

Concepts and Terms Used in Educational Planning and Administration

- A Guidebook

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Foreword

The National University of Educational Planning and Administration (NUEPA) is actively engaged in research and capacity building in the area of educational planning. A major component of its work involves building capacities for various professionals engaged in the development of school education at state and district levels. In order to meet the felt need of grassroots professionals to understand and use technical concepts related to educational planning, NUEPA brought out a publication entitled “A Guidebook Concepts and Terms in Educational Planning” in the year 2003. The Guidebook was carefully prepared by late Prof. Y.P. Aggarwal and Dr. R.S. Thakur. Responding to the overwhelming demand for the publication, the Guidebook was also reprinted for wider dissemination.

The school education sector in India has witnessed significant changes both in quantitative and qualitative terms during the last 10 years. This has necessitated revisiting the Guidebook and bringing out a revised edition incorporating new terms and concepts related to recent developments such as the Right to Education Act 2009 and the publication of new ISCED Framework in 2011 by UNESCO. Dr. R.S. Thakur who was one of the authors of the original publication, has done a very commendable work by putting together a revised edition of the Guidebook in the form of the present publication.

The present publication titled “Concepts and Terms in Educational Planning and Administration – A Guidebook” is a significant step in presenting a consolidated picture of frequently used concepts and terms used in the field of education. This compilation of often used terms in educational planning and administration will be of immense help to the students of education, educationists, administrators and researchers. The author has made full effort to include terms and concepts relevant to Indian educational administration and educational planning.

I am grateful to late Professor Y.P. Aggarwal for having conceived the idea of such a publication. Dr. R.S. Thakur has made a major contribution in producing this revised version of the document. I am sure that researchers, administrators, development planners, educationists and all those interested in Indian education would find it useful.



(R. Govinda)
Vice-Chancellor
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New Delhi

Preface

This Guidebook was initially published by erstwhile NIEPA in the year 2003 and thereafter reprinted a number of times. The present volume has been updated keeping the latest concepts that have come to the knowledge of the author from time to time. The concepts and terms which have been debated extensively in the public and in the media have, as far as possible, been duly included in this publication. I am hopeful that the concepts and terms used here will immensely help the students of education, educational planners, educational administrators as also the educationists. In addition, this publication will also help the parents of pupils to understand their wards' day to day problems. The concepts and terms have been explained in a very simple, lucid and meaningful manner. The purpose is not to conduct an in-depth study into the subject-matter but to have an overall understanding of the subject-matter in a simple and appreciable way. Care has also been taken to include some of the important educational indicators developed by UNESCO for EFA 2000 and ISCED 2011. This volume reflects 35 years of experience of the author in the field of educational planning and educational administration right from the lower levels/state level to the national level as also interaction with international agencies through Conferences, Seminars, trainings etc. Notwithstanding this, concrete suggestions for improvement shall be welcome. I shall also welcome healthy criticism. My E.mail is thakurrs2003@yahoo.com.

I am grateful to late Dr. Y.P. Aggarwal who had gently agreed to my idea of bringing out such a publication; had helped me and contributed to the success of this publication. I am also grateful to the staff of the Publication Unit, NUEPA, for getting this publication printed in record time and getting it reprinted a number of times thereafter in the past.

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Abbreviations Used

AAR	=	Apparent Admission Rate
AIR	=	Apparent Intake Rate
APPEAL	=	Asia Pacific Programme of Education for All
AR	=	Attendance Rate
ASER	=	Age Specific Enrolment Ratio
BCS	=	Bishop Cotton School
BITEs	=	Block Institutes of Education
CBO	=	Community Based Organisation
CCTV	=	Closed Circuit Television
CE	=	Coefficient of Efficiency
CTE	=	College of Teacher Education
CLC	=	Community Learning Centre
CNGRP	=	Crude Natural Growth Rate of Population
CPM	=	Critical Path Method
CR	=	Completion Rate
CRC	=	Cluster Resource Centre
CWSN	=	Children with Special Needs
DISE	=	District Information System for Education
DIET	=	District Institute of Education & Training
DOR	=	Dropout Rate
DPS	=	Delhi Public School
EB	=	Enumeration Block
EBBs	=	Educationally Backward Blocks
EFA	=	Education for All
EGS&AIE	=	Education Guarantee Scheme & Alternative Innovative Education
EMIS	=	Education Management Information System
FCI	=	Food Corporation of India
GAR	=	Gross Admission Rate
GBS	=	Gross Budgetary Support
GER	=	Gross Enrolment Ratio
GDP	=	Gross Domestic Product
GFR	=	Gross Fertility Rate
GNP	=	Gross National Product
HDI	=	Human Development Index
HTTP	=	Hypertext Transfer Protocol
IASE	=	Institute of Advanced Studies in Education
IDEA	=	International Data Encryption Algorithm
IED	=	Integrated Education
ILT	=	Information & Learning Technology
IIEP	=	International Institute of Educational Planning.
IMR	=	Infant Mortality Rate

IQ	= Intelligence Quotient
ISCED	= International Standard Classification of Education
KGBVS	= Kasturba Gandhi Balika Vidyalaya Scheme
LAN	= Local Area Network
LD	= Learning Difficulties
MDM	= Mid-Day Meals
MME	= Management, Monitoring & Evaluation
MLLs	= Minimum Levels of Learning
MR	= Mentally Retarded
MS	= Mahila Samakhya
NALSA	= National Legal Service Authority
NCLP	= National Child Labour Project
NPE	= National Policy on Education
NAR	= Net Admission Rate
NCERT	= National Council of Educational Research & Training
NCTE	= National Council of Teacher Education
NER	= Net Enrolment Ratio
NFE	= Non-Formal Education
NIR	= Net Intake Rate
NPEGEL	= The National Programme for Education for Girls at Elementary Level.
NSPE	= Nutritional Support to Primary Education
NUEPA	= National University of Educational Planning & Administration
NVs	= Navodaya Vidyalayas
OECD	= Organization for Economic Cooperation and Development
PERT	= Programme Evaluation & Review Technique.
POA	= Programme of Action
PWD Act	= Persons with Disabilities (Equal Opportunities, Protection & Full Participation) Act, 1996(1 of 1996)
RCE	= Regional College of Education.
RMSA	= Rashtriya Madhyamik Shiksha Abhiyan
SAR	= Specific Absorption Rate
SCERT	= State Council of Educational Research & Training
SC	= Scheduled Castes
SLE	= School Life Expectancy
SNE	= Special Needs Education
SSA	= Sarva Shiksha Abhiyan
ST	= Scheduled Tribes
TFR	= Total Fertility Rate
TLM	= Teaching Learning Material
TLMs	= Teaching Learning Methods
WHO	= World Health Organization

Concepts and terms used in Educational Planning & Administration – A Guidebook

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Concepts and Terms Used in Educational Planning and Administration – A Guidebook

A. Contextual

1. Ability

The quality of being able to perform a mental or physical task or action with a minimum or greater degree of success, through application of innate talent, acquired skill, acquired knowledge, or any combination of these.¹

2. Accountability

(1) 'Accountability is the obligation to demonstrate and take responsibility for performance in the light of commitment and expected outcome'.²

(2) i) Accountability is the responsibility for one's own actions and justification, therefore, lies with the actor. In education accountability is the relationship between checks and balances among the interest of three groups, namely:

- a) the public sector (government and professional educators);
- b) the private sector; and,
- c) the civic society (tax payers/stake holders, users and beneficiaries)

The first, i.e. public sector uses different rules, regulations, norms, standards etc. to set up the framework for service delivery but competitive checks of market forces or exercise of voice by the beneficiaries is essential in order to improve upon its efficiency and quality. The private sector, on the other hand, introduces the concept of competition and choice between the two sectors public and private. Finally, if there is a monopoly of one of these sectors, quality, efficiency and responsiveness is bound to decline. Therefore, it is the checks and balances among the three mechanisms which will result in most efficient and responsive service.³

ii) Internally, it is the responsibility bestowed by the stake-holders on the Institution, who, in turn, carries this responsibility through its academic staff, the teachers. Thus academic staff is made accountable for any lapse on their part on the outcomes of education in the Institution.

¹ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

² Treasury Board of Canada Secretariat.

³ Encyclopedia of Education (2nd Edition) by James W.Guthrie Macmillan Reference USA

iii) Educational accountability is a concept in which the school system, and especially teachers, are held responsible for the learning and academic progress of students.⁴

3. Acquired ability

Acquired ability is skill or talent that is learned by one's own effort as differentiated from that which is innate or hereditary.⁵

4. Aesthetic

The study of the nature of forms of beauty as represented in courses dealing with art, history, the fine arts, or the philosophy of art.⁶

5. Alumnae, Alumni

Alumnae are former students or graduates of an educational institution.⁷

6. Aptitude⁸

Aptitude is the combination of traits and abilities by which a person being qualified for type of occupation or activity. A natural skill or talent.

7. Articulation

'Articulation is coordination of course content between different levels in the educational system to promote continuing progress of students from kindergarten through higher education.'⁹

8. Atmosphere¹⁰

(i) Atmosphere is a colorless, tasteless, odorless blanket of gasses that surrounds the Earth. As it extends into the space, it becomes thinner, eventually fading out. It gives us air to breathe, water to drink, shields us from Sun's harmful rays, while at the same time it keeps us warm by retaining the Sun's heat. Atmosphere is mainly made of nitrogen and oxygen and is divided into five layers of gases. Its composition varies within these layers. Ozone layer shields the earth from harmful/dangerous radiation; stratosphere contains 19% of the atmosphere's gases but little water vapor—Airliners fly up here; Mesosphere, here gases are so thin that temperatures drop rapidly to less than 110° C but the air is still thick enough to slow down meteorites. In thermosphere gases are very thin but they absorb ultraviolet light of the Sun raising temperatures to 2000° C. The ionosphere [layer within the thermosphere] is made of gases electrically charged or ionized by the

⁴ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

⁵ Ibid, Page 6

⁶ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

⁷ Ibid, Page 11

⁸ Determinants of Teacher Effectiveness by Been Shah, The India Publications, Ambala,1995

⁹ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

¹⁰ Family Encyclopedia by Dorling Kindersley,Printed at Tien Wah Press Pte.Ltd.Singapore.

Sun's light. Radio signals can be bounced off these ionized gases. Exosphere is the outer layer of the atmosphere. Here lighter gases drifts into space.

- (ii) "Atmosphere is a blanket of gases that enables life to exist on this Planet, the Earth. This layer has no definite outer edge, gradually becoming thinner until it merges into space, but over 80% of atmospheric gases are held by gravity within about 20 kms of the Earth's surface. The atmosphere blocks out much harmful ultraviolet solar radiation and insulates the Earth against extremes of temperature by limiting both –incoming solar radiation and the escape of re-radiated heat into the space. This natural balance may be distorted by the green house effect as gases such as carbon dioxide have built up in the atmosphere trapping more heat".¹¹
- (iii) "The gaseous envelope surrounding a celestial body. The terrestrial atmosphere by its composition, control the temperature and shielding effect from harmful wavelengths of solar radiation, makes possible life as known on Earth."¹²

9. Attention

(William James 1842-1910): Attention is the taking possession of the mind, in clear and vivid form of one out of what seems several simultaneously possible objects or trains of thought.

In the Encyclopedia of Education (2nd Edition), the subject has been broken down into two sub-divisions (i) arousal and (ii) selection of information. Arousal here means to remain in contact with the environmental stimuli and the other refers to storing of information in the memory and brain. The process involved in arousal involves achieving and maintaining an alert state sufficient to remain in contact with environmental stimuli. This sense of attention separates the waking state from conditions such as sleep or coma. Selective attention refers to the process involved in selecting information for consciousness, for immediate response, or for storing information in memory. The conscious content of selective attention is only a small sub-set of information that could be available at any given movement.

10. Attitude¹³

- (1) Attitude is mental readiness to respond positively or negatively towards a person, object, event or situation. According to Allport (1954) attitude is a mental and neutral state of readiness, organized through experiences, exerting a directive or dynamic influences upon the individual responses to all objects and situations with which it is related.
- (2) A general predisposition or mental set with regard to any persons, beliefs, or other entities; educational systems typically seek to encourage the

¹¹ Dorling Kindersley Ultimate Visual Dictionary, 21st Century Supplement.

¹² McGraw-Hill Concise Encyclopaedia of Science & Technology, Sybil P.Parker, McGraw-Hill Book Company, New York.

¹³ Determinants of Teacher Effectiveness by Beena Shah. The India Publications, Ambala, 1995

development of certain attitudes in their students in addition to inculcating knowledge.¹⁴

11. Audio-Visual Aids

- (i) Audio-Visual Aids use the senses of both sight (seeing) and sound (hearing) collectively or sometimes individually. These aids include Sound Films; Filmstrips; Tapes/slides, broadcast television, Closed Circuit Television (CCTV), video-recording etc. Recently, microprocessors have also been used in computer-assisted learning/training.
- (ii) A type of material that enhances learning through special appeal to hearing and sight, such as phonograph records, audio tapes, films, slides, and graphs and diagrams large enough to display before groups.¹⁵

12. Biometric PAN Card¹⁶

The existing PAN Card, contains the name of the Person, his Permanent Account Number and a scan of his photo. The biometric PAN Card will, in addition, also carry finger prints or the iris scan of the person so that there can be an easy recognition of the person once the card has been presented.

13. Body Mass Index (BMI)

Body Mass Index (BMI) is an indicator of healthy weight and is calculated by dividing body weight (in kg.) by Height squared (in metres). It can be expressed as follows $BMI = \frac{\text{Weight (in kg.)}}{\text{Height (in metres)} \times \text{Height (in metres)}}$. The Indian and International cut-offs for a healthy weight are as under:

Indian cut offs	International cut offs
Below 18.5kg/m.: Underweight	Below 18.5 kg/m.: Underweight
Between 18.5 kg/m & 23 kg/m.: Normal	Between 18.5 kg/m & 24.9 kg/m.: Normal
Between 23 kg/m & 24.9 kg/m.: Overweight	Between 25 kg/m & 29.9 kg/m.: Overweight
Over 25 kg/m.: Obese	30 kg/m & more: Obese

14. Body Language

The process of communicating what you are feeling or thinking by the way you place and move your body than by words.¹⁷

¹⁴ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

¹⁵ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A Hudson Group Book-Van Nostrand Reinhold Co., New York-London -Toronto

¹⁶ HT 26-12-2007

¹⁷ Oxford Advanced Learner's Dictionary, Sixth Edition edited by Sally Webmeier, Oxford University Press, 2001.

15. Brain Drain

Brain drain is any substantial departure of talented individuals from one locale or one field of work to a second locale or field that offers greater attractions or rewards.¹⁸

16. Brainstorming¹⁹

(i) A technique for the rapid generation of original thoughts based on a meeting at which all present throw out as many ideas as possible on a selected subject/topic.

(ii) "Brainstorming is a conference technique of solving specific problems, amassing information, stimulating creative thinking, developing new ideas etc by unrestrained and spontaneous participation in discussion."²⁰

(iii) Brainstorming is a technique used to stimulate production of creative solutions to problems by a group or individual; in it persons are encouraged to generate spontaneously as many ideas and associations as possible without any self-consciousness or restraint. Many inapplicable ideas may be collected in the process but one or two highly valuable notions can appear among them.²¹

17. Branch and Bound Technique²²

An optimization technique which transform problems into a series of smaller problems by branching and limits the computation of alternative solutions by bounding.

18. Brain Mapping Test²³

In this test, the brain is mapped to reveal guilty knowledge. Sensors are attached to the head and the person is made to sit before a computer monitor and shown certain images or made to hear certain sounds. The sensors monitor electrical activity in the brain and register P300 waves, which are generated only if the subject has connection with the stimulus i.e. picture or sounds. He is not asked any questions here. Thus the test result matches information stored in the brain with information from the crime scene.

19. Calligraphy

Calligraphy is beautifully formed lettering. The term applies to written text and illumination. The essential materials needed to practice calligraphy are a writing

¹⁸ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne.

¹⁹ A concise Encyclopaedia of Management Techniques by Frank & Finch, New Delhi.

²⁰ Random House Dictionary of English Language by Jess Stein and Laurance Urdang, Random House, New York. @ Hindustan Times September 18, 2011.

²¹ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

²² A Concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers P Ltd, New Delhi

²³ HT 12-06-2008

tool, ink and a writing surface. Quills are among the oldest writing tools in calligraphy.

20. **Choreography**

According to Oxford Dictionary, 'to choreograph is to compose the sequences of steps and movements for a dance performance'. Choreographers design sequences of dance movements keeping both form and motion in mind. It is now in demand in musical, TV., movies, advertisements, reality shows, fashion shows, cultural shows etc. The skills needed by a choreographer, inter-alia, are,-

- Eye-catching communication skills;
- Tremendous ability to perform flawlessly
- Amazing motivator
- Ability to realize creative vision
- Managing logistics and great people skills
- Curiosity about research, planning and ability for new developments.

21. **Closed Circuit Television (CCTV)**

CCTV is a video communication system in which the signal is transmitted from the point of origin only to those specific receivers that have access to it by previous arrangement.²⁴

22. **Cloud**

Cloud is suspensions of minute droplets or ice crystals produced by the condensation of water vapor.²⁵

23. **Cloud Burst**

A cloud burst is a form of torrential rainfall followed by thunder and hail. It occurs due to the formation of low pressure area which attracts clouds to that area with great force. When these clouds hit the mountain peak, the moisture content is released in the form of heavy rain.

24. **Cognition**

Cognition is a collection of largely integrated mental operations that include: thinking, perceiving, remembering and learning.²⁶

25. **Community**²⁷

Any human social enterprise which obtains its identity through a geographical, social, religious, intellectual or historical sense of shared identity.

²⁴ McGraw-Hill Concise Encyclopaedia of Science & Technology, Edited by Sybil P.Parker, McGraw Hill Book Company, New York, 1984.

²⁵ McGraw-Hill Concise Encyclopaedia of Science & Technology, Edited by Sybil P.Parker, McGraw-Hill Book Company, New York, 1984.

²⁶ Internationall Encyclopaedia of Education, 3rd Edition Vol.5 by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010.

²⁷ International Encyclopaedia of Education 3rd Editiion by Penelope Peterson, EvaBaker and Barry McGrow, Academic Pres, Boston 2010, Volume 4.

26. Concept

“Concept is an idea or representation of the common element or attribute by which groups or classes may be distinguished; it is any general or abstract intellectual representation of a situation, state of affairs or objects; a thought, an opinion, an idea or a mental image”²⁸ It is an idea or aggregation of ideas that has been acquired as a symbol or generalization for an intangible, i.e. of square, circle, soft, fast, long, over etc.

“Concept is a valid understanding or idea of the essential nature of some entity, such as a series of events, a type of phenomenon, or a body of thought; concepts formed by a student or child may concern simple or complex entities.”²⁹

27. Corruption

Oxford Dictionary defines corruption as dishonesty; Illegal behaviour – the state of being morally corrupt [willing to act dishonestly in return for money or personal gain]. ‘Corruption is a vice, a very old social disease infecting our system— Society as a whole is infected by it’. Corruption is a multi-faceted concept and includes dishonest practices such as bribery and tainted behavior. In Times of India dated 9th May, 2011 Arvind Panagariya, Professor, Columbia University has stated that Economists distinguish between two types of bribes. Type I is bribes given to low level bureaucrats to do what they are otherwise supposed to do. Type II bribes are bribes given to high level officials and Politicians to do what they are not supposed to do. In the former case, there is no loss to the state exchequer but the bribe giver is the victim. In the latter case, however, the bribe giver is a partner in crime and shares the profits by defrauding the state.

(ii) ‘A: Corruption in public life is the use of public power for private profit, preferment or prestige, or for the benefit of a group or class in a way that constitutes a breach of law or of standards of high moral conduct.’³⁰

(iii) “Corruption is wrong doing on the part of an authority or powerful party through measures that are illegitimate, immoral or incompatible with ethical standards. Corruption often results from patronage and is associated with bribery.”³¹

It is a vicious cycle: Corruption breeds absolute authority; absolute authority breeds money, authority and still more corruption.

28. Counseling

Counseling is a technique by which a suitably qualified and experienced person gives advice to an employee on some personal problem connected with his work environment or in his personal affairs.

²⁸ Dictionary of Education, III Edition, By Carter V. Good & W.R. Market, McGraw – Hill Book Co. NY, 1973.

²⁹ Concise Dictionary of Education by Gene R. Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

³⁰ A dictionary of the Social Sciences by Julius Gould & William L. Kolb, Tavistock Publications

³¹ Google Encyclopaedia

29. Conscience

Conscience is moral sense of right and wrong. `A faculty developed at home and in school from early childhood, functioning as the center of awareness for an individual's moral and ethical beliefs; similar in some respects to what Freudian psychoanalytic theory terms as superego.'³²

30. Course

- (i) A course is a planned series of learning experiences in a particular range of subjects or skills, offered by an institution and undertaken by one or more learners.
- (ii) "Course is a unit of instruction in a particular subject, such as: 'Introductory Chemistry'. Courses consist of regularly scheduled class Sessions of one to five (or more) hours per week throughout the term."³³
- (iii) "Course is a unit of instruction comprising a sequence of educational activities in a particular field or range of related fields of education. This can also be referred to as a 'module', 'unit' or 'subject'."³⁴

31. Credentials

Written documents that certify an individual's qualifications in such respect as experience, education, or character, submitted usually when applying for admission, employment, promotion or professional status.³⁵

32. Culture³⁶

- (i) `Culture comprises values, beliefs, customs, behaviors, institutions and artifacts of a group of people or of a nation.'
- (ii) In the Oxford dictionary (Vol.II), culture has been defined as `cultivation, tending, training, development and refinement of mind, tastes and manners—refinement by education and training. It is the intellectual side of civilization.'

33. Deflation

Reduction in general price level in an economy.

34. Defense Mechanism

A behavioral pattern that serves to protect an individual against threats to physical safety, emotional equilibrium, or general well-being by using such

³² Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

³³ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

³⁴ ISCED-2011, UNESCO

³⁵ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

³⁶ A Directory of Education, edited by P.J. Hills, Routledge & Kegan Paul, London, 1982.

behavioral techniques as rationalization, altered perception, self deception, or attack on the threatening party.³⁷

35. Distracters

- (i) A number of options are presented to a testee as the possible right answer to each item in a multiple-choice test. Only one is correct. The other options are called distracters, since they are intended to be answers unless the person has confidence in his choice of the correct answer.
- (ii) "In psychological testing, distracter is an incorrect alternative among the choices of answers given after a question on a multiple-choice test." "A type of test in which one answers the questions by selecting the correct or most appropriate choice from among several answers that are presented with each question; answers are usually marked by the examinee on a separate answer sheet provided with the test. Most standardized tests used in education are of the multiple-choice type."³⁸

36. Domain

The everyday usage of the word domain refers to an area of land or territory, which has clear boundaries. In educational parlance, the term also refers to an area of educational interest, which is defined and bounded. However, educational domains are not like that. Intelligence is a good example of a domain where boundaries are not well defined.

37. Dope Test

Dope Test is a test conducted on players to ascertain the level of cocaine in their blood. Players take heavy doze of cocaine through coffee which helps them to run fast and run more as compared to other players. According to Times of India, New Delhi/Chandigarh dt. 12.07.2011 the word "doping" is derived from Dutch word "Dop"— an alcoholic beverage used by Zulu warriors to enhance their prowess. However, the use of performance enhancers is much older than the word itself. Ancient Olympians used to eat Lizard meat to enhance their performance. To check doping in sports, authorities have established 'World Anti Doping Agency (WADA)' in 1999 representing International Govts. and Non-governmental Agencies.

38. Dual Use Technology

Dual Use Technologies (DUTs) are those technologies that can be used both for conventional purposes as also for nuclear purposes. DUTs include, inter-alia, some composite materials, special softwares/programmes, sensor technologies, specialized microchips etc.

³⁷ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne.

³⁸ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne.

39. Earthquakes³⁹

Earthquakes are tremors in the ground, created by sudden movements of tectonic plates – huge slabs of rocks that make up the Earth's crust. Tectonic plates usually slide past each other, but sometimes they get stuck together. The stress on the rocks builds up until they fault [crack]. The tectonic plates then jolts past each other, sending shock waves through the ground. These vibrations, known as seismic waves, cause the earth to quake.

40. Economies of Scale

Economies of Scale happens when the more one produces, the cheaper it is to produce any additional unit.

"Increases in productivity or decreases in average cost of production, that arise from increasing all the factors of production in the same proportion."⁴⁰

41. Educational Innovation

Educational Innovation refers to an idea or practice new to a specific educational context that meets specified needs. It is the introduction or promotion of new ideas and methods that are devised in education or school practices which have a substantial effect on changing the existing patterns of behavior of a group or groups involved. Innovative strategies imply the development of new ideas which are disseminated and utilized, these usually occur in response to particular problems.⁴¹

42. Educational psychology

- (1) The study of the nature and operation of the human learning process.
- (2) The study of the psychological issues and problems directly related to teaching and learning including mental processes, emotions, and behavior.⁴²

43. Educational Program

- (i) Educational program is a set of organized and purposeful learning experiences with a minimum duration of one school or academic year, usually offered in an educational institution.⁴³
- (ii) 'A coherent set or sequence of educational activities designed and organized to achieve pre-determined learning objectives or accomplish a specific set of educational tasks over a sustained period. Within an educational programme, educational activities may also be grouped into sub-components variously described in national contexts as "courses", "modules", "units", and/or "subjects". A programme may have major components not normally

³⁹ Family Encyclopedia by the Dorling Kindersley Printed at Tien Wah Press Pte.Ltd.Singapore.

⁴⁰ Samuelson, Nordhans. ECONOMICS, The McGraw: Hill Publishing Co. Ltd, N.Delhi

⁴¹ Evaluation of NGO Projects under MHRD Schem of Innovative & Experimental Programs of EE, NCERT, New Delhi, 2001

⁴² Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

⁴³ EFA, the Year 2000 Assessment – Technical Guidelines, UNESCO, Paris, p.26.

characterized as courses, units, or modules – for example, play-based activities, periods of work experience, research projects and the preparation of dissertations.⁴⁴

44. Educator

Educator is a professional practitioner in the field of education, usually engaged either in teaching or administration.⁴⁵

45. Ego-centric

Ego-centric is the quality of being self-centered and unresponsive to the needs of others; frequently observed in young children before offset by sufficient socialization and maturation.⁴⁶

46. Engineering

- (i) Engineering is the application of mathematics and science to create some thing of value from natural resources.⁴⁷
- (ii) “Engineering is the art or science of making practical application of the knowledge of pure sciences, as physics, chemistry, biology etc.”⁴⁸
- (iii) Most simply stated, engineering is the art of directing the great sources of power in nature for the use and convenience of the people.⁴⁹

47. Equated Monthly Installments (EMI)

Equated Monthly Installments for the loan doled out by the lender, the borrower has to make regular monthly repayments throughout tenure of the loan. Banks arrive at EMI based on the principal amount borrowed, the repayment tenure, actual rate of interest and the basis for computation of rate of interest. In initial years of loan repayment, it is mainly the interest payments that are made. The greater the amount of loan taken by the borrower, the greater will be his EMI and will be heavily tilted towards interest repayments. As the years roll out, the chunk of repayments shifts towards principal amount.

48. Facts about Honey Bee⁵⁰

Queen Bee is only one Bee in a colony. It is a fertile female. Its only function is to lay eggs. It lays about 1,500 eggs a day – one at a time. It can live 3-5 years.

Drones are hundreds in a colony; have no stinger. They do not work but are cared for by workers. Their main task is to mate with the queen but die shortly after mating. Their big eyes find out the Queen as she flies.

⁴⁴ ISCED-2011, UNESCO

⁴⁵ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

⁴⁶ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

⁴⁷ HT 29-11-2007

⁴⁸ Random House Dictionary of English Language by Jess Steinn and Laurance Urdang, Random House, New York.

⁴⁹ Concise Encyclopedia of Science & Technology bny Sybil P.Parker, McGRAW-HILL Book Co.New York.

⁵⁰ 1HT: Life, Universe & Everything dt 25-05-2007

Workers are infertile females and are thousands in a colony. They live for six weeks and their main functions are,-

- i) Clean hive
- ii) Nurse feeding larvae
- iii) Build honeycomb
- iv) Guard hive
- iv) Collect Pollen, nectar

49. **Films & their rating**⁵¹

According to the Cable Television Networks (Regulation) Act, films have to be U rated for television broadcasting, UA or A rated films to be shown on television must be amended accordingly to get a U certification. The proposal for U15 rating is still hanging. All feature or documentary films shown in Indian cinemas have to be certified according to the following four ratings:

- 49.1 **Universal [U]**: All ages admitted, there is nothing unsuitable for children. Films under this category should not upset children over 4. This rating is similar to the American G and the British U ratings.
- 49.2 **Parental Guidance [U/A]**: All ages admitted, but certain scenes may be unsuitable for children under 12. This rating is similar to the American PG-13 and the British 12A.
- 49.3 **Adults[A]**: Nobody younger than 18 can watch a film in the cinema with this rating. Films under this category do not have limitation on the bad language that is used. Hard drugs are generally allowed, and strong violence/sex references along with non-detailed sex activity is also allowed. This rating is similar to the American R and NC-17, and the British 18. Under 18s cannot rent or buy an 18-rated DVD, Blu-Ray Disc or game.
- 49.4 **Specialist Viewing [S]**: This rating signifies that the film is meant for a specialized audience, such as medical practitioners etc.
- 49.5 **Proposed Rating [U15]**: Ages between 15 and 18 and between U/A and A rating similar to the British 15. The bill for the change is yet to be tabled in Parliament.

50. **Finger Test**

Finger Test is also known as Per Vagina (PV) Test and is conducted on sexual offence victims. This test only establishes whether the vestibule is congested and whether one, two or three fingers can be inserted in the vestibule.

51. **Fluency**

Facility in speaking a language rapidly and correctly, and often also in writing and reading it.⁵²

⁵¹ HT 13-02-2011

⁵² Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

52. Fog

'Fog' is a cloud that forms near the surface of the Earth. As the ground becomes cooled by the night sky, the air above the ground also gets cooled. This can bring the air down below its dew point causing water vapor to condense around the dust and other particulates in the atmosphere creating fog.⁵³

53. Formula

"(1) In mathematics, a rule or principle usually stated in mathematical notation, like the formula for the area of a rectangle, e.g. Length*breath (L*B).

(2) In chemistry, an expression in symbolic notation for the number of each kind of atom in a substance, such as H₂O (empirical formula), or a similar diagrammatic expression also indicating links between atoms (structural formula).

(3) A prescription or recipe, as with infant's milk formula.

(4) Any codified statement of a uniform procedure".⁵⁴

54. Glossary

Glossary is a section in printed material containing a dictionary of special terms and their definitions pertinent to the subject matter.⁵⁵

55. Gravity⁵⁶

Gravity is a force of attraction rather a universal force that acts between any two objects. Together, the forces act like a single force pulling downwards at just one point called the centre of gravity. An object will balance when it is supported in line with its centre of gravity.

56. Heredity⁵⁷

Heredity is the transmission of characteristics from one generation to the next generation, such as colour, shapes, sizes etc. and the study how these characteristics are passed from parents to the offspring is known as genetics.

57. Inflation

A general increase in price level in an economy.

58. Interviewing & Consultation⁵⁸

Interviews are formally structured oral exchanges, an essential feature being the presence of an active and passive partner. There is another more general type of

⁵³ HT 30-01-2010

⁵⁴ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

⁵⁵ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

⁵⁶ Family Encyclopedia by the Dorling Kindersley Printed at Tien Wah Press Pte.Ltd.Singapore

⁵⁷ Family Encyclopedia by the Dorling Kindersley Printed at Tien Wah Press Pte.Ltd.Singapore

⁵⁸ A Concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers P Ltd. New Delhi.

oral exchange which is informally structured and in which the active/passive aspect may not exist or if it does exist, will be much less noticeable. This type is the consultation.

59. Instinctive Behaviour⁵⁹

Instinctive behavior is the behavior that an animal performs automatically without having to learn it. It is programmed by an animal's genes and comprise unchanging components called fixed pattern actions.

60. Inventions⁶⁰

Invention is something new created by human effort that did not exist before.. Inventions are useful to society and have made life of human beings easy and comfortable. To quote a few: the wheel, the light and power, the computer, radio and TV etc.

61. Law⁶¹

(i) Law can be defined as the rules and standards that administer all aspects of Society. They regulate the Government of a State, the relationship between the Government and the individuals and the conduct of individuals towards each other. Law is a fundamental element of all civilized Societies.

(ii) "Law is the principles and regulations established by a Government and applicable to a people, whether in the form of legislation or of custom and policies recognized and enforced by judicial decisions."⁶²

62. Law of Blasphemy

[This law has roots in 19th Century colonial legislation to protect places of worship but General Zia-ul-Haq's dictatorship in 1980s gave it teeth as part of a drive to Islamize Pakistan.] This law states "that anyone who speaks ill of Islam and Prophet Mohammad faces the death penalty. Derogatory remarks in respect of the Prophet either spoken or written, or by visible representation, or by any imputation, innuendo or insinuation, directly or indirectly shall be punished with death, or imprisonment for life."⁶³

"Blasphemy is speaking about God or sacred matters in a disrespectful or rude way"⁶⁴

63. Learning

'Learning is the individual acquisition or modification of information, knowledge, understanding, attitudes, values, skills, competencies, or behaviours through experience, practice, study or instruction.'⁶⁵

⁵⁹ Family Encyclopedia by Dorling Kindersley, at Tien Wah Press Pte.Ltd.Singapur

⁶⁰ Family Encyclopedia by Dorling Kindersley, at Tien Wah Press(P) Ltd.Singapore

⁶¹ Family Encyclopedia by Dorling Kindersley, at Tien Wah Press(P)Ltd.Singapore.

⁶² Random House Dictionary of English Language by Jess Steinn and Laurance Urdang, Random House, New York.

⁶³ HT dated 03-03-2011, page 19

⁶⁴ Chambers' 21st Century Dictionary, Allied Publishers(India) Ltd.2005, Page 141

⁶⁵ ISCED-2011, UNESCO.

64. Lie Detector Test⁶⁶

Lie Detector is an instrument for recording impulses due to changes in certain body activities as blood pressure, pulse, breathing and perspiration, the results of which may be interpreted to indicate the truth or falsity of a person's answers under questioning.

65. Machine

- (i) Machine is a device divided into several parts for performing a particular task by using mechanical energy.
- (ii) It is 'a combination of rigid or resistant bodies having definite motions and capable of performing useful work.'⁶⁷

66. Mathematics⁶⁸

- (i) The study of numbers, shapes and quantities is called Mathematics. Its important branches are algebra, arithmetic, calculus, geometry, statistics, trigonometry etc.
- (ii) "Mathematics is the systematic treatment of magnitude, relationships between figures and forms and relations between quantities expressed symbolically."⁶⁹
- (iii) "Mathematics is frequently encountered in association and interaction with astronomy, physics and other branches of natural science and it also has deep rooted affinity with humanities. It is a realm of knowledge entirely into itself and one of considerable scope."⁷⁰

67. Matter⁷¹

- (i) Matter is anything that occupies a space. Every object and substance that exists in the universe is made of matter – including the air we breathe in, the water we drink, the ground we walk on and even our own bodies.
- (ii) "Matter is anything that occupies a space. It includes everything from natural substances, such as minerals or living organisms to synthetic materials. Matter can exist in three distinct states – solid, liquid and gas. A solid is rigid and retains its shape; a liquid is fluid, has a definite volume and will take shape of its container; and, a gas [also fluid] fills a space so its volume will be the same as the volume of its container. Most substances can exist as a solid, a liquid or a gas – the state determined by temperature. At very high

⁶⁶ Random House Dictionary of English Language by Jess Stein and Laurance Urdang, Random House, New York

⁶⁷ Concise Encyclopedia of Science & Technology by Sybil P.Parker, McGRAW Hill Book Co.New York.

⁶⁸ Family Encyclopedia by the Dorling Kindersley printed at Tien Wah Press Pvt.Ltd.Singapore

⁶⁹ Random House Dictionary of English Language by Jess Stein and Laurance Urdang, Random House New York.

⁷⁰ McGraw-Hill Concise Encyclopaedia of Science & Technology, Edited by Sybil P.Parker, McGraw Hill Book Company, New York, 1984.

⁷¹ Family Encyclopedia by the Dorling Kindersley printed at Tien Wah Press Pvt.Ltd.Singapore.

temperatures, matter becomes plasma, often considered to be a fourth state of matter".⁷²

68. Nanotechnology

The science of making things measured in units 10,000 times smaller than the width of a human hair.⁷³

69. Narco Analysis Test (NAT)

- (i) Narco Analysis Test (NAT) is a serum induced test. In this test the accused (subject) is administered sedatives and put in a state of hypnotic trounce by injecting drugs and then subjected to torture to eke out vital clues to unearth a conspiracy in crime syndicate. A semi-conscious person is unable to manipulate the answers but for such a test personal consent is required.⁷⁴
- (ii) "Narco Analysis Test is a method of psychological investigation conducted by a trained interrogator in which the conscious or unconscious unwillingness of a subject to confess memories or feelings is diminished by the use of a drug that induces a semi-somnolent state."⁷⁵

70. Parasite⁷⁶

Parasite is an organism that lives inside, or on another organism (the host) using it as a source of food, water and shelter'.

71. Pendulum

Pendulum is a rigid body mounted on a fixed horizontal axis, about which it is free to rotate under the influence of gravity. The period of motion of a Pendulum is virtually independent of its amplitude and depends primarily on the geometry of the pendulum and on the local value of g, the acceleration of gravity. Pendulums have therefore been used as the central elements in clocks, or inversely as instruments to measure g.⁷⁷

72. Philosophy

- (i) Philosophy is the science that seeks to organize and systematize all fields of knowledge as a means of understanding and interpreting the totality of reality: usually regarded as comprising ethics, aesthetics, metaphysics and epistemology.⁷⁸

⁷² Dorling Kindersley Ultimate Visual Dictionary, 21st Century Supplement, London.

⁷³ HT 25-11-2007

⁷⁴ HT 12-06-2008, Page 7, Metro.

⁷⁵ Random House Dictionary of English Language by Jess Steinn and Laurance Urdang, Random House, New York.

⁷⁶ Family Encyclopedia by the Dorling Kindersley printed at Tien Wah Press Pvt.Ltd.Singapore.

⁷⁷ McGraw-Hill Concise Encyclopaedia of Science & Technology, Edited by Sybil P.Parker, McGraw Hill Book Company, New York, 1984.

⁷⁸ Dictionary of Education by Carter V Good & W.R. Market, McGraw Hill Book Co.Inc. New York, London.

- (ii) The love or study or pursuit of wisdom or of knowledge of things and their causes – whether theoretical or practical. Some times used or especially obtained by natural reason in contrast with revealed knowledge.⁷⁹

73. **Photosynthesis**⁸⁰

- (i) Photosynthesis is the process by which the Plants breathe and reproduce energy to grow. It is the process of making sugars from water and carbon dioxide using sunlight by Plants. It takes place mostly in the leaves – which contains the green pigment called chlorophyll. This pigment traps some of the energy in sunlight, using it to drive a sequence of chemical reactions that result in the production of glucose and water. Oxygen is produced as a waste product.
- (ii) Photosynthesis is the process by which plants make their food using sunlight, water and carbon dioxide. It takes place inside special structures in the leaf-cells called chloroplasts. The chloroplasts contain chlorophyll [a green pigment that absorbs energy from the sunlight]. During photosynthesis, the absorbed energy is used to join together carbon dioxide and water to form the sugar glucose, which is the energy source for the whole plant; oxygen a waste product is released into the air. Leaves are the main sites of photosynthesis, and various adaptations for that purpose; flat laminae (blades) provide a large surface for absorbing sunlight; stomata (pores) in the lower surface of the laminae allow gases (carbon dioxide and oxygen) to pass into and out of the leaves and an extensive network of veins bring water into the leaves and transports the glucose produced by photosynthesis to the rest of the plant.⁸¹

74. **Programmed Instruction**

Instructional material written in the step-by-step form that is based on the learning theories which also underlie teaching machines; such material typically includes in each step a comprehensible, new item of knowledge to be learned, a question about it that is easy to answer correctly, and prompt confirmation of the answer's correctness to give 'positive reinforcement' to consolidate learning. An educational technique using such instructional material.⁸²

75. **Programmed Learning**⁸³

A programmed course is a self-study training course based on a logical flow chart, presented in a series of small steps, and embodying frequent self-testing. Programmed learning is learning through the use of a programmed course or alternatively, the subject of a programmed course.

⁷⁹ Oxford English Dictionary (Vol.XII) Clarendon Press, London 1970

⁸⁰ Family Encyclopedia by the Dorling Kindersley, Printed at Tien Wah Press Pte.Ltd.Singapore

⁸¹ Dorling Kindersley Ultimate Visual Dictionary, 21st Century Supplement, London.

⁸² The Concise Dictionary of Education by Gene R. Hawes & Lynne Salop Hawes, A Hudson Group Book; Van Nostrand Reinhold Company New Yor, Toronto, London.

⁸³ A Concise Encyclopedia of Management Techniques, Frank & Finch, Allied Publishers Pvt.Ltd New Delhi.

76. Project

A project is a combination of non-routine activities that must be completed with a set of resources and within a set time interval e.g.

- (i) construction of a school building of a specific design
- (ii) design of a training program for a specified group
- (iii) production of text book.

77. Psychology

Psychology is the academic discipline constituting the science of the mind and of mental activity or of patterns of behavior; classified with the natural sciences or social sciences.⁸⁴

78. Recurrent Education

Recurrent education is an approach that rejects the concept of education as a preparatory front and/or apprenticeship process at the beginning of working life but seeks to make learning experience available flexibly throughout person's life according to choice, interests, career, social and economic and job relevance. It has points in common with adult education, continuing education, permanent in service training and life long education but places emphasis on ready availability and access on relevance to individual needs and on an autonomous learner situation. Recurrent education calls for a radical reshaping of the educational system rather than the mere provisions of second chance institutions.

79. Reflation

Reflation is inflation after deflation. It is increase in the amount of currency above what would normally be expected in the spending of money.⁸⁵

80. Refraction & Reflection⁸⁶

Refraction is a process in which light entering a transparent material at an angle bends or refracts. Example: When one rests a pen in a glass of water, the part of the pen below the surface of the water appears to bend. On the other hand, when light strikes a shiny material, it simply bounces off the surface. This is reflection.

81. Science

"Science is derived from the latin word 'scientia' which means knowledge".

Random House Dictionary of English Language by Jess Stein & L Urdang, New York, defines 'Science as the systematic knowledge of the physical or material world. It is a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws'.

⁸⁴ The Concise Dictionary of Education by Gene R. Hawes & Lynne Salop Hawes, A Hudson Group Book; Van Nostrand Reinhold Company New York, Toronto, London.

⁸⁵ International Encyclopaedia of Education, 3rd Edition (Vol.4) by Penelope Peterson, Eva Baker and Barry McGrow, Academic Press, Boston, 2010.

⁸⁶ Family Encyclopedia by Dorling Kindersley Printed at Tien Wah Press Pte.Ltd. Singapore

82. Sex Education

- (1) Education dealing with the physiology of human reproduction.
- (2) Education dealing with sexual behavior, including such topics as contraception and family planning, venereal diseases, emotional and ethical considerations in sexual behavior, and homo-sexuality.⁸⁷

83. The Solar System⁸⁸

- (i) The solar system consists of a central star (the Sun) and the bodies that orbit it. These bodies include nine planets and their 61 known moons; asteroids, comets and meteoroids. The solar system also contains inter-planetary gas and dust. Most of the Planets fall into two groups, namely: four small rocky Planets near the sun [Mercury, Venus, Earth, Mars] and four Planets further out, the gas giants [Jupiter, Saturn, Uranus, Neptune]. Pluto belongs to neither group but is very small, solid and icy. Pluto is the outermost Planet except when it passes briefly inside Neptune's orbit. Latest theories suggest that Pluto is not a planet. It is a satellite. Between the rocky Planets and Gas giants, is the asteroid belt, which contains thousands of chunks of rock orbiting around the Sun in elliptical orbits located in a thin disc around the Sun's equator. All the Planets orbit the Sun in the same direction (ante clockwise when viewed from above) and all but Venus, Uranus and Pluto also spin about their own axes in this direction. Moons also spin as they, in turn, orbit their Planets. The entire solar system orbits the centre of our galaxy, the Milky Way.
- (ii) "An Earth-like planet is stated to be orbiting a Sun-like Star 600 light years away every 290 days reports NASA. It is named Kepler-22B in a habitable outside our solar system. It is 2.4 times the size of the planet 'Earth'".⁸⁹

84. Stalking

Stalking is any kind of intrusive behavior with the aim of establishing contact, obtaining private information and/or keeping a tab on another person's movements and actions. In case, same intrusive behavior occurs on-line or via the inter-net, it is called cyber stalking.⁹⁰

85. Training

Training is learning experience that leads to the acquisition of a skill⁹¹. It is a process for preparing people for different jobs enabling them improve their job-capacities and potentials.

⁸⁷ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A Hudan Group Book-Van Nostrand Reinhold Co., New York-London –Toronto, Melbourne.

⁸⁸ Dorling Kindersley Ultimate Visual Dictionary, 21st Century Supplement

⁸⁹ Times of India dated 07-12-2011, Page 1.

⁹⁰ Hindustan Times [Think, Page 10] dated the 20th March, 2011.

⁹¹ Manual for Statistics on NFE, Division of Statistics, UNESCO, Paris

86. Tsunami

Most of underwater/undersea earthquakes cause tsunami if such earthquakes are over a magnitude of 6.75 on Richter scale. Tsunamis are inter-alia, caused by (i) underwater earthquakes; (ii) volcanic eruptions; (iii) a submarine rockslides; (iv) asteroid or meteorite from space crashing into water. When the ocean floor at a boundary of tectonic plate rises or falls suddenly it displaces water above it and launches rolling waves that cause a tsunami.⁹² Tsunami is a Japanese word.

87. Universe⁹³

- (i) Everything that exists makes up the universe from the smallest particles to the biggest structures – whether on earth or in space. It includes everything that is visible much that is invisible, everything that is known, and more, that is unknown. Today scientists know more than ever before, but there is much still to be learnt.
- (ii) The universe contains everything that exists; from the tiniest sub-atomic particles to galactic super-clusters. Nobody knows how big the universe is but astronomers' estimate that it contains about 100 billion galaxies, each comprising an average 100 billion stars. The most widely occupied theory about the origin of the universe is the Big Bang theory, which states that the universe came into being in a huge explosion – the Big Bang – that took place between 10 and 20 billion years ago. The universe initially consisted of a very hot, dense fireball of expanding, cooling gas. After about one million years, the gas probably began to condense into localized clumps called protogalaxies. During the next five billion years, the protogalaxies continued condensing, forming galaxies in which stars were being born. Today, billions of years later, the universe as a whole is still expanding although there are localized areas in which objects are held together by gravity; for example, many galaxies are found in clusters. The Big-Bang theory is supported by the discovery of faint cool background radiation coming evenly from all directions.⁹⁴

88. Visual Aids

Visual aids are devices of presenting information in pictorial, diagrammatic chart form in an economical manner and with immediate visual impact.⁹⁵

89. Weather⁹⁶

- (i) Winds, rain, snow, fog, frost, sunshine etc. are all signs of the constant shifting of the lowest level of the atmosphere. The continual change is what we call the weather. The weather changes in four-folds, namely: its movement – which can bring winds; its temperature – which can cause

⁹² Times of India dated 15.03.2011 Page: 6.

⁹³ Family Encyclopedia by Dorling Kindersley Printed at Tien Wah Press Pte.Ltd.Singapore

⁹⁴ Dorling Kindersley Ultimate Visual Dictionary, 21st Century Supplement.

⁹⁵ Oxford English Dictionary (Vol.XII) Glavendon Press, London, 1970

⁹⁶ Family Encyclopedia by Dorling Kindersley Printed at Tien Wah Press Pte.Ltd.Singapore.

anything from frost to heat waves; its moisture contents – which can bring rain and fog; and its pressures -- which can cause anything from cloudless days to fierce storms.

- (ii) "Weather is defined as the atmospheric conditions at a particular time and place, climate is average weather condition for a given region over time. Weather is assessed in terms of temperature, wind, cloud-cover and precipitation such as rain or snow. Fine weather is associated with high pressure areas; cloudy, wet changeable weather is common in low pressure regions".⁹⁷

⁹⁷ Dorling Kindersley Visual Dictionary, 21st Century Supplement, London.

B. Policy & Planning

1. Bias

- (1) Bias is any predisposition for or against some viewpoint or social group.
- (2) Prejudice, or other attitude or approach, resulting in discrimination against one or more social groups, usually minority groups, and hence generally viewed as objectionable in education in a democratic nation.⁹⁸

2. Bibliography

Bibliography is listing with essential identification of the written works pertaining to a given subject, topic, or treatment (such as an article or chapter).⁹⁹

3. Basic Research

In the sciences, research seeking to develop fundamental scientific theory and findings in contrast to 'applied research', which is concerned mainly with developing practical applications of fundamental knowledge. Basic research is also called pure research.¹⁰⁰

4. Cash Reserve Ratio (CRR)

Cash Reserve Ratio is the percentage of a bank's total deposits that the bank must mark with the Reserve Bank of India (RBI). Simply stated it is the amount of funds that the banks have to maintain with the RBI.¹⁰¹

5. Classification

The result of the systematic grouping and organization of people, objects, ideas, and situations into categories based upon certain common specific traits, principles, or elements for purposes of identification and learning.¹⁰²

6. Clearing House

In education, an agency that collects and disseminates voluminous data. Educational Resources Information Center (ERIC) is a clearing house.¹⁰³

⁹⁸ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

⁹⁹ Ibid, Page 27.

¹⁰⁰ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne
¹⁰¹ Hindustan Times Business October 28, 2009.

¹⁰² Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne.

¹⁰³ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne.

7. Critical Incidents Appraisal¹⁰⁴

A total appraisal of employee performance built up from day-to-day records of particularly good or bad incidents, or typical examples.

8. Critical Incidents Method¹⁰⁵

A method for determining what abilities are needed to do a particular job in order to establish standards of success through actual incidents occurring on the job; used by Flangan to develop charts of the personal and social developments of elementary school children: critical incidents films or tapes are sometimes in teaching to study the causes and possible solutions of problems encountered in achieving success in the activity illustrated by such an incident.¹⁰⁶

9. Critical Path Method (CPM)

CPM is the project network analysis technique for determining the minimum project duration. Critical Path in a set of activities is that subset of activities, which will delay planned completion date for the whole project if any of its activities is subjected to delay.¹⁰⁷

10. Delphi Technique¹⁰⁸

This is succession of iterative brainstorming rounds in which an attempt is made to avoid the interference of psychological factors that lead to reduce the value of brainstorming sessions. The name is derived from the oracle of Apollo, near Delphi in Greece.

11. Data

Data is the plural form of Datum. A datum results from the reduction of information to a single recorded unit. For instance, Radha is 16 years old can be reduced to age, sex or both depending on what is of interest to us. The only requirement is that we are able to classify into meaningful and mutually exclusive categories. Data collection is the process of allocating to categories and counting and data thus collected are presented as a data matrix. This matrix can have any number of dimensions

12. Education Development Index (EDI)

- (i) Education Development Index is simple average of Net Enrolment Ratio (NER) + Survival Rate to Grade V + Gender Equity Index + Adult Literacy. This concept is still in the stage of development in India and no final outcome has yet been arrived at.

¹⁰⁴ A Concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers(P)Ltd New Delhi.

¹⁰⁵ A Concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers P Ltd. New Delhi.

¹⁰⁶ A concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers(P) Ltd. New Delhi.

¹⁰⁷ A Concise Encyclopaedia of Management Techniques by Frank Finch, Allied Publishers(P) Ltd New Delhi.

¹⁰⁸ A concise Encyclopedia of Management Techniques by Frank & Finch Allied Publishers.

- (ii) National University of Educational Planning & Administration (NUEPA)¹⁰⁹ has developed Educational Development Index (EDI) to track the progress of the States towards Universal Elementary Education (UEE). For 2008-09, the following parameters had been taken into account:

S.No.	Component	Indicator
1	Access	1) Percentage of habitations not served. 2) Availability of Schools per 1000 Child Population 3) Ratio of Pry to U.Pry Schools/Sections (Only at Upper Primary stage).
2	Infrastructure	1) Schools with students-classroom ratio >40 2) Schools with Drinking Water facility 3) Schools with Common toilets 4) Schools with Girl's toilets
3	Teachers	1) %of schools with Female teachers(in schools with 2 and more teachers 2) Schools with Pupil-Teacher Ratio >40 3) %of schools with <2 teachers[Pry only] (in schools with more than 15 students) 4) %of schools with >3 teachers(UPS only) 5) Teachers without Professional qualification.
4	Outcomes	1) Gross Enrolment Ratio – Overall 2) Participation of SC children: %SC Population[2001 Census]-% SC Enrolment 3) Participation of ST children: % ST Population [2001 Census] -% ST Enrolment 4) Gender Parity Index in Enrolment 5) Repetition Rate 6) Dropout Rate 7) Ratio of Exit Class over Class 1 Enrolment(Pry Stage only) 8) Transition Rate from Pry to U.Pry level (Only Upper Pry level) 9) % of Appeared Children securing 60%& more marks

¹⁰⁹ MHRD, Annual Report 2008-09, Page 40-41 & Annual Report 2010-11

13. Electronic Data Processing¹¹⁰

Electronic Data Processing is the use of a computer to process data. The term is frequently abbreviated to E.D.P. and is synonymous with Automatic Data Processing.

14. Education Management Information System (EMIS)

EMIS is a formal method of providing educational managers with accurate and timely information so that decision making, planning, project development and implementation and other management functions and operations can be carried out effectively.¹¹¹

15. Estimation

Estimation is to assess the magnitude of an already existing quantity. It is concerned with inference about the numerical value of unknown population values from incomplete data such as a sample. If single figure is calculated for each unknown parameter, the process is called point estimation. If an interval is calculated with which the parameter is likely in some sense, to lie, the process is called interval estimation.¹¹²

16. Feasibility Studies

A technique for discovering the extent to which a proposal is practicable

17. Forced Choice Appraisal

Forced Choice Appraisal is a performance appraisal technique in which the freedom of choice in making assessment is restricted.¹¹³

18. Forced-Choice technique

A technique for presenting answers to test questions in which the individual is required to select an answer among options that are generally equally acceptable but unequally valid; often used to assess the individual's powers of discrimination and scrutiny.¹¹⁴

19. Forecasting¹¹⁵

(a) Forecasting and Prediction are used synonymously in the customary sense of assessing the magnitude, which a quantity will assume at some future point of time: as distinct from estimation – which attempts to assess the magnitude of an already existing quantity.

¹¹⁰ A concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers P.Ltd. New Delhi.

¹¹¹ Literacy Glossary, Asia/Pacific Cultural Centre for UNESCO, Japan.

¹¹² Directory of Statistical Norms (II Edition) by M.G.Kendel & W.R.Buckland. M/s Oliver & Boyd, London

¹¹³ A Concise Encyclopaedia of Management Techniques by Frank Finch Allied Publishers(P)Ltd. New Delhi

¹¹⁴ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

¹¹⁵ Directory of Statistical Terms by M.G.Kendall & W.R Buckland, II Edition, by Oliver & Boyd, London.

- (b) (i) Forecasting is “An estimate of a future trend, event or magnitude on the basis of previous experience”.¹¹⁶ For example the final yield of a crop is forecast during the growing period but estimated at harvest.
- (ii) “A family of techniques each of which aims at to estimate some aspect of the future”¹¹⁷
- (iii) ‘Predicting future events, outcomes, or trends based upon previous experience or data, current information, and forecasting formulae and techniques.’¹¹⁸

20. Group Dynamics¹¹⁹

Group Dynamics refers to “The study of the interaction of the behaviour of individuals as members of a group and of the behaviour of groups generally.”

21. Human Resource Development (HRD)

Human Resource Development (HRD) is used by development economists and educational administrators to denote productive investment in human beings (formal and Non-formal Human education, short term and on the job training) that enhances their knowledge, skills and abilities to perform day-to-day tasks.¹²⁰

22. Human Development Index (HDI)

HDI measures the overall achievements in a country in three basic dimensions of human development, namely: longevity, knowledge and decent standard of living. It is measured by life expectancy, educational attainment (adult literacy and combined primary, secondary and tertiary enrolment) and adjusted income.¹²¹

23. Index

- (i) An Index is a mathematical device (number) which is used to express the observation of a given period in comparison with that of a base period i.e. a cost of living index etc.
- (ii) An Index is a number developed from a ratio by expressing the denominator as a fixed base value, expressing the numerator in terms of this and then expressing the denominator, which is implied.¹²²
- (iii) In printed material, one or more lists with references indicating where particular information can be found; usually alphabetical in organization.¹²³

¹¹⁶ Directory of Education edited by V.Carter V.Good; McGraw-Hill Book Co.,New York.

¹¹⁷ A Concise Encyclopedia of Management Techniques by Frank & Finch,Allied Publishers PLtd. New Delhi.

¹¹⁸ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

¹¹⁹ A Concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers P.Ltd. New Delhi
¹²⁰ Literacy Glossary, Asia/Pacific Cultural Centre for UNESCO, Japan

¹²¹ Asia/Pacific Cultural Centre UNESCO, Literacy Glossary.

¹²² A Concise Encyclopedia of Management Techniques by Frank Finch, Allied Publisher(P) Ltd.

¹²³ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

24. Information

- (i) Oxford dictionary defines information as the act of informing; communication of knowledge or news of some fact or occurrence. Knowledge communicated concerning some particular fact, subject or event etc. "Information Science is sometimes equated with the study of information and communication systems of all types including mechanized data, computerized information and documentation of all types."¹²⁴
- (ii) Statistically, information is data that have been collected, recorded, classified, organized, collated, and interpreted within a framework so that some meaning emerges therefrom.

25. Mass Media

Mass media are means of communicating to large numbers of individuals more or less simultaneously. Used in education as a group term for the press and printed text, films, radios, televisions and popular music.¹²⁵

26. Monte Carlo Technique¹²⁶

A simulation technique applied to queuing situations, in which one draws random numbers from statistical frequency distributions of arrival and service times in order to estimate some parameters of the queue situation.

27. Non-Random Sampling¹²⁷

Any type of sampling that does not select items at random from the population.

28. Operations Research¹²⁸

The term comprises all those procedures concerned with the original design or improvement of production or service operations and may be described as methods study. Studies of an entire process may be made to determine whether Operations or elements of combined, changed in sequence or improved analysis is made of the method, motion, pattern, materials, tools and equipment used in an individual operation to determine the one best way. Work measurement is an integral part of operations analysis as a method of quantitative analysis.

29. Performance Appraisal

Performance Appraisal is systematic assessment of an individual's performance in order to assess his training needs, potential for promotion, eligibility for a merit increment as part of pay or salary review or for management succession

¹²⁴ International Dictionary of Education by G.Terry Page & G.B.Thomas with Mr.A.R.Marshal Kogan Page, London; New York.

¹²⁵ International Dictionary of Education by G.Terry Page & J.B.Thomas, Kogan Page, London 1977.

¹²⁶ A Concise Encyclopedia of Management Techniques by Frank & Finch, Allied Publishers P Ltd New Delhi.

¹²⁷ A Concise Encyclopedia of Management Techniques, Frank & Finch, Allied Publishers P. Ltd., New Delhi.

¹²⁸ A concise Encyclopedia of Management Techniques, Frank & Finch, Allied Publishers (P) Ltd, New Delhi.

planning. Methods of appraisal include the controlled report, factor rating, forced choice ranking system, task based appraisal etc.¹²⁹

30. Planning

- (i) Planning is the formal process of making decisions for the future of individuals and organizations. Planning involves dealing on aims and objectives, selecting to correct strategies and program to achieve the aims, determining and allocating the resources required and ensuring that plans are communicated to all concerned. Plans are statement of things to be done and the sequence and timing in which they should be done in order to achieve a given end.¹³⁰
- (ii) Marvin Peterson has defined 'Planning' as conscious process by which an institution assesses its current state and the likely future condition of its environment, identifies possible future states for itself, and then develops organizational strategies, policies and procedures for selecting and getting to one or more of them.¹³¹

31. Policy

Policy is a statement of aims, purposes, principles or intentions which serve as continuing guidelines for management in accomplishing objectives.¹³²

32. Prediction¹³³

- (i) Prediction is defined as 'to tell in advance; to foretell the future; prophesy; to predict the weather; to predict the fall of a civilization'.¹³⁴ It is also referred to the process of forecasting the magnitude of statistical variate at some future point of time. In statistical contexts, the word may also occur in slightly different meanings; e.g. in a regression equation expressing a dependent variate y in terms of dependent x's; the value of given for y by specified values of x's is called the predicted value even when no temporal element is involved.
- (ii) Prediction in the educational context is defined as a probability statement of the degree of the scholastic success likely to be achieved by a student, judgment being based on the case study method with particular emphasis on the result of the scholastic aptitude test scores.¹³⁵

The errors of estimation involved in prediction from a regression equation are sometimes referred to as 'forecasting errors' but this expression is better avoided in such a restricted sense. Likewise terms such as 'Index Numbers of forecasting

¹²⁹ International Dictionary of Education by G.Terry Page & J.B. Thomas Kogan Page, London/ Nicolas Publishing Company, New York.

¹³⁰ International Dictionary of Management (III Edition) by Hano Johannsen & T.Gerry Pag, 1996

¹³¹ Encyclopedia of Education (2nd Edition) by James W. Guthrie. Macmillan Reference, USA

¹³² Intrnational Directory of Management (III Edition), by Hano Johannsen & T Gerry Page, 1986

¹³³ Directory of Education by Carter V.Good, McGRAW-Hill Book Co.New York..

¹³⁴ The Random House Dictionary of English Language, edited by Jess Stein and Lauraence Urdang, Random House, New York.

¹³⁵ Directory of Education, edited by Carter V.Good; McGraw-Hill Book Company, New York

efficiency', in the sense of residual error variances in regression analysis are to be avoided.

33. Programs

Programs are approved and authorized means, strategies and details of procedures for achieving the targets. The goals are desired ends to be achieved. The Central Government adopted NPE 1986 and for achieving the goals mentioned therein they simultaneously prepared the POA (the Programme of Action) to achieve the goals mentioned in the NPE 1986.

34. Program Evaluation and Review Technique (PERT)

The technique was adopted by industry to plan for system defense programme.¹³⁶ "PERT: Acronym for 'Program Evaluation and Review Technique', a planning and control process that requires identifying the accomplishment of programs and the time and resources needed to go from one accomplishment to the next. A PERT diagram shows the sequence and inter-relationship of activities from the beginning of a project to the end and uses probabilities for activity start and completion dates"¹³⁷

35. Projection¹³⁸

Projection is an estimate of future values based on current trends. This term is used in two connected senses:

- In relation to a time series, it means the forecast value of the series; a value projected forward from current experience;
- More recently, it has been used in probability theory to denote the conditional expectation of a variate. Since a regression equation gives the expected value of the dependent variate based upon the values of the predicted (independent) variates and such equations are used for forecasting or prediction.

36. Questionnaire

Questionnaire is a group or sequence of questions designed to elicit information upon a subject or sequence of subjects from informants. A good questionnaire has a well-designed plan which makes collected data amenable to computerization, data cleaning and data processing.

37. Qualitative Research

Qualitative Research is when the researcher uses data from document analysis, interviews and/or observations often gathered into case studies or other descriptive formats.¹³⁹

¹³⁶ A concise Encyclopedia of Management Techniques by Frank Finch by M/s Allied Pub.(P)Ltd, NewDelhi.

¹³⁷ Directory of Education, Vol 2 (General Editor) Prof.S.K.Singh, ommonwealth Publishers, Delhi

¹³⁸ International Directory of Management (III Edition) by Hano Johannsen & T Gerry Page, 1986

¹³⁹ International Encyclopaedia of Education, 3rd Edition (Vol.4) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010, Page 656

38. Quantitative Research

Quantitative Research is when the researcher uses data from a test, survey or experimented performance analyzed with statistical techniques.¹⁴⁰

39. Random Sampling

A sampling technique in which each member of the population has an equal probability of being sampled and in which each item sampled is determined by chance.¹⁴¹

40. Repo Rate

The rate at which Banks can borrow from RBI (The rate at which RBI lends money to Banks for short term). OR the rate at which banks borrow from RBI.¹⁴²

41. Research

Research is a process in which measurements are taken of individuals or organizations and the resulting data are subjected to analysis and interpretation. Special care is taken to provide as accurate an answer as possible to the posed question by subjecting beliefs, conjectures, policies, positions, sources of ideas traditions and the like ... to maximum criticism in order to counteract and eliminate as much intellectual error as possible. (Bartley. Pp 139-140) In collecting the necessary information, a variety of methodologies and procedures can be used, many of which are shared by such disciplines as education, psychology, sociology, cognitive science, anthropology, history, and economics.

Evidence – the Foundation of Research: In education research is approached from two distinct perspectives on how knowledge should be acquired. Research using quantitative methods rests on the belief that individual groups, organizations, and the environment in which they operate have an objective reality that is relatively constant across time and settings. Consequently, it is possible to construct measures that yield numerical data on this reality which can then be further probed and interpreted by statistical analyses. In contrast, qualitative research methods are rooted in the conviction that features of the social environment are constructed as interpretations by individuals and that these interpretations tend to be transitory and situational. It is only through intensive study of specific cases in natural settings that these meanings and interpretations can be revealed and common themes deduced. Although debate over which perspective is right continues, Qualitative and quantitative research share a common feature – data are at the center of all forms of inquiry.

“Research is a process of systematic inquiry, investigation, and analysis of data in order to increase knowledge, test hypotheses, and arrive at conclusions.”¹⁴³

¹⁴⁰ International Encyclopaedia of Education, 3rd Edition (Vol 4) by Penelope Peterson, Eva Baker and Barry McGrow, Academic Press, Boston, 2010, Page 656.

¹⁴¹ A Concise Encyclopaedia of Management Techniques, by Frank Finch, Allied Publishers(P) Ltd., New Delhi.

¹⁴² HT Business dt.28-10-2009

¹⁴³ Same as 169

42. Reliability

The degree to which a psychological test can be depended on to produce consistent results in repeated uses.¹⁴⁴

43. Reverse Repo Rate

The rate that banks get when they keep money with RBI. Simply stated, reverse repo rate is the rate at which RBI borrows from the banks.¹⁴⁵

44. Sampling¹⁴⁶

Sampling is the process of measuring a physical quantity at finite intervals, usually at equal intervals of time.

45. Scalar Principle¹⁴⁷

Concept that subordinates should communicate with their seniors only through the intermediate superiors following the chain of command.¹⁴⁸

46. Schedule

A schedule is a specialized series of a group or sequence of questions designed to elicit data/information upon a subject. Usually, it is completed by an Investigator on the basis of data/information supplied by the particular member of the population chosen for inclusion in the sample but sometimes it is completed by that member himself/herself as in postal enquiries.

47. School Mapping

- (i) School mapping is an exercise which is undertaken normally after a survey of all existing facilities like school building (i.e. availability of class rooms, laboratories, lavatories, drinking water facilities etc.) library, library books, teachers, equipment, consumable stores, availability of schools in habitations/villages, etc. so that the deficiencies are pin-pointed for taking corrective measures.
- (ii) In Model Rules 2009 the central Govt. in sec. 2: Definitions have clarified "School Mapping as follows. "g. school mapping means planning school locations to overcome social barriers and geographical distance".

48. Sequencing¹⁴⁹

A group of optimization techniques in which the objective is to determine the best sequence of activities, machines, etc. to satisfy a stated criterion.

¹⁴⁴ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.
H.T Business dt. 28.10.2009.

¹⁴⁵ A Concise Encyclopedia of Management Techniques, Frnk & Finch, Allied Publishers P Ltd. New Delhi.

¹⁴⁶ A Concise Encyclopedia of Management Techniques, Frank & Finch, Allied Publishers P.Ltd. New Delhi.

¹⁴⁷ International Dictionary of Management (III Edition) by Hano Johannsen & G.Terry Page, Kogan Page, London.

¹⁴⁸ A Concise Encyclopedia of Management Techniques, Frank & Finch, Allied Publishers P Ltd. New Delhi.

¹⁴⁹ A Concise Encyclopedia of Management Techniques, Frank & Finch, Allied Publishers P Ltd. New Delhi.

49. Stratified Sampling

Stratified Sampling is a sampling technique in which a population is divided into strata or layers and a sample is drawn from each stratum or layer.

50. Synergy

Where combining two or more courses of action is more effective than pursuing them individually.¹⁵⁰

51. Types of planning

There are two basic kinds of planning: strategic and operational. Strategic planning, also known as long range, comprehensive, integrated, overall and managerial planning, has three dimensions: the identification and examination of future opportunities, threats and consequences; the process of analyzing an organization's environment and developing compatible objectives along with the appropriate strategies with policies capable of achieving those objectives; and the integration of the various elements of planning into an overall structure of plans so that each unit of the organization knows in advance what must be done when and by whom. Operational planning also known as divisional planning is concerned with the implementation of the larger goals and strategies that have been determined by strategic planning; it is also concerned with improving current operations and with the allocation of resources through the operating budget.¹⁵¹

51.1 **Macro Planning:** Macro Planning deals with broad entities having such large magnitude, aggregates, and averages as National Income, Per Capita Income, National Expenditure on consumption and income; Balance of Trade and Balance of Payment, National Population, Total Enrolment, Enrolment Ratios, Age structure etc. Thus macro-planning deals with broad plans not taking note of break-downs between skills or schemes implementation at grass root level.

51.2 **Micro-Planning:** As against macro planning, micro economic planning analyses consumption and investment of households, prices of particular goods, output, sales and purchase decisions of individual firms and industries. Micro Planning in education starts from grass root level. For instance, the head of institution has to plan how best he/she should bring all the children to schools in his/her area. Here planning at the village level has to be done. How best individual schools can bring and retain all the children in schools. It is also done in another way. How schools in individual habitations can be provided. Whether eligible students are getting their scholarships on time etc.

51.3 **Decentralised Planning:** Decentralization implies distribution of administrative powers and functions among local constituents. Decentralized planning means to confer the authority of planning for the local development. The 73rd and 74th constitutional amendment has placed the primary education under the control of

¹⁵⁰ International Dictionary of Management (Third Edition) by Hano Johannsen & G.Terry Page, Kogan Page, London.

¹⁵¹ Directory of Education, Vol.2, by (General Editor) Prof.S.K. Singh, Commonwealth Publishers, Delhi.

Panchayati Raj Institutions. Under the decentralized planning model, all local units prepare their plans after due consultations with their people and analysis of the strengths and weaknesses of the planning area. These local level plans are, then coordinated and summated to make the district plan by taking into account the availability of the physical and financial resources. Apart from this, in India the Government have also delegated financial and administrative powers to the heads of educational institutions to which budget is also allocated for being spent by them according to their requirements. Such financial delegations are available in the General Financial Rules. The administrative powers are delegated according to the provisions contained in the state Education Code of each state.

- 51.4 Many times decentralization is viewed as something opposite to centralization. In the socialist countries, the concept of centralized planning was practiced as the Central authority did all planning. These plans were then passed on to the grassroots for implementation.
- 51.5 ***Rolling Plan:*** A long term plan that is revised regularly and each revision is projected forward again for the same period as the original plan.¹⁵² Thus, a three-year Rolling Plan might be revised each year so that at the end of year one, the plan is revised and fresh projections made to the end of the year four.¹⁵³
- 51.6 ***Strategic Planning:*** The managerial process of developing and maintaining a viable link between the organization's objectives and resources and its environmental opportunities¹⁵⁴.
- 51.7 ***Contingency Planning:*** A planning technique which determines actions to be taken by individuals and groups at specific places and times if abnormal threats or opportunities arise.¹⁵⁵
- 51.8 ***Corporate Planning:*** A technique, which aims to integrate all the planning activities of a company and relate them to the best overall objectives for the company.¹⁵⁶
- 51.9 ***Manpower Planning:***
- (i) A generic term for those techniques used to arrive at a specification of any aspect of future manpower requirement, deployment or development needs¹⁵⁷ Manpower planning has been an important feature of centralized planning in socialist countries. The Government of India has established a specialized institute to undertake manpower planning exercises in the Indian context.
 - (ii) Manpower planning is to choose right people at right places in right numbers and at right times.
- 51.10 ***Process Planning:*** Determining how the product or part should be manufactured by referring to the component and assembly drawings and

¹⁵² International Dictionary of Education by G.Terry Page & J.B.T.Homas/A.R.Marshall,London

¹⁵³ International Dictionary of Management by Hano Johannsen & G.Terry Page, 1986, London.

¹⁵⁴ International Dictionary of Management by Hano Johannsen & G.Terry Page, 1986, London.

¹⁵⁵ A concise Encyclopedia of Management Techniques by Frank Finch, by M/sAllied Pub.(P) Ltd New Delhi.

¹⁵⁶ A concise Encyclopedia of Management Techniques by Frank Finch, Allied Publishers.

¹⁵⁷ A concise Encyclopedia of Management Tech.by Frank Finch, Allied Publishers (P)Ltd N.Delhi

- drafting an operation sequence for each component;
- deciding the machines or hand tools to be used;
- Drawing up the manufacturing lay out for each component and sub assembly, the departments and type of labour to perform the operations and specifying the tools, fixtures and gauges to be used.¹⁵⁸

51.11 ***Indicative Planning:*** Indicative Planning is planning by agreement and indication of desirable targets rather than by compulsion or decree. It is also known as participative planning or planning by consent.

51.12 ***Strategic & Tactical Planning:*** Strategic planning is concerned with the long-term future in broad outline, with summaries of objectives, and tactical planning with the short-term future planning with details of objectives; and both list the resources and methods to be used.¹⁵⁹

52. Variable¹⁶⁰

Generally, any quantity which varies. A variable is a quantity, which is susceptible of continuous change while others remain constant. US Department of Education, office of Research & Improvement have defined 'variable' as a quantity that may assume any one of a set of values.¹⁶¹

52.1. ***Dependant variable:*** A dependant variable is that which depends for its value on another variable.

52.2. ***Independent Variable:*** An independent variable is a variable arbitrarily assumed as one on which other related variables shall be regarded as dependant.

52.3 ***Exogenous variable:*** Variables for which the values are determined outside the model but which influence the model.

Samuelson defines variable as 'a magnitude of interest that can be defined and measured. Important variables in economics include prices, quantities, interest rates, exchange rates' ... etc.¹⁶²

53. Variance

The difference between a standard value and an actual value.¹⁶³

54. Vision

'Vision is something which is apparently seen otherwise than by ordinary sight. The action or fact of seeing or contemplating something not actually present to the eye; mystical or super-natural in sight or foresight.¹⁶⁴ Vision is to articulate the purposes of an organization into idioms and goals.

¹⁵⁸ A concise Encyclopaedia of Management Techniques by Frank Finch, M/s Allied Pub.(P) Ltd N.Delhi.

¹⁵⁹ A Concise Encyclopedia of Management Tech. by Frank Finch, Allied Publishers(P)Ltd;ND

¹⁶⁰ A concise Encyclopedia of Management Tech.by Frank Finch,Allied Publishers(P)Ltd.N.D.

¹⁶¹ Projections of Education Statistics to 2007, Education Department, Washington D.C.

¹⁶² Samuelson et:al: ibid p. 753

¹⁶³ A Concise Encyclopedia of Management Techniques, Frank & Finch, Allied Publishers Pvt.Ltd. New Delhi.

¹⁶⁴ Oxford English Dictionary (Vol.XII), Glavendon Press, London, 1970.

C. LEVELS AND TYPES OF EDUCATION

1. Basic Education

- (i) Basic education refers to a whole range of educational activities that takes place in different settings and that aim to meet basic learning needs as defined in World Declaration on Education for All (Jomtein, 1990). It thus comprises both formal schooling (Primary and sometimes lower secondary) as well as a wide variety of non-formal and informal public and private educational activities offered to meet the defined basic learning needs of groups of people of all ages.¹⁶⁵
- (ii) Basic Education according to UNESCO is education intended to meet basic learning needs; it includes instructions at the first or foundation level on which subsequent learning can be based; it encompasses early childhood and primary (elementary) education for children as well as education in literacy, general knowledge and skills for youth and adult. It may extend into secondary education in some countries.¹⁶⁶
- (iii) In 1937, when Congress Ministries assumed office in seven provinces, they faced the problem of introducing free, universal and compulsory primary education in the wake of, among others, non-availability of financial resources. At this juncture Mahatma Gandhi proposed self-supporting free primary education of 7 years duration through the introduction of useful productive craft to meet the teachers salaries. The First Conference of National Education at Wardha on 22-23 October 1937 considered this proposal and appointed a Committee under the chairmanship of late Dr. Zakir Husain for preparation of detailed syllabus which, in turn, submitted its Report in December, 1937. On these lines most of the Primary Schools and Upper Primary Schools were converted into Junior Basic Schools and Senior Basic Schools respectively. However, this experiment didn't materialize and all Junior Basic Schools and Senior Basic Schools were re-named as Primary Schools & Upper Primary Schools.

2. Basic Learning Needs

Basic Learning Needs comprise both (i) essential learning tools, such as: literacy, oral expression, numeracy, problem solving etc; and (ii) the basic learning content such as: knowledge, skills, values, attitudes etc required by human beings to be able to survive, to develop their lives to make informed decisions and to continue learning.¹⁶⁷

¹⁶⁵ EFA the Year 2000 Assessment – Guidelines, UNESCO, 1998

¹⁶⁶ Asia Pacific Cultural Centre for UNESCO, Literacy Glossary

¹⁶⁷ Asia Pacific Cultural Centre for UNESCO, Literacy Glossary

3. Comparative Education

The study of educational systems of different countries is defined as comparative education. "Comparative education' and 'international education' are often confused. The former refers to a field of study that applies historical, philosophical and social sciences theories and methods to international problems in education. Its equivalents in other fields of academic study are those dedicated to the trans-societal study of other social institutions, such as comparative government, comparative economics, and comparative religion. Comparative education is primarily an academic and inter-disciplinary pursuit."¹⁶⁸

4. Compulsory Education

- (i) Compulsory education refers to the number of years or the age-span during which children and youth are legally obliged to attend school for a specified number of years.¹⁶⁹
- (ii) 'That which must be attended or undertaken by the law of a particular country or state. The legal requirement may be education from a certain starting age to a certain school-leaving age or it may be education to a certain standard'.¹⁷⁰
- (iii) The term compulsory elementary education under the Right of Children to Free and Compulsory Education Act, 2009 [No.35 of 2009] has been defined in Explanation below Section 8, Sub-Section (a) as follows:

Explanation: The term 'compulsory education' means obligation of the appropriate Government to: "provide free elementary education to every child of the age of six to fourteen years, and,- ensure compulsory admission, attendance and completion of elementary education by every child of the age of six to fourteen years".

5. Discipline

- (i) Discipline is a defined body of knowledge for learning, research and instructions. In this sense, it is a branch of knowledge and academic study.
- (ii) In ordinary parlance, it is training of people to obey rules, regulations and code of conduct and behaviour.

6. Duration of level of education

Duration is the number of grades (in years) in a given level of education.

¹⁶⁸ E. Epstein in International Encyclopedia of Education by Torsten Husn, T.Neville Postiethwaite (eds) Oxford: Pergamon, New York: Elsevier Science, 1994, p.918

¹⁶⁹ EFA 2000 Year Assessment – Guidelines, UNESCO, 1998

¹⁷⁰ International Dictionary of Education, by G.Terry Page& G.B.Thomas,Kogan Page,London 1997

7. Education

"The processes by which societies deliberately transmit their accumulated information, knowledge, understanding, attitudes, values, skills competencies and behaviours across generations"¹⁷¹

Different philosophers and educationists have defined education differently. Froebel defined education `as the un-foldment of what is already enfolded in the germ. It is the process by which the child makes internal external.' 'Education can be thought of as the transmission of the values and accumulated knowledge of the society'.¹⁷² For Swami Vivekananda, "education is the manifestation of the divine perfection already existing in man". According to Mahatma Gandhi "Education is an all round drawing out of the best in the child and man - body, mind and spirit"*. However, for the purpose of educational statistics, education, according to UNESCO, "is understood to involve, organized and sustained communication designed to bring about learning".¹⁷³ Here, the words organized, sustained, communication and learning need to be explained.

- 7.1 **Organized**: means planned in a pattern or sequence with explicit or implicit aims. It involves a providing agency (person or persons or body) which sets up the learning environment and a method of teaching through which the communication is organized. The method is typically someone who is engaged in communicating or releasing knowledge and skills with a view to bringing about learning. It can also be indirect or inanimate e.g. a piece of computer software, a film or tape etc.
- 7.2 **Sustained**: means that the learning experience has the elements of duration and continuity. No minimum duration has been stipulated. The appropriate minima differ from course to course and program to program.
- 7.3 **Communication**: Communication is a relationship between two or more persons involving the transfer of information in the form of messages, ideas, knowledge, strategies, skills etc. Communication may be verbal or non-verbal, direct/face to face, or indirect/remote, and may involve a wide variety of channels and media.
- 7.4 **Learning**: Learning is any improvement in behavior, information, knowledge, understanding, attitudes, values, skills etc.

8. Education System

Education system is the overall network of institutions and programs through which education of all types and all levels is provided to the population.

¹⁷¹ ISCED 2011, UNESCO

¹⁷² The New Encyclopaedia Britannica Inc. P.1 Vol.18(1768) Macropaedia Robert P.Gwinn & Petter B. Norton.

* Educational quotations by R.N. Safaya, 1989, The Associated Publishers, Ambala Cant – 133001.

¹⁷³ ISCED 1997, UNESCO, Paris, November, 1997)

9. Educational Administration

In professional teacher education, it is the study of planning, organizing, directing and managing the human and material resources and systems in an educational institution.¹⁷⁴

10. Early Childhood Care & Education (ECCE)

ECCE offer a structured and purposeful set of learning activities either in a formal institution or in a non-formal children program. The age-span covered under ECCE is from conception to 6 years. Emphasis has been given to a child centered approach, play-way and activity based learning in place of formal methods of teaching. In addition linkages between Integrated Child Development Services (ICDS) and other ECCE programs are also stressed to be established. National Policy on Education (1986) as amended has given a great deal of importance to ECCE as a crucial input in the strategy of human resource development. The ECCE programs include:

- I.C.D.S.
- Scheme of assistance to voluntary organisations for conducting ECCE centres.
- Balwadis and Day care centres run by voluntary agencies with Government assistance.
- Pre-Primary schools run by the State Governments, Municipal Corporations and other governmental and non-governmental agencies.
- Maternal and child health services through primary health centres, sub-centres and other agencies.

Pre-primary education in some states starts at the age of 4 years instead of 3 years. According to 86th Constitutional amendment, now the State shall endeavor to provide early childhood care and education for all children until they complete the age of six years.

11. Formal Education

- (i) Formal education refers to intentionally organized full time learning events with regular fixed duration and schedule, structured hierarchically with chronological succession of levels and grades, admission requirements and formal registration; catering mainly to the population of 5-25 years old, which are held within established educational institutions and using predetermined pedagogical organization; contents, methods and teaching/learning materials.¹⁷⁵

¹⁷⁴ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

¹⁷⁵ Literacy Glossary Asia/Pacific Cultural Centre for UNESCO, Japan.

- (ii) Education in recognized educational institutions, as distinguished from what one has learned outside schools and colleges is formal education.¹⁷⁶
- (iii) "Formal education is education that is institutionalized, intentional and planned through public organizations and recognized private bodies and, in their totality, make up the formal education system of a country. Formal education programmes are thus recognized as such by the relevant national educational authorities or equivalent e.g. any other institution in co-operation with the national or sub-national educational authorities. Formal education consists mostly of initial education, vocational education, special needs education and some parts of adult education are often recognized as being part of the formal education system."¹⁷⁷

12. General Education

- (i) General education is mainly designed to lead participants to a deeper understanding of a subject or group of subjects, especially but not necessarily, with a view to preparing pupils for further (additional) education at the same or a higher level. Successful completion of these programs may or may not lead the participants to a labour-market relevant qualification at this level. These programs are typically school-based. Programs with a general orientation and not focusing on a particular specialization should be classified in this category.¹⁷⁸
- (ii) "General education is education that is designed to develop learners' general knowledge, skills and competencies and literacy and numeracy skills, often to prepare students for more advanced educational programmes at the same or higher ISCED levels and to lay the foundation for lifelong learning. General educational programmes are typically school-or college-based. General education includes educational programmes that are designed to prepare students for entry into vocational education, but that do not prepare for employment in a particular occupation or trade or class of occupations or trades, nor lead directly to a labour market relevant qualification."¹⁷⁹

12.1 **Knowledge:** Knowledge is the aggregate of facts, information and principles that an individual has acquired through learning and experience; formal education seeks to raise levels of knowledge systematically.¹⁸⁰

12.2 **Intelligence:**

- (i) Psychologically, there are different technical meanings of intelligence, such as verbal reasoning, quantitative thinking, abstract analysis and manipulation of geometric shapes and recognition of similarities and differences between pictorial objects; but intelligence in popular understanding is mental abilities

¹⁷⁶ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

¹⁷⁷ ISCED-2011, UNESCO.

¹⁷⁸ Instructional Manual for completing the Questionnaire on Statistics on Education, UNESCO, Paris, 1998.

¹⁷⁹ ISCED-2011, UNESCO

¹⁸⁰ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A HudanGroup Book Van Nostrand Reinhold Co., New York-London-Toronto.

enabling one to think rationally, learn readily, act purposefully and deal effectively with one's environment.¹⁸¹

- (ii) 'General Mental ability due to the integrative and adaptive functions of the brain that permits complex, unstereotype, purposive responses to novel or changing situations involving discrimination, generalization, learning concept formation, inference, mental manipulation of memories, images, words and abstract symbols, education of relations and correlates reasoning and problem solving.'¹⁸²

13. Grade

Grade is a stage of instruction usually covered in one school year.¹⁸³ In India this is also known as class. Classes are further divided into sections depending upon the strength of students, medium of instruction, performance of students etc.

14. Inclusive Education

- (a) Inclusive education means that all students (disabled and non-disabled children and young people) in a school/college study together, regardless of their strengths or weaknesses in any area and become part of the school/college community.¹⁸⁴ Here children of diverse socio-economic backgrounds/abilities study together.

- (b) SSA provides financial support upto Rs.1200/- per child for integration of disabled children. (2) The interventions under SSA for inclusive education are identification, functional and formal assessment, appropriate educational placement, preparation of individualized Educational Plan, provision of aids and appliances, teacher training, resource support, removal of architectural barriers, monitoring and evaluation and a special focus on girls with special needs. (3) Residential bridge courses for children with special needs (CWSN). (4) Home based education for children with severe profound disabilities with the objective of either preparing CWSN for schools and for life, by imparting basic life skills.¹⁸⁵

15. Inter-Disciplinary

Two or more disciplinary bodies of knowledge interacting in research, learning and instructions.

16. Professional Education

Professional education is all that education which has direct value as preparation for professional calling or employment in life. It is differentiated, on the one hand, from vocational education which relates to those employments of social grades

¹⁸¹ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A Hudan Group Book-Van Nostrand Reinhold Co., New York-London -Toronto

¹⁸² Concise Encyclopedia of Science & Technology by Sybil P.Parker, McGRAW-HILL Book Co. New York.

¹⁸³ EFA the Year 2000 Assessment, Technical Guidelines, UNESCO, 1998, p.28.

¹⁸⁴ Dictionary of Primary Education by Henal Ashraf. A.P.H. Publishing Co., New Delhi, 1999.

¹⁸⁵ Annual Report 2008-09, MHRD Page 31-32.

not recognized as profession and, on the other hand, from the general or so called 'liberal' education which has no specific practical application in view.'¹⁸⁶

17. Special Education

- (i) Special Education i.e. education specially designed for exceptional students who, due to physical or mental handicap, extraordinary mental capacity students or special circumstances (e.g. a migratory or unusual way of life) must be provided with special aids or special teaching facilities. In many countries special schools or special programmes are provided for such students.¹⁸⁷
- (ii) Special education was mainly understood to refer to the education of children with disabilities that takes place in special schools or institutions distinct from, and outside of, the institutions of the regular school system (non-integrated). However, in many countries today a large proportion of disabled children are in fact educated in institutions of the regular system (integrated). Moreover, the concept of 'children with special educational needs' extends beyond those who may be included in handicapped categories to cover also those who are failing in school for a wide variety of other reasons that are known to be likely to impede a child's optimal progress.¹⁸⁸
- (iii) Special education, as its name suggests, is a specialized branch of education. Claiming lineage to such persons as Jean-Marc-Gaspard Itard (1775-1838), the physician who tamed the wild boy of Aveyron and Anne Sullivan Macy (1866-1936), the teacher who worked miracles with Helen Keller, Special Educators teach those students who have physical cognitive language, learning sensory, and/or emotional abilities that deviate from those of the general population. Special educators provide instruction specifically tailored to meet individualized needs, making education available to students who otherwise would have limited access to education. In 2001, special education in the United States was serving over five million students.

18. Technical Education

Technical education designed at upper secondary and lower tertiary levels to prepare middle level persons (technicians, middle management etc.) and at University level to prepare engineers and technologists for higher management positions. Technical education includes general education, theoretical, scientific and technical studies and related skill training. The component of technical education may vary considerably depending on the types of personnel to be prepared and the education level.¹⁸⁹

19. Tertiary Education

Tertiary education is that education which follows the completion of secondary education or its equivalent. Thus, tertiary education includes higher education

¹⁸⁶ Encyclopaedia of Education, Macmillan Co. & Free Press, New York.

¹⁸⁷ Manual for collection of adult education statistics (ISCED)UNESCO, Paris, 1975, Para 20.

¹⁸⁸ Manual for collection of Statistics on Education, UNESCO, Paris, 1998 Page 3.

¹⁸⁹ Directory of Primary Education by Henal Ashraf A.P.H. Publishing Co. New Delhi, 1999.

and the more advanced parts of further education though the term is more often used in the U.K. in a sense excluding higher education.¹⁹⁰

“Tertiary education builds on secondary education, providing learning activities in specialized fields of education. It aims at learning at a high level of complexity and specialization. Tertiary education includes what is commonly understood as academic education, but is broader than that because it also includes advanced vocational or professional education.”¹⁹¹

20. Vocational Education

- (i) Vocational education is designed mainly to lead participants to acquire the practical skills, know-how and understanding necessary for employment in a particular occupation or trade or class of occupations or trades. Successful completion of such programs can lead, but not necessarily to a labour-market relevant vocational qualification recognized by the competent authorities in the country like Ministry of Labour & Employment, Education etc¹⁹²
- (ii) “Vocational education is education that is designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation or trade or class of occupations or trades. Vocational education may have work-based components (e.g. apprenticeships). Successful completion of such programmes leads to labour-market relevant vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labour market.”¹⁹³

21. ISCED 1997

ISCED is the International Standard Classification of Education¹⁹⁴ for the purpose of cross-country comparisons, classification and reporting of educational statistics to UNESCO. Designed by UNESCO in early 1970's to serve as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally. It presents concepts, definitions and classifications. It is a classification of educational programs and has been defined on the basis of their educational content as an array or a sequence of educational activities, which are organized to accomplish a pre-determined objective or a specified set of educational tasks. Since it is difficult to define the content of a program level in an abstract way, proxy criteria are used to help describe educational programs and determine their levels. ISCED excludes communication that is not designed to bring about learning. It also excludes various forms of learning that are not organized.¹⁹⁵ The classification was first developed by UNESCO in 1976 and then amended in 1997 and again in 2011. Both ISCED 1997 and ISCED 2011 have been included in this volume at Appendix “e-2” and Appendix “e-3”.

¹⁹⁰ International Dictionary of Education by G.Terry Page & J.B.Thomas, Kogan Page, London,1977.

¹⁹¹ ISCED-2011, UNESCO.

¹⁹² Instructional Manual for completing the Questionnaire on Statistics of Education, UNESCO, Paris, 1998

¹⁹³ ISCED-2011, UNESCO.

¹⁹⁴ ISCED 1997 – UNESCO, Paris, November, 1998.

¹⁹⁵ UNESCO Manual of Instructions 1998 and ISCED 1997, UNESCO, Paris 1997

22. Levels of Education

Based on ISCED 1997, UNESCO has divided levels of education for cross country comparison of education and classification of educational statistics as under:

Levels of education for cross country comparison and classification of education statistics

Proxy Criteria for Contents		Name of the level	Code	Complementary Dimensions
Main Criteria	Subsidiary Criteria			
Educational Properties School or centre based Minimum age Upper age limit	Staff qualification	Pre-Primary education	0	None
Beginning of systematic apprenticeship of reading, writing and mathematics	Entry into the nationally designated primary institutions or programmes Start of compulsory education	Primary education First stage of basic education	1	None
Subject presentation Full implementation of basic skills and {? foundation for lifelong learning	Entry after some 6 years of primary education End of the cycle after 9 years since the beginning of primary education End of compulsory education Several teachers conduct classes in their field of specialization	Lower secondary education Second stage of basic education	2	Type of subsequent education or destination Programme orientation
Typical entrance qualification Minimum entrance requirement		(Upper) Secondary education	3	Type of subsequent education or destination Programme orientation Cummulation duration since the beginning of ISCED level 3
Entrance Requirement Content Age Duration		Post Secondary Non-tertiary education	4	Type of subsequent education or destination Cumulative duration since the beginning of ISCED level 3 Programme

				orientation
Minimum Entrance requirement Type of certification Obtained Duration		First stage of tertiary education (not leading directly to an advanced research qualification)	5	Type of Programmes Cummulative theoretical duration at tertiary National degree and qualification structure
Research oriented content Submission of thesis	Prepare graduates for faculty and research posts	Second stage of tertiary education (leading to an advanced research qualification)	6	None

Source: International Standard Classification of Education, UNESCO, Nov.1997

The description of ISCED 1997 classification of education is given at Appendix (e-2)

23. Section

All students in a grade or class are divided into groups for convenience of teaching. Each such group is called a section. In a big class/grade there can be a number of sections labeled as A, B, C, D etc. Sections are also formed for the following reasons:

- To teach various types of optional subjects;
- To cater to the requirements of children offering different mediums of instructions; and,
- To segregate poor performing students from those of high scoring Students. This is also called as ability based schools.

The structure of education and learning in India has undergone significant changes over the last 50 years. The increasing complexity of education systems, often reflecting more choices both between types of programs and modes of attendance have resulted in classificatory problems. The multiple entry system has been useful.

23.1 **Level 0:** Pre-Primary level of education is the initial stage of organized instruction, designed primarily to introduce very young children to a school-type environment, i.e. to provide a bridge between the home and a school based atmosphere. It is generally confined to 3-5/6 year's age group.

23.2 **Level 1:** Primary education usually begins at the age of 5 or 6 years and generally lasts 4 to 5 years in India. In some countries it lasts 6 years. Programs at the primary level generally require no previous formal education although it is becoming increasingly common for children to have attended a pre-primary

program before entering primary education. Level 1 gives students a sound basic education in reading, writing and mathematics along with elementary understanding of other subjects of social studies.

- 23.3 **Level 2:** Upper primary or lower secondary level of education generally continues the basic programs of the primary level, although teaching is typically more subject-focused often requiring more specialized teachers who conduct classes in their fields of specialization.
- 23.4 **Level 3:** Upper secondary level of education: Instructions in this level are more organized along subject matter lines than lower secondary level and teachers need to have a higher level or more subject specific qualifications than at lower secondary level. The entrance age is 15 or 16 years and duration ranges between 2-5 years of schooling. This level may either be terminal and/or preparatory for tertiary education.
- 23.5 **Level 4:** Post Secondary non-tertiary: Level 4 was introduced in ISCED-97 to cover programs that straddle the boundary between upper secondary and post secondary education. Such programs are available in Europe. These programs are not considered as tertiary programs. In India we include under this category programs like Basic Teachers Training, Diploma courses in Engineering and Technology, Diploma courses in primary education etc. for which the minimum school qualification is 12th pass.
- 23.6 **Level 5:** First stage of tertiary education: The curriculum of programs at this level has a strong theoretical foundation; emphasizing the liberal Arts and Sciences (History, Philosophy, Mathematics etc.) or preparing students for professions with high skills requirements (e.g. medicine, dentistry, architecture etc.). Have a minimum cumulative theoretical duration of 3 years full-time equivalent although they are typically 4 or more years. In case a program has 3 years full-time duration it is usually preceded by at least 13 years of previous schooling. Some programs directly lead the incumbent to market relevant qualifications.
- 23.7 **Level 6:** Second stage of tertiary education: This level is reserved for tertiary programs that lead directly to the award of an advanced research qualification. The duration is 3 years in most countries (for a cumulative total of at least 7 years FTE (Full Time Equivalent) at the tertiary level. It requires submission of a thesis or dissertation of publishable quality representing contribution to knowledge and is not solely based on course work.

- To teach various types of optional subjects;
- To cater to the requirements of children offering different media of instruction; and
- To segregate poor performing students from those of high scoring students. This is also called as ability based sections.

There can be variations in the number of students amongst sections. These need not be uniform.

24. Primary education

Primary education usually begins at the age of 5 or 6 years as shown in the Table II for different states and lasts for about 4-5 years. Programs at Primary school education require no previous formal education. 86th Constitutional amendment Act 2002 states that the state shall endeavor to provide early childhood care and education to all children until they complete the age of 6 years. Primary school education gives students a sound basic education in reading, writing and mathematics along with an elementary understanding of social sciences.

25. Upper Primary education

Upper primary education comprises three years duration and usually starts at the age of 11 years (though in some states it starts at the age of 10 years) and continues up to the 13th year of the child. At this stage, education generally continues the basic programmes of primary school level, though teaching is more subject-focused.

The Right of Children to Free and Compulsory Education Act, 2009[No.35 of 2009] [a-1] and Model Rules under the Right of Children to Free and Compulsory Education Act, 2009 are given in Appendix **a-2**. This Act came into force w.e.f. 1.4.2010. However, some States have not yet notified the Model Rules presumably for want of funds. Hon'ble Supreme Court has directed all states on Monday (15.10.12) to conduct fresh surveys to identify how many minors worked as domestic help even after the enactment of the right to Education Act, 2009.

26. Secondary Education

Secondary school education comprises four years duration: two years in lower secondary and two years upper secondary school education. In most of the states, the lower secondary starts at the age of 14th year of the child and ends at the 17th year of the child. Admission requirement is the completion of upper primary school education. Instruction is more organized along subject-specifics. At the higher secondary level, there is a choice of the student for particular subjects/vocations (keeping requirement of Boards and their tests in view).

The system of school education in India is given in Appendix **b**.

Structure of education in India is given in Appendix **c**.

UNESCO Education Indicators EFA 2000 are given in Appendix "**d-1**".

UNESCO-UIS- Education Indicators 2011 are given in Appendix "**d-2**".

Tabular description of ISCED 1997 is at Appendix "**d-3**".

ISCED 1997 classification, description, sub-categories are at Appendix "**e-1**".

ISCED 2011 Classification, description, sub-categories are at Appendix "**e-2**".

D. Modes of education

1. Adult Education

- (i) "Adult education specifically targeting individuals who are regarded as adults by the society to which they belong to improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose to complete a level of formal education, or to acquire knowledge, skills and competencies in a new field or to refresh or update their knowledge in a particular field."¹⁹⁶
- (ii) Adult Education is synonymous with "out of school education" and means education provided for the benefit and adapted to the needs of persons not in the regular school and university system and generally fifteen and older. Adult education can be both formal and non-formal.¹⁹⁷
- (iv) 'Adult education for men and women of all ages provided by schools, learning centers, or other agencies, which enables them to improve their general knowledge by either continuing their education or resuming incomplete education of previous years. Adult education is usually more flexible in structure than traditional, mandatory education. Adult education offerings include courses both for credit toward higher education degrees and for non-degree-credit learning.'¹⁹⁸
- (v) Adult Education means the education of the adults in the age-group 15 years and above. In the western world it is some sort of continuing education of the adults. 'One of the oldest forms of education in USA, Adult Basic Education was for the eradication of illiteracy. It has been differently designated as remedial, elementary, fundamental, literacy and common branches of education'¹⁹⁹. Adult education (or continuing or recurrent education) in the western concept is 'the entire body of organized education processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adults by the society to which they belong, improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose:
 - To complete a level of formal education;
 - To acquire knowledge and skills in new fields;
 - To refresh or update their knowledge in a particular field.'

¹⁹⁶ ISCED-2011, UNESCO.

¹⁹⁷ Manual for the collection of Adult Education Statistics (ISCED) UNESCO, Paris, 1975

¹⁹⁸ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

¹⁹⁹ Encyclopaedia of Education, Vol.I, Macmillan Co.& Free Press, New York.

In the Indian context, adult education is a major programme of the Central and State Governments. With the objective of establishing a fully literate society through improved quality and standard of adult education and literacy, a series of programmes were launched over Five Year Plans (FYP). In 1949, the Committee appointed by the Central Board of Education (CBE) suggested a new programme of adult education known as Social education and it continued during I & II FYP. On the basis of experience gained and the recommendations of Education Commission, 1968, the programme of liquidation of illiteracy was launched on 2nd October, 1978. It aimed to make 100 million illiterates as literates in the age-group of 15-35 years. Subsequent Education Policy of 1986/1992 continued to refine this area further.

In May 1988²⁰⁰, the Government launched five Technology Missions, of which, National Literacy Mission for eradication of illiteracy was one. It is a social mission which implies that adequate awareness and motivation have to be generated at all levels of the society. In June 2009²⁰¹, the then President of India declared that NLM will be recast with a new focus on female literacy to make every woman literate in the next 5 years. On 8th September, 2009 (being the International Literacy Day), new variant of Sakshar Bharat²⁰² was launched. It was characterized as a Flagship Programme and National Literacy Mission Authority was established during the same year with its diversified roles including: Policy and planning; developmental and promotional; assistance to voluntary agencies/other NGOs; technical development, media and materials, research and development; monitoring and evaluation. NLMA has three wings, namely: (i) the Council; (ii) the Executive Committee; and (iii) Grants-in-aid Committee. To achieve the goal of adult education, NLMA is implementing two schemes, namely:

- (a) Sakshar Bharat Mission; and
- (b) Support to Voluntary Agencies for adult education and skill development.

Sakshar Bharat Mission was launched on 8-9-2009 with the following objectives:

- (i) Impart functional literacy and numeracy to neo literates and non-literate adults;
- (ii) Enable the neo-literate adults to continue their learning beyond basic literacy and acquire equivalency to formal school system;
- (iii) Impart non-literates and neo-literates relevant skill-development programmes to improve their earning and living conditions; and,
- (iv) To promote a learning society by providing opportunities to neo-literate adults for continuing education.²⁰³

²⁰⁰ Annual Report-2009-10 MHRD, GOI, Page 194

²⁰¹ Ibid Pages 195, 204

²⁰² Ibid Page 195

²⁰³ Annual Report 2011-12 MHRD, GOI, Page 100-109

2. Distance Education

Distance Education is education from the distance and not face to face but indirect/remote or inanimate. It involves a wide variety of channels and media. It has the following types:

- (a) Correspondence Courses
- (b) Home Study
- (c) Open Education/Learning
- (d) E-Learning
- (e) Video-Conferencing

a) **Correspondence Courses/Study:**

(i) Correspondence Courses/Study is a (1) method of providing for the systematic exchange between student and instructor of materials sent by mail for the purpose of instruction in units of subject matter; (2) a set of printed lessons or assignments based on textual materials and/or instructional media with directions for study, exercises, tests etc. to be used as primary or supplemental aids to learning outside a regular classroom environment; (3) formal study and instruction conducted by mail, using texts, course outlines, and other materials, with lesson reports, corrections and examinations.²⁰⁴

(ii) A type of course conducted by written instruction with teacher and student interacting by mail; in such a course, the teacher periodically sends written assignments to the student according to the course syllabus and the student completes and returns the required work.²⁰⁵

b) **Home Study:** Some of the Universities permit female students to appear in Degree and Post Degree courses privately without having attended any College or without undergoing any correspondence courses whatsoever. Such students do their home studies themselves and appear in the University Examinations after, of course, paying University Examination dues.

c) **Open Education:** Open Education has spread in India and a large number of Universities are now offering open education system. In addition, there are more than a dozen Open Universities in India. Under the open education system, the students are not required to comply with hierarchical ladder which is compulsory under the formal education system. Instead, the students, who have attained a particular age, are free to undertake the open education courses i.e. only age condition is applicable. There are no other restrictions under open education scheme.

²⁰⁴ Directory of Education edited by Carter V. Good; McGraw Hill Book Company, New York.

²⁰⁵ Concise Dictionary of Education by Gene R. Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

- d) **E-Learning:**
- (i) E-Learning is the effective learning process created by combining digitally delivered content with (learning) support and services.²⁰⁶
 - (ii) "E-Learning: The use of any digital technology in support of teaching and learning."²⁰⁷
 - (iii) e-Learning is those parts of information and learning technology (ILT) which directly support effective learning and teaching. In other words it focuses on the use of IT/ICT for teaching and learning but excludes business uses of IT/ICT such as electronic enrolment of students or electronic registers.²⁰⁸
- e) **Video - Conferencing:** Conducting a Conference between two or more participants at different sites by using computer network to transmit audio and video data. Each participant has a video-camera, microphone and speakers mounted on his or her computer. As the two participants speak to one another, their voices are carried over the network and delivered to the other speakers and whatever images appear in front of the video camera appear in a window on the other participant's monitor. This system works much like a video telephone. [www.webopedia.com]

3. Formal Education

See elsewhere.

4. Blended Learning

Blended Learning is a mix of conventional and digital technologies for learning and teaching.²⁰⁹

5. Informal Learning

Informal Learning is generally intentional but unorganized and unstructured learning events that occur in the family, the work place and in daily-life of every person on a self-directed, family-directed or socially-directed basis.²¹⁰

6. Kindergarten²¹¹

Friedrich Froebel (1782-1852) – a German educator – in 1837 established a new type of early childhood school titled as 'Kindergarten' – the garden of children for three and four years old. Using play, songs, stories and activities, the kindergarten was designed as an educational environment in which children,

²⁰⁶ Vaughan Walter & Jim Wilson: e-Learning & Network, Forum for Technology on Training, E-learning, Newsletter.

²⁰⁷ International Encyclopaedia of Education 3rd Edition (Vol.4) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010, Page 419.

²⁰⁸ Teaching with e-learning in the Lifelong learning sector, by Chris-Hill Second Edition, Learning Matters Ltd, UK

²⁰⁹ International Encyclopaedia of Education, 3rd Edition (Vol.4) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010, Page 419

²¹⁰ International Encyclopaedia of Education 3rd Edition (Vol.4) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010.

²¹¹ An Encyclopaedia of Education by Paul Monroe; Macmillan Co. New York and Encyclopedia of Education (2nd Edition) by James W. Guthrie, Macmillan Reference, USA.

through their own self-activity, could develop in the right direction. The right direction meant that, in their development, children would follow the divinely established laws of human growth through their own activity. Froebel articulated his idealistic themes as under:

- (1) All existence originates in and with God;
- (2) Humans possess an inherent spiritual essence that is the vitalizing life force that causes development; and,
- (3) All beings and ideas are interconnected parts of a grand, ordered and systematic universe.

Froebel believed that every child at birth possessed an internal spiritual essence (a life force) that seeks to externalize through self-activity and unfolding of that which was present latently in the individual. Froebel emphasized on play method to promote self-actualization. The kindergarten curriculum that Froebel identified as gifts in the kindergarten. These gifts had actual physical appearance as also a hidden symbolic meaning to stimulate the child to bring the fundamental concept that they represented to mental consciousness. The gifts were six soft colored balls as under:-

- A wooden sphere, cube and cylinder
- A large cube divided into eight smaller cubes
- A large cube divided into twenty-one whole, six half, twelve quarter cubes.
- A large cube divided into eighteen whole oblongs: three divided lengthwise; three divided breadth wise.
- Quadrangular cube divided into eight smaller cubes and triangular tablets used for arranging figures
- Sticks for outlining figures
- Whole and half wise rings for outlining figures
- Various materials for drawing, perforating, embroidering, paper cutting, weaving or braiding, paper folding, modeling and interlacing.

There is another aspect of the Kindergarten, i.e. its social aspect of which this name gives no suggestion. From this standpoint, it has been defined as a society of children engaged in play and in various forms of self expression through which the child comes to learn something of the values and methods of social life without as yet being burdened by its technique.

'W.A.Friedrich Froebel originated the type of schooling continued today as the kindergarten grade in elementary schooling. Schools he founded included a training College and demonstration school and, after his death, many kindergartens based on his theories were introduced in Europe and the United States.'²¹²

²¹² Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

7. **Montessori Method**²¹³

Maria Montessori (1870-1952) was an Italian physician turned educator who developed a special method of teaching young children as a result of initial experience of working with mentally retarded children. In 1900 Montessori was appointed Director of new Orthophrenic School attached to the University of Rome. Formerly, this was a Municipal Asylum for the deficient and insane children of the city of Rome. Montessori studied here insane children – listening and carefully noting their responses in order to implement Seguin’s educational methods vis-à-vis their progress in becoming independent and verbal. Slowly children learned performing their everyday tasks involving preparing meals, maintaining the environment of residential school etc. Her success was internationally acclaimed. The Italian Ministry of Education, however, posted her as Medical Director of a Day Care Centre of working class children known as Dei Bambini (Children’s House) located in a worst slum of Rome where children from 2 years through 5 years of age remained from dawn to dusk while their parents worked outside. These children had to be fed two meals per day, bathed regularly and given a program of medical care. The very first day, children entered the house, crying, pushing and generally exhibiting aggressive and impatient behaviour. Montessori began teaching older children how to help out with everyday tasks required to be done. She taught manipulative discrimination and puzzles and eye-hand manipulative exercises that were used with mentally retarded children. Results surprised her. Children who wandered aimlessly the week before began to settle down at constructive activity for long periods. The children were fascinated with the puzzles and perceptual training devices. Senior children (3, 4 and 5 years of age) took the greatest interest in learning practical everyday living skills that reinforced their independence and self respect. These old children were helping in taking care of the school and assisting the teacher in preparation and serving of meals and maintenance of spotless school environment. Montessori by using special manipulative materials developed a series of concrete math learning materials that still fascinates many mathematicians and educators. Her four and five year olds were adding and subtracting four digit numbers soon progressing on to multiplication, division, skip counting and increasingly advanced and abstract concepts. She kept pace with the children in geometry, geography, history and natural sciences. Montessori evolved her method through trial and error, making educated guesses about the underlying meaning of the children’s actions. She was quick to pick up on children’s cues, and constantly experimented with the class. All the manipulative materials used to be kept in the drawers under lock and key of the teacher. One day teacher neglected to lock one such Cabinet and the children had crawled the window and selected the materials and were working with selected material. The teacher who came late in the morning was scolding the children for taking the materials without her permission. Montessori noted this and recognized that children’s behavior showed that they were capable of selecting their own work.

²¹³ Encyclopaedia of Edu.(Vol 6) Macmillan Co.New York; & Encyclopedia of Edu.(2nd Edition) by James W.Guthrie, Macmillan Reference, USA

She replaced the Cabinets with low open shelves which were always available to the children. Montessori was first to have child-sized tables and chairs built. She had miniature pitchers and bowls prepared and found knives that fit a child's tiny hands. Environmental engineering included child-sized toilets and low sinks, windows low to the ground, low shelves and miniature hand and garden tools of all sorts. Her contribution towards education includes:-

- (a) Recognition of multiple pathways to learning
- (b) The importance of concrete or hands on learning
- (c) The stages of cognitive learning in children
- (d) The link between children's emotional development and their ability to learn at an optimal rate.

The method worked out, in great detail, received self-activated learner at work in a prepared environment of programmed materials which encourage auto education under the trained observation of a new teacher – the individuals normalization – Montessori's term for the development of confidence, competence, self-discipline and the preparedness to meet environmental challenge. The Montessori approach recognizes the importance of allowing the young child to utilize his formative periods, sensitive periods, absorbent mind, and other unique characteristics in the learning process.

8. Non-Formal Education

"NFE is education that is institutionalized, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or a complement to formal education within the process of the lifelong learning of individuals. It is often provided to guarantee the right of access to education for all. It caters for people of all ages, but does not necessarily apply a continuous pathway-structure; it may be short in duration and/or low intensity, and it is typically provided in the form of short courses, workshops or seminars. Non-formal education mostly leads to qualifications that are not recognized as formal qualifications by the relevant national educational authorities or to no qualifications at all. Non-formal education can cover programmes contributing to adult and youth literacy and education for out-of-school children, as well as programmes on life skills, work skills, and social or cultural development."²¹⁴

NFE refers to intentionally organized learning events catering essentially to persons not currently participating in formal education; the educational activities of which are not organized as part of formal school and university education as mentioned in Formal Education. Types of NFE are as follows:

- (1) Adult Literacy Programmes – organized primarily to impart literacy and numeracy skills to adults;

²¹⁴ ISCED-2011, UNESCO.

- (2) Non-formal education for out of school children and youth – to provide education, literacy and skill training to children and youth who have been left out or dropped out of formal schooling;
- (3) Functional literacy and life-skill training – specific NFE programmes and activities organized to impart ability to function in daily life, society and the environment, regarding health and hygiene, civic, political awareness, family planning, early childhood care, environment protection, trade unionism , etc.;
- (4) Agricultural extension and rural development – education, training and counseling carried out in rural and agricultural communities primarily to improve agricultural practices and to promote rural development;
- (5) Industrial production and service trade/skills training – training in productive and service skills and trades organized by enterprises, professional associations, voluntary agencies, and other bodies. This can include pre-service and in-service, as well as on the job and off the job training apprenticeships, sandwich courses, internships, etc.
- (6) Non-formal higher education – open universities and university extra-mural studies offering advanced educational and training opportunities through face-to-face contacts, correspondence, radio, television, and other distance educational methods and means;
- (7) Language and communication skills training – specially organized NFE programmes and activities to improve abilities in languages and communication skills;
- (8) Religious education – organized learning about religion in churches, mosques, temples and other places of worship;
- (9) General culture and leisure education – educational activities in cultural and recreational subjects, offered either during leisure time or in order that the participants may derive greater benefit from leisure.²¹⁵

9. Random Learning

Random or incidental learning refers to unintentional learning occurring at any time and in any place in every person's everyday life.²¹⁶ Unintentional here refers to unconscious efforts on the part of learners to learn or on the part of organizers/teachers to provide and transfer information and skills.

10. Special Needs Education

- (i) 'Education designed to facilitate the learning of individuals who, for a wide variety of reasons, require additional support and adaptive pedagogical methods in order to participate and meet learning objectives in an educational programme. Reasons may include (but are not limited to) disadvantages in physical, behavioural, intellectual, emotional and social capacities. Educational programmes in special needs education may follow a similar curriculum as that offered in the parallel regular education system,

²¹⁵ Manual of Statistics on NFE, Division of Statistics, UNESCO, Paris. 1996

²¹⁶ Manual of Statistics on NFE, Division of Statistics, UNESCO, Paris, 1996.

however, they take individuals particular needs into account by providing specific resources (e.g. specially trained personnel, equipment, or space) and, if appropriate, modified educational content or learning objectives. These programmes can be offered for individual students within already existing educational programmes, or be offered as a separate class in the same or separate educational institutions.²¹⁷

- (ii) “The term Special Needs Education (SNE) essentially refers to the provisions for educating children having disabilities. Earlier these were being educated primarily in special schools established for the purpose as a part of social welfare activity. Presently the policy is to educate all such children in normal/general schools along with their peers. Though children with severe disabling conditions can even now be educated in special schools, attention of education providers due to slow pace learning, social deprivations etc with or without disability are also referred to as children with special education needs. Special Needs Education thus implies education of all such children who may have specified education needs meriting special attention of education providers. Following Salamanca Declaration of 1994, now all such children (other than children with disabilities) who may need special support such as remedial teaching, special policy inputs etc are also termed as children with special education needs. All are to be educated preferably in general/mainstream schools. Emphasis is on meeting, needs and facilitating learning and not labeling a child. Since GOI has already pro-active measures in place like special programmes for SC/ST children, girls etc., SNE refers mainly to education needs of children with disabilities. These programmes are referred to as IED/inclusive education. PWD [Persons with Disabilities] Act (1995) defines the disabilities as under:”²¹⁸

- a) Blindness
- b) Hearing Impaired
- c) Leprosy Cured Persons
- d) Loco motor Disability
- e) Mental Retardation
- f) Low Vision
- g) Mental Illness²¹⁹
- h) Thalassemia²²⁰

10(a) **Blindness**: Blindness refers to a condition where a person suffers from any of the following conditions, namely:

- total absence of sight; or

²¹⁷ ISCED-2011, UNESCO.

²¹⁸ M/Social Welfare Gazette Notification in GOI Extraordinary Gazettes Part II dated 1-1-1996 Act: Persons with Disabilities (Equal Opportunities Protection of Rights & Full Participation) Act, 1995

²¹⁹ In place of Mental illness, there is a proposal to include learning disabilities but this proposal has not yet been through.

²²⁰ Central Govt.has declared to include Thalassemia as one of the disabilities in the PWD Act, 1995.

- visual acuity not exceeding 6/60 or 20/200 (Snellen) in the better eye with correcting lenses; or
 - limitation of the field of vision subtending an angle of 20 degrees or worse;
- 10(b) **Hearing Impaired:** Hearing impaired means loss of sixty decibels or more in the better ear in the conversational range of frequencies. In common parlance, a person who can't hear at all, or could hear only loud sounds or can hear only shouted words or can hear only when the speaker is sitting in front of the listener or usually asks to repeat the words spoken or would like to see the face of the speaker is a hearing impaired person.
- 10(c) **Leprosy Cured Person:** Leprosy cured person means any person who has been cured of leprosy but is suffering from:
- Loss of sensation in hands or feet as well as loss of sensation and paresis in the eye and eye-lid but with no manifest deformity;
 - Manifest deformity and paresis but having sufficient mobility in their hands and feet to enable them to engage in normal economic activity;
 - Extreme physical deformity as well as advanced age which prevents him from undertaking any gainful occupation.
- 10(d) **Loco motor Disability:** Loco motor disability means disability of the bones, joints or muscles leading to substantial reduction of the movement of the limbs or any form of cerebral palsy; cerebral palsy means a group of non-progressive conditions of a person characterized by abnormal motor control posture resulting from brain insult or injuries occurring in the pre-natal or infant period of development.
- 10(e) **Orthopaedic disability:** Orthopaedic disability is the loss or lack of normal ability of an individual to move himself/herself and/or objects from one place to the other.
- 10(f) **Muscular Dystrophy:** Muscular Dystrophy is the weakening of muscles.
- 10(g) **Mental Retardation:** Mental retardation means a condition of arrested or incomplete development of mind of a person which is specially characterized by sub-normality of intelligence. Mental retardation is identified by below average intellectual ability and poor adaptive behavior that is pervasive in all areas of life.
- 10(h) **Low Vision:** A person with low-vision means a person with impairment of visual functioning even after treatment or standard refractive correction but who uses or is potentially capable of using vision for the planning or execution of a task with appropriate assistive device.

11. **Alzheimer's disease**

Alzheimer's disease is a disorder which causes mental deterioration in middle or old age. The disease has been named after the German neurologist Alois Alzheimer.

12. Autism²²¹

(i) Autism is a developmental disorder, autism affects language, communication skills and lacks socialization with symptoms such as,- lacks eye contact, communicative babbling first appearing at the age of 6 months. There is no cure for Autism. Therapy improves speech, language and communication skills and helps autistic individuals adjust one's surroundings. Symptoms of autism are as under:

- Avoids eye contact
- Does not babble
- is prone to repetitive behavior
- registers delay in acquiring speech
- shows no response to facial expression

The National Institute for Medically Handicapped has developed a Standardized Screening for Assessment of Autism (SSAA).

(ii) "Autism is a condition in which children do not find relationship with others."²²²

13. Bacteria

(i) Bacteria is extremely small – usually 0.3-2.0 micrometers in diameter – a relatively simple microorganisms possessing the prokaryotic type of cell construction.²²³

(ii) Tiny organisms most of them inside the body are neutralized by the immune system but a few cause diseases.

14. Bipolar treat²²⁴

Bipolar disorder, commonly known as manic-depressive disorder, is highly influenced by the circadian system — the body's internal clock — and a specific kind of psychotherapy may help decrease irregularities in the circadian system that can trigger key symptoms. Bipolar disorder causes severe shifts in mood, energy and ability to function. The bipolar disorder tends to have extremely sensitive, circadian systems which makes it much more difficult for them to recover from disruptions in sleep and routine.

15. Bisexual

Bisexuals are those men and women who show sexual interest towards both the sexes.

²²¹ HT dt 20-02-2010

²²² Encyclopaedia of Science & Technology by James Trefill, Routledge, NY, London.

²²³ McGraw-Hill, a Concise Encyclopaedia of Science & Technology, Sybil P.Parker, McGraw-Hill Book Company, New York.

²²⁴ HT dt.09-12-2007

16. Braille

Braille is a tactile writing system used by the visually impaired persons. It is a method of printing or writing that enables the blind to read through the sense of touch; it uses patterns of raised points or dots to represent letters and other characters. It is named after Louis Braille (1809-1852).²²⁵

17. Bronchitis

Bronchitis is breathlessness. The airways in respiratory allergies are very irritable and go into spasm at the slightest stimulation. These allergies cause airways narrowing through the nervous mechanism as also by liberation of chemicals called mediators i.e. histamine, serotonin etc. causing spasm of the smooth muscles in the bronchioles resulting in breathlessness. Bronchitis is episodic difficulty in breathing (dyspnoea) generally associated with wheezing and cough.

18. Cataract (Safed Motia)

Human crystalline lenses are transparent and crystal clear. These form part of focusing mechanism of the eye. With age, usage or any other reason the lens become cloudy and opaque thereby hampering normal vision. Therefore, any opacity in the crystalline lens thereby decreasing vision is called Cataract (Safed Motia). It is curable. Cataract is any opacity in the crystalline lens which leads to decreased vision.²²⁶

19. Cerebral Palsy

Cerebral Palsy is a condition in which a person has difficulty in controlling or moving one's muscles caused by brain damage before or at birth.

20. Cochlear Implant

An electric device is surgically implanted in the inner ear and activated by a device worn outside the ear. This device bypasses damaged parts of the auditory system and directly stimulates the nerve of hearing, allowing individuals to receive sounds.²²⁷

21. Cross-dresser and Drag queen

Cross-dressers refer to people who love to dress up as a member of opposite sex. A Drag Queen is a male who dresses up as a woman to entertain people.

22. Diabetes

One becomes diabetic partly due to one's sedentary life style and partly due to the foods one consumes daily. In diabetes, initially pancreas works harder to produce more insulin with the added demand but subsequently it loses ability to secrete the required insulin. Thus the person becomes unable to metabolize the blood sugar. Diabetes is controllable partly by medication and partly by changing

²²⁵ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne.

²²⁶ Centre For Sight, East Delhi; Faridabad; Gurgaon; Agra + HT 13-11-2009

²²⁷ HT dt. 09-12-2007

the sedentary life-style and changing eating habits from starchy to non-starchy vegetables and low calorie diets/foods. On the other hand, uncontrolled diabetes gives rise to many diseases like: heart attack, stroke, kidney failure, blindness, gangrene etc.

A person is healthy if his blood sugar level after 8 hours of fasting is below 100. But any reading between 100-125 blood sugar ranges is indicative of impaired fasting glucose i.e. pre-diabetes and a reading above this level is classified as diabetes. The glucose tolerance test is conducted after two hours of consuming 75 gm of glucose in 200 ml of water. A healthy reading is below 140; a reading between 140 -199 is pre-diabetes while a reading above 200 indicates diabetes.

Type-1 diabetes occurs when one's immune system destroys cells in pancreas that produce insulin thereby stopping production of insulin completely. This normally happens before the age of 20 years.

Type-2 diabetes occurs when body can not use produced insulin and the glucose remains in blood and forces pancreas to overwork to produce more insulin, ultimately wearing it out. It affects adults.²²⁸

23. Down's syndrome

People with three copies of chromosome 21 instead of 2 develop Down's syndrome having craniofacial abnormalities, impaired brain development and are at a great risk of leukemia, heart defects and alzheimer's disease.²²⁹

24. Dyslexia

Dyslexia is a reading disability, apparently caused by neurological dysfunction in which the student experiences difficulty in clearly perceiving individual letters, words or passages. Dyslexic students often need special instructional provisions and may ultimately outgrow or overcome the handicap.²³⁰

25. Epilepsy

Epilepsy is a common chronic neurological disorder that is characterized by recurrent unprovoked seizures. These seizures are transient signs and/or symptoms due to abnormal, excessive or synchronous neuronal activity in the brain. Epilepsy is usually controlled, but cannot be cured with medication.

26. Gay

Gay refers to a man who is attracted towards the same sex.²³¹

27. Genome

The totality of an organism's hereditary information encoded in the DNA (deoxyribonucleic acid). Genome is the hereditary information of the child.

²²⁸ Health Scan; HT dated 26-06-2011/14-11-2011

²²⁹ HT Life, the Universe 24-09-2005 Page 12.

²³⁰ Concise Dictionary of Education by G.R.Hawes & L.S.Hawes; A Hudan Group Book Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne..

²³¹ HT 11-08-2010

28. Gifted Child

Among educators, a child whose ability level is far above average, academically, physically, and/or artistically. Gifted children often need specially adapted educational programs for optimum development. (2) Loosely, a child who is born with and demonstrates specific talent in an area, or a child who excels consistently in achievement, either generally or in a specific area.²³²

29. Glaucoma (Kala-Motia)

Glaucoma is a condition that can damage the optic nerve at the back of the eye and if left untreated it may result in blindness. Glaucoma is a condition wherein an increased intraocular pressure damages the optic nerve, thereby affecting vision. It affects the outer or peripheral vision first while maintaining the central vision. Glaucoma is of two types, viz:

- i) Chronic or Primary Open angle Glaucoma (POAG); &
- ii) Closed or Acute angle-closure Glaucoma

In the former type, the intraocular pressure increases very rapidly due to a sudden and severe blockage of fluid drainage in the eye while the latter type is where damage of vision is gradual and generally painless.²³³

30. Hearing impaired

(See elsewhere)

31. A Hermaphrodite

A hermaphrodite is one who has some or all primary sex characteristics of both genders, such as penis and a valve. There are three types of hermaphrodites:

- True
 - Male pseudo
 - Female pseudo
- (a) True: A true hermaphrodite is a person who has both ovarian and testicular tissue.
 - (b) A male pseudo hermaphrodite is a person who is genetically male i.e. has xy chromosomes but whose external genitalia are usually male. The testes are usually hidden in the abdominal cavity.
 - (c) A female pseudo-hermaphrodite is a person who is genetically female i.e. has xx chromosomes, but has masculine genitalia.

32. Hemophilia

Hemophilia is an inherited bleeding disorder in which the blood does not clot properly. Human blood comprises about 13 clotting factors that helps to stop bleeding. Absence of one of these clotting factors leads to bleeding. It is usually caused by a gene alteration or mutation. Females are carriers of the affected

²³² Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (A Hudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

²³³ Centre For Sight, Safdarjung Enclave New Delhi; Gurgaon; Faridabad, Agra.

gene to pass the gene on to their children. If the mother carries hemophilia gene and the father does not have this gene, there is a 50% chance of a male child having hemophilia; however, if the mother is not carrier but father has hemophilia, a female child will be a carrier. All male children will inherit their father's y chromosome and their unaffected x chromosome. Hence they will not be affected by it.²³⁴

33. **Healthy Food**

Healthy food is one that gives nutrients, is easily digestible, leave an alkaline residue in the blood instead of toxic residue: if the body craves fried food, it lacks fatty acids -- give it raw nuts; if the body craves salty food, it lacks minerals--give it vegetables and not chips; if the body craves sweets, it lacks glucose--give it fruits and not chocolates.

34. **Insomnia**

Insomnia is difficulty in sleeping or frequently waking up in sleep. It may lead to chronic fatigue, depression, irritability, lack of concentration, impaired responses etc. The affected age-group is 6-16 years old.

35. **Immunity**

Immunity is the body's internal defence mechanism which protects one from germs and diseases. The older one gets, the more germs one's body becomes immune to. Since children's immune system is developing and hence more vulnerable to diseases than the adults.

36. **Juvenile delinquent**

Juvenile delinquent is generally a youth under the age of 18 years, suspended from school, who commits an anti-social or criminal act. A juvenile delinquent usually receives mitigated punishment before the law.²³⁵

"In USA, juvenile delinquency has been defined as the violation of the law of United States committed by a person prior to his or her eighteenth birthday that would have been a crime if committed by an adult. Delinquency refers to those encounters with the law where the juvenile custody is entered into the record books. Any act that could place the juvenile who committed it in jeopardy of adjudication if it were to be detected is referred to as delinquent behaviour [Hopkins 1883]."²³⁶

37. **Junk Food**

Junk food is anything that has a lot of calories, sugar, sodium and saturated fats, but lacks vitamins and minerals. These are chemicals and may lead to genetic mutations causing diseases in the long run because these are exposed to high temperatures for increasing their shelf-lives. Junk Foods include (i) Street foods,

²³⁴ HT 22-08-2010; HT 17-04-2008; HT Brunch 17-04-2010

²³⁵ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes, Van Nostrand Reinhold Company, New York, London, Toronto.

²³⁶ Encyclopaedia of Special Education by Cecil R.Reynolds, Elaine Fletcher Janzen, third Edition, Volume 2, John Willey & Sons Inc. New Jersey, 2007.

such as: *Samosa, Pakoda* etc. (ii) Ready to eat foods, such as: Biscuits etc. (iii) Fast foods, such as: *Burgers, Pizzas* etc. (iv) Processed Foods, such as: *wafers, colas* etc. (v) Packaged foods, such as: *Biryanis* and *dals*, etc.²³⁷

38. Keratocornea

Puberty brings with it various changes such as: hair-growth, acne, change in voice etc. Along-with this, there is another subtle change which occur in the eye condition when spherical cornea thins out and begins to bulge into a con-like shape. This is keratoconus (kerato=Cornea; Conus=Cone). It attains its most severe state in the 20s and 30s. In Keratoconus signs of visual discomfort appear; shapes and figures seem crooked; eye sight worsened. It is treated by C3R which means C3R=3Cs and 1R=corneal collagen cross linkage with Riboflavin. After instillation of Riboflavin eye drops the cornea is exposed to uvrays which strengthens cornea and prevents its progressive bulging.

39. Learning Disability

- (i) The majority of students categorically labeled have learning disabilities (LD). This is ironic because LD is one of the most difficult disabilities to define. Some individuals believe that LD is simply a social construct for those students who have not had adequate instruction. Another concern is that of the IDEA definition. Most localities define LD using a discrepancy between the student's actual achievement and the student's presume ability or IQ. The problem is that not all localities use the same discrepancy standard or the same tests to measure achievement and ability and discrepancy scores have inherent limitations.
- (ii) A definition of learning disabilities that provides unambiguous identification criteria does not yet exist, however, there is growing consensus regarding some aspects of a definition [e.g. presumption of central nervous system dysfunction; association with underachievement and psychological process disorders; variance within and among individuals].²³⁸

40. Lesbian²³⁹

It originated from the Greek island Lesbos and the term refers to those women who are sexually attracted towards other women. Lesbians and Gays taken together constitute homosexuals.

41. Memography

'An X-Ray procedure that is performed to detect breast cancer at an early stage.'²⁴⁰

²³⁷ National Institute of Nutrition, Hyderabad.HT 22-08-2010

²³⁸ Encyclopedia of Education second Edition, Volume 4, by James W. Guthrie, Macmillan Reference, USA.

²³⁹ HT City 11-08-2010

²⁴⁰ Encyclopaedia of Science & Technology by James Trefill, Routledge, NY., London.

42. Meningitis

Meningitis is infection or inflammation of the membranes covering the brain and spinal cord. It may affect the arachnoids, the piamater, and the cerebrospinal fluid in the sub arachnoids space.²⁴¹

"Meningitis is inflammation of the meninges, the membranes that surround and protect the brain and the spinal chord."²⁴²

43. Mental Illness

Mental illness means any mental disorder other than mental retardation.

44. Metabolism

Metabolism is the process by which what we eat is converted into life giving energy.

45. Motor Development

'Growth in physical coordination or skills of physical movement during infancy especially, concerning such functions as posture, locomotion, and hand-arm-eye movements in manipulation.'²⁴³

46. Pedophilia

Pedophilia is a person who sexually abuse children.

47. Pain²⁴⁴

(i) Pain is a perception of mind and is completely in the brain. It is the brain's interpretation of the injury. That is why its extent is different with different people. If the situation demands, anyone's nervous system can shut out pain.

(ii) 'Pain is bodily suffering or distress, as due to injury, illness etc.'²⁴⁵

48. Parkinson's Disease²⁴⁶

Parkinson's disease is a relatively common chronic movement disorder of the central nervous system that is marked by tremor and weakness of resting muscles, stooped posture, slow and shuffling gait accompanied by a sense of propulsion and muscular rigidity of the trunk and limbs with a notable fixity of facial expression. Parkinsonism is at least partially the result of the destruction of dopamine-producing cells in the substantia nigra in the mid brain (dopamine is a significant neurotransmitter).

²⁴¹ Encyclopaedia of Special Education, Elaine Fletcher Janzen, Third Edition, Volume 2, John Willey & Sons Inc. New Jersey, 2007.

²⁴² Encyclopaedia of Science & Technology by James Trefill, Routledge, NY, London

²⁴³ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes, Van Nostrand Reinhold Company, New York, London, Toronto.

²⁴⁴ HT 04-05-2008

²⁴⁵ Random House Dictionary of English Language by Jess Steinn and Laurance Urdang, Random House, New York.

²⁴⁶ Consise distonery of education by Gene R Hawes and Lyeen Salop Hawes. A Hudson Group Book.

The onset of Parkinson's disease usually occurs in late adult life, but it may begin as early as the third decade. The course is slowly progressive over 10 to 20 or more years. The first symptom may be the scuffing of one foot in walking, a sense of heaviness of a limb, or a gentle tremor of one hand; the other symptoms follow in slow procession. The handwriting becomes small, and this and other manual skills are gradually lost. Speech is poorly articulated, and swallowing and chewing are laborious. Locomotion becomes increasingly difficult, and ultimately the patient finds it an effort even to rise from bed or a chair or to walk; and there is tendency to lose balance and to fall. In the advanced stages, the patient is handicapped in all voluntary movements but usually is not paralyzed. An unexpected call for action may momentarily excite the patient to perform some movement with surprising facility. The senses and the intellect are not damaged, except with the usual ageing process.

49. Polio

Polio is Poliomyelitis which, is an infectious disease caused by a virus that invades the nervous system through the faecal-oral route. It causes total paralysis within hours. The initial symptoms are fever, fatigue, headache, vomiting, stiffness - in the neck and in the limbs. Children under five years of age are most affected by Polio. There is no cure for polio but it can be prevented by Polio-vaccine (drops) given till the age of 5 at several intervals and the child can be protected for life.

50. Preeclampsia²⁴⁷

Preeclampsia is a disorder that occurs only during pregnancy and the post partum period. It affects both the mother and the unborn baby.

51. Psychiatrist²⁴⁸

A psychiatrist is a trained medical practitioner who treats persons with mental disorders as laid down by the Diagnostic and Statistical Manual of Mental Disorders IV and WHO's International Classification of diseases 10. The psychiatrists can prescribe medicines and counsel patients. They normally work in conjunction with the clinical psychologists.

52. Psychologists

Psychologists are those persons who have surely studied psychology at least upto the Master's Degree level. These persons can specialize either in Occupational, Industrial, Social or Experimental psychology, career or clinical counseling.

53. Schizophrenia

- (i) "Schizophrenia is the most common form of psychotic illness – includes disturbed thinking and abnormal emotional reactions and behaviour among its symptoms."²⁴⁹

²⁴⁷ HT11-06-2010

²⁴⁸ Family Encyclopedia , The Dorling Kindersley, London

- (ii) According to Compact Oxford Dictionary, Schizophrenia is a long-term mental disorder whose symptoms include inappropriate actions and feelings, and withdrawal from reality into fantasy. It may also lead to impairment of thought processes, a normal personality change, loss of emotional responsiveness and social withdrawal.
- (iii) "Schizophrenia is a group of mental disorders which are characterized by withdrawal from reality and by disturbances in thinking and feeling. It is also called dementia praecox. In many cases, it leads to disorganization of personality but not necessarily mental deterioration. One of the outstanding symptoms of schizophrenia is a lack of rapport and serious misjudgment of reality processes.

The main symptom of schizophrenia is a rather severe dissociation in thinking and feeling. The patients think and speak incoherently and illogically. There is a blocking of thinking process, ideas become vague. Emotions become flattened and also extremely ambivalent or contradictory at the same time."²⁵⁰

54. Shaking Palsy

Shaking Palsy is Parkinson's disease. It is also known as Parkinson's syndrome and Parkinsonism.

55. A squint Eye

A squint – also referred to as crossed eyes—is a medical condition in which the eyes are relatively misaligned and deviate when looking at a particular object. It is a medical condition in which eyes are relatively misaligned and point in different directions. Over time, a squint can lead to problems such as lazy eye (amblyopia), poor depth perception (stereosis), double vision, inadequate vision in one eye, abnormal head posture or a combination of any of these. Orthoptics is eye muscle training programme which is done through a special machine known as synaptophore. Surgery is undertaken in complicated cases. Exact cause is not known but a squint is most likely due to the loss of coordination between the eye muscles. Certain neurological disorders like cerebral palsy, Down's syndrome, brain tumors also can cause squint.

56. Snoring

Snoring is the sound of breathing through mouth while sleeping due to enlargement of tonsils and adenoids. It may lead to hyperactivity, memory lapses, lowering of concentration.

57. Stuttering

Stuttering is having difficulty in talking because one is unable to stop repeating the first sound of a word. It begins when the child is 3 or 4 years old. Boys are three times more likely to suffer from this problem. Some children recover naturally from stuttering but starting treatment in pre-school years seems to be

²⁴⁹ Encyclopaedia of Science & Technology by James Trefill, Routledge, N.Y., London.

²⁵⁰ McGraw Hill Encyclopaedia of Science & Technology, McGraw Hill Book Co. New York, London Lisbon, Bogota. Edited by Cybil P. Parker.

most effective. Australian Stuttering Research Centre has developed the early treatment called Lidcombe Programme to treat such children.

58. Surrogacy²⁵¹

Surrogacy is an arrangement in which a woman agrees to become pregnant for the purpose of gestating and giving birth to a child for others to raise. In ivf surrogacy, a woman's ovum is fertilized in-vitro or outside the human body in a test tube. The embryo is then transplanted into the uterus of the surrogate mother. After birth, the child is surrendered to the ovum donor or the genetically related parents.

59. Thalassemia

Thalassemia is inherited blood disorder that causes mild or severe anaemia due to reduced hemoglobin and fewer red blood cells. Genes in each case are passed from parents to children.

60. Transgender²⁵²

- (i) It refers to the person whose physical characteristics clash with the one he is born with. In other words, a person is born like a woman but his sexual organs are that of a man and vice versa. However, such persons do not want sexual re-assignment surgery.
- (ii) "It refers to a broad term used to describe a wide range of individuals who are not necessarily defined by or who feel they do not fit, the gender assigned to them at birth. They usually live or prefer to live in the gender role opposite to the one in which they are born".²⁵³

[HT think dated 13-02-2011 has brought forward the following events or developments in India about 'Transgender and the law': "(1) In 2006, the Tamil Nadu Govt. issued an Order on rehabilitation of Aravanis (Transgender) providing for a number of supportive measures including establishment of a special state Welfare Board for them; (2) In July 2009, Delhi High Court decriminalized gay sex between consenting adults in private; (3) In November 2009, transgender won the right to be listed as 'others' rather than 'male' or 'female' on electoral rolls and voter identity cards; (4) The 2011 census will include the 'other category' to enumerate transgender; (5) The Karnataka Govt. has passed a resolution entitling them to 15% reservations under the 2A category of the Backward Class Commission; (6) MCD has recently announced a monthly pension scheme for transgender; (7) National Legal Services Authority (NALSA) has included the transgender in the definition of marginalized groups entitling them to avail of free legal aid].

61. Transponders

Transponders are devices which receive and transmit signals. ISRO Satellites INSAT-2E, INSAT-3B, INSAT-3C, INSAT-3A, INSAT-3E, INSAT-4B, INSAT-4CR

²⁵¹ HT Special 04-02-2008,p13; Hindustan Times 13-02-2011

²⁵² Hindustan Times dated 11-08-2010

²⁵³ HT think wellness dated 13-02-2011

launched during 1999-2007 are carrying transponders. These are leased to different firms.

62. Trans-sexual²⁵⁴

Trans-sexual is a person who is suffering from gender identity disorder and hence undergoes a sex change operation either from male to female or vice-versa.

63. Trafficking²⁵⁵

A protocol supplementing the UN Convention against Transnational Organized Crime defines trafficking as the recruitment, transportation, transfer, harboring or receipt of persons for the purpose of exploitation. Exploitation shall include the prostitution of others or other form of sexual exploitation, forced labour or services, slavery or practices similar to slavery servitude or the removal of organs.

64. Un-educable child

A child, who, because of extreme mental impairment (usually brain damage), has little or no potential for learning, even in special classes or schools.²⁵⁶

65. Viruses

Viruses are tiny packages of genetic material DNA or RNA enclosed in a protein layer and sometimes a lipid layer. They are about 200 nano-meters i.e. about eight millionth of an inch in width and come in a variety of shapes: round, - bottle, rod, harpoon, hellcat etc Viruses show the properties of both living organisms as also non-living organisms. Viruses can reproduce but only when they are in a living cell. But viruses can't by themselves convert energy and grow

Diseases:

- Influenza A from wild birds
- HIV from chimpanzees
- Plague from rodents
- Hepatitis B from apes
- Malaria from macaques
- Dengue from primates(Aedes mosquito)
- H1N1 from swine also known as swine flue.

(Respiratory secretions i.e.coughing, sneezing etc)²⁵⁷

- Chikungunia-viral disease transmitted to humans by the bite of infected aedes aegypti mosquitoes

²⁵⁴ Ibid

²⁵⁵ Encyclopedia of Education (2nd Edition) by James & Guthrie, Macmillan Reference USA

²⁵⁶ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes, A Hudson Group Booki, Van Nostrand Reinhold Company, New York, London, Toronto, Melbourne.

²⁵⁷ Hindustan Times dated 17-04-2008; Hindustant Times dated 11-05-2009

- Viral & bacterial conjunctivitis
- Malaria (Female anopheles mosquito)
- Gastro entities(Water & Food contamination)
- Typhoid (Water & food contamination)
- Bacterial, viral & fungal skin infections(Contact, Contaminated water)

Difference between Normal Flu, Swine Flu, Dengue & Chikungunya

Disease	Symptoms,brief	When to be tested
Normal Flue	High fever, cough, cold, sore throat, runny-nose, blocked ear.	No test is reqd.
H1N1(Swine flu)	High fever, severe chest congestion, breathlessness	Any time after symptoms appear
Dengue fever	High or Moderate fever, Pain in bones (but no arthritis), Pain behind eyes, severe nausea and vomiting, red rashes and itchiness, platelet count dips below 1 lakh. Caused by the bite of aedes aegypti & aedes albopictus mosquitoes.	NSI antigen within 5 days of fever; 1gm 5th day onwards.
Chikungunya	Moderate fever, unbearable joint pain due to arthritis, extreme swelling of joints, feeling of discomfort in the chest, muscular pain and stiffness, nausea and vomiting, redness in eyes, more rashes and itching, platelet count stays above 1 lakh. ²⁵⁸	Fifth day onwards for spot and Elisa tests.

E. Population and Settlement Structure

1. Blocks

In India there are two types of Blocks; viz. (a) Educational Blocks and (b) Community Development Blocks. The Educational Blocks have been established by State Education Departments. In some states these are co-terminus with Community Development Blocks but in many states these are not co-terminus with C.D.Blocks.

In 1951, fifteen pilot projects were started in fifteen states in collaboration with Ford Foundation. In this three basic units were visualized, namely: (a) the village; (b) the Mandi and (c) the Development Block. A village on an average was to consist of nearly 500 persons (about 100 families); a Mandi was visualized as a nucleus of 15 to 25 villages depending upon population, serving as a center for marketing, communications, recreational and other services; and the Development Block was to comprise 4 to 5 Mandis. Eventually, the idea of a Mandi unit had to be given up and the Community Development Block Program was launched in 1952 as a movement.²⁵⁹

2. Cluster Resource Center

A nodal school/centre to provide academic support to a number of schools lying within short distance of the nodal school. The DPEP has promoted the concept of Cluster Resource Centre in India. The CRC (primary school) acts as a nodal point for providing academic support to 8 to 10 primary schools lying within a distance of 5-10 Kms. The CRCs do not perform any administrative functions.

2.1 **Community Learning Centre (CLC)**: CLC is the continuing education centre under the NFE scheme.

2.2 **Community Based Orgaiznation (CBO)**: CBO refers to any organization that exists at local or grass root level and works for local community.

3. Demography

Demography is the systematic study of human population including its size, distribution, composition and the factors that determine changes in its size, distribution and composition.

4. Disadvantaged Groups

Disadvantaged groups are those groups of people who, for one reason or another remained ignored and did not benefit to the same degree as the majority of other people in their country from services and other concessions provided by the Government.²⁶⁰

In India, the disadvantaged groups of people include,

- Scheduled castes

²⁵⁹ Panchayati Raj – A Policy Perspective by M Shiviah, National Institute of Rural Development, Hyderabad.
²⁶⁰ Literacy Glossary; Asia/Pacific Cultural Centre for UNESCO, Japan

- Scheduled tribes
- Women
- Other Backward Classes
- Muslims
- Marginalized Groups

5. Gram Panchayat

The Government, by notification in the official Gazette, declares a Gram Sabha of a village or group of villages with a population not less than 500. Every Gram Sabha has a Gram Panchayat duly notified by the Government. Government can relax the condition of the population for reasons duly recorded in writing.²⁶¹

6. Habitation

A habitation is a distinct cluster of houses existing in a compact and contiguous manner with a local name having a population of not less than 25 persons in plain areas and not less than 10 persons in hilly or sparsely populated areas.²⁶²

7. Household

A 'household' is usually a group of persons who normally live together and take their meals from a common kitchen unless the exigencies of work prevent any of them from doing so. Persons in a household may be related or unrelated or a mix of both. However, if a group of unrelated persons live in a census house but do not take their meals from the common kitchen, then they are not constituent of a common household. Each such person should be treated as separate household.²⁶³

7.1 **Census House:** A census house is a building or part of a building used or recognized as a separate unit because of having a separate main entrance from the road or common courtyard or staircase, etc. It may be occupied or vacant. It may be used for a residential or non-residential purpose or both.²⁶⁴ Census 2011, has added here the following: "Observation Homes, Beggars' Homes, Jails, Ashrams, Old-age Homes, Children Homes etc."

7.2 **Houseless household:** Houseless households are those who do not live in buildings or census houses but live in the open on roadside, pavements, in hume pipes, under fly-overs and staircases, or in the open in places of worship, Mandaps, railway platforms etc. are to be treated as houseless households.²⁶⁵

7.3 **Institutional household:** A group of unrelated persons who live in an institution and take their meals from a common kitchen is called an institutional household (e.g. hostels, boarding houses, hotels, Messes, rescue homes, jails, ashrams, orphanages etc.)²⁶⁶

²⁶¹ Haryana Gram Panchayat Act, 1994

²⁶² All India Educational Surveys, NCERT, New Delhi.

²⁶³ Census of India 2001 – Instruct Manual for Filling up the Household Schedule P8.

²⁶⁴ Census of India 2001

²⁶⁵ Census of India 2001

²⁶⁶ Census of India 2001

7.4 **Enumeration Block (EB)**: Enumeration Block means a specific area allotted to a specific Enumerator for the purpose of carrying out of Census Operations relating to the population enumeration.²⁶⁷

8. Rural Areas

Rural areas are those areas which are not urban areas.

9. School-age Population

School age-population is the number of children in officially defined school age-group, whether enrolled in school or not. For instance, the population in the age group 6-14 years is the school age population for elementary school education. 6-11 years population is primary school age population while 6-18 years population is total school age population in India.

10. Urban Agglomeration

Urban agglomeration is a continuous urban spread constituting a town and its adjoining urban outgrowths (OGs), or two or more physical continuous towns together and any adjoining outgrowths of such times.

For census of India 2001, it was decided that the core town or at least one of the constituent towns of an urban agglomeration should necessarily be a statutory town and the total population of all the constituent units should not be less than 20000 (as 1991 census). With these two basic criteria having been met, the following are possible different situations in which urban agglomerations could be constituted.

11. Urban Areas

The census adopts the following criteria for treating habitations as urban:

- a) All statutory towns i.e. all places within a municipality, corporation, cantonment board, or notified town area committees etc.
- b) All other places which satisfy the following criteria:
 - a minimum population of 5000;
 - at least 75% of the male working population engaged in non-agricultural activities, and
 - a density of population of at least 400 persons per square km (1000 per square mile).
- c) A city or town with one or more continuous outgrowths;
- d) Two or more adjoining towns with or without their outgrowths;
- e) A city and one or more adjoining towns with their outgrowths all of which form a continuous spread of town classes;

Class I town with one lakh and above

Class II town with 50,000-99999

²⁶⁷ Census of India, 2011

Class III town with 20,000-49999

Class IV town with 10,000-19999

Class V towns with 5000-9999

Class VI towns with population below 5000

12. Village

Village represents a parcel of land whose boundaries are settled and defined for revenue purposes. Village with no population will be termed as Bechirag or deserted or uninhabited.

13. Density of Population (DOP)

It is essential to know if a particular area is thickly or sparsely populated when one thinks of providing educational facilities. This is ascertained from the density of population of that area and is calculated as under:

$$\text{D.O.P} = \frac{\text{Mid-year Population of a defined area}}{\text{Surface area}}$$

Where - D.O.P. is density of population

14. Annual Average Growth Rate of Population (AAGRP)

Population growth is of compound nature and variety. Here increases are reckoned on compounded successive annual increments and the formulae used are as under:

$$P_n = P_o (1+r)^n \text{ where, } r \text{ being the rate to be calculated.}$$

With the help of logarithms, this can be expressed as under:

$$r = \text{Anti log} \frac{\text{Log} \frac{P_n}{P_o}}{t} - 1 \times 100$$

Where,

r = Rate to be calculated.

P_n = Total Population at the end of period.

P_o = Population in the beginning of the period.

Log = Logarithms (use log tables)

t = Time in Number of years.

15. Crude Birth Rate

Crude Birth Rate is defined as the number of live births occurring in a given time period, usually a year, divided by the population of that year expressed per 1000 persons. Symbolically,-

$$\text{Crude Birth Rate:} = \frac{\text{Number of births in a year}}{\text{Mid-Year Population in that year}} * 1000$$

16. Crude Death Rate

Crude death rate is the number of deaths occurring in a given time period, usually a year, divided by the total population during that period expressed as 1000 persons.

Symbolically,-

$$\text{Crude Death Rate} = \frac{\text{Number of deaths in a year}}{\text{Mid-Year Population of that year}} * 1000$$

17. Fertility Rate

Fertility is the rate at which a population augments itself to the number of females at risk; i.e. at child-bearing age (15-49 years). We distinguish between,-

(a) General Fertility Rate (GFR);

(b) Age Specific Fertility Rate (ASFR).

General Fertility Rate: GFR attributes to all births to all women within the child bearing age (15-49years). Symbolically,-

$$\text{GFR} = \frac{\text{Number of live births in a year}}{\text{Mid -Year Population of women at risk.}} * 1000$$

Age-specific Fertility Rate: Number of births to women at risk per thousand women in that age-group:

$$\text{ASFR} = \frac{\text{Number of live births born to women in a specified Age - group in a year}}{\text{Mid - Year Population of women in specific age-group}} * 1000$$

18. Total Fertility Rate (TFR)

TFR is the number of live berths per 1000 females at risk (i.e. 15-49 years). It is average number of children that would be born alive to woman during her life time if she were to pass through her child bearing years conforming to the age specific fertility rates of a given year.

$$\text{TFR} = 5 \sum \text{ASFR}_i \quad \text{where,-}$$

5 = age group interval

ASFR for age-group i 15-49

19. Crude Rate of Natural Growth of Population

Crude Natural Growth of Population (CNGP): CNGP is the quantum of change in Population due to Births and deaths. Its rate is calculated as under:

$$\text{CNGRP} = \frac{(\text{Number of births}) - (\text{Number of deaths}) \text{ in a year}}{\text{Mid-Year Population in the year}} * 1000$$

Where, - CNGRP=Crude Natural Growth Rate of Population.

20. Infant Mortality Rate (IMR)

IMR is the number of deaths below age1 in the year divided by the number of live births in that year. Symbolically,-

$$\text{IMR} = \frac{\text{Number of deaths below age1 in a year}}{\text{Number of live births in that year.}} * 1000$$

21. Population at a particular point of time

$P_t = P_o + B - D + IM - OM$ where,-

P_t = Population at any given time

P_o = Population at the base year

B = Number of births

D = Number of Deaths

IM = In-migration

OM = Out-Migration.

In-Migration Rate(IMR) is calculated as under:

$$\text{IMR} = \frac{\text{Number of in-migrants to area 'x' at specific time Pd.}}{\text{Population of area 'x' at beginning of the time period}} * 1000$$

Out-Migration Rate is calculated as under:

$$\text{OMR} = \frac{\text{No.of out-migrants to area 'x' for specified time Pd.}}{\text{Popn.of area 'x' at the beginning of time period.}} * 1000$$

22. Total Dependency Ratio =
$$\frac{\text{Population below 15 yrs+ Population > 64 yrs}}{\text{Population 15 Yrs \& above - >64 yrs.}}$$

F. Access & Equity in Education

1. Access/Accessibility

Access means a channel, a passage, an entrance or a doorway to education. Accessibility in education has two-way role: (i) a physical approach; and (ii) availability and utilization of existing facilities. The physical access of schools is crucial in determining whether a child joins a school and is retained in the school system. The nearer the population is to this facility, there is every possibility of the population utilizing it or vice versa. This factor is undermined in urban areas where it is stated that alternative modes of transportation are available. To provide access for all children to elementary education according to the National norms or where not possible to provide alternate schools of teaching learning of comparable standards/levels as under:

Primary school to be provided within a radius of 1 km from the habitation(s) with 300 persons in plains and 200 persons in hilly and sparsely populated areas
Upper Primary school to be provided within a radius of 3 kms from habitation(s) with a population of 500 persons.

Availability refers to the size of school-going population. In high population density areas more schooling facilities are required to be provided, physical distance in such cases occupies a less important position; pupil-teacher ratio and class sizes needs to be studied separately for such areas. The utilization is measured through such indicators as SLE,GER,NER,GAR,NAR,AAR,ASER etc.

2. Equality²⁶⁸

Equality means that every person would receive same treatment irrespective of status, caste, creed, color etc. Equality to all is a concept which is not conceivable because the category of 'all' itself is not a homogeneous one. It (All) consists of heterogeneous groups having disparate levels of socio-economic development. Therefore, to give same treatment to all would mean that the haves will continue to benefit more and more; and, the have nots will continue to suffer more by this principle of equality. "Equality is an essentially quantitative approach to differences between groups."²⁶⁹

3. Equity²⁷⁰

Equity means fairness or recourse to the principle of justice which implies that a policy of protective discrimination has to be adopted in order to ensure social justice. Equity does not mean that people receive things in the same proportion but in different proportions in different circumstances specific to their immediate context and situation. If one goes by the principle of inequity, the privileged will

²⁶⁸ Encyclopedia of Education (2nd Edition) by James W.Guthrie, Macmillan Reference, USA.

²⁶⁹ International Encyclopaedia of Education , 3rd Edition (Vol.4) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010.

²⁷⁰ Ibid

continue to benefit and the underprivileged will continue to suffer. Therefore, the principle of equity will eventually have to be adopted to achieve equality.

“Equity is the spirit of justice which looks at the fairness of a given state of affairs. It is essentially a qualitative judgement.”²⁷¹

4. Equitable Quality

Equitable quality in relation to elementary education means providing all children opportunities of access to, participation in and completion of elementary education of a fairly good standard.

5. Gender

Gender refers to the social differences and relations between men and women which are learned, very widely among societies and cultures, and changes over time. The term gender does not replace the term sex, which refers exclusively to biological difference between men and women. For example, statistical data are broken down by sex. The term gender is used to analyze the roles, responsibilities, constraints and needs of women and men in all areas and in any given social context.²⁷²

6. Gender equality

Equality between men and women entails the concept that all human beings, both men and women, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles and prejudices. Gender equality means that the different behavior, aspirations and needs of women and men are considered, valued and favoured equally. It does not mean that women and men have to become the same, but that their rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equity means fairness of treatment for women and men, according to their respective needs. This may include equal treatment or treatment that is different but which is considered equivalent in terms of rights, benefits, obligations and opportunities.

²⁷¹ International Encyclopaedia of Education, 3rd Edition (Vol.4), by Penelope Peterson, Eva Baker and Barry McGrow, Academic Press, Boston, 2010.

²⁷² ABC of Women Worker's Rights and Gender Equality, ILO, Geneva 2000, Pages 47-48.

G. Legal Basis of Education

1. Introduction

Education was exclusively a state subject till 1976 under the provisions of entries 63 to 66 of List I and entry 25 of List III. Article 19(c) and Article 19(g) gave the right to form associations and to practice any profession or to carry out any trade or business which obviously covers the right of the individuals to establish private schools. Article 28(1) and Article 28(2)/(3) imply that all citizens shall have the freedom to establish private educational institutions in order to provide religious instructions of their choice. Article 29(1) of the Constitution provides that any section of the citizens, residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same. Article 29(2) lays down that no citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, language or any of them. Article 30(1) enjoins that all minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice. Article 30(2) lays down that the State shall not, in granting aid to educational institutions, discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language. [Article 45 of the Constitution states that the State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years]. This was substituted by 86th Amendment Act, 2002 to read as follows: "Art 45 Provision for early childhood care and education to children below the age of six year: The State shall endeavour to provide early childhood care and education for all children until they complete the age of six years". Article 46 of the Indian Constitution requires the State to promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation. Article 350-A lays down that it shall be the endeavour of every State and of every local authority within the State to provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups and the President may issue such directions to any State as he considers necessary or proper for securing the provision of such facilities.

In 1976, through the 42nd Constitution Amendment Act, 1976, Sec.57 of the Indian Constitution, education was included in the Concurrent List of the Constitution [Seventh Schedule] and it became the joint responsibility of the Union Government as also the State Governments to implement various programmes for the spread of education as follows:

“25. Education, including technical education, medical education and universities, subject to the provisions of entries 63,64,65, and 66 of List I, vocational and technical training of labour.”

The concept of concurrency was given an operational meaning by the National Policy on Education (NPE) 1986 as a meaningful partnership between the Centre and the States and placed on the Union Government a larger responsibility in regard to the national and integrative character of education, quality and standards, manpower planning, research and advanced study, and international aspects of education, culture and human resource development. This was followed by Programme of Action (POA) 1992.

2. Compulsory Early Childhood Care & Education for all until the age upto 6 years

According to 86th Constitutional Amendment Act 2002, Sec.3, the Article 45 [“45: Provision for free and compulsory education for children: The state shall endeavor to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years.”] has been substituted as follows: ‘45. Provisions for early childhood care and education to children below the age of 6 years: The state shall endeavor to provide early childhood care and education for all children until they complete the age of six years’.

3. Legal Basis of Education

Legal Basis of education means the legal provisions or legislative authority Government has for imparting education for its people. Education was exclusively a state subject till 1976 under the provisions of entries 63,64,65,66 of list I and entry 25 of List III. It became a concurrent subject by a Constitutional amendment in 1976 which enabled the Union Government to legislate on matters like School Education.

4. Compulsory Education

The judgment of the Supreme Court in J.P.Unnikrishna vs. State of Andhra Pradesh, 1993 has already transformed an incremental development goal into an entitlement of all children up to 14 years by pronouncing the Right to Education to be a Fundamental Right derived from the Right to Life itself. As regards determining the extent of the responsibility of the State would have to be as laid down by Article 13 of the Constitution of India which includes, the Government and the Parliament in India, government and legislature of each of the States and all local or other authorities within the territory of India or under the control of the Government of India.

The term compulsory elementary education under the Right of Children to Free and Compulsory Education Act, 2009 (No.35 of 2009) has been defined in the Explanation under Section 8 as follows:

“Explanation:- The term “compulsory education” means obligation of the appropriate Government to:-

- (i) Provide free elementary education to every child of the age of six to fourteen years;
- (ii) Ensure compulsory admission, attendance and completion of elementary education by every child of the age of six to fourteen years.”

5. Decentralization of Primary Education

The 73rd and 74th Amendment to the constitution provided for decentralization of school education and entrusts primary education to the Panchayati Raj Institutions and Urban Area Committees so that participatory and interactive management for primary education could be evolved.

6. Elementary Education as fundamental right of the child & fundamental duty of parents

Further, 86th Constitution amendment Act, 2002, Sec.2 provides that after Article 21 of the Constitution, the following Article shall be inserted:

- (a) “21A: The Right to Education:- The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine.”

86th Amendment to the Constitution Act, 2002, Sec.4, the following clause (k) has been added to Article 51 after clause (j):

- (b) “Article 51(k): Fundamental duties of parent/guardian: who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.”

7. Education: a joint responsibility of Central Government and State Governments

The 42nd amendment to the Constitution of 1976 has put education in the Concurrent List and empowered the Indian Parliament with the authority to legislate on education concurrently with the States.

8. The Right of children to Free and Compulsory Elementary Education

In implementation of Art 21A: The Right to education: The Right of Children to Free and Compulsory Education Act, 2009 (No.35 of 2009) specifies the duties of the appropriate Government, Local Authority and the parents as well for providing free and compulsory elementary education to children in the age-group of 6 -14 within 3 years from the date of implementation of this Act. This Act came into force w.e.f.1.4.2010. It will be concurrent responsibility of both the Central and State Governments while parents/guardians’ duty shall be to the extent that their wards are admitted to the school for compulsory elementary education. A copy of the Act (No.35 of 2009) as also a copy of the Model Rules framed under the Right of Children to free and compulsory education Act, 2009 is placed at Appendix a-1 and a-2 respectively.

9. Other Constitutional safeguards

- 9.1 **Article 15(4):** Nothing in this article or in clause (2) of Article 29 shall prevent the State from making any special provision for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes.²⁷³
- 9.2 **Article 15(5):** Nothing in this Article or in sub-clause (g) of clause (1) of Article 19 shall prevent the State from making any special provision, by law, for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Casts or the Scheduled Tribes in so far as such special provisions relate to their admission to educational institutions including private educational institutions, whether aided or unaided by the State, other than the minority educational institutions referred to in clause (1) of article 30.²⁷⁴
- 9.3 **Article 24:** Prohibition of employment of children in factories etc. states that no child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment.
- 9.4 **Article 28:** Freedom as to attendance at religious instruction or religious worship in certain educational institutions:-
- (1) No religious instruction shall be provided in any educational institution wholly maintained out of State funds.
 - (2) Nothing in clause (1) shall apply to an educational institution which is administered by the State but has been established under any endowment or trust which requires that religious instruction shall be imparted in such institution.
 - (3) No person attending any educational institution recognized by the State or receiving aid out of State funds shall be required to take part in any religious instruction that may be imparted in such institution or to attend any religious worship that may be conducted in such institution or in any premises attached thereto unless such person or, if such person is a minor, his guardian has given his consent thereto.
- 9.5 **Article 30(1A):** states that in making any law providing for the compulsory acquisition of any property of an educational institution established and administered by a minority, referred to in clause (1), the State shall ensure that the amount fixed by or determined under such law for the acquisition of such property is such as would not restrict or abrogate the right guaranteed under that clause.
- 9.6 **The Article 39:** states that State shall, in particular, direct its policy towards securing xxx xxx xxx xxx xxx xxx xxx
- (e) That the health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength.

²⁷³ Added by Constitution 1st Amendment Act, 1951. sec.7

²⁷⁴ Inserted by the Constitution (93rd Amendment) Act, 2005, s.2

(f) That children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment.

9.7 **Article 41:** Right to work, to education and to public assistance in certain cases. The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want.

9.8 **Article 47:** Duty of the State to raise the level of nutrition and the standard of living and to improve public health:- The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavor to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.

H. Content and purpose of education

1. Academic freedom

Academic freedom typically refers to the unencumbered search for truth, freedom for academics to undertake research and publication in their specialist fields and to teach without any restriction in their area of experience.²⁷⁵

2. Academic Year

The education cycle consists of a number of years divided into annual calendar. The students are evaluated at the end of each year and are either promoted to the next grade or detained in the same grade. Normally academic term begins in the month of April or May or June and ends in the month of March, April or May of the following year in India. In eastern sector the academic term is between January of the year to December of the year. In most of the states long term vacations are in summer season but hilly states have summer vacations as also winter vacation schools. In the case of many higher education institutions, the educational cycle is divided into terms of semesters and trimesters.

“The annual teaching or examination period during which students attend courses or take final examinations, not taking minor breaks into account, it may be shorter than 12 months, but would typically not be shorter than 9 months. It may vary for different levels of education or between different types of educational institutions within a country. This also referred to as the school year, mainly for the pre-tertiary level.”²⁷⁶

3. Achievement

Accomplishment or proficiency of performance in a given skill or body of knowledge²⁷⁷. Achievement or performance in school or college in a standardized series of educational tests. The term is used more generally to describe performance in the subjects of the curriculum.²⁷⁸

4. Calendar Year

The one-year period that begins on January 1 and ends on December 31 based on the commonly used Gregorian calendar.

5. Competencies

Ability to apply to practical situations the essential principles and techniques of a particular subject matter field.²⁷⁹ It is also defined as:

²⁷⁵ International Encyclopaedia of Education, 3rd Edition (Vol.4) by Penelope Peterson EvaBaker and Barry McGraw, Academic Press, Boston, 2010, Page 433.

²⁷⁶ ISCED-2011, UNESCO.

²⁷⁷ Dictionary of Education edited by Carter V. Good, McGraw-Hill Book Company, NY/N.Delhi.

²⁷⁸ International Directory of Education, London, 1977.

²⁷⁹ Directory of Education, edited by Carter V. Good; McGraw-Hill Book Company NY/N.Delhi.

- a) Those skills, concepts and attitudes needed by all workers regardless of their occupations or specific jobs.
- b) Specific jobs are those concepts, skills and attitudes, which are highly specialized and relate directly to the single job classification in which the student learner is interested, and the specific requirements of the student learner's training station position.
- c) Specific occupations are those concepts, skills and attitudes essential to a broad occupational grouping, those with common usefulness to a family of occupations.²⁸⁰

6. Corporal punishment

Physical beating or spanking of a student for punishment; today, a generally outmoded technique of punishment in school.²⁸¹ There is a proposal to make it an offence.

7. Curriculum

- (i) Curriculum is the course of study duly prescribed by a Board or University for completing a particular level of education. Educationists' definitions of curriculum have tended to shift from the content of discrete courses of study to the much wider notion of [the curriculum as] all the learning experiences offered to pupils under the aegis of school. Curriculum has, therefore, to be seen in terms of four facets, namely: content, method, purpose and evaluation.²⁸²
- (ii) Curriculum is a group of courses and planned experiences which a student has under guidance of the school or college; it may refer to what is intended as planned courses and other activities or intended opportunities or experiences or to what was actualized for the learner, as in actual educational treatment or all experiences of the learner under the direction of the school.²⁸³
- (iii) UNESCO has defined curriculum as the subjects that are studied or prescribed for study in an educational program.²⁸⁴

- 7.1 (a) **Core-curriculum:** In core-curriculum, the intention is to shift attention from essential knowledge to fundamental social values. Core-curriculum is built around problems common to every one's cultural experiences, like the effect of technology on life styles. The idea has been expressed in cultural map curriculum in which core activities include work experience, community service, integrative projects, in house crafts, craft and design as well as orthodox academic studies.

²⁸⁰ Directory of Education, edited by Carter V. Good, Mc Graw-Hill Book Company, NY/N. Delhi.

²⁸¹ Concise Dictionary of Education by Gene R. Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

²⁸² A Dictionary of Education, edited by P. J. Hills, Routledge & Kegan Paul, London, 1982.

²⁸³ Directory of Education by Carter V. Good, McGraw – Hill Book Company, New Delhi.

²⁸⁴ Literacy Glossary, Asia/Pacific Cultural Centre for UNESCO, Japan.

- (b) **Core-curriculum** is a school curriculum with common requirements for all students in basic courses in fields such as English, mathematics, science, history etc.²⁸⁵
- 7.2 **Extra curricular activities:** (1) Activities associated with schools but take place outside of the usual schedule of classes and which are optional for learners.²⁸⁶
 (2) Academic or non-academic functions engaged in by students outside of and in addition to courses of study, such as, athletic teams, journalistic or literary publications, dramatic or debating or campus service societies and students governing bodies, all under the auspices of the School or College.²⁸⁷
- 7.3 **Common Curriculum:** Common curriculum usually implies a compulsory pattern of learning for all pupils. It tends to emphasize syllabuses and time allocations.
- 7.4 **Hidden Curriculum:**
 (1) The knowledge and understandings that students learn in school that are not part of the official syllabus curriculum, and not intentional.²⁸⁸
 (2) An implied attitude or stance held by an educational institution whereby it supports and re-inforces societal values, such as, encouraging good work habits, independence, leadership, achievements and respect for others, etc.²⁸⁹
- 7.5 **Activity Curriculum:** Activity curriculum is a program found sometimes in lower grades planned jointly by students and teachers in which the content is based largely upon the educational priorities or interests of the students. Closely akin to curricula in progressive education.²⁹⁰
- 7.6 **Intramural:** Pertaining to an athletic game or other contest or activity involving students at the same school or college.²⁹¹
- 8. Forgetting**
 Forgetting is the inability to recall an episode or a skill that was previously learned. In forgetting of declarative memory, it is suspected that many failures to recall are in fact due to a failure to access a still-existent memory trace.²⁹²

²⁸⁵ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

²⁸⁶ A Dictionary of Primary Education by Henal Ashraf; APH Publishing Company, N.Delhi, 1999

²⁸⁷ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes, Van Nostrand Reinhold Company, New York, London, Toronto.

²⁸⁸ International Encyclopaedia of Education, 3rd Edition (Vol.5) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010, Page 432.

²⁸⁹ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes, Van Nostrand Reinhold Company, New York, London, Toronto.

²⁹⁰ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

²⁹¹ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

²⁹² International Encyclopaedia of Education, 3rd Edition (Vol.5) by Penelope Peterson, EvaBaker, and Barry McGrow, Academic Press, Boston, 2010.

9. Grading system

- (i) System of marks given usually by a teacher as an evaluation of the academic quality of the student's work in a course, subject, assignment, or examination; each educational institution or program adopts its own grading system. Most commonly, institutions in the US use either a numerical (or percentage) system ranging from 65 (or 70) as the lowest passing mark to a high of 100, or a letter-grade system ranging from "F" for failure through "A" for excellent. Typical levels of a meaning and approximate equivalence in these two predominant systems are as follows.²⁹³

General meaning	Numerical system	Letter system
Excellent	90-100(or 95-100)	A(or A –to A +)
Above Average	80-90(or 85-94)	B(or B - to B +)
Average	70-80(or 75-84)	C(or C – to C+)
Below Average	65-70 (or 65-74)	D(or D – to D+)
Failure	Below 65	F

- (ii) According to HT dt. 08.09.2009, the Grading System in India is as follows:

Grade	Point	Attribute	Marks Range
A1	10.0	Exceptional	91-100
A2	9.0	Excellent	81-90
B1	8.0	Very Good	71-80
B2	7.0	Good	61-70
C1	6.0	Fair	51-60
C2	5.0	Average	41-50
D	4.0	Below Average	33-40
E1	-	Need Improvement	21-32
E2	-	Unsatisfactory	01-20

²⁹³ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

10. Learning Assessment²⁹⁴

In education, learning assessment is the process by which one attempts to measure the quality and quantity of learning and teaching using various techniques, e.g. assignments, projects, continuous assessment, objective type tests, final examinations and other standardized tests etc. In psychology, that branch of applied psychology concerned with testing in educational, occupational, clinical or other settings e.g. the psychological assessment of mental and physical handicaps.

11. Minimum Levels of Learning (MLL)

National Policy on Education 1986 as amended brought to the fore front the need for focusing not only on quantitative aspects but on quality in terms of achievement levels also. Ministry of Human Resource Development, therefore, constituted a committee who specified the basic competencies to be achieved by all children at the primary stage which is known as Minimum Levels of Learning (MLLs) in selected subjects such as language, Mathematics, Environment studies across the country. Many states are implementing the project through institutional mechanism around DIETs. Financial assistance for preparation of competency based textbooks, TLMs, training of teachers etc. is being provided by State Governments.

12. Morphology

It is the way in which words are formed and related to each other. Morphology is therefore the subsystem of the smallest units of meaning in a language – words and parts of words.²⁹⁵

13. Memory

(i) "Memory is the ability to store and remember sensations and observations."²⁹⁶

(ii) Memory is the central part of our brain. It attempts to make sense of experience, and to tell coherent stories about it. In contrast to previous schools of thought in psychology, where memory was considered to be unitary, in cognitive psychology one considers memory to be a multifaceted set of modules. There is a host of evidence to suggest that we possess many different types of memory.²⁹⁷

13.1 **Declarative Memory:** An essential property of declarative memory is that one is conscious of what one is remembering. Such memories are by their very nature, verbal.²⁹⁸

²⁹⁴ International Directory of Education by G.Terry Page & J.B. Thomas Kogan Page London P.26

²⁹⁵ International Encyclopaedia of Education, 3rd Edition, (Vol.5) by Penelope Peterson, EvaBaker and Barry McGraw, Academic Press, Boston, 2010, Page 345.

²⁹⁶ Encyclopaedia of Science & Technology by James Trefill, Routledge, N.Y., London.

²⁹⁷ International Encyclopaedia of Education, 3rd Edition, Vol.5, by Penelope Peterson, EvaBaker and Barry McGraw, Academic Press, Boston, 2010.

²⁹⁸ International Encyclopaedia of Education, 3rd Edition, Vol.5, by Penelope Peterson, EvaBaker and Barry McGraw, Academic Press, Boston, 2010.

- 13.2 **Episodic Memory:** Personal experiences and events are stored in episodic memory.
- (ii) 'Episodic Memory is the everyday form of memory that most consider when they think of memory. It is defined as a composite of episodic memory, the ability to recollect personal experiences, and semantic memory, the synthesis of the many episodic memories into the knowledge about the world. In addition, declarative memory supports the capacity for conscious recall and the flexible expression of memories, one's ability to search networks of episodic and semantic memories and to use the capacity to solve many problems.²⁹⁹
- 13.3 **False Memory:** A memory that appears real to the remembered, but is not based on veridical experience is referred to as a false memory. They can be induced in the laboratory, but they are also prevalent in everyday situations, sometimes with drastic legal and interpersonal consequences.³⁰⁰
- 13.4 **Non-declarative Memory:** One is not aware of everything that affects his behavior. These non-conscious effects of previous experiences are evidence of non-declarative memory. Also, our memory for motor skills, such as walking, typing and skiing, is non-declarative because motor skills are essentially non-verbal.³⁰¹
- 13.5 **Semantic Memory:** Believed to be stored separately from personal experiences or episodes, semantic memory refers to a person's general knowledge of the world.³⁰²
- 13.6 **Working Memory:** A coordinated set of short-term memory mechanisms that allow us to consciously manipulate what we are thinking about at any given moment.³⁰³
- 14. Pass-Fail**
- (1) A grading option, usually exercised at the secondary/post secondary levels which can take the place of the more typical A, B, C, etc. grade system. It also signifies the similar dichotomy of satisfactory/unsatisfactory.
 - (2) A pass-fail grading system is one in which students receive course grades consisting only of pass or fail, by individual student request or for all students in a given course or institution. Also called a credit-no-credit grading system.
 - (3) An alternative grading system used at some experimental institutions and frequently in preschool and early primary education; employs detailed written comments by teachers to provide evaluations of the students performance

²⁹⁹ Encyclopedia of Education Second Edition, Vol.4, by James W.Guthrie, Macmillan Reference USA

³⁰⁰ International Encyclopaedia of Education 3rd Edition, Vol.5 by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010

³⁰¹ International Encyclopaedia of Education, 3rd Edition, Vol.5, by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010.

³⁰² International Encyclopaedia of Education 3rd Edition (Vol.5) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010

³⁰³ International Encyclopaedia of Education, 3rd Edition,(Vol.5) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010.

instead of letter or numerical grades. Sometimes called informal assessment or summative evaluation.³⁰⁴

15. Syllabus

Main heads and topics to be covered by a course of study or instruction.³⁰⁵

16. Syntax

Syntax is the system of phrases and clauses that are used to create sentences. It is the study of sentence structure and grammatical morphology.³⁰⁶

³⁰⁴ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne

³⁰⁵ International Dictionary of Management Techniques (2nd Edition) by Hano Johannsen & G.Terry Page, London.

³⁰⁶ International Encyclopaedia of Education, 3rd Edition (Vol.5) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010, Page 345/ 375.

I. Educational Institutions and their classification

1. Academic Accreditation

Academic Accreditation is the assessment of an Institution's or a program's capacity for quality with a binary judgment about the attainment of threshold academic standards.³⁰⁷

2. Academic Calendar

Five types of Academic Calendars, like:

- Early Semester
- Traditional Semester
- Quarter System
- Trimester
- 4-1-4 Calendars

have been used in education. A review has shown that the traditional Semester (a Calendar that divides the academic year into two terms of 15 to 17 weeks) was the dominant Calendar in the USA³⁰⁸

3. Accreditation³⁰⁹

(i) Accreditation means to accord official authorization. The word accreditation is derived from latin word credito (trust). Its application dates back to 1871 when on site visits basis, University of Michigan began accrediting secondary schools entrusted with providing adequate preparations for University studies. The regional associations sought a voluntary method for identifying schools capable of their objectives and worthy of their trust. Accreditation became the preferred name of this process. In India, National Open School, has also accredited centers for school education throughout the country. Apart from this, there are following types of School Boards/authorities in India, namely:

- ICSE; CBSE; State Boards;
- National Board of Examinations
- AICTE (For Engg.Architecture and Technology)
- NCTE (For Teacher Education)
- Association of Indian Universities
- University Grants Commission
- Central Universities/State Universities
- Private Universities under different statutes.

³⁰⁷ International Encyclopaedia of Education, 3rd Edition(Vol.4) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010,P377.

³⁰⁸ Encyclopedia of Education, Second Edition by James W.Guthrie,Volume 1, Macmillan Reference USA.

³⁰⁹ Encyclopedia of Education (2nd Edition) by James W.Guthrie, Macmillan Reference, USA

- Deemed to be Universities
- Institutions of National Importance.

(ii) Accreditation is the process by which a programme or Institution is recognized as being in conformity with some agreed upon standard.³¹⁰

4. Alternative Schools

(1) Alternative Schools are those schools set up in un-served habitations (with no schooling facilities within one km) under the Education Guarantee Scheme (EGS) component of the EGS & AIE Scheme to provide education to out of school children. Such schools are available in MP, Kerala, Odisha, UP, A.P. Maharashtra, Rajasthan etc

(2) Alternative Schools are usually Schools or school programs adapted to provide more personal attention and flexibility than conventional programs, and designed to meet the needs of students who might otherwise become drop-outs. These substitute school programs usually differ from traditional programs in curriculum, teaching methods, and background of teachers.³¹¹

5. Community Schools³¹²

This concept was started by Henry Morris, Chief Education Officer, Cambridge with the establishment of Village Colleges in 1920s. The college housed not only the school but the village hall, the branch of county library, the clubroom for old pensioners, and so on; the facilities available to the school, for example, those in the workshops and gymnasium were also available to the community. The college was the place not only where children went to school but also where their parents and elder brothers and sisters went to concerts, attended evening classes or meetings of the women's institutions etc.

6. Categories of Educational Institution

The educational institutions are divided into three types, viz; Boys, Girls and Co-educational.

6.1 **Boys Institutions:**³¹³ An educational institution for boys is one where only boys are admitted to all classes and admission of girls is restricted to some specific classes only. For instance in a Sr. Secondary School for Boys, there is the facility for teaching of Geography which is not available in the adjoining Girls Sr. Secondary School. So, the girls of that area will be admitted to this school for the teaching learning of geography only but it will still be treated a Boys Sr. Secondary School and not a co-educational Sr. Secondary School.

³¹⁰ Encyclopedia of Educational Evaluation, Jossey Bass Publishers, San Francisco, Washington, London, 1976

³¹¹ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

³¹² A Dictionary of Education, edited by P.J. Hills, Routledge & Kegan Paul, London, 1982

³¹³ All India Educational Surveys, NCERT, New Delhi

6.2 **Co-educational Institution:** A co-educational institution is one in which both boys and girls are admitted to all classes in the institution.

6.3 **Girls Institution:** An educational institution is girls institution if only girls are admitted to all classes and admission of boys is restricted to some specific classes as described above.

7. **Institutions in the same Building**

If two institutions are functioning in the same building with separate heads of institutions and administration for want of accommodation, these institutions will be treated as two institutions and each institution will fill up a separate form of educational statistics. However, in the case of an institution having two shifts under the same head and administration, it will be treated as one institution and only one form of educational statistics about both the shifts will be filled up by the institution.

8. **Mobile Schools**

Mobile school is an innovative and alternative method of school teaching when unreachable children of the nomadic tribes are provided education. The nomadic tribes continue moving from one place to another along with their families and folks. For the education of their children, teachers are sent along with the moving population. This experiment has not been very successful. The other experiment is that the children of these nomadic tribes are allowed attendance in various public schools wherever these nomadic tribes move. This experiment has also not been very useful.

9. **Neighborhood school**

(i) This concept was developed and refined by the Kothari Commission (1964-66). The idea was that the children of a particular area will necessarily attend schools in their locality or neighborhood and will not be permitted admission in any other school beyond their neighborhood in order to avoid segregation in schools. The concept of neighborhood school has not been implemented in India.

(ii) The idea of neighborhood within which a School has to be established has also been spelt out in the Rule 4 of Model Rules under the Right of children to Free and Compulsory Education Act, 2009 (No.35 of 2009) as under:

4(1) (a) In respect of children in classes I-V, a school shall be established within a walking distance of one KM of the neighborhood; and

4(1) (b) In respect of children in classes VI-VIII, a school shall be established within a walking distance of 3 Km of the neighborhood, although area problems of difficult terrain, thickly populated areas have been specified as exceptions.

10. Boarding School

A boarding School is an elementary or secondary school at which substantial numbers of students reside in school dormitories during school session instead of at home.³¹⁴

11. Convent School

A convent school is a private school operated by a Roman Catholic Convent. Curriculum is oriented around the tenets of Catholicism and includes religious instruction.³¹⁵

12. Proprietary School

A private school chartered as a profit-making organization; postsecondary institutions providing non-collegiate instruction in occupational and technical fields are frequently proprietary.³¹⁶

13. Residential Schools

Residential schools are those schools where both board and lodging arrangements are made by the school management for the students along with teaching learning. Residential schools are of the following types:

- a) Those who admit only boarders and day scholars are not admitted to schools. In this category fall all the Navodaya Vidyalayas, Sainik Schools, Doon School, BCS, Shimla, Asharam Schools and the like.
- b) Those who admit both boarders and day scholars as well. In this category fall all other schools who have attached hostels including hostels for SC/ST children etc.
- c) Sports hostels: In order to encourage sports, there are sports hostels attached to schools where admission is restricted to sports persons only and none else.

14. The School

A school normally comprises a group of pupils of one or more grades organized to receive instructions of a given type and level duly prescribed by a School Board/Government under one or more than one teacher. Schools are classified by type, by management, by category, by stage, by recognition etc.

The Government of India has defined an Elementary School as "School means, any recognized School imparting elementary education and includes,-

- i) A School established, owned or controlled by the appropriate Government or a local authority;

³¹⁴ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

³¹⁵ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne.

³¹⁶ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

- ii) Aided School receiving aid or grants to meet whole or part of its expenses from the appropriate Government or local authority;
- iii) A School belonging to specified category;
- iv) An unaided School not receiving any kind of aid or grants to meet its expenses from the appropriate Government or local authority.”

- 14.1 **Recognized School:** A recognized school is one in which the course(s) of study followed is/are prescribed or recognized by the Government (Central/State/Local Body) or a university or a Board constituted by law or by any other agency authorized in this behalf by the Central or State Government and which satisfies one or more of the authorities e.g. Directorate of Education, Municipal Board, School Board etc. with regard to its standard of efficiency. It runs regular classes and sends candidates for public examinations, if any.
- 14.2 **Unrecognized School:** Unrecognized schools are those which are not recognized by the Govt. [(central/state/local Body)/Board/University etc]. Such schools are not obliged to follow the prescribed curriculum or the textbooks. The management can fix fee without approval from the government.
- 14.3 **Self Managing School:** A Self Managing School is a School in a system of education “to which there has been decentralized a significant amount of authority and responsibility to make decisions related to the allocation of resources within a centrally determined framework of goals, policies, standards and accountabilities. Resources are defined broadly to include knowledge, technology, power, material, people, time, assessment information and finance (Caldwell and Spinks, 1998,4,5)”³¹⁷

15. Schools by stages

Schools are established for teaching of specific grades which may or may not follow a particular level of education. For example, a school may be offering education from Grade 1 to Grade 12. Such a school would be classified as a senior secondary level school. However, it comprises of four stages of education, namely, primary, upper primary, secondary and senior secondary. The classification of schools by stage is as follows:

- a) Primary stage: A primary school comprising I-IV/V classes
- b) Upper primary stage: An upper primary school comprising V/VI-VII/VIII classes
- c) Primary and upper primary stage: An upper primary school having primary as attached classes (I-VII/VIII)
- d) Primary, upper primary and secondary stage: A high school having primary and upper primary classes as attached classes I-X
- e) Primary, upper primary, secondary and senior secondary stage: A higher secondary school having primary and upper primary as attached classes I-XII

³¹⁷ International Encyclopaedia of Education 3rd Edition (Vol 4) by Penelope Peterson, Eva Baker and Barry McGrow, Academic Press, Boston, 2010.

- f) Upper primary and Secondary stage: A high school with upper primary as attached classes (VI-X)
- g) Secondary stage: A high school having IX-X classes
- h) Upper primary, secondary and senior secondary stage: A higher secondary classes having classes (VI-XII)
- i) Secondary and senior secondary stage: A higher secondary school having IX-XII classes
- j) Senior secondary: A higher secondary school comprising (XI-XII) classes

16. Schools by Management

The authority, which runs an educational institution, determines its type of management. It may be Government, local body, and private body receiving grants-in-aid or not receiving grants-in-aid. As such educational institutions may be classified as follows:

- 16.1 **Government Schools:** An educational institution run by Central or State Government, public sector undertaking or autonomous organization wholly financed by Government will be classified as Government educational institution. For instance KVS, NVS, Sainik Schools, State Govt. Schools, Ashram Schools, Military Schools, Air Force Schools, Naval Schools, Project Schools, etc. will fall under this category. 'An educational institution is classified as public if it is (i) controlled and managed directly by a public education authority or agency or (ii) managed either by a Government agency or by a Governing Body (Council, Committee etc.) most of whose members are either appointed by a public authority or elected by public vote'.³¹⁸
- 16.2 **Local Body Schools:** An educational institution run by Municipal Committee/corporation/ NAC/ Zilla Parishad/ Panchayat Smiti/ Cantonment Board etc. is classified as local body institution. In Delhi for instance all Primary schools managed by NDMC/MCD etc. will fall under this category.
- 16.3 **Private schools:** A private educational institution is one which is run by an individual or a private organization including religious bodies and private trust and philanthropic institution. Private recognized schools are of two types. 'An educational institution is classified as private if it is controlled and managed by non-governmental organization (a Church, a trade union, a business enterprise, a religious organization etc.) or if its governing board consists mostly of members not selected by a public agency'.³¹⁹
- 16.4 **Private Aided school:** A privately managed school, which is in receipt of regular maintenance grant from the Government, local body or from any public authority. If an institution which is on the grant-in-aid list of a public authority but does not get the maintenance grant in a particular year that institution will still be treated as an aided institution for that year.

³¹⁸ Division of Statistics, UNESCO, Paris, Instruction Manual, 1998.

³¹⁹ Division of Statistics, UNESCO, Paris, Instruction Manual, 1998.

- 16.5 **Private Unaided School:** A private unaided educational institution is one which is managed by an individual or a private organization and is not receiving maintenance grant either from Government, local body or any public authority etc. One time grant for a specific purpose like adding a science block, fencing of the institution, etc. will not make the unaided institution as aided. It will still remain unaided institution. In Delhi, schools like G.D. Goenka School, Delhi Public School, Modern school, St. Stephens College and in Shimla, Tara Hall, Bishop Cotton School, St. Edwards, St. Bedes, Auckland House etc. fall under this category.
- 16.6 **Ashram Schools:** Schools managed and run by the Welfare Department of the Govt. for the destitute. These are purely residential and are fully financed by the State Welfare Department.

17. School Complexes

The concept of School Complexes has been developed by Kothari Commission (1964-66)³²⁰. Since the high and higher secondary schools have better laboratory and library facilities and these schools have also better qualified and trained teachers; they have larger and well-developed playgrounds and games materials. Five or six primary and upper primary schools, as per convenience, may form a complex and get their academic and administrative problems solved at the school complexes level. The attached schools in the complex, may arrange co-curricular activities, give better exposure to their students at the thus formed school complex rather than taking up the matter at block or district level. In case of temporary absence due to illness of the single teacher school, the school complex head, immediately, on knowing, can send a teacher from the school where teachers are available in his complex. A large number of academic issues and problems can be discussed at the school complex level by arranging a meeting of all the teachers or otherwise. Thus many states have formed school complexes.

18. Shift Schools

Shift schools are quite popular in many parts of the world. Shift schools are normally opened to optimally utilize the school infrastructure or to provide one level of education in one shift and another in the second or third shift. Shift schools also function to provide separate educational facilities to the boys and girls. In Delhi there is the concept of shift schools i.e. two shifts one in the morning and the other in the evening are functioning with separate Vice-Principals in charge. These have been treated as separate schools for various reasons as follows:

- a) these shifts are under separate heads
- b) These shifts are separate by nomenclature; the morning shift for boys, the evening shift for girls or vice-versa with separate name.

³²⁰ Report of Education Commission 1964-66, MHRD, New Delhi Page 43.

- c) Even if in some cases the shifts are not for boys alone, the morning shift is a primary school and the evening shift is for secondary school. So these are separate schools.

19. School pattern

The school pattern differs from state-to-state. Various combinations of classes of the school system constitute different stages of school education. In India 22 States/UTs have I-V classes at primary school stage. In 12 States/UTs the primary school stage comprises I-IV classes; In Nagaland primary school stage comprises Pre-Primary, A, B, I-IV classes. So is the case at upper primary school stage. The details are contained in App.'b': System of School Classes in India.

20. Special Schools for the Handicapped

The special education for the disabled is conducted in two types of schools. One type of schools are known as special schools for the handicapped, such as schools for mentally retarded/ school for deaf and dumb/ school for the blind etc. These are under Welfare Department and are meant for severely handicapped children who are trainable. The other types of schools fall under "integrated education". In this category, the educable disabled children are taught along with normal children. The only difference in this type of education is that there are special teachers for different disabilities along with resource rooms where the disabled children are prepared by the resource Teacher and then they are integrated with the normal students.

J. Enrolment in educational institutions

1. Adolescents

Chronological years of individual growth and development beginning with puberty (about 13 years old) and lasting more or less until maturity (above 21 years old). Adolescent is past childhood and not yet an adult so that the physical and psychological process of development may be erratic or confusing and lead to difficulty in adjustment or adolescent crisis.³²¹ Adolescence is characterized by a conflict between identity and role confusion. During this period an individual can grow by about 4" and can gain 8-10 pounds in weight per year; for 2-3 years there is a quick growth followed by steady growth in the following 3-4 years. Adolescents reach sexual maturity and ends when the individual has established an identity as an adult within one's social order.

"Adolescence is the whole process of growing up from a child to an adult. During adolescence changes occur to a person's body and in the way they think and feel. In girls, puberty begins between the ages of 10-14 years. The body becomes rounder, breasts grow and periods begin. In boys puberty begins between the ages of 12-16 years. The body becomes more muscular, the testes produce sperm and the voice deepens."

2. Age of the Child

The age of the child is computed in terms of years completed by the child on or before the first day of the academic year.

3. Autistic Child

Autistic child is a severely disturbed and possibly schizophrenic child requiring extensive special education; behavior includes inability to distinguish fantasy from reality and alternate acting-out and withdrawal.³²²

4. Children Attending School/Colleges

The decennial census and the occasional NSSO Rounds collects number of persons attending schools/colleges and the educational attainments they have achieved. The information in these two surveys is collected from households; there is a difference in the definitions they have used. The NSSO in its 52nd Round has defined the persons attending schools/colleges as under:

"The current attendance status refers to whether person is currently attending any educational institution or not. While every person who is attending an educational institution is necessarily enrolled in that institution, it may so happen that a person who is enrolled is not currently attending the institution. While most

³²¹ Concise Dictionary of Education by G.R.Hawes and L.S.Hawes, Van Nostrand Reinhold Co. New York/Toronto, London, Melbourne

³²² The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

of the educational statistics are based on enrolment, the NSSO survey, because of its household approach, bases its analysis on the current attendance status³²³.

5. Cohort

Cohort is a group of individuals that have a statistical factor in common³²⁴. Another definition of Cohort is given by IIEP, Paris is: 'Cohort is a group of pupils joining standard 1 of primary education in a given year'³²⁵.

6. Cognitive Abilities

Mental or intellectual abilities involved in perception, knowing, and abstract thinking.³²⁶

7. Congenital factors

Physical or psychological influences on the pre-natal growth and development of a child before birth; such factors may contribute to learning difficulties or disabilities for the child.³²⁷

8. Disturbed Child

A child with emotional difficulties stemming from organic or functional disorders, which interfere with his normal learning and usually cause behaviour problems in the school is a disturbed child.³²⁸

9. Exceptional Child³²⁹

- (1) A Child well above average in measured mental or physical ability who often requires intensification, enrichment and acceleration in learning in order to realize his or her potential. Sometimes called a "gifted child".
- (2) A child below average in measured mental, physical or emotional ability who requires special education guided by Special Education Teachers in order to realize his or her potential. Sometimes referred to as 'Slow learner' or "handicapped" pupil.
- (3) Handicapped Child: A child with a moderate to severe physical, mental or emotional disability that interferes with child's normal learning.

10. Enrolment

Enrolment is the number of students officially registered on the rolls of an educational institution in a given grade or level of education, irrespective of age,

³²³ 52 Round of NSSO, Ministry of Statistics & Planning, GOI, New Delhi.

³²⁴ Projections of Education Statistics to 2007, by Department of Education, USA, Washington D.C., USA

³²⁵ Primary Education in Lesotto, by International Institute for Educational Planning, Paris, 1992 Glossary, Page 9

³²⁶ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

³²⁷ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York, Toronto, London, Melbourne.

³²⁸ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes, A Hudson Group Book Van Nostrand Reinhold Company New York, London, Toronto.

³²⁹ Ibid.

on a specific point of time. In the Indian context, the enrolment refers to the number of children enrolled as on 30th September of the academic session.

11. Graduate

Graduate is a pupil or student who successfully completes a level of education, such as primary education, elementary education etc.³³⁰

12. Gross Enrolment

Gross Enrolment is the total enrolment of pupils in a grade or cycle or level of education, regardless of age, in a given school year.

Gross Enrolment Ratio is calculated as under:

$$GER^t = \frac{E_a^t}{P_a^t} * 100$$

Where,-

GER^t = Gross Enrolment Ratio in year t.

E_a^t = Enrolment at a level regardless of age (Pry, Secy etc) in year t

P_a^t = Population of age-group corresponding to the level of education in year t.

Detailed GER^t calculation method is given in Appendix d-1.

13. Medium of Instructions

Medium of instructions is the language through which the subjects (other than languages) and topics from the courses of study are taught to the students in schools.

14. Automatic Promotion

The practice in primary and secondary schooling of advancing pupils from one grade to the next higher grade at the end of the school year regardless of the educational attainment of the pupils.³³¹

15. Auto-instruction

The teaching of oneself, usually with learning material prepared in a special form and in a formal educational program.³³²

16. Mental Age

(i) A means of indicating a person's level of intelligence (generally with reference to a child) based on the individual's performance on tests of intelligence by indicating the chronological age of persons who typically perform of the same level of intelligence as the test-taker.³³³

³³⁰ The Year 2000 Assessment – Technical Guidelines, UNESCO, Paris, 1998, Page 28.

³³¹ The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

³³² The Concise Dictionary of Education by Gene R.Hawes & LynneSalop Hawes, A Hudson Group Book, Van Nostrand Reinhold Company, New York,Toronto, London,Melbourne

³³³ International Encyclopaedia of Education, 3rd Edition,Vol.5,by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Boston, 2010.

- (ii) "The level of one's ability to think, understand etc. that is judged by comparison with the average ability for children of a particular age. As against this, the chronological age is the number of years a person has lived as opposed to their level of physical, mental or emotional development."³³⁴
- (iii) "Mental Age is an age-equivalent score derived from a general test of intellectual skill or aptitude. A Mental Age represents the mean level of performance on a group of children at a particular chronological age on the test in question. For example, if the average number of questions answered correctly by children age 8 years, 2 months, on an intelligence test was 33, then in future administrations of the same test, all children who answer 33 questions correctly would be assigned a Mental Age of 8 years, 2 months."³³⁵

17. Net Enrolment

Net Enrolment is the number of pupils in the official school age-group in a grade or cycle or level of education in a given school year. Net Enrolment Ratio is calculated as under:

$$\text{NER}^t = \frac{E_{a,b}^t}{P_a^t} * 100$$

Where, NER^t = Net Enrolment Ratio in year t.

$E_{a,b}^t$ = Enrolment in the age-group corresponding to the Education level in year t.

P_a^t = Population of the age-group corresponding to the Education level in year t.

18. New Entrants

New entrants are those pupils who enter Grade I of primary education for the first time³³⁶. OECD has defined new entrants as follows: New entrants to a level of education are students who are entering any programme leading to a recognized qualification at this level of education for the first time, irrespective of whether students enter the programme at the beginning or at an advanced stage of the programme. Individuals who are returning to study at a level following a period of absence from studying at that same level are not considered new entrants.³³⁷

19. Pupil

A pupil is a young person who is enrolled in an educational program. For purposes of the assessment, 'pupil' refers to a child enrolled in primary school, whereas children or adults enrolled at more advanced levels are students.³³⁸

³³⁴ Oxford Advanced Learner's Dictionary, Sixth Edition edited by Sally Webmeier, Oxford University Press, 2001.

³³⁵ Encyclopaedia of Special Education by Cecil R.Reynolds, Elaine Fletcher Janzen, Third Edition, Volume 2, John Willey & Sons Inc. New Jersey, 2007.

³³⁶ The Year 2000-Technical Guidelines, UNESCO, Paris, 1998.

³³⁷ Investing in Education – Analysis of the 1999 World Education Indicators, OECD Paris, 2000

³³⁸ EFA, the Year 2000 Assessment – Technical Guidelines, UNESCO, 1998, Paris, Page 28.

20. Puberty

The transitional time in the life cycle marked by the maturity of the reproductive organs and the emergence of secondary sexual characteristics at the start of adolescence around the age of 12 or 13.³³⁹

21. Stages of Child Growth³⁴⁰

- (a) **Early Childhood: 0-3 Years:** Child doubles in height; quadruples in weight; head becomes like a toddler adult like in appearance; masters many skills of sitting, walking, tweltry, using spoon, scribbling, head-eye coordination to watch and throw a ball etc.
- (B) **3-5 Years Child:** Continue growing and begins developing fine motor skills; develop control of pencils; development of gross motor skills like skipping and balancing on one foot etc.
- (C) **5-8 Years Child:** Physical growth slows down; motor skills become more refined; able to tell stories; vocabulary grows; learn to use tenses; concept formation takes place etc. Kids develop the ability to combine stimuli coming from different senses after the age they turn 8. Their eyes get farther apart and their limbs longer, they may use one sense to calibrate the other, according to a research study in Oxford University.
- (D) **8-12 Years old:** Sigmund Freud labeled this period of life as latency stage – a time when sexual and aggressive urges are repressed. But modern psychologists regard this stage as integration both in terms of development within the individual and of the individual within the social context. In this latency stage growth is slow but steady till the onset of puberty. This stage is important for friendships, developing interests in sports, education. Recent social trends like school violence, eating disorders, drug-use/abuse, depression etc. affect many school children at this stage.

During first five years of life, a young human being grows and develops rapidly. A six-week child sleeps when not being held or fed, and cries when in distress. The baby can follow objects with his/her eyes and listens to a person while talking. A six-months child can sit supported with his/her head up and back straight. The child at this age holds objects, squeals and babbles. At 8-months age, the baby can sit up by herself/himself, will try to crawl and can stand if supported. He/She turns towards the sound of familiar voice and can imitate simple sounds. At 10-months, the baby can crawl rapidly, pupil herself up to a standing opposition, point to and pick up objects. The child says her/his first words, like: Mamma, Papa. At 14-months, the child can stand alone and may walk without help. The child speaks a few words and tries to indicate what he/she wants. At 2 years the child can run and jump, turn the pages of a book, identify pictures of familiar objects, draws lines etc. At 4-years, the child now has good

³³⁹ Concise Dictionary of Education by Gene R.Hawes & Lynne Salop Hawes (AHudson Group Book), Van Nostrand Reinhold Company, New York,Toronto, London, Melbourne

³⁴⁰ Encyclopedia of Education (2nd Edition) by James W.Guthrie, Macmillan Reference, USA

balance and can hop on one foot. He/She can draw simple pictures and copy some letters.

22 Student

A student is a person formally enrolled in an educational program for undergoing a course of study.

22.1 ***Foreign Student:*** A foreign student is a person enrolled in an educational program in a country of which he is not a permanent resident.³⁴¹

22.2 ***Full-time Student:*** A full time student is a person enrolled in an educational program whose study load is considered to be full time by national norms or conventions.³⁴²

22.3 ***Part-time Student:*** A part time student is a person whose study load is less than that of a full time student and who consequently will require program, a longer period of time to complete an equivalent education.³⁴³

23. Truancy

Students' absence from school for unexcused reasons is truancy.

24. Typical Ages

Typical ages are the age of students at the entry time and ending time of a level or a cycle of education.

³⁴¹ Instructions Manual for completing the Questionnaire on Statistics of Education UNESCO, Paris, 1998, Page 6.

³⁴² Concise Dictionary of Education, by G.R.Hawes and L.S. Hawes, Van Nostrand Reinhold Co. New York/Toronto.

³⁴³ Ibid.

K. School Efficiency

1. Out of School Children

Out of school children are those children in the official school age-group who are not enrolled in schools³⁴⁴. These comprise dropouts and never enrolled children.

2. Pupil-cohort

Pupil-cohort is a group of pupils who enter the first grade of a level of education in the same school year and subsequently experience promotion, repetition, drop-out each in his or her own way³⁴⁵.

3. Co-efficient of Efficiency

Co-efficient of efficiency is a measure of the internal efficiency of an education system obtained by dividing the total number of pupil-years required for a pupil cohort to complete a level or cycle of education by the estimated total number of pupil years actually spent by the same pupil cohort. The reciprocal of the co-efficient of efficiency is the input: output ratio.³⁴⁶

Symbolically:

$$CE_g = \frac{\sum_{j=n}^{N+k} G_{g,j} * n}{\left\{ \sum_{j=n}^{N+k} G_{g,j} * j \right\} + \left\{ \sum_{j=1}^{n+k} D_{g,j} * j \right\}} * 100$$

[For more details, see the flow diagram on [cohort analysis](#).]

Where:

CE_g = Coefficient of Efficiency for a pupil-cohort **g**

$G_{g,n}$ = the number of pupils graduating from cohort **g** in final grade **n** after **n** years of study (without repetition)

$G_{g,j}$ = the number of pupils graduating from cohort **g** in final grade **n** after **j** years of study

$D_{g,j}$ = the number of pupils (of the cohort **g**) dropping out after **j** years of study.

Detailed calculation method is given in Appendix **d-1**, Part II.

³⁴⁴ EFA, the Year 2000 Assessment, Technical Guidelines, UNESCO, 1998, Page 28.

³⁴⁵ EFA, the Year 2000 Assessment, Technical Guidelines, UNESCO.1998

³⁴⁶ EFA, the Year 2000 Assessment, Technical Guidelines, UNESCO, 1998.

4. School Life Expectancy

School Life Expectancy for a child of certain age is defined as the total number of years of schooling which the child can expect to receive in the future, assuming that the probability of his or her being enrolled at school at any particular future age is equal to the current enrolment ratio for that age. It is the sum of the age specific enrolment ratios for primary, secondary and higher education.³⁴⁷

$$SLE_a^t = \sum_{i=a}^n \frac{E_i^t}{P_i^t}$$

Where,-

SLE_a^t = School life expectancy at an age **a** in year **t**

E_i^t = Enrolment of the population of age **i** (for **i = a, a+1, ..., n**) in school-year **t**; **n** denotes the theoretical upper age-limit of schooling.

P_i^t = Population of age **i** in school-year **t**

Detailed calculation method is given in Part II, Appendix d-1.

5. Survival Rate

Survival Rate is the percentage of a pupil cohort that enters together in the first grade of primary education and that reaches a given grade (e.g. Grade 5) or the final grade of an educational cycle either with or without repeating a grade.³⁴⁸

Detailed calculation method is in Part II, Appendix d-1.

6 Drop Out

A dropout is the pupil who leaves school before the completion of a given stage of education or leaving at some intermediate or non-terminal point in a cycle of schooling.³⁴⁹ Dropout Rate is calculated as under:

$$\text{Dropout Rate} = \frac{\text{No. of students dropping out from Grade } i \text{ in year } t.+1}{\text{No. of students in Grade } i \text{ in year } t.}$$

Symbolically,-

$$dor_a^t = \frac{E_i^t - [(R_i^{t+1}) + (P_{i+1}^{t+1})]}{E_i^t} * 100$$

Where,

dor_a^t = Dropout Rate of Grade **a**, in year **t**.

E_i^t = Enrolment in grade **a** in year **t**.

³⁴⁷ World Education Report, 1993, UNESCO, Paris, Page 94.

³⁴⁸ EFA, the Year 2000 Assessment – Technical Guidelines, UNESCO, Paris, 1998.

³⁴⁹ Primary Education in Lesotho Indicators 1992, by International Instt. For Educational Planning, Paris.

R_i^{t+1} = Repeaters in grade a in year t+1

P_{i+1}^{t+1} = Promotees in grade (i+1) in successive year t+1

Detailed calculation method is in Appendix **d-1**.

7. Repeater

Repeater is a pupil who is enrolled in the same grade for a second (or further) consecutive year³⁵⁰. Repeaters will also include the following:

- 7.1 **Repeater due to failure:** A student who appeared but failed in the annual examination and also includes the students who didn't appear in the annual examination and is declared as 'fail'.
- 7.2 **Repeater due to re-admission:** A child whose name was deleted due to some reason from the school register (including transfer certificate cases) but is again readmitted into the same class after a gap of more than one academic session.
- 7.3 **Repeater due to long absenteeism:** A child who got admitted once but discontinued schooling for more than 3 months without any prior intimation and the same child again starts attending school.

International Institute for Educational Planning, Paris, has defined repeater as follows: 'Repeaters are pupils who, at the beginning of a given school year, are enrolled in the same standard doing the same work as in their previous year in school'.³⁵¹ Repetition Rate is calculated as under:

$$R_i^t = \frac{\text{Number of students repeating grade } i \text{ in year } t+1}{\text{Number of students in Grade } i \text{ in year } t.}$$

Symbolically,-

$$R_i^t = \frac{R_i^{t+1}}{E_i^t} * 100$$

Where,

R_i^t = Repetition Rate in grade i, in year t

R_i^{t+1} = Number of students repeating grade i in year t+1.

E_i^t = Enrolment in Grade i in year t.

Detailed calculation method is in Appendix **d-1**.

8. Promotee

A promotee is the pupil who successfully graduates to the next grade in the following school-year after completing the prescribed procedures. The Promotion Rate is calculated as under:

³⁵⁰ Ibid.

³⁵¹ Primary Education in Lesotho, International Instt for Educational Planning, Paris

$$P_i^t = \frac{\text{Number of students promoted to Grade } i+1 \text{ in year } t+1}{\text{Number of students in Grade } i \text{ in year } t}$$

$$\text{Symbolically, } P_i^t = \frac{P_{i+1}^{t+1}}{E_i^t} * 100$$

Where, -

P_i^t = Promotion Rate in Grade i, in year t+1

P_{i+1}^{t+1} = Number of Promotees in Grade i+1 in year t+1.

E_i^t = Enrolment of Grade i in year t.

Detailed calculation method is at Appendix d-1.

9. Pupil-year

Pupil-year is a non-monetary measure of educational inputs or resources. One pupil-year denotes the resources spent to maintain a pupil in school for one year.³⁵²

10. Monitoring

Monitoring is a management function and operates during the implementation phase of a project. It tracks the progress of project implementation against the pre-defined benchmarks and milestones. All development projects are monitored through an efficiently designed Information Management System to find out and identify:

- Specific problems as they arise for corrective measures
- Whether or not a project continues to be relevant etc.

11. Evaluation

Evaluation is an important tool for ensuring accountability. As a result of project interventions, the achievements or failures are brought to the fore. Evaluation also tells whether the project has been implemented effectively or not. Evaluation and impact assessment can be summative or formative. Summative processes are carried out to determine how effective project was whereas formative processes are carried out during the life of the project for providing feedback into the program reformulation and affecting mid-course changes.

12. Grade Transition

In education, grade transition is the number of a cohort of pupils who entered first grade of primary education and who experience promotion, dropout and repetition from grade to grade i.e. how many of them roll over to the next grade, next year and so on and thus complete a particular level or stage of education.

³⁵² EFA, the Year 2000 Assessment, Technical Guidelines, UNESCO, Paris 1998

13. Transition Rate

$$\frac{\text{No. of students promoted to class VI – Repeaters}}{\text{No. of students in class V previous year}} * 100$$

Detailed calculation method is in Appendix d-1 and d-2.

14. Attendance

Number of students attending a class in a week or month in proportion to the total enrolment of the week or total working days in that week or month in that class/educational level.

15. Attendance Rate

$$\frac{\text{Total Attendance of a child in a month}}{\text{Total working days in that month}} * 100$$

16. Completion Rate

Number of students who complete a particular school stage of education beginning from initial class of that level of education. Briefly stated, children completing an educational level as a percentage of initial enrolment in the first grade of that level four years back.

$$CR = \frac{\text{No. of students in class V}}{\text{No. of students in class 1 [4 Yrs.back]}} * 100$$

Where, CR=Completion Rate

- (a) **Gross completion ratio**: Total number of students completing an educational level (inclusive of repeaters; overage and underage children, say Grade V) as a percentage to single-age population (total, say age '11'), which is supposed to complete that level.
- (b) **Net completion ratio**: Students completing an educational level (say Grade V) of a particular single-age population (say age '11') as a percentage to total single-age population, which is supposed to complete that level.

17. Education Indicators³⁵³

Oxford Dictionary defines indicator as one whom or that which points out, directs attention to, something.

Nuttal defined education indicator as "which tells something about the performance or behavior of an education system and can be used to inform

³⁵³ OECD (1992) 'The OECD International Education Indicators. A Framework for analysis. Paris.

educational decision making.” It is a tool to have both a sense of the state of an education system and to report on that state to the whole of the community. Education indicator is information processed so as to permit the study of an educational phenomenon. World Education report 1991 indicates that a good indicator

- Should be policy relevant by being capable of providing clear and unambiguous responses to key policy issues and concerns.
- User friendly i.e. comprehensive, timely and few in numbers.
- Derived from a frame-work which allows interpretation of one figure in the context of the other basic variable of a particular country.
- Technically sound, i.e. valid, reliable and comparable.
- Feasible to measure at reasonable cost i.e. the basic statistics required for deriving them can be either readily available or comparatively easy to collect within a well-defined time-frame.

IIEP Paris has given the following definition of educational indicators:

‘Educational indicators are the indices, ratios, growth rates which are calculated using educational statistics and, where necessary, demographic, economic and other types of data’.³⁵⁴

- 17(i) The important features of an indicator are,-
- a) An indicator makes a general statement with more or less exactness;
 - b) Indicators are distinct from variables;
 - c) Indicator’s value expresses a quantity;
 - d) Indicators are basic units in theory development; and,
 - e) Indicators are temporal.
- 17(ii) Important types of indicators are as under:
- a) Representative indicators – it is like a single variable to reflect some aspect of education system.
 - b) Disaggregated Indicators –This requires the definition of variables for every element or component of the education system.
 - c) Composite Indicators –This combines a number of variables, like a kind of average of all variables entering into the combination.
 - d) Other types of indicators are:
 - i) Contextual: Population area, sex-Ratio, FR, BR, DR, IMR etc.
 - ii) Access: Availability of schools/Teachers, area wise, population wise etc.
 - iii) Participation: GE, NER, DOR, RR, enrolled students etc.
 - iv) Equity: Schools in rural areas/ rural population, SC/ST rural population, female teachers etc.

³⁵⁴ Primary Education in Lesotho, Indicators 1992 by International Institute for Educational Planning, Paris.

- v) Efficiency: Attrition of students/Teachers, PTR in schools, survival rates cost per pupil, sectoral budget etc.
- vi) Achievements: Literacy rate; incidence of illiteracy; pass % at the end of different school stages.

A list of indicators for educational development developed and adopted by UNESCO, Paris is annexed at Appendix **d-1** and **d-2** together with their definitions, calculation methodology etc.

18. Indices

Indices are plural of index. An index is a number developed from a ratio by expressing the denominator as a fixed base value, expressing the numerator in terms of this, and then suppressing the denominator which is implied.³⁵⁵

19. Educational Wastage

Educational wastage is the incidence, in a country's education, of dropout and repetition taken together.³⁵⁶

20. Symposium

Symposium is a meeting to hear and discuss a range of lectures and papers on a particular subject.³⁵⁷

21. Student Attrition

Student attrition is variously measured, but most often by student persistence from year to year and from course commencement to course completion.³⁵⁸

22. Efficiency in Education

Efficiency in education refers to the relationship between the inputs into the education system and outputs from that system. An activity is said to be efficient if maximum output is being obtained from the given inputs and if a given output is obtained with the minimum possible inputs. Therefore, inputs and outputs have to be valued so that these could be aggregated financially. Usually, prices are used to perform this valuing function. Educational inputs comprise the school buildings/playgrounds, teachers, text-books/ libraries, chalks/ black-boards, school laboratories, equipment etc. which may all be converted financially and aggregated in terms of expenditure per pupil-year. This is rather difficult to accomplish. The input indicator appropriate for the measure of output in terms of successful completers is the number of pupil years used by the cohort analysis. In a system of five grades, a minimum of five pupil years would be required for a pupil to complete successfully the education cycle. But in practical life situation,

³⁵⁵ A Concise Encyclopaedia of Management Techniques by B.Frank Finch, Allied Publishers Pvt. Ltd., New Delhi.

³⁵⁶ Primary Education in Lesotho Indicators 1992 by International Institute for Educational Planning, Paris.

³⁵⁷ International Dictionary of Management Techniques (Third Edition) by Hano Johannsen & G. Terry Page, London.

³⁵⁸ International Encyclopaedia of Education , 3rd Edition, (Vol.4) by Penelope Peterson, EvaBaker and Barry McGraw, Academic Press, Boston, 2010, Page 467

this is not possible and pupils repeat grades thereby increasing the number of pupil-years (inputs). Some pupils dropout before completing the education cycle, thus diminishing output. At the end of each school year, students may: (a) be promoted to next higher grade; (b) have to repeat the same grade the following year; or (c) drop out of the system either because of illness or otherwise. These flows of students over time, between and within grades form the core of basic educational flow model.

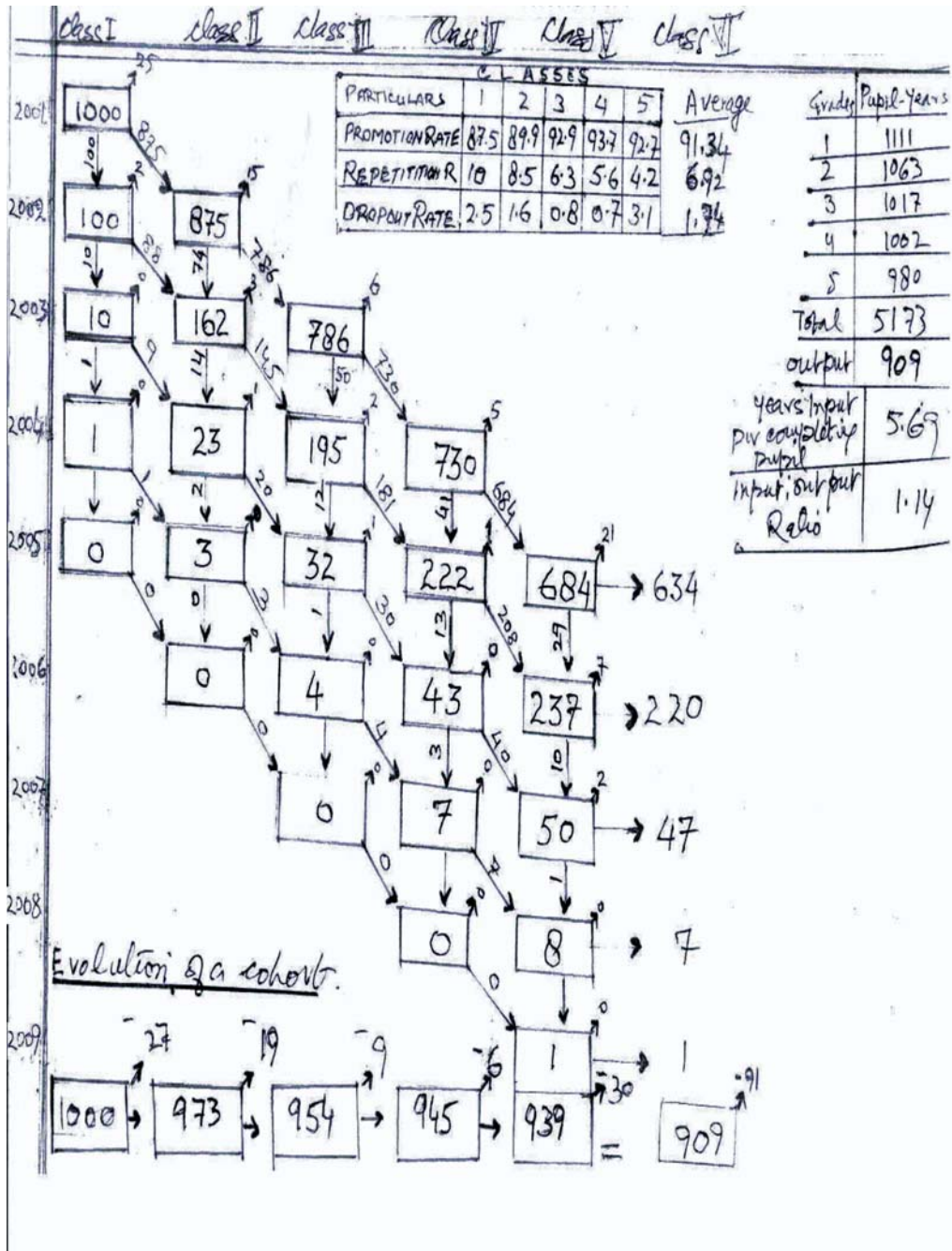
23. Apparent Cohort Method

When grade-wise data on repeaters are not available, the apparent cohort method is applied to estimate the dropouts between grades. In this method, data on grade-wise enrolment in successive years of an education cycle is compared. It is assumed that the decrease from each grade to the next grade equals dropout. If there is no repetition, then this method will give results similar to the Reconstructed Cohort Analysis method. It may also give reasonable results if the repetition rates are relatively small and do not vary much in magnitude between grades. On the contrary, if repetition rates are large and vary in magnitude, the results would be altogether different and alarming as compared to the other method. This method may be helpful under the Right of children to free & compulsory Education Act, 2009, under which there is automatic promotion from Grade 1 to the other.

24. Reconstructed Cohort Method

Under the reconstructed cohort method, the available data on grade-wise enrolment and repeaters are utilized to reconstruct the school history of a given cohort in order to work out the internal efficiency of educational system. Following Chart elucidates the fictitious number of 1000 students-cohort w.e.f 2001-2009 with assumptions that the rates of promotion, repetition remain constant and that there are no new entrants into the system.

Reconstructed Cohort Analysis



In the above hypothetical illustration, the efficiency indicators are as under:

(1) Wastage Rate:

$$(i) \frac{\text{Actual Input/Output Ratio}}{\text{Ideal Input/Output Ratio}} \quad \text{i.e.} \quad \frac{5173/909}{5} = 1.14$$

The above wastage ratio reveals that there is scope for improvement because wastage rate is above the ideal ratio which is one.

(2) Wastage on account of Repeaters/Dropouts

Wastage on account of Repeaters and Dropouts out of 5173 student years, graduates have consumed only 4545 (909 x 5) student years. Remaining 628 student years have gone waste. The break-up of 909 is as follows: 909 = 634(5)+220(6)+ 47(7)+7(8)+1(9). This equation reveals that out of 909, only 634 students have taken exactly five years, compared to 220 students who have taken six years, 47 students have taken 7 years, seven students who have taken eight years and one student who has taken nine years. Thus 220, 47, 7 and 1 students have taken one, two, three and four more years. Hence 339= [(220X1)+(47x2)+(7x3)+(1x4)] student-years were wasted due to repetition. Similarly wastage on account of dropout is as follows: 289= [(25x1)+(17x2)+(9x3)+(8x4)+(23x5)+(7x6)+(2x7)] student years. Hence out of 628 student years wasted, the percentage of wastage on account of Repeaters and Dropouts is as follows:

$$(a) \text{ Wastage on account of repetition} = \frac{339}{628} * 100 = 54\%$$

$$(b) \text{ Wastage on account of Dropouts} = \frac{289}{628} * 100 = 46\%$$

(3) The Average duration of stay in the system is as under:

(a) Graduates:

$$\frac{(634x5)+(220x6)+(47x7)+(7x8)+(1x9)}{909} = 5.37 \text{ Years}$$

(b) Dropouts:

$$\frac{(25x1)+(17x2)+(9x3)+(8x4)+(23x5)+(7x6)+(2x7)}{91} = 3.18 \text{ Yrs}$$

(4) Cohort:

$$\frac{(1000x1)+(975x2)+(958x3)+949x4+(941x5)+(284x6)+(57x7)+(8x8)+(1x9)}{5173}$$

$$= \frac{16501}{5173} = 3.19$$

It may be noted from the above that 909, 91 and 5173 are the number of graduates, dropouts and the total pupil-years respectively invested during the entire evolution of the hypothetical cohort of 1000 students who entered into the system during the year 2001. The average stay in the system indicates that on an average, a dropped out student stayed for at least 3.17 years in the system i.e. marginally lower than the average stay for the entire cohort.

$$(5) \text{ Input: Output Ratio} = \frac{\text{Total Pupil Years/ Total output}}{5}$$

$$= \frac{5173}{909} / 5 = 5.69/5 = 1.14$$

L. Teaching and non-teaching staff

1. Teacher

- (i) Teacher is a person who in his/her professional capacity, guides and directs pupils learning experiences in gaining knowledge, skills and attitudes that are stipulated by a defined curriculum programme. Briefly stated a teacher is a person who is directly engaged in instructing a group of pupils (students).³⁵⁹
 - (ii) A teacher is defined as a person whose professional activity involves the transmission of knowledge, attitudes and skills that are stipulated in a formal curriculum to students enrolled in an educational programme. The teacher category includes only personnel who participate directly in instructing students.³⁶⁰
 - (iii) A teacher is a person who has completed a minimum program of professional teacher education and met other requirements to qualify for state certification as a teacher.³⁶¹
- 1.1 **Full-time teacher:** A full time teacher is a person engaged in teaching for a number of hours of work statutorily regarded as full time at a particular level of education in a given year.³⁶²
 - 1.2 **Part time teacher:** A part-time teacher is one who takes only few classes on contract basis in an academic session. Part-time teachers are not full time employees of the school/institution where they are teaching.
 - 1.3 **Para teachers:** The concept of para-teachers has come into vogue after NPE 1986. In the Indian context, Para teachers are full time employees in the schools who are not necessarily professionally qualified as teachers but are generally from amongst the same population/community/area. Such teachers are normally appointed on a fixed salary/honorarium, which is much lower than the normal compensation of full time teachers. Para teachers include: Contract teachers, Shiksha Karmi, Guruji, Community Teachers, etc. Para teachers salary, recruitment procedure and service conditions are entirely different from those for regular teacher.
 - 1.4 **Trained Teacher:** A trained teacher is one who has successfully undergone a course of teacher training from a recognized teacher training institution; deemed trained are those teachers who have been awarded a certificate by the department of education on the basis of experience or age etc. The different teachers training courses in India include B.Ed./B.T./JBT/ETTE/NTT/SV/JV/CT/LT/OT/DM/PET etc.

³⁵⁹ EFA, the Year 2000 Assessment – Technical Guidelines, UNESCO, 1998, Paris.

³⁶⁰ Investing in Education – Analysis of the 1999 World Education Indicators, OECD, Paris (2000).

³⁶¹ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A Hudan Group Book-Van Nostrand Reinhold Co., New York-London -Toronto

³⁶² UNESCO Manual of Instructions, Paris, 1998, Page 5.

1.5 **Untrained teacher:** An untrained teacher is one who is not a trained teacher as specified above.

1.6 **Contract Teacher:** A teacher having all the academic and professional qualifications and appointed on contract for a specific period of time with a specific gross remunerations. After that the services of such teachers stand automatically terminated unless the contract is revived/extended/ regularized.

2. **Supporting Staff**

In educational institutions, the supporting staff is also classified as non-teaching staff and comprises the following:

- a) Non-teaching staff - ministerial such as Superintendents, Assistants., Clerks, Class IV,
- b) Supporting staff such as Lecture Assistants, Laboratory Attendants, Laboratory Staff, Animal Collectors, etc.

3. **Categories of Teaching Staff**

Teachers are classified according to their pre-service training and type of school. There is no standard classification in India. However, illustrative categories are Headmaster / Principal /Post Graduate Teacher (PGT)/M.Ed/Trained Graduate Teacher (TGT) / Oriental Teacher (OT)/ Language Teacher (LT)/ Drawing Master (DM)/ Physical Training Instructor (PTI)/ Music Teacher (MT)/ Head Teacher (HT) / Primary Teacher (PT) / Centre Head Teacher (CHT) etc.

4. **Teachers Training Institutes**

Teachers Training Institutes are those Institutes which are engaged in imparting pre-service/in-service teacher training of a specified duration. For pre-service and in-service teacher training at schools and higher education levels, the NPE and POA 1992 contemplate the following teachers training institutions:

- District Institutes of Education & Training (DIETs)
- Colleges of Teacher Education (CTEs) both Govt.& Private
- Institutes of Advanced Study in Education (IASEs)
- Regional colleges of Education (NCERT).

In addition to NCERT, a large number of Universities undertake pre-service teacher training programmes annually through their Teaching Departments or affiliated colleges (Govt. Non-Govt.). There are a large number of teacher training institutions in the country imparting diploma courses as also Degree and Post Degree course.

5. **Teaching-Learning Methods (TLMs)**

Teaching-learning methods are processes in the education of a student which facilitates learning. Teaching learning methods are undergoing changes over time especially after the introduction of computers and the emergence of multimedia application.

6. Teaching-Learning Material (TLM)

The teacher in helping learning to take place amongst the pupils uses teaching learning material. These include books, notebooks, charts, Audio-Visual Aids, chalks Blackboards, slide projector, overhead projector, computer, internet, education kits, science kits etc.

7. Resource Teacher

Resource Teacher is a specially trained (special education) teacher who is assigned to work with an individual or with small groups of students who have learning or behavior problems. The Resource Teacher may also consult with the regular classroom teacher as a means of assisting these students in the regular classroom.³⁶³

8. Student Teacher Ratio

Ratio of the total number of teachers to the total number of students at a school or other educational institution, such as 1:28, the ratio generally represents the institution's average class size.³⁶⁴ It is same as the TPR (Teacher:Pupil Ratio).

9. Teaching Machine

- (1) A special-purpose electromechanical (or mechanical) device that presents programmed instruction to an individual learner.
- (2) A computer presenting programmed instruction to the learner via a computer terminal in computer assisted instruction.
- (3) Loosely, any device used to present study material to a learner.³⁶⁵

10. Textbooks

In common parlance, textbook is that printed and bound artifact with which one was provided, or which one had to buy, for each year of school education and course of school study. It contained all the core content and all sorts of exercises and study questions at the end of sections or chapters. However, the textbook is not that simple. Firstly, textbooks are not the product of creativity and imagination of individual authors. Textbooks are commissioned and written by authors or firms who are hired to write to specifications set by authorities develop³⁶⁶ the standard curriculum for school system. Briefly stated, curriculum is set, then from it a set of specifications for textbooks are developed, and these specifications are then either delivered to a textbook agency for book development and production or taken up by private sector publishers for textbook development according to the specifications in a competitive market. This process has tended to produce textbooks that are formulaic and uninteresting. Secondly, the boundaries between textbooks and other forms of learning materials have become

³⁶³ Directory of Education, Volume 2 by Prof. S.K. Singh, General Editor, Commonwealth Publishers, Delhi.

³⁶⁴ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A Hudan Group Book-Van Nostrand Reinhold Co., New York-London -Toronto

³⁶⁵ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A Hudan Group Book-Van Nostrand Reinhold Co., New York-London -Toronto

³⁶⁶ Encyclopedia of Education (2nd Edition) by James W.Guthrie, Macmillan Reference, USA

increasingly blurred in recent years. In old days textbook was the primary or the only, carrier of the set curriculum. As wealth and technology have advanced, other learning materials have appeared in classrooms, to the point where it is often difficult to distinguish between the textbook and all the other forms of learning materials (teachers guide, audiovisual materials, charts, maps, student exercise and homework sheets, power point presentations, computer access resources and future resources produced by advancing technology).

11. Team Teaching

A method of instruction in which two or more teachers organize to provide the instruction of a large group of students in flexibly varied ways best fitted to the specific learning tasks.³⁶⁷

³⁶⁷ Concise Dictionary of Education by Gene R.Hawes, Lynne Salop Hawes, A Hudan Group Book-Van Nostrand Reinhold Co., New York-London -Toronto

M. Public Finances

1. Budget

(1) Budget is a statement in quantitative and usually in financial terms of the planned allocations and use of resources. (2) An itemized list of expected income and expenditure for specific future period.³⁶⁸ It is the annual financial statement of income and expenditure of Government for a fiscal year and is generally approved by the public representative body like Parliament and Legislature. Revised Budget (*RE*) is an itemized list of expected incomes and expenditures for the remaining period of the current year whereas Budget Estimates (*BE*) is an itemized list of expected incomes and expected expenditures for the ensuing year.

In technical terms, budget is a statement of the total educational program for a given unit as well as an estimate of resources necessary to carry out the program and the revenues needed to cover those expenditures. A vertical budget includes the various income and expenditure estimates (by line item – function, object and cost center) in a given fiscal year, while a horizontal budget includes current estimates for a given fiscal year compared to prior audited income and expenditures and a projection of the costs into the future.³⁶⁹

2. Capital Expenditure

Capital expenditures are the expenditures for assets that last longer than one year. They include expenditure incurred on the purchase of land, construction of the building of an educational institution, fittings, fixtures, development of playground, hedging, protection walls of the institution and on development of institutional infrastructure etc that last for more than a year.

3. Cost-Benefit Analysis

Economists³⁷⁰ use the technique of cost-benefit analysis to measure and compare the costs and the expected monetary benefits of an investment in order to provide a measure of its profitability. Rate of Return approach is used for prioritization of investment decision. The fact that education is an important form of investment in human capital has resulted in a number of attempts to apply cost-benefit analysis to education in order to assess the profitability of expenditure on education as an investment for society as a whole or for the individual student.

'Cost Benefit Analysis is a systematic comparison between the cost of carrying out the service or activity and the value of that service or activity, quantified as far

³⁶⁸ International Dictionary of Management by H.Johannsen & G.Terry Page, Kogan Page London

³⁶⁹ Encyclopedia of Education (2nd Edition) by James W.Guthrie, Macmillan Reference, USA

³⁷⁰ A Dictionary of Education by P. J. Hills, Routledge & Kegan Paul, London, 1982

as possible, all costs and benefits direct and indirect, financial and social, being taken into account.³⁷¹

4. Current Expenditures

Current expenditures are expenditures for goods and services consumed within the current year, and which should be renewed if there is need for prolongation the following year.³⁷²

5. Date of Reference

The date of reference in case of financial data is 31st March while in case of numerical data it is 30th September of the year.

6. Deficit budget

Deficit budget is that budget when current expenditure of the Government is in excess of the current incomes or revenues of the Government.

7. Economy

Economy is a system by which people earn their living.

8. Expenditure

Expenditure means the sums of money actually spent on a project, activity, program etc by the institution during the year. Public expenditure is the amount of money spent by the government on social and economic welfare programs/activities. These shall, however, not include the following:

- a) Refund of security deposits such as library deposits, hostel caution money, laboratory caution money etc.
- b) Money collected on behalf of other authorities like boards registration fee, university enrolment fee, boards'/university's' examination fee etc. which is passed on to them.
- c) Fees collected from students for providing specific services like bus fees etc.
- d) Repayment of loans.
- e) Hostel fee excludes the messing fee, but if the institution contributes anything towards hostel from its own funds that amount should be shown as its expenditure.
- f) Fees foregone on account of free studentship should not be included in the menu of the institution.³⁷³

9. Expenditure (Revenue Account)

Expenditure (Revenue Account) includes all expenditure excluding capital expenditure.

³⁷¹ A Concise Encyclopedia of Management Techniques by Frank Finch, Allied Publishers Pvt.Ltd New Delhi.

³⁷² Division of Statistics UNESCO, Paris, Instruction Mannual 1998.

³⁷³ Form I(S) MHRD, GOI, Shastri Bhavan, New Delhi.

10. Financial Year

In India, financial year extends from 1st April of the year to the 31st March of the subsequent year.

11. Functions/Objects Budgeting³⁷⁴

Under this form of budgeting, the budgeting is organized spending around the basic functions of system, such as instructions, student support services, operation, administration and transportation etc. These functions are sub-divided into elementary education, secondary education while the object being purchased e.g. elementary textbooks, high school cleaning equipments etc. is also specified. Personnel services or salaries and benefits may be handled by functions i.e. for instructional support, or plant maintenance staff etc. While these broad categories, objects and processes are generally the same for education budgeting across the country a strategic attempt has also been made to determine the most effective and efficient uses of resources.

12. Gross Domestic Product (GDP)

- (i) GDP is the sum of net values added by all the producers in the domestic territory of the country and the value of consumption of fixed capital is GDP at factor cost. It is also known as domestic factor income + consumption of fixed capital. GDP at market prices is equal to G.D.P. at factor cost + net indirect taxes. IIEP, Paris has defined GDP as follows: "GDP equal to gross national product (GNP) used in connection with all output of goods and services of a country less the net income of the production factors received from abroad."³⁷⁵
- (ii) "The quantity of goods and services produced in a nation during a year. Real GDP takes nominal GDP and corrects for price increase."³⁷⁶

13. Gross National Product at market prices (GNP)

- (i) GNP at market prices is equal to the Gross Domestic Product at market prices + net factor income from abroad. Net National Product (NNP) at market prices is equal to GNP at market prices minus consumption of fixed capital. Net National Product at factor cost is equal to GNP at market prices minus net indirect taxes.
- (ii) "Real (or real GNP). Nominal GNP corrected for inflation i.e. real G.N.P. equals Nominal G.N.P. divided by G.N.P. deflated."³⁷⁷

14. Gross National Product (GNP)

GNP is the sum of gross value added by all resident producers plus any taxes (less subsidies) that are not included in the valuation of output plus receipts of

³⁷⁴ -ditto-

³⁷⁵ Primary Education in Lesotho Indicators 1992 by IIEP, Paris, Glossary.

³⁷⁶ Samuelson; ibid P.740

³⁷⁷ Samuelson; Ibid P.740

primary income (employee compensation and property income) from non-resident sources.³⁷⁸

15. Income

Income means receipts of the institution during the financial year from all sources. These, however, do not include the following:

- a) Refundable security deposits such as library deposits, hostel caution money, and laboratory caution money etc.
- b) Money collected on behalf of other authorities like boards registration fee, university enrolment fee, boards'/ university's' examination fee etc. which is passed on to them.
- c) Fees collected from students for providing specific services like bus fees etc.
- d) Repayment of loans.
- e) Hostel fee excludes the messing fee,
- f) Fees foregone on a/c. of free studentship should not be included in the menu of the institution.³⁷⁹

16. Input: Output Analysis³⁸⁰

Input:output analysis is a technique which is used to discover how changes in one or more than one output flow in a static or dynamic supply and demand network are shared over the various users (input flows). A static system is a system whose levels and flows do not vary from period to period. In a dynamic system the levels and flows vary over time.

17. Internal Auditing³⁸¹

There are several meanings of Internal Audit, one suitable meaning is the study of accuracy of the financial figures and methods used with the object of increasing the accuracy and value of the figures produced, and improving control over the security of assets. The second interpretation of internal audit is the audit of both the administrative methods as also the personnel. This method is also called Management Audit in USA and overlaps with organization and Methods activities. A third meaning is the checking the arithmetic accuracy of the financial records and the extent to which divergences from standard procedures occur, i.e. the principal function of the external auditors.

18. Line-item Budgeting³⁸²

Line item budgeting is traditional budgeting. Barry Mundt defines line-item budgeting as a technique in which line-items or objects of expenditures e.g. personnel, supplies, services, capital outlays etc. are the focus of analysis,

³⁷⁸ Literacy Glossary: Asia/Pacific Cultural Centre for UNESCO Japan.

³⁷⁹ Form I(S) MHRD, GOI, Shastri Bhavan, New Delhi.

³⁸⁰ A Concise Encyclopedia of Management Technique by Frank & Finch, Allied Publishers P. Ltd. New Delhi.

³⁸¹ A Concise Encyclopedia of Management Techniques by Frank Finch, Allied Publishers Pvt.Ltd.,New Delhi.

³⁸² Encyclopedia of Education(2nd Edition) by James W.Guthrie, Macmillan Reference, USA

authorization and control. Under this form of budgeting, the functions of the expenditures are not explained and the particular need, school site, type of students being served are lost in spending aggregated by line.

19. Management Accounting³⁸³

The accounting methods, systems and techniques, which, coupled with special knowledge and ability, assist management in its task of maximizing profits or minimizing losses.

20. National Income

National Income is defined as the factor income accruing to the normal residents of a country. It is the sum of domestic factor income (i.e. compensation of employees + rent + interest + profits + mixed income of self employed) and net factor income earned from abroad.

21. Non-Plan Expenditure

Non-plan expenditure is committed expenditure for the maintenance of the existing school plant. While non-plan expenditure is maintenance expenditure, the plan expenditure is developmental expenditure

22. Non-Recurring Expenditure

Non-recurring expenditure on education is that expenditure which is comparable to capital expenditure on education. It includes expenditure on construction, purchase of major equipment, land, hostel, vehicles, development of laboratories, library etc

23. Plan Expenditure

Plan expenditure is that expenditure which is incurred out of the funds provided under different Five Year Plans/Annual Plans of the country/State for development purposes.

24. Program Planning Budgeting System (PPBS)

PPBS seek greater efficiency by attaching spending to a particular program. Under the PPBS, the Agency is required to spell out their mission and goals, lay out alternatives to reach these goals/objectives, attributes, costs to each choice, analyze the costs, select the best option and then build the budget around these outcomes, and finally feed back to adjust the costs to the results.

25. Recurring Expenditure

Recurring expenditure on education is the expenditure, which is required to be incurred frequently or which recurs repeatedly. Under this head, we may include salaries and allowances of staff, consumable stores, whitewashing, maintenance etc. of school plant including repairs and maintenance.

³⁸³ A Concise Encyclopedia of Management Techniques by Frank Finch, Allied Publishers Pvt.Ltd New Delhi.

26. Site Based Budgeting (SBB)³⁸⁴

Site Based budgeting is concerned with who will do the budgeting and where in organizational hierarchy the decisions will be made. Under SBB districts must determine who will serve on the SBB Committees; what decisions and resources are devolved to schools - and using what formulae; how much autonomy is granted to spend for local school needs; exactly how to analyze the budget at each school; and what training and support are needed to make SBB work effectively.

27. Surplus Budget

Surplus Budget is that budget when the current expenditure of the Government is less than the current income or revenues of the Government.

28. Zero based budgeting

- (i) A system of budgeting which requires managers, when preparing their budgets, to justify all their expenditures from a zero base rather than simply asking for increments to previously budgeted figures. Thus all activities and programs have to be re-evaluated to decide whether they should be eliminated or funded at a reduced, similar or increased level.³⁸⁵
- (ii) Zero based budgeting began on the assumption that the school system starts out yearly with a clean slate. Thus each function, program and agency has to justify its expenditure annually relating to all costs to system goals and objectives to avoid habitual spending. Since so many costs are committed costs and many programs are fixed, pre-determined and so complex that zero based budgeting becomes only a mere exercise than a practical reality.³⁸⁶

³⁸⁴ A concise Encyclopedia of Management Techniques, by Frank Finch, Allied Publishers(P) Ltd. New Delhi.

³⁸⁵ International Dictionary of Management by H. Johanssen & G. Terry Page, Kogan Page, London.

³⁸⁶ Encyclopedia of Education(2nd Edition) by James W. Guthrie Macmillan Reference, USA

N. School Buildings

1. Status of School Buildings

The status of the school buildings refers to the ownership and type of occupancy of school buildings. The following classifications are used for this purpose:

- Owned
- Rented
- Rent-free
- No building

But some questionnaires have asked information differently as under:

- Private
- Rented
- Government
- Government schools in a rent-free building
- No building

2. Types of School Building

The school buildings are classified on the basis of the type of construction and the materials used in the construction of the building in India, the following classification for the school buildings is used:

- Pucca buildings
- Partly pucca buildings
- Kuchcha buildings
- Tent/pre-fabricated materials
- Thatched hut
- Open space

But in some questionnaires only four classifications have been retained and thatched huts have been included in Kuchcha buildings.

O. Educational attainment and literacy

1. Educational Attainments

Attainment has been defined as the performance in a school subject or in the whole curriculum, which is measured by examinations or tests³⁸⁷. The educational usage of the term 'attainment' is based on describing a level on a scale for a certain attribute. The scale, itself, however, has no true zero and no definable top level. The concept of such a scale can be implied in everyday usage but it can also be dispensed with altogether.

In India, educational attainment means the highest level of education attained by an individual. It is measured in different ways. Registrar General of India collects information on educational levels as follows:

- a) Literate (without educational level)
- b) Completed Primary level
- c) Completed Middle level
- d) Completed Matriculation (Secondary) level
- e) Completed higher secondary/intermediate/pre-university
- f) Completed Non-technical diploma or certificate not equal to degree
- g) Graduate and above

NSSO, Department of Statistics has defined educational attainment as under:

"It may be noted that if a person has successfully passed the final year of a given level, then and only then will he/she be considered to have attained that level. For example, the level attained by a person studying in class IX will be middle but the level at which he/she is currently studying is secondary³⁸⁸."

2. Literacy

Census 2001 in their instruction manual for filling up the household schedule has defined literacy (p.55) as 'a person aged 7 and above who can both read and write with understanding in any language is to be taken as literate. A person, who can only read but cannot write, is not literate. People who are blind and can read in Braille will be treated as literate.

UNESCO: has defined literacy as follows: (1) A Literate person is the one who can with understanding both read and write a short simple statement relevant to his everyday life. (2) Literacy is not the simple reading of word or a set of associated symbols and sounds, but an act of critical understanding of men's situation in the world. (3) Literacy is not an end in itself but a means of personal liberation and development and extending individuals educational efforts involving overall inter-disciplinary responses to concrete problems. (4) A literate

³⁸⁷ International Dictionary of Education, London, 1977.

³⁸⁸ 52nd Round of NSSO, Department of Statistics, DOI, New Delhi.

person is the one who has acquired all the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group and community and whose attaining in reading, writing and numeric make it possible to use these skills towards his own and his community's development.

- 2.1 **Prose Literacy**: Prose Literacy refers to the knowledge and skills required to understand and use information from texts; such as editorials, news stories, poems, fictions etc.
- 2.2 **Documentation Literacy**: Documentation Literacy refers to the knowledge and skills required to locate and use information contained in various formats such as; job applications, payroll forms, transportation timetables, maps, tables, graphs etc.
- 2.3 **Quantitative Literacy**: Quantitative Literacy refers to knowledge and skills required to apply arithmetic operations to numbers embedded in printed materials, such as balancing a cheque book, calculating a tip, completing an order form or determining the amount of interest on a loan from an advertisement.
- 2.4 **Functional Literacy**: A person is functionally literate if his/her ability to read and write is adequate enough for the needs of his/her job; the demands of a situation or the like. When one is capable of using three R's (i.e. reading, writing & arithmetic) in his day to day life situations, he is functionally literate.
- 2.5 **Functional Literacy**: Functional Literacy is the ability to use literacy skills for particular purposes in the home, community or workplace.³⁸⁹
- 2.6 **Media/Internet Literacy**: The ability to access, understand and create communications in a variety of contexts.³⁹⁰

³⁸⁹ Literacy Glossary: Asia/Pacific Cultural Centre for UNESCO, Japan.

³⁹⁰ International Encyclopaedia of Education, 3rd Edition (Vol.4) by Penelope Peterson, Eva Baker and Barry McGrow, Academic Press, Boston, 2010, Page 34.

P. Information & Communication Technologies

1. **Altimeter**

Altimeter is any device which measures the height of an aircraft.³⁹¹

2. **Apogee**

The position most distance from Earth in the orbit of a satellite, as in the orbit of the Moon or of an artificial satellite.³⁹²

3. **Backbone**

A central high-speed network that connects smaller, independent networks.

4. **Backup**

Something which duplicates the function of an active component and is kept on standby in case of disaster. It is also common to talk of 'backing up' disks or files on a computer i.e. duplicating them.

5. **Bandwidth**

The range of frequencies, expressed in hertz (Hz), that can pass over a given transmission channel. The bandwidth determines the rate at which information can be transmitted through the circuit. The greater the bandwidth, the more information can be sent in a given amount of time.

6. **Bar Code**

A line of bars and spaces which is read by an optical scanner. Bar codes are often used for indexing and product codes. Bar codes are also used for cataloguing library books.

7. **Browser**

A browser is an application program that provides a way to look at and interact with all the information on the World Wide Web. The word "browser" seems to have originated prior to the Web as a generic term for user interfaces that let you browse (navigate through and read) text files online. By the time the first Web browser with a graphical user interface was generally available (Mosaic, in 1993), the term seemed to apply to Web content, too. Technically, a Web browser is a client program that uses the Hypertext Transfer Protocol (HTTP) to make requests of Web servers throughout the Internet on behalf of the browser user. A commercial version of the original browser, Mosaic, is in use. Many of the user interface features in Mosaic, however, went into the first widely-used browser, Netscape Navigator. Microsoft followed with its Microsoft Internet Explorer. Today, these two browsers are used by the vast majority of Internet users. Lynix

³⁹¹ McGraw-Hill Concise Encyclopaedia of Science & Technology; Sybil P.Parker, McGraw-Hill Book Company, New York.

³⁹² McGraw-Hill Concise Encyclopaedia of Science & Technology; Sybil P.Parker, McGraw-Hill Book Company, New York.

is a text-only browser for UNIX shell and VMS users. Another recently offered and well-regarded browser is Opera.

8. Compact Disk

Compact disks are of two types, namely, multiple read and multiple write, and single write and multiple read. CD-RW (for compact disc, rewriteable) is a compact disc (CD) format that allows repeated recording on a disc. Prior to the release of the CD-RW, CDs were read-only audio (CD-Digital Audio, described fully in the Red Book), to be played in CD players, and multimedia (CD-ROM), to be played in computers' CD-ROM drives. After the Orange Book, any user with a CD Recorder drive could create their own CDs from their desktop computers. CD-RW drives can write both CD-R and CD-RW discs and can read any type of CD.

9. Computer Language

A computer can process information only when it is in the form of binary numbers [which are made up of the digits 0 and 1]. It is difficult to write a computer program in this form. So, the Programmers write their instructions in special codes called computer languages. The computers then translate the instructions into binary numbers which it can understand.

10. Computer Simulation

Given the correct information and programs, powerful modern computers can simulate real-life situations, such as flying an aircraft, maneuvering the space shuttles or exploiting the ocean depths. Computer simulation is used for research, education, training, entertainment etc.

11. CPU

CPU (Central Processing Unit) is an older term for processor and microprocessor, the central unit in a computer containing the logic circuitry that performs the instructions of a computer's programs.

12. Digital Divide

It is the process of inclusion and exclusion in the information society.³⁹³

13. Download

To obtain computer information or programs from a source – usually another computer transmitting over a telephone line or a local area network.

14. Drive

The mechanical part of the storage system is known as drive. The most commonly known is floppy disk drive, which is a flexible plastic disk with a magnetic coating encased in a protective jacket.

³⁹³ International Encyclopaedia of Education, 3rd Edition (Vol. 4) by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press, Bopston, 2010. Page 34

15. Driver

A program or routine which handles the computer relationship with a peripheral device.

16. Electronic Mail (Email)

One of the many services that can be provided to computer users hooked through a telecommunications network. Email is a system under which a computer handles the delivering and sending of messages to people over a phone line connected to a single computer or a network of computers.

17. File

The file is the entity in which an individually accessible body of information is stored and manipulated by the computer.

18. Flow Chart

A diagram representing the sequence of operations involved in a process. Lines connect symbolic shapes, which represent events or processes.

19. Hardware and Software

Software is a general term for the various kinds of programs used to operate computers and related devices. (The term hardware describes the physical aspects of computers and related devices.) Software can be thought of as the variable part of a computer and hardware the invariable part. Software is often divided into application software (programs that do work users are directly interested in) and system software (which includes operating systems and any program that supports application software). The term middleware is sometimes used to describe programming that mediates between application and system software or between two different kinds of application software (for example, sending a remote work request from an application in a computer that has one kind of operating system to an application in a computer with a different operating system).

20. Information Technology

Information Technology is the use of computers to handle, store, retrieve, process and transmits information. The key to Information Technology is software sets of instructions called programs that tell computers what to do.

21. Information Communication Technology (ICT)

This term is often used interchangeably with Information Technology (IT) in the literature on technology in education. It refers both to computer hardware and software as well as networking infrastructure to enable the user to connect to the internet via the computer hardware.³⁹⁴

³⁹⁴ International Encyclopaedia of Education 3rd Edition (Vol 4) by Penelope Peterson, EvaBakerand Barry McGrow,Academic Press, Boston, 2010 Page 609

22. Icon

A graphical representation of various elements such as disk-drives, application and documents.

23. Integrated Services Digital Network (ISDN)

A fully digital communications facility designed to provide transparent, end to end transmission of voice, data, video, and still image across the *PSTN*.

24. Internet

The Internet, sometimes called simply "the Net", is a worldwide system of computer networks – a network of networks in which users at any one computer can, if they have permission, get information from any other computer (and sometimes talk directly to users at other computers).

25. Intranet

An internal network that operates identically to, but is not necessarily connected to, the global Internet.

26. Local Area Network (LAN)

It is a system devised to allow a number of computers or computer terminals to exchange information and/or share a central storage device.

27. Modem (Modulator – Demodulator)

A hardware device which converts digital information from a computer into modulations or on a carrier wave which can be sent down the telephone line by another modem and transferred to another piece of hardware at the other end.

28. Multi-tasking

The ability of a computer to run a number of tasks simultaneously.

29. Newsgroup

A conference area where one can post message on a specified topic. Newsgroups exist for a huge range of subjects.

30. Operating System

The software that controls a computer's essential functions is called its operating system. Example: MS Windows.

31. Peripherals

An input/output device which is connected to and controlled by the computer. A printer, disk drive, keyboard are all examples

32. Programs

A program is a sequence of simple instructions that tells a computer how to perform a specific task/job, such as printing a document. The program that makes a computer work are called software.

33. Projector

Projector is a device for transferring photographic and other images in an enlarged form onto a viewing screen. All types of projectors employ a light source and a lens system. A simple still photo or slide projector for exhibiting transparencies has two sets of lenses, one between the light source and the transparency, to concentrate the light, and one in front of the transparency, to focus the picture on the screen and enlarge the image.

Another type of still projector has the light source positioned in front of the picture so that the image is formed by light reflected from the picture; this produces a dimmer image but is necessary for the exhibition of opaque pictures, i.e. printed photographs and illustrations from books and magazines.

A motion picture projector is a more complex device though it still employs the basic combination of light source and lens systems. A shutter operates to flash each successive frame on the screen (usually at a rate of about 16 per second) while electrically driven reels pass the sprocket-wound film through the lens system. To effect reel changes smoothly in public movie houses, two synchronized projectors are used, one beginning a new reel as the other completes an old one.

34. Protocol

A set of rules which describe the method in which information may be transferred between two computer systems.

35. SAR

SAR is Specific Absorption Rate which is a measure at which energy is absorbed by body tissues in a radio frequency electromagnetic field. The SAR of Mobile hand-sets should not exceed 1.6 watt/kg.

36. Simputers

A Simputer is a hand-held machine used for recording the duration of a vehicle at a parking site.

37. Simulate

To reproduce natural phenomena, usually by presenting a computer program with the similar inputs to those found in nature. The program (or model) usually abstracts and simplifies so as not to be overwhelmed by natural complexity.³⁹⁵

38. Simulation

In education, an instructional method in which learners perform in a situation or in problems made as much as possible like the actual tasks for which they are being instructed. Laboratory experiments by students in science courses represent a long-established example of simulation; current simulations include

³⁹⁵ International Encyclopaedia of Education, 3rd Edition (Vol.5), by Penelope Peterson, EvaBaker and Barry McGrow, Academic Press Boston, 2010, Page 476.

sophisticated gaming exercises in international diplomacy or multinational business management involving teams of participants and computers.

39. Software Application

Other than Operating System, all other software programs including word processing are called software applications. This helps one write letters, documents, multi-media, texts, pictures, video, music animation etc.

40. Source Code

Programming instructions written or entered by the user, prior to its being compiled or interpreted by the machine into object code.

41. Spread Sheet

A Spread Sheet is a software application that performs calculations on a table of numbers, such as sums of money, population projections etc.

42. Uploading

Uploading is the transmission of a file from one computer system to another, usually larger computer system. From a network user's point-of-view, to upload a file is to send it to another computer that is set up to receive it.

43. Webmaster

Person designated to maintain a web site and to receive general queries by Email.

44. Website

A Web site is a related collection of World Wide Web (WWW) files that includes a beginning file called a home page. A company or an individual tells you how to get to their Web site by giving you the address of their home page. From the home page, you can get to all the other pages on their site. For example, the Web site for IBM has the home page address of <http://www.ibm.com> (The home page address actually includes a specific file name like `index.html` but, as in IBM's case, when a standard default name is set up, users don't have to enter the file name.) IBM's home page address leads to thousands of pages. (But a Website can also be just a few pages).

Q. Some Important Programmes/Schemes in School Education in India

1. District Primary Education Program (DPEP)

District Primary Education Program (DPEP) is a centrally sponsored scheme providing special thrust to achieve Universalization of Primary Education (UPE). It was initiated in 1994. The program takes a holistic view of primary education development and seeks to operationalize the strategy of UPE through district specific planning with emphasis on decentralized management, participatory processes, empowerment and capacity building at all levels. The program is structured to provide additional inputs on, over and above, the provisions made by the State Government in the form of construction of school buildings, new schools, opening of non-formal/alternative schooling centres, appointment of new teachers, establishment of Block Resource Centres/Cluster Resource Centres, structuring of Teachers Training Institute, development of teaching-learning materials, research based interventions, special interventions for education of girls, SC/ST etc. The program mainly aims at providing access to primary education for all children, reducing primary dropout rates to less than 10%, increasing learning achievement of primary school students by 25% and reducing the gap among gender and social group to less than 5%. It stands merged in SSA.

2. District Information System for Education (DISE)

DISE is a computerized school based system for collection, analysis and use of school-based data concerning elementary education of districts covered under DPEP. It includes Data Capture Format and the computer software for processing the school data thus collected. The Government of India has decided to extend the scope and coverage of the project to include all schools up to elementary education and all districts in the country would be covered under the project.

3. Education Guarantee Scheme and Alternative Innovative Education (EGS&AIE)

Recently, the Government of India has discontinued the NFE scheme and has come out with an alternative approach to provide non-formal education to out-of-school children. The newly formulated Education Guarantee Schools and Alternative and Innovative Education (EGS & AIE) scheme would cover out-of-school children in the age group 6–14 years. The newly formulated scheme (EGS & AIE) will continue to have three components as under:

- a) State-run centres (now EGS school or a variety of alternative schools/back-to-school camps) run by the state governments.
- b) EGS/learning centres or alternative schools run by voluntary agencies (VAs)
- c) Innovative and experimental projects and DRUs run by voluntary agencies.

Since EGS & AIE would be implemented as an integral part of UEE under Sarva Shiksha Abhiyan, the structure and personnel would be part of the elementary education. EGS & AIE would support the following three broad kinds of strategies:

- a) Setting up of schools in school-less habitations (EGS);
- b) Intervention for mainstreaming of 'out-of-school' children, viz. bridge courses, back-to-school camps etc.
- c) Strategies for very specific difficult groups of children who cannot be mainstreamed.

4. Mahila Samakhya Programme (MS)³⁹⁶

Mahila Samakhya (MS) is an ongoing scheme for women's empowerment that was initiated in 1989 to translate the goals of the National Policy on Education into a concrete programme for the education and empowerment of women in rural areas, particularly those from socially and economically, marginalized groups. MS is GOI's main scheme targeted at addressing the barriers that prevent rural women and girls from accessing education, such as problems of their relative isolation, struggle for livelihoods, lack of self confidence, oppressive social customs etc. MS aims to create a collective awareness and understanding of rural, most marginalized women's contexts and build their capacities to challenge it. Objectives of MS are as under:

- (i) To create an environment in which education can serve the objectives of women's equality;
- (ii) To enhance the self image and self confidence of women and thereby enabling them to recognize their contribution to the economy as producers and workers, reinforcing their need for participating in educational programmes;
- (iii) To create an environment where women can seek knowledge and information and thereby empower them to play a positive role in their own development and development of society;
- (iv) To set in motion circumstances for larger participation of women and girls in formal and non-formal education programmes;
- (v) To provide women and adolescent girls with the necessary support structures and an informal learning environment to create opportunities for education;
- (vi) To enable Mahila Sanghas to actively assist and monitor educational activities in the villages—including elementary schools, AE, EGS/AIE Centres and other facilities for continuing education;
- (vii) To establish a decentralized and participative mode of management, with the decision making powers devolved to the district level and to the village-level women's collectives (mahila sanghas), which in turn will provide the necessary conditions for effective participation.

³⁹⁶ Annual Report 2011-12, MHRD, GOI, New Delhi, Pages 45-48.1`1

At present the programme is being implemented in 112 districts (542 blocks) of ten States, viz: AP, Assam, Bihar, Chhatisgarh, Jharkhand, Karnataka, Kerala, Gujarat, UP & Uttarakhand. Core activities centre on the following themes:

- (i) Issues of education of women and girls;
- (ii) Health
- (iii) Gaining entry into local governance and accessing public services;
- (iv) Addressing issues of violence and social practices which discriminate against women and girls
- (v) Economic empowerment and seeking sustainable livelihoods etc.

5. **APPEAL**

'Asia-Pacific Programme of Education for All' refers to the regional cooperative program established by UNESCO in 1987. It focuses on the eradication of illiteracy, universalization of primary education, and expanding the provision of continuing education. Its primary constituencies are the vast number of illiterate adults and out-of-school children and youth, most of whom are female.³⁹⁷

6. **Education for All (EFA)**

EFA is the provision of basic education in the sense of expanded vision proclaimed in the World Declaration on Education for All adopted by the World Conference on Education for All: Meeting Basic Learning Needs (Jomtein, Thailand, March, 1990).³⁹⁸

7. **District Institutes of Education & Training (DIET)**

As envisaged in National Policy of Education(1986) and Programme of Action, the centrally sponsored scheme of restructuring and reorganization of teacher education was launched in 1987 to create a viable institutional infrastructure, academic and technical service base for orientation of knowledge, competence and pedagogical skills of elementary and secondary school teachers in the country. The Scheme had, inter alia, the following components for which Central Government has been providing financial assistance to States:-

- (a) Setting up of District Institutes of Education & Training (DIETs)
- (b) Strengthening of secondary Teachers Education Institutions into Colleges of Teacher Education (CTEs) and Institutes of Advanced Studies (IASEs)
- (c) Strengthening of State Councils of Educational Research and Training (SCERTs).

So far out of the sanctioned 571 DIETs, 106 CTEs, 32 IASEs, only 555 DIETs, 104 CTEs, and 31 IASEs are functional. The Scheme has been revised under Xth Five Year Plan with the following main objectives.³⁹⁹

³⁹⁷ Literacy Glossary, Asia/Pacific Cultural Centre for UNESCO, Japan.

³⁹⁸ The Perfect Manpower by Robert Heller-Hoddwstoughton, London.

³⁹⁹ Annual Plan 2010-11, Page 31-32, MHRD, New Delhi

1. Speedy completion of DIET/CTE/IASE/SCERT projects, already sanctioned but not yet completed;
2. Making DIETs, CTEs, IASEs optimally functional and operational;
3. Sanction and implementation of fresh DIET/CTE/IASE/SCERT projects to the extent necessary;
4. Improvement in the quality of programmes being undertaken by DIETs etc., especially those of pre-service and in-service training, so as to enable them to effectively play their nodal role of improving quality of elementary and secondary education in their respective jurisdiction, as measured in terms of levels of learner achievement;

“The Scheme of Teacher Education is being revised in order to meet the exceptional challenges for the Teacher Education system arising from the massive spatial and numerical expansion of schooling facilities at the elementary and secondary levels, the corresponding increase in the demand for teachers and to fulfill the statutory obligations of the Government with regard to teacher obligations of the Government with regard to teacher preparation and teacher training under the Right of Children to Free and Compulsory Education (RTE) Act, 2009 as also the need for training requirements of teachers at the secondary level under the Rashtriya Madhyamik Shiksha Abhiyan (RMSA). The main component of the Revised Schemes are as under:

- (i) Strengthening and upgradation of State Councils for Educational Research and Training/State Institutes of Education
- (ii) Strengthening of existing IASEs and upgradation of Departments of Education of Universities into IASEs.
- (iii) Strengthening of CTEs and establishment of new CTEs
- (iv) Strengthening of existing DIETs and extending their mandate for training of teachers at the secondary level
- (v) Establishment of Block Institutes of Teachers Education (BITEs) in 196 identified SC/ST/Minority concentration districts as elementary pre-service teacher education institutions
- (vi) Identification of 50 lead institutions, including Departments of Education in Universities, NUEPA, NCERT, Academic Staff Colleges and other institutions in the non-Government sector to conduct refresher courses for teacher educators.
- (vii) Provide hardware support, namely provisioning of satellite transmission facilities in the DIETs and provisioning of software support for developing content for orientation of teacher educators and teachers.
- (viii) Giving SCERTs and DIETs the mandate to involve not for profit organizations for conducting innovative field based programmes relating to teacher education, collaboration in in-service and pre-service teacher education, undertaking impact assessment studies and designing & developing locally relevant material for teachers and student-teachers of teacher education institutions.

- (ix) Developing and putting in place comprehensive monitoring mechanism.

B: National Council for Teacher Education (NCTE):

In July 2011, the Central Government superseded the General Council of the NCTE and constituted a six-Member Committee to exercise the powers and functions of the Council. Important development since the constitution of the Committee is summarized below:

- (i) The Four Regional Committees were re-constituted on 23rd September, 2011;
- (ii) The Appeal Committee was re-constituted on 16th September, 2011;
- (iii) The Committee has undertaken the task of streamlining the personnel in the NCTE;
- (iv) With a view to prepare a long-term reform agenda for the NCTE, the Committee four sub-Committees have been constituted on (a) Regulatory functions; (b) Teacher Education Curriculum and Norms and Standards, Innovative programmes in teacher education, accreditation norms for teacher education institutions; (c) programmes for preparation of teacher educators; and (d) Distance education and ICT in Teacher Education.⁴⁰⁰

8. Navodaya Vidyalayas⁴⁰¹

In order to provide high quality modern education, including strong component of culture, inculcation of values, awareness of the environment, adventure activities and physical education to the talented children predominantly from the rural areas, without regard to their socio-economic conditions, the Government of India launched the scheme to establish on an average, one Navodaya Vidyalaya (NV) in each district of the country. For this purpose, Navodaya Vidyalaya Samiti was registered as a Society under the Society Registration Act, XXI of 1860

- (a) To establish, endow, maintain, control and manage schools (hereinafter called the 'Navodaya Vidyalaya') and to do all acts and things necessary for or conducive to the promotion of such schools which will have the following objectives:
 - (i) To provide good quality modern education – including a strong component of inculcation of values, awareness of the environment, adventure activities and physical education – to the talented children predominantly from the rural areas without regard to their family's socio-economic condition.
 - (ii) To provide facilities, at a suitable stage, for instruction through a common medium, viz. Hindi and English all over the country.
 - (iii) Offer a common core-curriculum for ensuring comparability in standards and to facilitate an understanding of the common and composite heritage of our people.

⁴⁰⁰ Annual Report 2011-12, MHRD, GOI, New Delhi Pagss 50-51.

⁴⁰¹ Annual Report-[2009-10 (P. 86-87)], 2011-12 (P. 8,73-75), MHRD, GOI, New Delhi.

- (iv) To progressively bring students from one part of the country to another in each school to promote national integration and enrich the social content.
- (v) To serve as a focal point for improvement in quality of school education through training of teachers in live situations and sharing of experience and facilities.
- (b) To establish, develop, maintain and manage hostels for the residence of students of Navodaya Vidyalayas;
- (c) To aid, establish and conduct other institutions as may be required for the furtherance of the Society's objects in any part of India.
- (d) To do all such things as may be considered necessary, incidental, or conducive to the attainment of all or any of the objects of the Society

Navodaya Vidyalayas are fully residential, co-educational institutions, providing education up to Senior Secondary stage. Education in Navodaya Vidyalayas, including board and lodging, textbooks, uniforms etc., are free for all students. Out of 612 districts (excluding districts in Tamil Nadu), the Samiti has sanctioned 576 Jawahar Navodaya Vidyalayas (JNVs) out of which 570 are functional. In addition, Central Govt. has approved establishment of 20 JNVs in the districts that have a large concentration of Scheduled Castes and Scheduled Tribes during 2008-09. The opening of a JNV is based on the proposal from the concerned State/UT offering about 30 acres of suitable land, free of cost. The State Govt. has also to provide sufficient temporary building and other infrastructures, free of rent, to accommodate 240 students and staff for three to four years or till such time the Samiti constructs its own building at the permanent site. Admission to Navodaya Vidyalayas is made at the level of Class VI through a test conducted in the concerned district in which all children who passed Class V from any of the recognized schools in the district are eligible to appear. From 1998, JNVST is being conducted by CBSE. Rural urban ratio of seats is 75:25 respectively in each district. As per policy of Navodaya Vidyalayas, 30% of the students at Class IX migrate to other areas/states. Reservation of seats to SC/ST is allowed as per policy of the Government.

Revised Norms of expr. on students in JNVs w.e.f. April'12

Items	Rates	Amount (Rs.)
1. Mess Expr.	(i) Rs.1200 (for 9 months) for JNVs located at other than hard and difficult areas.	Rs.10,800/-
	(ii) Rs.1400/-(for 9 months) for JNVs located at hard and difficult areas	Rs.12,600/-
2. Uniforms	(i) Rs.2,000/- per student for JNVs located in temperate climate/coastal areas	
	(ii) Rs.2,500/- per student for JNVs located in	

	extreme summer and winter areas (iii) Rs.2,800/- per student for JNVs located in extreme winter areas	
3. Text books	Rs.400/- per student per year	
4. Daily Use items	Rs.1,000/- per student per year	
5. Other Expr. on students including stationary, travel, medical, CBSE fees	(i) Medical Expenses Rs.270/- @ Rs.30/- per child per month for 09 months (ii) Stationery – Rs.85/- (iii) Bedding – Rs.600/- (iv) Doctor's fee – Rs.45,000/- per JNV (v) CBSE fee - Actual (vi) School Bag for classes VI,IX & XI students only Rs.300/- (vii) Travel Expenses – Rs.180/- @ Rs.20/- per child per month for local journey, actual sleeper class rail/bus fare for outstation journey	
6. DA to students during journey only for participating in various events/ activities outside the JNV	Rs.150/- per day	

9. Nutritional Support to Primary Education⁴⁰²

- (1) National Programme of Nutritional Support to Primary Education (NP- NSPE) was launched on 15th August 1995 as a Centrally sponsored scheme in 2408 blocks as a dry ration scheme under which food-grains @3 kgs per student/per month was provided to all children in primary classes of Govt schools, Local Body Schools and Govt aided schools subject to 80% attendance of such children. Subsequently, the Scheme was extended to all blocks in the country by 1997-98. Under order of Hon'ble Supreme Court dated 28-11-2001, this became a cooked Mid-Day Meals Scheme with minimum content of 300 calories and 8-12 gram protein per day for a minimum of 200 days. Central assistance comprised free supply of food grains @ 100 grams per child per school day and subsidy for transportation of food grains upto a maximum of Rs.50 per quintal. In 2002, the Scheme was extended to cover children studying in Education Guarantee Scheme and Alternative and Innovative Scheme Centers (EGS&AIES). In 2004, the Scheme was further amended to provide for cooking cost @Rs.1/- per child/per school day. Cooking cost included cost of pulses, vegetables, oils, condiments, fuel and wages and remuneration of the Agency responsible for cooking etc. Transportation subsidy was also raised from the earlier maximum of Rs.50/- per quintal to Rs.100/- per quintal for special category states and Rs.75/- per quintal for other States/UTs. Central assistance @2% of the cost of food

⁴⁰² Annual Report, 2010-11 MHRD, GOI, Page 39-40

grains, was also provided for management, evaluation and monitoring of the Scheme. In 2006 the cooking cost was enhanced to Rs.1.8 per child/school day for states in the North Eastern Region provided the NER States contribute minimum Rs.0.20 per child/school day; and Rs.1.50 per child/school day for other States and UTs provided these States/UTs contribute minimum of Rs.0.50 per child/school day. The nutritional norm was revised to 450 Calories and 12 grams of protein.

- (2) In October 2007, the Scheme was extended to cover the children of upper primary schools studying in 3,479 educationally backward blocks (EBBs) and the name of the Scheme was also changed from NPNSPE to “National Programme of Mid-Day Meal in Schools”. The Nutritional Norm for upper primary stage was fixed at 700 calories and 20 grams of protein. In order to facilitate construction of kitchen-cum-store and procurement of kitchen devices in schools provision for Central assistance @ Rs.60,000 per unit and @ Rs.5,000 per school in phased manner was made. The existing system of transport subsidy to states/UTs was modified to grant-in-aid system like other components of Central assistance under the Scheme. The Scheme was further revised in April 2008 to extend the Scheme to recognized as well as un-recognized Madrasas/Maqtabs supported under SSA as Govt.aided centers. In August 2009, the Scheme was extended to cover the children studying in National Child Labour Project Schools. Thus the Scheme covers all children in classes 1-VIII of Govt. Schools, Local Body Schools, Govt.aided Schools, EGS&AIES Centres supported under SSA including Madras/Maqtabs as well as children under National Child Labour Project. In November, 2009, the Scheme has further been revised to increase the quantity of pulses in upper primary classes from the existing 25 grams to 30 grams, vegetables from 65 to 75 grams, and by decreasing the quantity of oils and fat from the existing 10 grams to 7.5 grams. Cooking cost has also been revised from Rs.1.58 to 2.50 per child per day for primary and from Rs.2.10 to 3.75 per child per day for upper primary children w.e.f.1.12.2009. The cooking cost has been revised by 7.5% w.e.f.1.4.2011. The cooking cost is being shared between Centre and States @90:10 for NER States and 75:25 for other States. A separate provision for payment of honorarium @ Rs.1000/- per month to cook-cum-helpers has been introduced w.e.f. 1.12.2009 on sharing basis as above.
- (3) “During the year 2011-12, the scheme has further been revised as under:
- (i) The revision of norms for providing mid-day meal to NCLP children has been changed from Primary to Upper Primary children norms w.e.f. 1.11.2011. Accordingly, the Central Assistance to States/UTs for NCLP children has been revised and given for the year 2011-12 as per norms applicable to Upper Primary children.
 - (ii) MME @ 1.8% of cost of foodgrain, cooking cost, transportation and honorarium to cook-cum-helpers is being provided to States w.e.f. 1.4.2011. Prior to this, MME was provided @ 1.8% of only three components i.e. cost of foodgrain, cooking cost and transportation.
 - (iii) Transportation assistance effective from 1.4.2010 in the 11 Special Category States (8 NER States and 3 (TA) Special category states i.e. Himachal

Pradesh, Uttarakhand and Jammu & Kashmir) have been made at par with the PDS rates prevalent in these States. In case of all other States/UTs, TA is reimbursed on the basis of the actual cost incurred for transportation of food grains from nearest FCI godown to the school subject to the ceiling of Rs.75/- per quintal.

- (iv) As the system of payment of cost of foodgrains to FCI from the Government of India was prone to delays and risk, the payment of cost of foodgrains to the FCI has been decentralized at the district level w.e.f. 1.4.2010. Now the payment of cost of foodgrains is a part of recurring Central Assistance and is being released to all States/UTs to make payment of FCI⁴⁰³.

Objectives of Mid-Day Meal Scheme:

The objectives of the Mid Day Meal Scheme is to address two of the pressing problems for majority of children in India, viz. hunger and education by:

- i) Improving nutritional status of children in classes I-VIII classes in Government, Local Body, Government aided schools and EGS & AIE Centres, NCLP Schools, Madrasas & Maqtabas supported under SSA;
- ii) Encouraging poor children, belonging to disadvantaged sections, to attend schools more regularly and help them concentrate on classroom activities;
- iii) Providing nutritional support to children of elementary stage in draught affected areas during summer vacation.

Rationale:

1. Promoting School participation
2. Preventing classroom hunger
3. Facilitating healthy growth of children
4. Intrinsic educational value
5. Fostering social equality
6. Enhancing gender equity
7. Psychological benefits.

Financial Components of MDM:

Presently, MDM Scheme provides the following assistance to State Governments/UT Administration:

- (a) Supply of free food grains (wheat/rice) @100 grams per child per school day for primary and @ 150 grams per child per school day for upper primary and NCLP children from the nearest FCI go-down;
- (b) Transportation assistance (TA) effective from 1.4.2010 in the 11 Special Category States at par with PDS rates prevalent in these States. In case of all other States/UTs, the TA is reimbursed on the basis of actual cost incurred in transportation of food grains from nearest FCI godown to the school subject to the ceiling of Rs.75/- per quintal.

⁴⁰³ Annual Report-2011-12, MHRD, GOI, New Delhi, Page 37-38

- (c) Cooking cost has been revised from 1.12.2009 (excluding the labour and administrative charges) to Rs.2.50 for primary and Rs.3.75 for upper primary children and further enhanced by 7.5% on 1-4-2010 i.e. Rs.2.69 for primary and Rs. 4.03 for upper primary and again revised on 1.4.2011 @7.5%. The cooking cost is being shared between the Centre and the NER States on 90:10 basis and with other states/UTs on 75:25 basis. Accordingly, the share of the Centre and the minimum share of the States/UTs is currently as under:

Total cost per meal		Non-NER States(75:25)		NER States(90:10)	
Primary	Rs.2.89	Rs.2.17	Rs.0.72	Rs.2.60	Rs.0.29
U.Pry	Rs.4.33	Rs.3.25	Rs.1.08	Rs.3.90	Rs.0.43
Cooking Cost proposed for the year 2012-13					
		Centre	State	Centre	State
Primary	Rs.3.11	Rs.2.33	Rs.0.78	Rs.2.80	Rs.0.31
U.Pry	Rs.4.65	Rs.3.49	Rs.1.16	Rs.4.19	Rs.0.46

- (d) Instead of a flat rate of Rs. 60,000 for construction of kitchen-cum-store per school across the country, effective from 1.12.2009, the construction cost is to be determined on the basis of plinth area norms and State Schedule of Rates prevalent in the state/UT. The cost of construction of Kitchen-cum-stores is to be shared between the Centre and the NER States on 90:10 basis and with other States/UTs on 75:25 basis. Ministry vide letter No. 1-1/2009-Desk(MDM) dated 31-12-2009 has prescribed 20 Sq.mt plinth area for construction of Kitchen-cum-Store in schools having upto 100 children. For every additional upto 100, additional 4 sq.mt. plinth area will be added. States/UTs have the flexibility to modify the slab of 100 children depending upon the local conditions.
- (e) Assistance for procurement of kitchen devices at an average cost of 5,000 per school. Kitchen devices include:
- (i) Cooking devices (Stove, Chulha, etc.)
 - (ii) Containers for storage of food grains and other ingredients
 - (iii) Utensils for cooking and serving.
- (f) Honorarium of Rs.1000/- per month from 1.12.2009 to cook-cum-helper and engagement of one cook-cum-helper for schools upto 25 students, two cooks-cum-helpers for schools with 26 to 100 students and one additional cook-cum-helper for every addition of upto 100 students. The expenditure towards the honorarium of cook-cum-helper is to be shared between the Centre and the NER States on 90:10 basis and with other States/UTs on

75:25 basis. At present 24 lakh cook-cum-helpers are working in the schools to prepare and serve meals to children.

- (g) Assistance for Management, Monitoring & Evaluation (MME) of the Scheme at the rate of 1.8% of the total assistance for (a) cost of food grains, (b) transportation cost, (c) cooking cost and (d) honorarium to cook-cum-Helpers, 0.2% of the total assistance for (i) foodgrains, (ii) transportation cost (iii) cooking cost and (iv) the National level for management, monitoring and evaluation purposes.

Allocation of MDM for 11th FYP (2007-08-2011-12):

A total budget of Rs.48,000/- crore has been allocated by Planning Commission during the 11th FYP. This includes both Gross Budgetary Support (GBS) as well as the contribution from the Prarambhik Shiksha Kosh (PSK). The allocation for the year 2011-12 is Rs.10380 crores'.⁴⁰⁴

10. Sarva Shiksha Abhiyan (SSA)⁴⁰⁵

Sarva Shiksha Abhiyan which was launched in the year 2002, was to provide useful and relevant primary education for all children in the 6 to 11 age-group. Article 21-A of our Constitution and its consequent legislation, the Right of Children to Free and Compulsory Education [RTE] Act, 2009 became operative w.e.f.1st April, 2010 which implies that every child has a right to elementary education of satisfactory and equitable quality in a formal school, satisfying essential norms and standards. This development has far reaching implications for elementary education under Sarva Shiksha Abhiyan for the children in the age-group 6-14 years.

(a) Objectives of SSA:

- a) All children in school, EGS, AS, back-to-school camp by 2005.
- b) All children complete five years of primary schooling by 2007.
- c) All children complete eight years of elementary schooling by 2010.
- d) Focus on elementary education of satisfactory quality with emphasis on education for life.
- e) Bridge all gender and social category gaps at primary stage by 2007 and at elementary stage by 2010.
- f) Universal retention by 2010.

Sarva Shiksha Abhiyan covers all States/UTs in the country and reaches out to crores of children residing in lakhs of habitations. The organizational setup for SSA and its monitoring mechanism draw their authority from the National Mission for SSA under the chairmanship of Hon'ble Prime Minister of India with Minister of Human Resource Development as Chairman of the Executive Committee. The National Mission includes representatives from major political parties, non-government sectors, educationists, teachers unions, scientists and eminent

⁴⁰⁴ Annual Report-2011-12, MHRD, GOI, New Delhi, Pages 38-40.

⁴⁰⁵ Annual Report, 2010-11, MHRD, GOI, Pages21-23

experts. The Right of children for free and compulsory Education Act, 2009 was enforced w.e.f. 01-04-2010.

(b) Revised Norms of SSA:

The original SSA Norms are under revision of the MHRD as under:

1. **New Schools:** Opening of new Primary and Upper Primary schools shall be undertaken as per neighbourhood norms prescribed by the State Govt. in their RTE Rules. All alternative schooling facilities provided under Education Guarantee Scheme to be upgraded to regular formal schools.
2. **Teachers:** Sanction of teachers and part time instructors for Health, Art and Physical Education and Work Education as per Schedule prescribed under RTE Act, 2009.
3. **Additional Classrooms:** Provision of additional classrooms so that every teacher has a classroom to herself/himself; Also provision of the room for the head-teacher/office.
4. **Special training for out of school children:** Provision of special training for out of school and drop out children to facilitate age appropriate admission mandated under section 4 of RTE Act. The Centres functioning under SSA's Alternate and Innovative Education programme are reconceptualized to provide special training in residential or non-residential mode in a flexible duration of three months to two years depending on the needs of the child.
5. **Eight year Elementary Education Cycle:** All States, where necessary, to move towards eight year Elementary Education cycle comprising five years of primary + three years of upper primary schooling, SSA norms have been revised to provide teaching learning equipment (TLE) accordingly.
6. **Uniforms:** Uniforms constitute an expense which poor families are not able to afford, and hence, a barrier for many children to pursue and complete elementary education. SSA shall provide two sets of uniforms to all girls, SC, ST children and BPL children, wherever, (i) State Govts have incorporated provision of school uniforms as a child entitlement in their State RTE Rules; and (ii) State Governments are not already providing uniforms from the State budget.
7. **Transportation:** Children in remote habitations with sparse population or in urban areas where availability of land is a problem may not find access to neighborhood schools. Such children may be provided support for transportation.
8. **Residential facilities:** Residential facilities may be established for children from sparsely populated, hilly/forested terrains and for urban deprived children, street children and children without adult protection.
9. **Augmentation of academic support at Block/cluster level:** Academic support may be augmented at block/cluster level so that States follow curriculum and evaluation procedure mandated under section 29 of the RTE Act

10. **KGBV**: Additional 1073 KGBV have been sanctioned for educational backward blocks.
11. **Miscellaneous Revisions**: On the basis of experience, the following further changes have been incorporated in SSA norms:
 - (a) School infrastructure like: libraries, books @Rs.3,000/- for Primary schools and Rs.10,000/- for upper primary schools as one time grant has been allowed;
 - (b) Ceiling on each district to propose upto a maximum of 5% of the existing schools for major repairs in a particular year, which inhibited the demand for repairs, has been removed;
 - (c) Scope of School Grant extended to include play material, games, sports equipment, in addition to the existing provision for replacement of non-functional schools equipment and for other recurring costs;
 - (d) Training norms revised to include training of Resource Persons, Master trainers, BRC & CRC coordinators for up to 10 days each year @ Rs.200 per person per day for residential training;
 - (e) Unit costs towards maintenance, contingency and TLM grants for the academic supervision structures at block and cluster level enhanced;
 - (f) Unit cost, number of persons and days of training for capacity building of members of SMC/local authority enhanced;
 - (g) Financial provisions for children with special needs enhanced from Rs.1200 per child to Rs.3000/- per child per year, provided that at least Rs.1000/- per child will be used for the engagement of resource teachers;
 - (h) Flexibility in implementation of National Programme for Education of Girls at Elementary Level (NPEGEL) by removing component-wise ceilings.
 - (i) Provision made for supporting the activities of the National Commission for Protection of Child Rights (NCPCR)/State Commission for Protection of Child Rights(SCPCR) for monitoring the rights of children under the RTE Act; and,
 - (j) Enhancing the unit costs for Research, Evaluation, Monitoring and Supervision (REMS).

(c) Programme interventions:

'By February, 2012, 31 States and UTs had notified the State RTE Rules. 31 States issued notifications prohibiting corporal punishment and mental harassment; 25 States issued notifications prohibiting screening for admission and capitation fees; 31 States issued notifications prohibiting expulsion and detention; 30 States issued notification banning Board examinations till completion of elementary education; 27 States notified academic authority under RTE Act.

There were 1,73,757 habitations unserved by primary schools and 2,30,941 habitations unserved by upper primary schools in 2002 when SSA was launched. Over the years 2,09,166 primary schools and 1,73,775 upper primary schools were sanctioned of which 13,733 Primary and 2809 upper primary schools were sanctioned in 2011-12.

CBSE conducted the first CTET on 26th June 2011 in 1178 centres across 84 cities in India and two cities abroad where one lakh applicants cleared the TET. Second TET is likely to be held shortly. Several states also conducted their STET.⁴⁰⁶

11. Kasturba Gandhi Balike Vidyalaya Scheme (KGBV)⁴⁰⁷

KGBV Scheme provides for setting up of residential upper primary schools for girls from SC/ST/OBC and Muslim communities in areas of scattered habitations where schools are at great distances and are a challenge to the security of girls. The target population is,-

- (a) Adolescent girls who are unable to go to regular schools;
- (b) Out of school girls in the 10+ agegroup who are unable to complete primary school;
- (c) Younger girls of migratory population in difficult areas of scattered habitations that do not qualify for primary/upper primary schools.
- (d) Scheme provides for minimum reservations of 75% seats from amongst SC/ST/OBC and minority communities and 25% from the families who are below poverty line.

Till 2009-10 there were 2570 KGBVs in the country. After RTE Act came into operation, additional 1030 KGBVs were sanctioned.⁴⁰⁸

12. The National Programme for Education of Girls at Elementary Level (NPEGEL)⁴⁰⁹

NPEGEL Scheme is a holistic effort to address obstacles to girls education at the micro level through flexible, decentralized processes and decision making. It is implemented in educationally backward blocks (EBB) and addresses the needs of girls who are 'in' as well as 'out' of school. NPEGEL also reaches out to girls

⁴⁰⁶ Annual Report -2011-12, MHRD, GOI, New Delhi, Page22-23.

⁴⁰⁷ Annual Report,2009-10, MHRD, GOI, Page 23

⁴⁰⁸ Annual Report, 2011-12, MHRD, GOI, New Delhi, Page 27.

⁴⁰⁹ Annual Report, 2008-09, MHRD, GOI, Pages 21-22

who are enrolled in school, but do not attend school regularly. Children become vulnerable to leaving school when they are not able to cope with the pace of learning in the class or feel neglected by teachers/peers in class. The Scheme emphasizes the responsibility of teachers to recognize vulnerable girls and pay special attention to bring them out of their state of vulnerability and prevent them from dropping out. Recognizing the need for support services to help girls with responsibilities with regard to fuel, fodder, water, sibling care and paid and unpaid work, provisions have been made for incentives that are decided locally based on needs and through the provision of ECCE, as child care for the two and three year old children. Gender sensitive teaching learning materials as also additional subjects like self-defense, life skills, legal rights, gender have been provided in the scheme. Efforts to ensure a supportive and gender sensitive classroom environment through systematic sensitization and monitoring the Class room are also built into the scheme. The Scheme works through village level women's' and community groups to follow up girls enrolment, attendance and achievement. The community is engaged in recommending village specific action based on their understanding of local issues. At cluster level, one school is developed into a resource hub for schools of the cluster. It is a repository of supplementary reading material, books, equipment, games, vocational training, teacher training for gender, classes on additional subjects like self-defense and life skills. All girls use the resources in the cluster and are often circulated to the schools in the clusters by rotation. The reach of the NPEGEL is: 3297 Blocks, 41103 Clusters; 40,623 Model Cluster Schools; 4367 ECCE Suport; 24,593 Additional Classrooms Skill Development; 32.36 lakhs girls covered(Meena Activity); 9.10 lakhs girls covered(Exposure visits); 10.80 lakhs girls are covered under the programme and free uniform is provided to all girls.⁴¹⁰

13. Inclusive Education⁴¹¹

The scheme of inclusive education for disabled at Secondary stage (IEDSS) was launched in 2009-10 replacing the earlier scheme of Integrated Education for Disabled Children (IEDC). It provides assistance for the inclusive education of the disabled children in classes IX-XII. The aim of the scheme is to enable students with disabilities after completing eight years of elementary schooling to pursue further four years of secondary schooling in an inclusive and enabling environment. The Scheme covers all students studying in Govt., local body, Govt. aided schools, with disabilities as defined under the Persons with Disabilities Act (1995) and the National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation & Multiple Disabilities Act (1999), namely: Blindness; Low vision; Leprosy Cured Persons; Hearing impairment; Loco Motor Disabilities; Mental Retardation; Mental illness; Autism; and Cerebral Palsy. The components of the Scheme include,-

- i) Assessment of medical/educational needs;
- ii) Provision of student-specific facilities;

⁴¹⁰ Annual Report, 2011-12, MHRD, GOI, New Delhi, Page 27.

⁴¹¹ Annual Report, 2010-11, MHRD, GOI, Pages 60-61.

- iii) Development of learning material;
- iv) Support services like special educators;
- v) Construction and equipping of resource rooms;
- vi) Training of general school teachers to build their capacity to fulfill the needs of children with special needs; and,
- vii) Make schools barrier free.

'RTE-SSA seeks to ensure that every child with special needs, irrespective of the kind, category and degree of disability, is provided meaningful and quality education. The main components of SSA interventions for children with special needs include:

- (1) Identification, functional and formal assessment, appropriate educational placement, preparation of Individualized Educational Plan, provision of aids and appliances, teacher training resource support removal of architectural barriers, monitoring and evaluation and a special focus on girls with special needs.
- (2) Special training for children with special needs (CWSN) with the main objective of preparing children with special needs for schools, thereby ensuring better quality inclusion for them.
- (3) Home-based education for children with severe profound disabilities with the objective of either preparing children with special needs for schools and for life, by imparting to them basic life skills.
- (4) Financial support up to Rs.3,000/- per child for integration of disabled children, as per specific proposals, per year.

30.28 lakh children with special needs have been identified of which 26.46 lakh children with special needs are enrolled in schools; 1.62 lakh children with special needs are being provided home-based education in 31 States/UTs. So far 21.07 lakh children with special needs have been provided assistive devices under the SSA. 1.12 lakh teachers have been trained in 30 States with Rehabilitation Council of India for 90 days to act as Resource Persons in districts/blocks. 32 States have appointed 0.18 lakh resource teachers and 925 NGOs are involved in the IE programme in 30 States'.⁴¹²

14. Setting up of 6000 Model Schools at Block level

The Scheme envisages quality education to talented rural children through setting up 6000 Model Schools as benchmark of excellence at block level was launched during 2008-09 and is being implemented from 2009-10,

Objectives of the scheme are,-

- i) To have at least one good quality senior secondary school in every block;
- ii) To have a pace setting role;⁴¹³
- iii) To try out innovative curriculum and pedagogy; and,

⁴¹² Annual Report-2011-12, MHRD,GOI, New Delhi Pages29-30

⁴¹³ Annual Report, 2010-11, MHRD, GOI, New Delhi Pages 56-57.

- iv) To be a model in infrastructure, curriculum, evaluation and school governance.

Modes of Implementation:

The Scheme will have two modes, one for 3,500 educationally backward blocks (EBB) in government sector and another for remaining 2,500 blocks under Public Private Partnership (PPP) in blocks which are not educationally backward.

Salient features of the Scheme,-

- (a) Land for these schools will be identified and provided by the State Governments free of cost;
- (b) The medium of instruction will be decided by the State Governments. However, special emphasis will be given on teaching of,-
- (i) English and spoken English;
- (c) The schools will have classes from VI to XII, or IX to XII having two sections in each class; and,
- (d) These Schools will be run by State Government societies similar to Kendriya Vidyalaya Sangathan.

The component for setting up of model schools in EBBs through State/UT Government is operational since 2008-09.⁴¹⁴

Sharing pattern:

	Centre:States	
Non-NER States	75:25	[Both recurring+NR]
NER States+Ashram Schools	90:10	-ditto-

During 2009-10 as many as 327 model schools have been sanctioned and a sum of Rs.257.71 crores released as first installment of Central share. During 2010-11, as many as 401 model schools in 5 States have been sanctioned and Rs.229.51 Crores as Central share released. During the year 2011-12 (upto 31-1-2012) 786 model schools in seven states have been sanctioned and Rs.860 crores have been released as first instalment of Central share.⁴¹⁵

15. Rashtriya Madhyamik Shiksha Abhiyan (RMSA)⁴¹⁶

The Scheme of RMSA was started in March, 2009 with the objective to enhance access to secondary education and to improve its quality. Implementation was started from the year 2009-10.

Objectives:

- a. To enhance enrolment at secondary stage by providing secondary schools within reasonable walking distance from habitations in order to ensure 100% enrolment by 2017 and universal retention by 2020.

⁴¹⁴ Annual Report-2011-12, MHRD, GOI, New Delhi, Page 6

⁴¹⁵ Annual Report-2011-12, MHRD, GOI, New Delhi, Page 57-58.

⁴¹⁶ Annual Report, 2010-11, MHRD, GOI, New Delhi and Annual Report-2011-12 MHRD, GOI, New Delhi Pages 56-57.

- b. Improving quality of education imparted at secondary level through making all secondary schools conform to prescribed norms, removing gender, socio-economic and disability barriers, etc.

Targets:

Broad physical targets include,-

-Additional enrolment of 32 lakh students by 2011-12, by

- (a) Strengthening of about 44,000 existing secondary schools;
- (b) Opening of around 11,000 new secondary schools;
- (c) Appointment of additional teachers to improve PTR; and,
- (d) Construction of more than 80,000 additional classrooms.

-Infrastructure:

(a) additional classrooms; (b) Laboratories; (c) Libraries; (d) Art & crafts rooms; (e) Toilet blocks; (f) Drinking water provisions; (g) Electricity/telephone/internet connectivity, (h) appointment of trained teaching staff; (i) provisions of female trained teaching staff etc.

Sharing pattern:

During 11th Plan it would be 75:25% while during 12th Plan it would be 50:50%. However for North-Eastern states it would be 90:10% for both the Plans. Funds are being provided during the Annual Plans of the States with due appraisal.

Progress:

During 2011-12, the following interventions were approved till 31-12-2011j through Annual Plans of 35 States/UTs:

(a) New/upgraded Schools 4032; (b) 15567 schools were strengthened in terms of: additional classrooms, science labs, laboratory equipment, computer rooms, Art/craft/culture rooms, Libraries, Separate toilet facilities; (c) 8 lakhs teachers for inservice training; (d) Annual school grants; (e) Minor repair grants; Major Repair Grants; (f) Residential quarters for teachers.

APPENDICES

Appendix “a-1”

Published in Extraordinary Gazette of India, Part II Section 1, New Delhi, Thursday, August 27, 2009, Bhadra 5, 1931 by the Ministry of Law & Justice (Legislative Department)

The following Act of Parliament received the assent of the President on the 26th August, 2009, and is hereby published for general information:-

The Right of Children to Free and Compulsory Education Act, 2009 (No.35 of 2009) dated 26th August, 2009.

An Act to provide for free and compulsory education to all children of the age of six to fourteen years.

Be it enacted by Parliament in the Sixtieth Year of the Republic of India as follows:

Chapter 1: Preliminary

Short title, extent and commencement:

1. (1) This Act may be called the Right of Children to Free and Compulsory Education Act, 2009
- (2) It shall extend to the whole of India except the State of Jammu and Kashmir
- (3) It shall come into force on such date as the Central Government may, by notification in the official Gazette, appoint.

Definitions:

2. In this Act, unless the context otherwise requires,-
 - (a) “Appropriate Government” means-
 - (i) In relation to a school established, owned or controlled by the Central Government, or the administrator of the Union territory, having no legislature, the Central Government;
 - (ii) In relation to a school, other than the school referred to in sub-clause (i), established within the territory of,-
 - (A) A State, the State Government;
 - (B) A Union territory having legislature, the Government of that Union territory;
 - (b) “Capitation fee” means any kind of donation or contribution or payment other than the fee notified by the school;
 - (c) “Child” means a male or female child of the age of six to fourteen years;

- (d) "Child belonging to disadvantaged group" means a child belonging to the Scheduled Caste, the Scheduled Tribe, the socially and educationally backward class or such other group having disadvantage owing to social, cultural, economical, geographical, linguistic, gender or such other factor, as may be specified by the appropriate Government, by notification;
- (e) "Child belonging to weaker section" means a child belonging to such parent or guardian whose annual income is lower than the minimum limit specified by the appropriate Government, by notification;
- (f) "Elementary education" means the education from first class to eighth class;
- (g) "Guardian", in relation to a child, means a person having the care and custody of that child and includes a natural guardian or guardian appointed or declared by a court or a statute;
- (h) "Local authority" means a Municipal Corporation or Municipal Council or Zila Parishad or Nagar Panchayat or Panchayat, by whatever name called, and includes such other authority or body having administrative control over the school or empowered by or under any law for the time being in force to function as a local authority in any city, town or village;
- (i) "National Commission for Protection of Child Rights" means the National Commission for Protection of Child Rights constituted under section 3 of the Commissions for Protection of Child Rights Act, 2005,(4 of 2006);
- (j) "Notification" means a notification published in the Official Gazette;
- (k) "Parent" means either the natural or step or adoptive father or mother of a child;
- (l) "Prescribed" means prescribed by rule made under this Act;
- (m) "Schedule" means the Schedule annexed to this Act;
- (n) "School" means any recognized school imparting elementary education and includes,-
 - (i) A school established, owned or controlled by the appropriate Government or a local authority;
 - (ii) An aided school receiving aid or grants to meet whole or part of its expenses from the appropriate Government or the local authority;
 - (iii) A school belonging to specified category; and,
 - (iv) An unaided school not receiving any kind of aid or grants to meet its expenses from the appropriate Government or the local authority;
- (o) "Screening procedure" means the method of selection for admission of a child, in preference over another, other than a random method;
- (p) "Specified category" in relation to a school, means a school known as Kendriya Vidyalaya, Navodaya Vidyalaya, Sainik School or any other school having a distinct character which may be specified, by notification, by the appropriate Government;

- (q) "State Commission for Protection of Child Rights" means the State Commission for Protection of Child Rights constituted under section 3 of the Commissions for Protection of Child Rights Act, 2005, (4 of 2006).

Chapter-II: Right to Free and Compulsory Education

Right of child to free and compulsory education:

[Right of a child to free and compulsory education]:

3. (1) Every child of the age of six to fourteen years shall have a right to free and compulsory education in a neighbourhood school till completion of elementary education.
- (2) For the purpose of sub-section (1), no child shall be liable to pay any kind of fee or charges or expenses which may prevent him or her from pursuing and completing the elementary education;

Provided that a child suffering from disability, as defined in clause (i) of Section 2 of the Persons with Disabilities (Equal Opportunities, Protection and Full Participation) Act, 1996, (1 of 1996) shall have the right to pursue free and compulsory elementary education in accordance with the provisions of Chapter V of the said Act.

[Special provisions for children not admitted to, or who have not completed elementary education]:

4. Where a child above six years of age has not been admitted in any school or though admitted, could not complete his or her elementary education, then, he or she shall be admitted in a class appropriate to his or her age;

Provided that where a child is directly admitted in a class appropriate to his or her age, then, he or she shall, in order to be at par with others, have a right to receive special training, in such manner, and within such time-limits, as may be prescribed;

Provided further that a child so admitted to elementary education shall be entitled to free education till completion of elementary education even after fourteen years.

[Right of transfer to other school]:

5. (1) Where in a school, there is no provision for completion of elementary education, a child shall have a right to seek transfer to any other school, excluding the school specified in sub-clauses (iii) and (iv) of clause (n) of section 2, for completing his or her elementary education.
- (2) Where a child is required to move from one school to another, either within a State or outside, for any reason whatsoever, such child shall have a right to seek transfer to any other school, excluding the school specified in sub-clauses (iii) and (iv) of clause (n) of section 2, for completing his or her elementary education.

- (3) For seeking admission in such other school, the Head-teacher or in-charge of the school where such child was last admitted, shall immediately issue the transfer certificate;

Provided that delay in producing transfer certificate shall not be a ground for either delaying or denying admission in such other school;

Provided further that the Head-teacher or in-charge of the school delaying issuance of transfer certificate shall be liable for disciplinary action under the service rules applicable to him or her.

Chapter III –Duties of appropriate Government, Local Authority and Parents:

[Duty of appropriate Government and Local authority to establish school]:

6. For carrying out the provisions of this Act, the appropriate Government and the local authority shall establish, within such area or limits of neighborhood, as may be prescribed, a school, where it is not so established, within a period of three years from the commencement of this Act.

[Sharing of financial and other responsibilities]:

- 7
- (1) The Central Government and the State Governments shall have concurrent responsibility for providing funds for carrying out the provisions of this Act.
 - (2) The Central Government shall prepare the estimates of capital and recurring expenditure for the implementation of the provisions of the Act.
 - (3) The Central Government shall provide to the State Governments, as grants-in-aid of revenues, such percentage of expenditure referred to in sub-section (2) as it may determine, from time to time, in consultation with the State Governments.
 - (4) The Central Government may make a request to the President to make a reference to the Finance Commission under sub-clause (d) of clause (3) of article 280 to examine the need for additional resources to be provided to any State Government so that the said State Government may provide its share of funds for carrying out the provisions of the Act.
 - (5) Notwithstanding anything contained in sub-section (4), the State Government shall, taking into consideration the sums provided by the Central Government to a State Government under sub-section (3), and its other resources, be responsible to provide funds for implementation of the provisions of the Act.
 - (6) The Central Government shall,-
 - (a) Develop a framework of national curriculum with the help of academic authority specified under section 29;
 - (b) Develop and enforce standards for training of teachers
 - (c) Provide technical support and resources to the State Government for promoting innovations, researches, planning and capacity building.

[Duties of appropriate Government]:

8. The appropriate Government shall,-

(a) Provide free and compulsory elementary education to every child;

Provided that where a child is admitted by his or her parents or guardian, as the case may be, in a school other than a school established, owned, controlled or substantially financed by funds provided directly or indirectly by the appropriate Government or a local authority, such child or his or her parents or guardian, as the case may be, shall not be entitled to make a claim for reimbursement of expenditure incurred on elementary education of the child in such other school.

Explanation:- The term "compulsory education" means obligation of the appropriate Government to:-

(i) Provide free elementary education to every child of the age of six to fourteen years; and

(ii) Ensure compulsory admission, attendance and completion of elementary education by every child of the age of six to fourteen years;

(b) Ensure availability of a neighborhood school as specified in section 6;

(c) Ensure that the child belonging to weaker section and the child belonging to disadvantaged group are not discriminated against and prevented from pursuing and completing elementary education on any grounds;

(d) Provide infrastructure including school building, teaching staff and learning equipment;

(e) Provide special training facility specified in section 4;

(f) Ensure and monitor admission, attendance and completion of elementary education by every child;

(g) Ensure good quality elementary education conforming to the standards and norms specified in the Schedule.

(h) Ensure timely prescribing of curriculum and courses of study for elementary education; and

(i) Provide training facility for teachers.

[Duties of local authority]:

9. Every local authority shall,-

(a) Provide free and compulsory elementary education to every child;

Provided that where a child is admitted by his or her parents or guardian, as the case may be, in a school other than a school established, owned, controlled or substantially financed by funds provided directly or indirectly by the appropriate Government or a local authority, such child or his or her parents or guardian, as the case may be, shall not be entitled to make a claim for reimbursement of expenditure incurred on elementary education of the child in such other school;

(b) Ensure availability of a neighborhood school as specified in section 6;

- (c) Ensure that the child belonging to weaker section and the child belonging to disadvantaged group are not discriminated against and prevented from pursuing and completing elementary education on any grounds;
- (d) Maintain records of children up to the age of fourteen years residing within its jurisdiction, in such manner as may be prescribed;
- (e) Ensure and monitor admission, attendance and completion of elementary education by every child residing within its jurisdiction;
- (f) Provide infrastructure including school building, teaching staff and learning material;
- (g) Provide special training facility specified in section 4;
- (h) Ensure good quality elementary education conforming to the standards and norms specified in the Schedule;
- (i) Ensure timely prescribing of curriculum and courses of study for elementary education;
- (j) Provide training facility for teachers;
- (k) Ensure admission of children of migrant families;
- (l) Monitor functioning of schools within its jurisdiction; and
- (m) Decide the academic calendar.

[Duty of parents and guardian]:

10. It shall be the duty of every parent or guardian to admit or cause to be admitted his or her child or ward, as the case may be, to an elementary education in the neighborhood school.

[Appropriate Government to provide for pre-school education]:

11. With a view to prepare children above the age of three years for elementary education and to provide early childhood care and education for all children until they complete the age of six years, the appropriate Government may make necessary arrangement for providing free pre-school education for such children.

Chapter-IV Responsibilities of Schools and Teachers.

[Extent of school's responsibility for free and compulsory education]:

12. (1) For the purposes of this Act, a school,-
- (a) Specified in sub-clause (i) of clause (n) of section 2 shall provide free and compulsory elementary education to all children admitted therein;
 - (b) Specified in sub-clause (ii) of clause (n) of section 2 shall provide free and compulsory elementary education to such proportion of children admitted therein as its annual recurring aid or grants so received bears to its annual recurring expenses, subject to a minimum of twenty-five per cent;
 - (c) Specified in sub-clause (iii) and (iv) of clause (n) of section 2 shall admit in class I, to the extent of at least twenty-five percent of the

strength of that class, children belonging to weaker section and disadvantaged group in the neighborhood and provide free and compulsory elementary education till its completion;

Provided further that where a school specified in clause (n) of section 2 imparts pre-school education, the provisions of clauses (a) to (c) shall apply for admission to such pre-school education.

- (2) The School specified in sub-clause (iv) of clause (n) of section 2 providing free and compulsory elementary education as specified in clause (c) of sub-section (1) shall be reimbursed expenditure so incurred by it to the extent of per child expenditure incurred by the State, or the actual amount charged from the child whichever is less, in such manner as may be prescribed;

Provided that such reimbursement shall not exceed per-child-expenditure incurred by a school specified in sub-clause (i) of clause (n) of section 2;

Provided further that where such school is already under obligation to provide free education to a specified number of children on account of it having received any land, building, equipment or other facilities, either free of cost or at a concessional rate such school shall not be entitled for reimbursement to the extent of such obligation.

- (3) Every school shall provide such information as may be required by the appropriate Government or the local authority, as the case may be.

[No capitation fee and screening procedure for admission]:

13. (1) No school or person shall, while admitting a child, collect any capitation fee and subject the child or his or her parents or guardian to any screening procedure.
- (2) Any school or person, if in contravention of the provisions of sub-section (1),-
- (a) Receives capitation fee, shall be punishable with fine which may extend to ten times the capitation fee charged;
- (b) Subjects a child to screening procedure, shall be punishable with fine which may extend to twenty-five thousand rupees for the first contravention and fifty thousand rupees for each subsequent contraventions.

[Proof of age for admission]:

14. (1) For the purposes of admission to elementary education, the age of a child shall be determined on the basis of the birth certificate issued in accordance with the provisions of the Births, Deaths and Marriages Registration Act, 1886 or on the basis of such other document, as may be prescribed.
- (2) No child shall be denied admission in a school for lack of age proof (6 of 1886).

[No denial of admission]:

15. A child shall be admitted in a school at the commencement of the academic year or within such extended period as may be prescribed;

Provided that no child shall be denied admission if such admission is sought subsequent to the extended period;

Provided further that any child admitted after the extended period shall complete his studies in such manner as may be prescribed by the appropriate Government.

[Prohibition of holding back and expulsion]:

16. No child admitted in a school shall be held back in any class or expelled from school till the completion of elementary education.

[Prohibition of physical punishment and mental harassment to child]:

17. (1) No child shall be subjected to physical punishment or mental harassment.
 (2) Whoever contravenes the provisions of sub-section (1) shall be liable to disciplinary action under the service rules applicable to such person.

[No school to be established without obtaining certificate of recognition]:

18. (1) No school, other than a school established, owned or controlled by the appropriate Government or the local authority, shall, after the commencement of this Act, be established or function, without obtaining a certificate of recognition from such authority, by making an application in such form and manner, as may be prescribed.
 (2) The authority prescribed under sub-section (1) shall issue the certificate of recognition in such form, within such period, in such manner, and subject to such conditions, as may be prescribed.

Provided that no such recognition shall be granted to a school unless it fulfils norms and standards specified under section 19.

- (3) On the contravention of the conditions of recognition, the prescribed authority shall, by an order in writing, withdraw recognition.

Provided that such order shall contain a direction as to which of the neighbourhood school, the children studying in the derecognized school, shall be admitted;

Provided further that no recognition shall be so withdrawn without giving an opportunity of being heard to such school, in such manner, as may be prescribed.

- (4) With effect from the date of withdrawal of the recognition under sub-section (3), no such school shall continue to function.
 (5) Any person who establishes or runs a school without obtaining certificate of recognition, or continues to run a school after withdrawal of recognition, shall be liable to fine which may extend to one lakh rupees and in case of continuing contraventions, to a fine of ten thousand rupees for each day during which such contravention continues.

[Norms and standards for school]:

19. (1) No school shall be established, or recognized, under section 18, unless it fulfils the norms and standards specified in the Schedule.

- (2) Where a school established before the commencement of this Act does not fulfill the norms and standards specified in the Schedule, it shall take steps to fulfill such norms and standards at its own expenses, within a period of three years from the date of such commencement.
- (3) Where a school fails to fulfill the norms and standards within the period specified under sub-section (2), the authority prescribed under sub-section (1) of section 18 shall withdraw recognition granted to such school in the manner specified under sub-section (3) thereof.
- (4) With effect from the date of withdrawal of recognition under sub-section (3), no school shall continue to function.
- (5) Any person who continues to run a school after the recognition is withdrawn, shall be liable to fine which may extend to one lakh rupees and in case of continuing contraventions, to a fine of ten thousand rupees for each day during which such contravention continues.

[Power to amend schedule]:

20. The Central Government may, by notification, amend the Schedule by adding to, or omitting there from, any norms and standards.

[School Management Committee]:

21. (1) A school, other than a school specified in sub-clause (iv) of clause (n) of section 2, shall constitute a School Management Committee consisting of the elected representatives of the local authority, parents or guardians of children admitted in such school and teachers;

Provided that at least three-fourth of members of such Committee shall be parents or guardians;

Provided further that proportionate representation shall be given to the parents or guardians of children belonging to disadvantaged group and weaker section.

Provided also that fifty per cent of Members of such Committee shall be women.

- (2) The school Management Committee shall perform the following functions, namely:-
 - (a) Monitor the working of the school;
 - (b) Prepare and recommend school development plan;
 - (c) Monitor the utilization of the grants received from the appropriate Government or local authority or any other source; and
 - (d) Perform such other functions as may be prescribed.

[School Development Plan]:

22. (1) Every School Management Committee, constituted under sub-section (1) of section 21, shall prepare a School Development Plan, in such manner as may be prescribed.
- (2) The School Development Plan so prepared under sub-section (1) shall be the basis for the plans and grants to be made by the appropriate Government or local authority, as the case may be.

[Qualifications for appointment and terms and conditions of service of teachers]:

23. (1) Any person possessing such minimum qualifications, as laid down by an academic authority, authorized by the Central Government, by notification, shall be eligible for appointment as a teacher.
- (2) Where a State does not have adequate institutions offering courses or training in teacher education, or teachers possessing minimum qualifications as laid down under sub-section (1) are not available in sufficient numbers, the Central Government may, if it deems necessary, by notification, relax the minimum qualifications required for appointment as a teacher for such period, not exceeding five years, as may be specified in that notification.

Provided that a teacher who, at the commencement of this Act, does not possess minimum qualifications as laid down under sub-section (1) shall acquire such minimum qualifications within a period of five years.

- (3) The salary and allowances payable to, and the terms and conditions of service of, teachers shall be such as may be prescribed.

[Duties of teachers and redressal of grievances]:

24. (1) A teacher appointed under sub-section (1) of section 23 shall perform the following duties, namely:-
- (a) Maintain regularity and punctuality in attending school;
 - (b) Conduct and complete the curriculum in accordance with the provisions of sub-section (2) of section 29.
 - (c) Complete entire curriculum within the specified time;
 - (d) Assess the learning ability of each child and accordingly supplement additional instructions, if any, as required;
 - (e) Hold regular meetings with parents and guardians and apprise them about the regularity in attendance, ability to learn, progress made in learning and any other relevant information about the child; and
 - (f) Perform such other duties as may be prescribed.
- (2) A teacher committing default in performance of duties specified in sub-section (1), shall be liable to disciplinary action under the service rules applicable to him or her;

Provided that before taking such disciplinary action, reasonable opportunity of being heard shall be afforded to such teacher.

- (3) The grievances, if any, of the teacher shall be redressed in such manner as may be prescribed.

[Pupil Teacher Ratio]:

25. (1) Within six months from the date of commencement of this Act, the appropriate Government and the local authority shall ensure that the Pupil-Teacher Ratio, as specified in the Schedule, is maintained in each school.

- (2) For the purpose of maintaining the Pupil-Teacher Ratio under sub-section (1), no teacher posted in a school shall be made to serve in any other school or office or deployed for any non-educational purpose, other than those specified in section 27.

[Filling up vacancies of teachers]:

26. The appointing authority, in relation to a school established, owned, controlled or substantially financed by funds provided directly or indirectly by the appropriate Government or by a local authority, shall ensure that vacancy of teacher in a school under its control shall not exceed ten per cent of the total sanctioned strength.

[Prohibition of deployment of teachers for non-educational purposes]:

27. No teacher shall be deployed for any non-educational purposes other than the decennial population census, disaster relief duties or duties relating to elections to the local authority or the State Legislatures or Parliament, as the case may be.

[Prohibition of private tuition by teachers]:

28. No teacher shall engage himself or herself in private tuition or private teaching activity.

Chapter V- Curriculum and completion of Elementary Education

[Curriculum and evaluation procedure]:

29. (1) The curriculum and the evaluation procedure for elementary education shall be laid down by an academic authority to be specified by the appropriate Government, by notification.
- (2) The academic authority, while laying down the curriculum and the evaluation procedure under sub-section (1), shall take into consideration the following, namely:-
- (a) Conformity with the values enshrined in the Constitution;
 - (b) All round development of the child;
 - (c) Building up child's knowledge, potentiality and talent;
 - (d) Development of physical and mental abilities to the fullest extent;
 - (e) Learning through activities, discovery and exploration in a child friendly and child centered manner;
 - (f) Medium of instructions shall, as far as practicable, be in child's mother tongue;
 - (g) Making the child free of fear, trauma and anxiety and helping the child to express views freely;
 - (h) Comprehensive and continuous evaluation of child's understanding of knowledge and his or her ability to apply the same.

[Examination and completion certificate]:

30. (1) No child shall be required to pass any Board examination till completion of elementary education.
- (2) Every child completing his elementary education shall be awarded a certificate in such form and in such manner, as may be prescribed.

Chapter VI- Protection of Right of children

[Monitoring of child's right to education]:

31. (1) The National Commission for Protection of Child Rights constituted under section 3, or, as the case may be, the State Commission for Protection of Child Rights constituted under section 17, of the Commissions for Protection of Child Rights Act, 2005, (4 of 2006), shall, in addition to the functions assigned to them under that Act, also perform the following functions, namely:-
- (a) Examine and review the safeguards for rights provided by or under this Act and recommend measures for their effective implementation;
 - (b) Inquire into complaints relating to child's right to free and compulsory education; and
 - (c) Take necessary steps as provided under sections 15 and 24 of the said Commissions for Protection of Child Rights Act.
- (2) The said Commissions shall, while inquiring into any matters relating to child's right to free and compulsory education under clause (c) of sub-section (1), have the same powers as assigned to them respectively under sections 14 and 24 of the said Commissions for Protection of Child Rights Act.
- (3) Where the State Commission for Protection of Child Rights has not been constituted in a state, the appropriate Government may, for the purpose of performing the functions specified in clauses (a) to (c) of sub-section (1), constitute such authority, in such manner and subject to such terms and conditions, as may be prescribed.

[Redressal of grievances]:

32. (1) Not with standing anything contained in section 31, any person having any grievance relating to the right of a child under this Act may make a written complaint to the local authority having jurisdiction.
- (2) After receiving the complaint under sub-section (1), the local authority shall decide the matter within a period of three months after affording reasonable opportunity of being heard to the parties concerned.
- (3) Any person aggrieved by the decision of the local authority may prefer an appeal to the State Commission for Protection of Child Rights or the authority prescribed under sub-section (3), of Section 31 as the case may be.

- (4) The appeal preferred under sub-section (3) shall be decided by State Commission for Protection of Child Rights or the authority prescribed under sub-section (3) of section 31, as the case may be, as provided under clause (c) of sub-section (i) of section 31.

[Constitution of National Advisory Council]:

33. (1) The Central Government shall constitute, by notification a National Advisory Council, consisting of such number of Members, not exceeding fifteen as the Central Government may deem necessary to be appointed from amongst persons having knowledge and practical experience in the field of elementary education and child development.
- (2) The functions of the National Advisory Council shall be to advise the Central Government on implementation of the provisions of the Act in an effective manner.
- (3) The allowances and other terms and conditions of the appointment of Members of the National Advisory Council shall be such as may be prescribed.

[Constitution of State Advisory Council]:

34. (1) The State Government shall constitute by notification, a State Advisory Council consisting of such number of Members, not exceeding fifteen, as the State Government may deem necessary, to be appointed from amongst persons having knowledge and practical experience in the field of elementary education and child development.
- (2) The functions of the State Advisory Council shall be to advise the State Government on implementation of the provisions of the Act in an effective manner.
- (3) The allowances and other terms and conditions of appointment of Members of the State Advisory Council shall be such as may be prescribed.

Chapter VII- Miscellaneous

[Power to issue directions]:

35. (1) The Central Government may issue such guidelines to the appropriate Government or, as the case may be, the local authority, as it deems fit for the purposes of implementation of the provisions of this Act.
- (2) The appropriate Government may issue guidelines and give such directions, as it deems fit, to the local authority or the School Management Committee regarding implementation of the provisions of this Act.
- (3) The local authority may issue guidelines and give such directions, as it deems fit, to the School Management Committee regarding implementation of the provisions of this Act.

[Previous sanction for prosecution]:

36. No prosecution for offences punishable under sub-section (2) of section 13, sub-section (5) of section 18 and sub-section (5) of section 19 shall be instituted except with the previous sanction of an officer authorized in this behalf, by the appropriate Government, by notification.

[Protection of action taken in good faith]:

37. No suit or other legal proceeding shall lie against the Central Government, the State Government, the National Commission for Protection of Child Rights, the State Commission for Protection of Child Rights, the local authority, the School Management Committee or any person, in respect of anything which is in good faith done or intended to be done, in pursuance of this Act, or any rules or order made there-under.

[Power of appropriate Government to make rules]:

38. (1) The appropriate Government may, by notification, make rules, for carrying out the provisions of this Act.
- (2) In particular, and without prejudice to the generality of the foregoing powers such rules may provide for all or any of the following matters, namely:-
- (a) The manner of giving special training and the time-limit thereof, under first proviso to section 4;
 - (b) The area or limits for establishment of a neighbourhood school, under section 6;
 - (c) The manner of maintenance of records of children up to the age of fourteen years under clause (d) of section 9;
 - (d) The manner and extent of reimbursement of expenditure, under sub-section (2) of section 12;
 - (e) Any other document for determining the age of the child under sub-section (i) of section 14;
 - (f) The extended period for admission and the manner of completing study if admitted after the extended period, under section 15;
 - (g) The authority, the form and manner of making application for certificate of recognition, under sub-section (1) of section 18;
 - (h) The form, the period, the manner and the conditions for issuing certificate of recognition, under sub-section (2) of section 18;
 - (i) The manner of giving opportunity of hearing under second proviso to sub-section (3) of section 18;
 - (j) The other functions to be performed by School Management Committee under clause (d) of sub-section (2) of section 21;
 - (k) The manner of preparing School Development Plan under sub-section (1) of section 22;
 - (l) The salary and allowances payable to, and the terms and conditions of service of teacher, under sub-section (3) of section 23;

- (m) The duties to be performed by the teacher under clause (f) of sub-section (l) of section 24;
 - (n) The manner of redressing grievances of teachers under sub-section (3) of section 24;
 - (o) The form and manner of awarding certificate for completion of elementary education under sub-section (2) of section 30;
 - (p) The authority, the manner of its constitution and the terms and conditions therefor, under sub-section (3) of section 31;
 - (q) The allowances and other terms and conditions of appointment of Members of the National Advisory Council under sub-section (3) of section 33;
 - (r) The allowances and other terms and conditions of appointment of Members of the State Advisory Council under sub-section (3) of section 34.
- (3) Every rule made under this Act and every notification issued under section 20 and 23 by the Central Government shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or notification or both Houses agree that the rule or notification should not be made, the rule or notification shall thereafter have effect only in such modified form or be of no effect, as the case may be, so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or notification.
- (4) Every rule or notification made by the State Government under this Act shall be laid, as soon as may be after it is made, before the State Legislatures.

The Schedule:[See sections 19 and 25]

Norms and Standards for a School

S.No.	Item	Norms and Standards	
1	Number of teachers	Admitted children	No. of teachers
	(a) for 1 st class to V class	Upto Sixty Between 61-90 Between 91-120 Between 121-200 Above 150 children: Above 200 children:	Two Three Four Five Five+ 1 HT PTR (exclgd HT) shall not exceed forty.
	(b) For VI-VIII Class	(1) Atleast one teacher per class so that there	

		<p>shall be at least one teacher each for,-</p> <p>(i) Science and Mathematics;</p> <p>(ii) Social Studies;</p> <p>(iii) Languages;</p> <p>(2) At least one teacher for every thirty-five children.</p> <p>(3) Where admission of children is above one hundred,-</p> <p>(i) A full time head-teacher;</p> <p>(ii) Part time instructors for,-</p> <p>(A) Art Education</p> <p>(B) Health & Physical Education;</p> <p>(C) Work Education.</p>
2.	Building	<p>All weather building consisting of,-</p> <p>(i) At least one class-room for every teacher and an office-cum-store-cum-Head Teacher's room;</p> <p>(ii) Barrier-free access;</p> <p>(iii) Separate toilets for boys & Girls;</p> <p>(iv) Safe and adequate drinking water facility to all children;</p> <p>(v) A kitchen where mid-day meal is cooked in the school;</p> <p>(vi) Playground;</p> <p>(vii) Arrangements for securing the school building by boundary wall or fencing.</p>
3	Minimum number of working days/ instructional hours in an academic year.	<p>(i) 200 working days for 1st class to Vth class;</p> <p>(ii) 220 days for VI-VIII class;</p> <p>(iii) 800 instructional hours per academic year for first class to fifth class.</p> <p>(iv) 1000 instructional hours per academic year for sixth class to eighth class.</p>
4	Minimum number of working hours per week for the teacher	Forty-five teaching [hours] including preparation hours [per week]
5	Teaching learning equipment	Shall be provided to each class as required
6	Library	There shall be a library in each school providing newspaper, magazines and books on all subjects, including story-books.
7	Play material, games and sports equipment	Shall be provided in each class as required.

Sd:T.K.Viswanathan
Secretary to the Govt. of India.

Appendix “a-2”

MODEL RULES UNDER THE RIGHT OF CHILDREN TO FREE AND COMPULSORY EDUCATION ACT, 2009

PART 1 – PRELIMINARY

Short title, extent and commencement:

1. (1) These Rules may be called the Right of Children to Free and Compulsory Education Rules, 2009.
- (2) They shall come into force from (Date)
- (3) They shall extend to the whole of (Name of State).

Definitions:

2. (1) In these rules, unless the context otherwise requires,-
 - (a) “Act” means the Right of Children to Free and Compulsory Education Act, 2009.
 - (b) “Anganwadi” means an Anganwadi Centre established under the Integrated Child Development Scheme of the Ministry of Women and Child Development of the Government of India.
 - (c) “Appointed date” means the date on which the Act comes into force, as notified in the Official Gazette.
 - (d) “Chapter”, “section” and “Schedule” means respectively Chapter, section of, and Schedule to, the Act.
 - (e) “Child” means any child of the age of 6 to 14 years.
 - (f) “Pupil Cumulative Record” means record of the progress of the child based on comprehensive and continuous evaluation.
 - (g) “School mapping” means planning school location to overcome social barriers and geographical distance.
- (2) All references to “forms” in these Rules shall be construed as references to forms set out in Appendix I hereto.
- (3) All other words and expressions used herein and not defined but defined in the Act shall have the same meanings respectively assigned to them in the Act.

PART II – RIGHT OF CHILDREN TO FREE AND COMPULSORY EDUCATION

Special Training for the purposes of first proviso to section 4

3. (1) The School Management Committee/local authority shall identify children requiring special training and organize such training in the following manner, namely:

- (a) The special training shall be based on specially designed, age appropriate learning material, approved by the academic authority specified in section 29(1).
 - (b) It shall be provided in classes held on the premises of the school, or through classes organized in safe residential facilities.
 - (c) It shall be provided by teachers working in the school, or by teachers specially appointed for the purpose.
 - (d) The duration shall be for a minimum period of three months which may be extended, based on periodical assessment of learning progress, for a maximum period not exceeding two years.
- (2) The child shall, upon induction into the age appropriate class, after special training, continue to receive special attention by the teacher to enable him/her to successfully integrate with the rest of the class, academically and emotionally.

PART III - DUTIES OF STATE GOVERNMENT, LOCAL AUTHORITY:

Areas or limits for the purposes of section 6:

4. (1) The areas or limits of neighbourhood within which a school has to be established by the State Government shall be as under,-
- (a) In respect of children in classes' 1-V, a school shall be established within a walking distance of one km of the neighbourhood.
 - (b) In respect of children in classes VI-VIII, a school shall be established within a walking distance of 3 km of the neighbourhood.
- (2) Wherever required, the State Government shall upgrade existing schools with classes' I-V to include classes VI-VIII. In respect of schools which start from class VI onwards, the State Government shall endeavour to add classes' I-V, wherever required.
- (3) In areas with difficult terrain, risk of landslides, floods, lack of roads and, in general, danger for young children in the approach from their homes to the school, the State Government/Local Authority shall locate the school in such a manner as to avoid such dangers, by reducing the limits specified under sub-rule (1).
- (4) For children from small hamlets, as identified by the State Government/Local Authority, where no school exists within the area or limits of neighbourhood specified under sub-Rule (1) above, the State Government/Local Authority shall make adequate arrangements, such as free transportation, residential facilities and other facilities, for providing elementary education in a school, in relaxation of the limits specified under sub-Rule (1).
- (5) In areas with high population density, the State Government/Local authority may consider establishment of more than one neighbourhood school,

having regard to the number of children in the age group of 6-14 years in such areas.

- (6) The local Authority shall identify the neighbourhood school(s) where children can be admitted and make such information public for each habitation within its jurisdiction.
- (7) In respect of children with disabilities which prevent them from accessing the school the State Government/Local Authority will endeavour to make appropriate and safe transportation arrangements for them to attend school and complete elementary education.
- (8) The State Government/Local Authority shall ensure that access of children to the school is not hindered on account of social and cultural factors.

Duties of State Government and Local Authority for the purposes of Section 8 and 9:

5. (1) A child attending a school of the State Government or local authority referred to in sub-clause (i) of clause (n) of section 2, a child attending a school referred to in sub-clause (ii) of clause (n) of section 2 in pursuance of clause (b) of sub section (1) of section 12, and a child attending a school referred to in sub-clause (iii) and (iv) of clause (n) of section 2 in pursuance of clause (c) of sub section (1) of section 12 shall be entitled to free text books, writing materials and uniforms.

Provided that a child with disabilities shall also be provided free special learning and support material.

Explanation: In respect of the child admitted in pursuance of clause (b) of sub-section (1) of section 12 and a child admitted in pursuance clause (c) of sub-section (1) of section 12, the responsibility of providing the free entitlement shall be of the school referred to in sub-clause (ii) of clause (n) of section 2 and of sub-clauses (iii) and (iv) of clause (n) of section 2, respectively.

- (2) For the purpose of determining and for establishing neighbourhood schools, the State Government/Local Authority shall undertake school mapping, and identify all children including children in remote areas, children with disabilities, children belonging to disadvantaged groups, children belonging to weaker sections and children referred to in section 4, within a period of one year from the appointed date, and every year thereafter.
- (3) The State Government/ Local Authority shall ensure that no child is subjected to caste, class, religious or gender abuse in the school.
- (4) For the purposes of clause (c) of section 8 and clause (c) of section 9, the State Government and the Local Authority shall ensure that a child belonging to a weaker section and a child belonging to disadvantaged group is not segregated or discriminated against in the classroom, during mid day meals, in the play grounds, in the use of common drinking water and toilet facilities, and in the cleaning of toilets or classrooms.

Maintenance of records of children by local authority for the purposes of clause (d) of section 9.

6.
 - (1) The Local Authority shall maintain a record of all children, in its jurisdiction, through a household survey, from their birth till they attain 14 years.
 - (2) The record, referred to in sub-Rule (1), shall be updated each year.
 - (3) The record, referred to in sub-Rule (1), shall be maintained transparently, in the public domain, and used for the purposes of clause (e) of section 9.
 - (4) The record, referred to in sub-Rule (1) shall, in respect of every child, include,-
 - (a) Name, sex, date of birth,(Birth Certificate Number),place of birth;
 - (b) Parents'/guardians' names, address, occupation;
 - (c) Pre-primary school/Anganwadi centre that the child attends (upto age 6)
 - (d) Elementary school where the child is admitted;
 - (e) Present address of the child;
 - (f) Class in which the child is studying (for children between age 6-14), and if education is discontinued in the territorial jurisdiction of the Local Authority, the cause of such discontinuance;
 - (g) Whether the child belongs to the weaker section within the meaning of clause (e) of section 2 of the Act.
 - (h) Whether the child belongs to a disadvantaged group within the meaning of clause (d) of section 2 of the Act;
 - (i) Details of children requiring special facilities/residential facilities on account of migration and sparse population; age appropriate admission; disability.
 - (5) The Local Authority shall ensure that the names of all children enrolled in the schools under its jurisdiction are publicly displayed in each school.

PART IV – RESPONSIBILITIES OF SCHOOLS AND TEACHERS:

Admission of children belonging to weaker section and disadvantaged group for the purposes of clause (c) to section 12(1)

7.
 - (1) The school referred to in clauses (iii) and (iv) of clause (n) of section 2 shall ensure that children admitted in pursuance of clause (c) to section 12(1) shall not be segregated from the other children in the classrooms nor shall their classes be held at places and timings different from the classes held for the other children.
 - (2) The school referred to in clauses (iii) and (iv) of clause (n) of section 2 shall ensure that children admitted in pursuance of clause (c) to section 12(1) shall not be discriminated from the rest of the children in any manner pertaining to entitlements and facilities such as text books, uniforms, library and ICT facilities, extra-curricular and sports.
 - (3) The areas or limits of neighbourhood specified in Rule 4(1) shall apply to admissions made in pursuance of clause (c) to section 12(1).

Provided that the school may, for the purposes of filling up the requisite percentage of seats for children referred to in clause (c) to section 12(1), extend these limits with the prior approval of the State Government.

Reimbursement of per-child expenditure by the State Government for the purposes of section 12(2):

8. (1) The total annual recurring expenditure incurred by the State Government, whether from its own funds, or funds provided by the Central Government or by any other authority, on elementary education in respect of all schools established, owned or controlled by it or by the local authority, divided by the total number of children enrolled in all such schools, shall be the per-child expenditure incurred by the State Government.

Explanation:- For the purpose of determining the per-child expenditure, the expenditure incurred by the State Government or local authority on schools referred to in sub-clause (ii) of clause (n) of section 2 and the children enrolled in such schools shall not be included.

- (2) Every school referred to in clauses (iii) and (iv) of clause (n) of section 2 shall maintain a separate bank account in respect of the amount received by it as reimbursement under sub-section (2) of section 12.

Documents as age proof for the purpose of section 14.

9. Wherever a birth certificate under the Births, Deaths and Marriages Certification Act, 1886 is not available, any one of the following documents shall be deemed to be proof of age of the child for the purposes of admission in schools,-

- (a) Hospital/Auxiliary Nurse and Midwife (ANM) register record
- (b) Anganwadi record
- (c) Declaration through an affidavit of the age of the child by the parent or guardian

Extended period for admission for the purposes of section 15:

10. (1) Extended period of admission shall be six months from the date of commencement of the academic year of a school.
- (2) Where a child is admitted in a school after the extended period, he or she shall be eligible to complete studies with the help of special training, as determined by the head of the school.

Recognition of schools for the purposes of section 18:

11. (1) Every school, other than a school established, owned or controlled by the State Government or Local Authority, established before the commencement of this Act shall make a self declaration within a period of three months of the commencement of the Act, in Form No.1 to the concerned District Education Officer regarding its compliance or otherwise with the norms and standards prescribed in the Schedule and the following conditions:
- (a) The school is run by a society registered under the Societies Registration Act, 1860 (21 of 1860), or a public trust constituted under any law for the time being in force;
 - (b) The school is not run for profit to any individual, group or association of individuals or any other persons;

- (c) The school conforms to the values enshrined in the Constitution;
 - (d) The school buildings or other structures or the grounds are used only for the purposes of education and skill development;
 - (e) The school is open to inspection by any officer authorized by the State Government/Local Authority;
 - (f) The school furnishes such reports and information as may be required by the Director of Education/District Education Officer from time to time and complies with such instructions of the State Government/Local Authority as may be issued to secure the continued fulfillment of the condition of recognition or the removal of deficiencies in working of the school.
- (2) Every self declaration received in Form 1 shall be placed by the District Education Officer in public domain within fifteen days of its receipt.
 - (3) The District Education Officer shall conduct on-site inspection of such schools which claim in Form No.1 to fulfill the norms and standards and the conditions mentioned in sub-Rule (1) within three months of the receipt of the self declaration.
 - (4) After the inspection referred to in sub-Rule (3) is carried out, the inspection report shall be placed by the District Education Officer in public domain and schools found to be conforming to the norms, standards and the conditions shall be granted recognition by the District Education Officer in Form No.2 within a period of 15 days from the date of inspection.
 - (5) Schools that do not conform to the norms, standards and conditions mentioned in sub-Rule (1) shall be listed by the District Education Officer through a public order to this effect, and any time within the next two and a half years, such schools may request the District Education Officer for an on-site inspection for grant of recognition.
 - (6) Schools which do not conform to the norms, standards and conditions mentioned in sub-Rule (1) after three years from the commencement of the Act, shall cease to function.
 - (7) Every school, other than a school established, owned or controlled by the State Government or local authority established after the commencement of this Act shall conform to the norms and standards and conditions mentioned in sub-Rule (1) in order to qualify for recognition.

Withdrawal of recognition to schools for the purposes of sections 18(3) and 12(3):

12. (1) Where the District Education Officer on his own motion, or on any representation received from any person, has reason to believe, to be recorded in writing, that a school recognized under rule 12, has violated one or more of the conditions for grant of recognition or has failed to fulfill the norms and standards prescribed in the Schedule, he shall act in the following manner:

- (a) Issue a notice to the school specifying the violations of the condition of grant of recognition and seek its explanation within one month.
 - (b) In case the explanation is not found to be satisfactory or no explanation is received within the stipulated time period, the District Education Officer may cause an inspection of the school, to be conducted by a Committee of three to five members comprising of educationists, civil society representatives, media and government representatives, which shall make due inquiry and submit its Report, along with its recommendations for continuation of recognition or its withdrawal, to the District Education Officer.
 - (c) The District Education Officer shall forward the Report of the Committee, along with his comments, to the State Commission for Protection of Child or the Right to Education Protection Authority, as the case may be, with a copy to the State Education Department.
- (2) The State Commission for Protection of Child Rights or the Right to Education Protection Authority, as the case may be, shall, after seeking explanation from the concerned school and after due examination, prepare and send its recommendations to the State Education Department.
 - (3) The State Education Department, shall, on the basis of the recommendations referred to in sub-Rule (2) convey its decision to the District Education officer.
 - (4) The District Education Officer shall, on the basis of the decision of the State Education Department, pass an order canceling the recognition granted to the school. The order of de-recognition shall be operative from the immediately succeeding academic year and shall specify the neighbourhood schools to which the children of the de-recognized schools shall be admitted.

PART V – SCHOOL MANAGEMENT COMMITTEE

Composition and functions of the School Management Committee for the purposes of section 21.

- 13. (1) A School Management Committee shall be constituted in every school, other than an unaided school, within its jurisdiction, within six months of the appointed date, and reconstituted every two years.
- (2) Seventy five percent of the strength of the School Management Committee shall be from amongst parents or guardians of children.
- (3) The remaining twenty five percent of the strength of the SMC shall be from amongst the following persons:
 - (a) One third members from amongst the elected members of the local authority, to be decided by the local authority.
 - (b) One third members from amongst teachers from the school, to be decided by the teachers of the school.

- (c) Remaining one third from amongst local educationists/children in the school, to be decided by the parents in the Committee.
- (4) To manage its affairs, the School Management Committee shall elect a Chairperson and Vice Chairperson from among the parent members. The Head teacher of the school or where the school does not have a head teacher, the senior most teacher of the school shall be the ex-officio Member-Convenor of the School Management Committee.
- (5) The School Management Committee shall meet at least once a month and the minutes and decisions of the meetings shall be properly recorded and made available to the public.
- (6) The School Management Committee shall, in addition to the functions specified in clauses (a) to (d) of section 21(2), perform the following functions, for which it may constitute smaller working groups from amongst its Members:
 - (a) Communicate in simple and creative ways to the population in the neighbourhood of the school, the rights of the child as enunciated in the Act, as also the duties of the State Government, local authority, school, parent and guardian;
 - (b) Ensure the implementation of clauses (a) and (e) of section 24 and section 28.
 - (c) Monitor that teachers are not burdened with non academic duties other than those specified in section 27;
 - (d) Ensure the enrolment and continued attendance of all the children from the neighbourhood in the school.
 - (e) Monitor the maintenance of the norms and standards prescribed in the Schedule.
 - (f) Bring to the notice of the local authority any deviation from the rights of the child, in particular mental and physical harassment of children, denial of admission, and timely provision of free entitlements as per section 3(2).
 - (g) Identify the needs, prepare a Plan, and monitor the implementation of the provisions of Section 4.
 - (h) Monitor the identification and enrolment of, and facilities for learning by disabled children, and ensure their participation in, and completion of elementary education.
 - (i) Monitor the implementation of the Mid-Day Meal in the school.
 - (j) Prepare an annual account of receipts and expenditure of the School.
- (7) Any money received by the School Management Committee for the discharge of its functions under this Act, shall be kept in a separate account, to be made available for audit every year.
- (8) The accounts referred to in clause (j) to sub-Rule (6) and sub-Rule (7) should be signed by the Chairperson/Vice-Chairperson and Convenor of the

School Management Committee and made available to the local authority within one month of their preparation.

Preparation of School Development Plan for the purpose of section 22.

14. (1) The School Management Committee shall prepare a School Development Plan at least three months before the end of the financial year in which it is first constituted under the Act.
- (2) The School Development Plan shall be a three year plan comprising three annual sub plans.
- (3) The School Development Plan, shall contain the following details,-
- (a) Estimates of class-wise enrolment for each year;
 - (b) Requirement, over the three year period, of the number of additional teachers including Head Teachers, subject teachers and part time teachers, separately for Classes I to V and classes VI to VIII, calculated, with reference to the norms specified in the Schedule.
 - (c) Physical requirement of additional infrastructure and equipments over the three year period, calculated, with reference to the norms and standards specified in the schedule.
 - (d) Additional financial requirement over the three year period, year-wise, in respect of (b) and (c) above, including additional requirement for providing special training facility specified in section 4, entitlements of children such as free text books and uniforms, and any other additional financial requirement for fulfilling the responsibilities of the school under the Act.
- (4) The School Development Plan should be signed by the Chairperson/Vice-Chairperson and the Convenor of the School Management Committee and submitted to the local authority before the end of the financial year in which it is to be prepared.

PART VI – T E A C H E R S

Minimum Qualification for the purposes of section 23(1)

15. (1) The academic authority notified in pursuance of sub-section (1) of section 23 shall, within three months of such notification, lay down the minimum qualifications for persons to be eligible for appointment as a teacher in an elementary school.
- (2) The minimum qualifications laid down by the academic authority referred to in sub-Rule (1) shall be applicable for every school referred to in clause (n) of section 2.

Relaxation of minimum qualification for the purposes of section 23(2):

16. (1) The State Government shall estimate the teacher requirement as per the norms in the Schedule for all schools referred to in clause (n) of section 2 within the State, within six months from the commencement of the Act.

- (2) Where a State does not have adequate institutions offering courses or training in teacher education, or persons possessing minimum qualifications as laid down under sub-Rule (2) of Rule 15 are not available in sufficient numbers in relation to the requirement of teachers estimated under sub-Rule (1), the State Government shall request, within one year of the commencement of the Act, the Central Government for relaxation of the prescribed minimum qualification.
- (3) On receipt of the request referred to in sub-Rule (2), the Central Government shall examine the request of the State Government and may relax the minimum qualifications by way of a Notification.
- (4) The Notification referred to in sub-Rule (3) shall specify the nature of relaxation and the time period, not exceeding three years, but not beyond five years from the commencement of the Act, within which the teachers appointed under the relaxed conditions acquire the minimum qualifications prescribed by the academic authority notified under sub-section (1) of Section 23.
- (5) After six months after the commencement of the Act, no appointment of teacher for any school can be made in respect of any person not possessing the minimum qualifications prescribed by the academic authority notified under sub-section (1) of Section 23 without the notification referred to in sub-Rule (3).
- (6) A person appointed as a teacher within six months of the commencement of the Act, must possess at least the academic qualifications not lower than higher secondary school certificate or equivalent.

Acquiring minimum qualifications under proviso to section 23(2):

17. (1) The State Government shall provide adequate teacher education facilities to ensure that all teachers in schools referred to in sub-clauses (i) and (iii) of clause (n) of section 2, who do not possess the minimum qualifications laid down under sub-Rule (2) of Rule 15 at the time of commencement of the Act, to acquire such minimum qualifications within a period of five years from the commencement of the Act.
- (2) For a teacher, of any school referred to in sub-clause (ii) and (iv) of clause (n) of section 2, who does not possess the minimum qualifications laid down under sub-Rule (2) of Rule 15 at the time of commencement of the Act, the management of such school shall enable such teacher to acquire such minimum qualifications within a period of five years from the commencement of the Act.

Salary and allowances and conditions of service of teachers for the purpose of section 23(3):

18. (1) The State Government or the local authority, as the case may be, shall notify terms and conditions of service and salary and allowances of teachers in order to create a professional and permanent cadre of teachers.

- (2) In particular and without prejudice to sub-rule (1), the terms and conditions of service shall take into account the following, namely,-
 - (a) Accountability of teachers to the School Management Committee constituted under section 21;
 - (b) Provisions enabling long term stake of teachers in the teaching profession
- (3) The scales of pay and allowances, medical facilities, pension, gratuity, provident fund, and other prescribed benefits of teachers, including those employed for the purpose of imparting special training as specified in Section 4, shall be that of regular teachers, and at par for similar work and experience.

Duties to be performed by teachers for the purpose of clause (f) to section 24(1):

- 19. (1) In performance of the functions specified in sub-section (1) of section 24(1) and in order to fulfill the requirements of clause (h) of sub-section (2) of section 29, the teacher shall maintain a file containing the pupil cumulative record for every child which will be the basis for awarding the completion certificate specified in sub-section (2) of section 30.
- (2) In addition to the functions specified in clauses (a) to (e) of sub-section (1) of section 24, a teacher may perform the following duties assigned to him or her, without interfering with regular teaching:
 - (a) Participation in training programmes;
 - (b) Participation in curriculum formulation, and development of syllabi, training modules and text book development;

Grievance Redressal mechanism for teachers for the purposes of section 24(3):

- 20. (1) The School Management Committee constituted under section 21 shall be the first level of grievance redressal of teachers of schools specified therein.
- (2) The State Government shall constitute School Tribunals at the State, District and Block levels which would act as the grievance redressal mechanism for the teachers.

Maintaining Pupil-Teacher Ratio in each school for the purposes of section 25.

- 21. (1) Sanctioned strength of teachers in a school shall be notified by the State Government or the local authority, as the case may be, within a period of three months of the appointed date.

Provided that the State Government or the local authority, as the case may be, shall within three months of such Notification, redeploy teachers of Schools having a strength in excess of the sanctioned strength prior to the Notification referred to in sub-Rule (1).

- (2) If any person of the State Government or the local authority violates the provisions of sub-section (2) of section 25, he or she shall be personally liable for disciplinary action.

PART VII – CURRICULUM AND COMPLETION OF ELEMENTARY EDUCATION:

Academic Authority for the purposes of section 29:

22. (1) The State Government shall notify the State Council of Educational Research and Training (or its equivalent), as the academic authority for the purposes of section 29.
- 1(2) While laying down the curriculum and evaluation procedure, the academic authority notified under sub-Rule (1) shall,-
- (a) Formulate the relevant and age appropriate syllabus and text books and other learning material
 - (b) Develop in-service teacher training design, and
 - (c) Prepare guidelines for putting into practice continuous and comprehensive evaluation.
- (3) The academic authority referred to in sub-Rule (1) shall design and implement a process of holistic school quality assessment on a regular basis.

Award of certificate for the purposes of section 30:

23. (1) The Certificate of completion of elementary education shall be issued at the school/block/district level within one month of the completion of elementary education.
- (2) The Certificate referred to in sub-rule(1) shall,-
- (a) Certify that the child has completed all courses of study prescribed under section 29.
 - (b) Contain the pupil Cumulative Record of the child and also specify achievements of the child in areas of activities beyond the prescribed course of study and may include music, dance, literature, sports, etc.

PART VIII-PROTECTION OF RIGHT OF CHILDREN

Performance of functions by the State Commission for Protection of Child Rights, for the purposes of section 31.

24. (1) In respect of a State which does not have a State Commission for Protection of Child Rights, the State Government may take immediate steps to set up the Commission.
- (2) Till such time as the State Government sets up the Commission, it shall constitute an interim authority known as the Right to Education Protection Authority (REPA) for the purposes of performing the functions specified in sub-section (1) of section 31, within six months of the commencement of Act or the constitution of the State Commission for Protection of Child Rights, whichever is earlier.
- (3) The Right to Education Protection Authority (REPA) shall consist of the following, namely,-

- (a) A chairperson who is a person of high academic repute or has been a High Court Judge or has done outstanding work for promoting the rights of children; and,
- (b) Two Members of whom at least one shall be a woman, from the following areas, from amongst persons of eminence, ability, integrity, standing and experience in , -
 - i) Education;
 - ii) Child health care and child development;
 - iii) Juvenile justice or care of neglected or marginalized children or children with disabilities;
 - iv) Elimination of child labour or working with children in distress;
 - v) Child psychology or sociology; or
 - vi) Legal profession.
- (4) The National Commission for Protection of Child Rights Rules, 2006 shall, so far as pertains to the terms and conditions, mutatis mutandis apply to Chairperson and other Members of the REPA.
- (5) All records and assets of the REPA shall be transferred to the State Commission for Protection of Child Rights immediately after its constitution.
- (6) In performance of its functions, the State Commission for Protection of Child Rights or the REPA, as the case may be, may also act upon matters referred to it by the State Advisory Council.
- (7) The State Government shall enable constituting a Cell in the State Commission for Protection of Child Rights or the REPA, as the case may be, which may assist the Commission or the REPA in performance of its functions under the Act.

Manner of furnishing complaints before the State Commission for Protection of Child Rights.

- 25. (1) The State Commission for Protection of Child Rights or the REPA, as the case may be, shall set up a child help-line, accessible by SMS, telephone and letter, which would act as the forum for aggrieved child/guardian to register complaint regarding violation of rights under the Act, in a manner that records her identity but does not disclose it;
- (2) All complaints to the helpline should be monitored through a transparent 'alert and action' on-line mechanism by the State Commission for Protection of Child Rights, or the REPA, as the case may be.

Constitution and Functions of the State Advisory Council for the purpose of section 34.

- 26. (1) The State Advisory Council shall consist of a Chairperson and fourteen Members.
- (2) The Minister in-charge of the Ministry/Department of School Education in the State Government shall be the ex-officio Chairperson of the Council.

- (3) Members of the Council, shall be appointed by the State Government from amongst persons having knowledge and practical experience in the field of elementary education and child development, as under,-
- (a) At least four members should be from amongst persons belonging to SCs, STs and Minorities;
 - (b) At least one member should be from amongst persons having specialized knowledge and practical experience of education of children with special needs;
 - (c) One member should be from amongst persons having specialized knowledge in the field of pre-primary education.
 - (d) At least two members should be from amongst persons having specialized knowledge and practical experience in the field of teacher education.
 - (e) Fifty percent of such members shall be from amongst women
- (4) The Department of School Education shall provide logistic support for meetings of the Council and its other functions.
- (5) The procedure for transaction of Business of the Council shall be as under,-
- (i) The Council shall meet regularly at such times as the Chairperson thinks fit but three months shall not intervene between its last and the next meeting.
 - (ii) The meeting of the Council shall be presided by the Chairperson. If for any reason the Chairperson is unable to attend the meeting of the Council, he may nominate a member of the Council to preside over such meeting. Quorum of the meeting of the Council shall be considered complete if at least 50% of its members are present.
- (6) The terms and conditions for appointment of Members of the Council shall be as under,-
- (a) Every member shall hold office as such for a term of two years from the date on which he assumes office.

Provided that no member shall hold office more than two terms.

- (b) The member may be removed from his office by an order of the State Government on the ground of proved misbehaviour or incapacity, or on the happening of any one or more of the following events:
 - (i) Is adjudged an insolvent; or
 - (ii) Refuses to act or become incapable of acting; or
 - (iii) Is of unsound mind and stands so declared by a competent Court; or
 - (iv) Has so abused his office as to render his continuance in office detrimental to the public interest, or
 - (v) Is convicted for an offence by a competent Court; or
 - (vi) Is without obtaining leave of absence from the Council, absent from two consecutive meetings of the Council.

- (c) No Member shall be removed from his office without being given an adequate opportunity of being heard.
- (d) If vacancy occurs in the office of Members, whether by reason of his death, resignation or otherwise, such vacancy shall be filled within a period of 120 days by making a fresh appointment in accordance with the provisions of sub-Rule (2).
- (e) Members of the Council shall be entitled to reimbursement of traveling and daily allowances for official tours and journeys in accordance with the orders issued by the State Government in relation to non-official members of the Committees and Commissions and such like categories of persons.

APPENDIX [Form 1]**Self declaration cum application for grant of recognition of school**

[See sub-Rule (1) of Rule 11 of the Right of children to free and compulsory education Rule, 2009]

To
The District Education Officer
(Name of District & State)
Sir,

I forward herewith with a self declaration regarding compliance with the norms and standards prescribed in the Schedule of the Right of Children to Free and Compulsory Education Act, 2009 and an application in the prescribed proforma for the grant of recognition to..... (Name of School)..... with effect from the commencement of the School year 20.....

Yours faithfully,

Enclosure:
Place:

Date

Chairman of Managing
Committee/Manager

A:	School Details:	
1	Name of School	
2	Academic Session	
3	District	
4	Postal Address	
5	Village/City	
6	Tahsil	
7	Pin Code	
8	Phone No. with STD Code	
9	Fax No.	
10	E-mail address if any	
11	Nearest Police Station	

B:	General Information:		
1	Year of foundation		
2	Date of first opening of school		
3	Name of Trust/Society/ Management Committee		
4	Whether Trust/Society/Managing Committee is registered.		
5	Period upto which Registration of Managing. Committee/Trust/Society is valid		
6	Whether there is a proof of non-proprietary character of the Trust/Society,Mg.Committee supported by the list of members with their address on an affidavit in copy		
7	Name, official address of the Manager/President/Chairman of the School Name Designation Address Phone = O = R =		
8	Total Income & Expr. during last 3 years surplus/deficit		
	Year	Income	Expenditure
			Surplus/Deficit
C.	Nature and area of school:		
1	Medium of instruction		
2	Type of School (Specify entry & exit classes)		
3	If aided, the name of agency and percentage of aid		
4	If School recognized		
5	If so, by which authority Recognition Number.		
6	Does the School has its own building or is it running in a rented building.		
7	Whether the school buildings or other structures or the grounds are used only for the purpose of education and skill development		
8	Total area of the school		
9	Built in area of the school		

D.	Enrolment status	
	Class	No.of sections
1	Pre-Primary	
2	I-V	
3	VI-VIII	
E.	Infrastructure details & Sanitary conditions	
	Room	Average size
1	Classroom	
2	Office room-cum-Store Room-cum-Headmaster Room	
3	Kitchen-cum-Store	
F	Other facilities	
1	Whether all facilities have barrier free access	
2	Teaching Learning Material (attach list)	
3	Sports & Play equipments (attach list)	
4	Facility books in Library: -Books (No. of books) -Periodical/Newspapers	
5	Type and number of drinking water facility	
6	Sanitary conditions	
	-Type of W.C.&Urinals -Number of Urinals/Lavatories Separately of Boys -Number of Urinals/Lavatories separately for Girls	

G	Particulars of Teaching Staff		
1.	Teaching in Primary/Upper Primary exclusively(details of each teacher Separately)		
	Teacher Name (1)	Father/Spouse Name (2)	Date of birth (3)
	Academic Qualifications (4)	Professional Qualifications (5)	Teaching Experience (6)
	Class assigned (7)	Appointment Date (8)	Trained/Untrained (9)
2	Teaching in both Elementary & Secondary(details of each teacher separately):		
	Teacher Name (1)	Father/Spouse Name (2)	Date of Birth (3)

	Academic Qualification (4)	Professional Qualifications (5)	Teaching Experience (6)
	Class assigned (7)	Appointment Date (8)	Trained or Untrained (9)
3.	Head Teacher:		
	Teacher Name (1)	Father/spouse Name (2)	Date of Birth (3)
	Academic Qualification (4)	Professional Qualifications (5)	Teaching Experience (6)
	Class assigned (7)	Appointment Date (8)	Trained or untrained (9)
H	Curriculum and Syllabus		
1	Details of curriculum & Syllabus followed in each class upto VIII		
2	System of Pupil Assessment		
3	Whether pupils of the School are required to take any Board exam upto class 8?		

- I. Certified that the school has also submitted information in this data capture format of District Information System of Education with this application.
- J. Certified that the school is open to inspection by any officer authorized by the appropriate authority.
- K. Certified that the school undertakes to furnish such reports and information as may be required by the District Education Officer from time to time and complies with such instructions of the appropriate authority or the District Education Officer as may be issued to secure the continued fulfillment of the condition of recognition or the removal of deficiencies in working of the school.
- L. Certified that records of the school pertinent to the implementation of this Act shall be open to inspection by any officer authorized by the District Education Officer or appropriate authority at any time, and the school shall furnish all such information as may be necessary to enable the Central and/or State Government/Local Body or the Administration to discharge its or his obligations to Parliament/Legislative Assembly of the State/Panchayat/Municipal Corporation as the case may be.

Sd/-
Chairman/Manager
Managing Committee
.....School

Place.

Form II

Gram:

Phone:

E.Mail:

Fax:

OFFICE OF DISTRICT EDUCATION OFFICER

Name of District/State

No.

Date:

The Manager

Subject: Recognition Certificate for the School under sub-rule (4) of rule 11 of Right of Children to Free and Compulsory Education Rules, 2009 for the purpose of Section 18 of Right of Children to Free and Compulsory Education Act, 2009.

Dear Sir/Madam,

With reference to your application dated.....and subsequent correspondence with the school/inspection in this regard, I convey the grant for provisional recognition to the(name of the school with address)for Class.....to Class.....for a period of three years w.e.f.....to.....

The above sanction is subject to fulfillment of following conditions:-

1. The grant for recognition is not extendable and does not in any way imply any obligation to recognize/affiliate beyond class VIII.
2. The School shall abide by the provisions of Right of Children to Free and Compulsory Education Act, 2009 (Annexure I) and the Right of Children to Free and Compulsory Education Rules, 2009 (Annexure II).
3. The School shall admit in class I, to the extent of.....% of the strength of that class, children belonging to weaker section and disadvantaged group in the neighbourhood and provide free and compulsory elementary education till its completion. Provided, further that in case of pre primary classes also, this norm shall be followed.
4. For the children referred to in paragraph 3, the School shall be reimbursed as per Section 12(2) of the Act. To receive such reimbursements school shall provide a separate bank account.
5. The Society/School shall not collect any capitation fee and subject the child or his or her parents or guardians to any screening procedure.
6. The School shall not deny admission to any child for lack of age proof. If such admission is sought subsequent to the extended period prescribed for admission on the ground of religion, caste or race, place of birth or any of them.
7. The school shall ensure:
 - (i) No child admitted shall be held back in any class or expelled from school till the completion of elementary education in a school;
 - (ii) No child shall be subjected to physical punishment or mental harassment;
 - (iii) No child is required to pass any board examination till the completion of elementary education;

- (iv) Every child completing elementary education shall be awarded a certificate as laid down under Rule 23;
 - (v) Inclusion of Students with disabilities/special needs as per provision of the Act.
 - (vi) The teachers are recruited with minimum qualifications as laid under section 23(1) of the Act. Provided further that the current teachers who at the commencement of this Act do not possess minimum qualifications shall acquire such minimum qualifications within a period of 5 years.
 - (vii) The teacher performs its duties specified under section 24(1) of the Act and
 - (viii) The teachers shall not engage him self or her self for private teaching activities.
8. The School shall follow the syllabus on the basis of curriculum laid down by appropriate authority.
 9. The School shall enroll students proportionate to the facilities available in the school as prescribed in the section 19 of the Act.
 10. The School shall maintain the standards and norms of the school as specified in section 19 of the Act. The facilities reported at the time of last inspection are as given under:-
 - Area of the School campus
 - Total built up area
 - Area of play ground
 - No.of class rooms
 - Room for Headmaster-cum-office-cum-Storeroom
 - Separate toilets for boys and girls
 - Drinking Water Facility
 - Kitchen for cooking Mid Day Meal
 - Barrier free Access
 - Availability of Teaching Learning Material/Play Sports Equipments/library
 11. No unrecognized classes shall run within the premises of the School or outside in the same name of school.
 12. The school buildings or other structures or the grounds are used only for the purposes of education and skill development.
 13. The School is run by a society registered under the Societies Registration Act, 1860 (21 of 1860), or a public trust constituted under any law for the time being in force;
 14. The School is not run for profit to any individual, group or association of individuals or any other persons.
 15. The accounts should be audited and certified by a Chartered Accountant and proper accounts statements should be prepared as per rules. A copy each of the Statements of Accounts should be sent to the DEO every year.

16. The recognition Code Number allotted to your school is.....This may please be noted and quoted for any correspondence with this office.
17. The school furnishes such reports and information as may be required by the Director of Education/District Education Officer from time to time and complies with such instructions of the State Government/ Local Authority as may be issued to secure the continued fulfillment of the condition of recognition or the removal of deficiencies in working of the school;
18. Renewal of Registration of Society if any, be ensured.
19. Other conditions as per Annexure III enclosed.

Yours faithfully,
District Education Officer

Appendix 'b'

SYSTEM OF SCHOOL CLASSES IN INDIA

State / UT	Comp Edu.	Age at Class I	Structure of School Classes in India								
			I-V	I-IV	VI-VIII	VI-VII	V-VII	V-VIII	IX-X	VIII-X	XI-XII
Andhra Pradesh	*	5+	✓	-	-	✓	-	-	-	✓	✓
Arunachal Pradesh	@	6+	✓	-	✓	-	-	-	✓	-	✓
Assam	@	6+	-	✓	-	-	✓	-	-	✓	✓
Bihar	@	6+	✓	-	✓	-	-	-	✓	-	✓
Chhatisgarh		6+	✓	-	✓	-	-	-	✓	-	✓
Goa		5+	-	✓	-	-	✓	-	-	✓	✓
Gujarat	@	5+/6+	-	✓	-	-	✓	-	-	✓	✓
Haryana	*	6+	✓	-	✓	-	-	-	-	✓	✓
HP		5+	✓	-	✓	-	-	-	✓	-	✓
J & K		5+	✓	-	✓	-	-	-	✓	-	✓
Jharkhand		6+	✓	-	✓	-	-	-	✓	-	✓
Karnataka	@	5+	-	✓	-	-	✓	-	-	✓	✓
Kerala	@	5+	-	✓	-	-	✓	-	-	✓	✓
MP	*	6+	✓	-	✓	-	-	-	✓	-	✓
Maharashtra		5+	-	✓	-	-	✓	-	-	✓	✓
Manipur		5+	✓	-	✓	-	-	-	✓	-	✓
Meghalaya		6+	-	✓	-	-	✓	-	-	✓	✓
Mizoram	**		-	✓	-	-	✓	-	-	✓	✓
Nagaland		6+	-	✓	-	-	-	✓	-	-	✓
Orissa		5+	✓	-	-	✓	-	-	-	✓	✓
Punjab	*	5+	✓	-	✓	-	-	-	✓	-	✓
Rajasthan		6+	✓	-	✓	-	-	-	✓	-	✓
Sikkim		5+	✓	-	✓	-	-	-	✓	-	✓
TamilNadu	@	5+	✓	-	✓	-	-	-	✓	-	✓
Tripura		6+	✓	-	✓	-	-	-	✓	-	✓
U.P.		5+	✓	-	✓	-	-	-	✓	-	✓
Uttaranchal		5+	✓	-	✓	-	-	-	✓	-	✓
West Bengal		5+	-	✓	-	-	-	✓	✓	-	✓
A&N Islands	*	6+	✓	-	✓	-	-	-	✓	-	✓
Chandigarh		5+	✓	-	✓	-	-	-	✓	-	✓
D&N Haveli		5+	-	✓	-	-	✓	-	-	✓	✓
Diu	@	5+	-	✓	-	-	✓	-	-	✓	✓
Delhi		5+	✓	-	✓	-	-	-	✓	-	✓
Lakshadweep		5+	-	✓	-	-	✓	-	-	✓	✓
Pondicherry: Pondy/Yanam		5+	✓	-	✓	-	-	-	✓	-	✓
Mahe		5+	-	✓	-	-	✓	-	-	✓	✓

Source : Selected Information on School Education, MHRD, Department of Education, 1996-97.

Note : (✓) means that the said class structure exists in that State/UT.

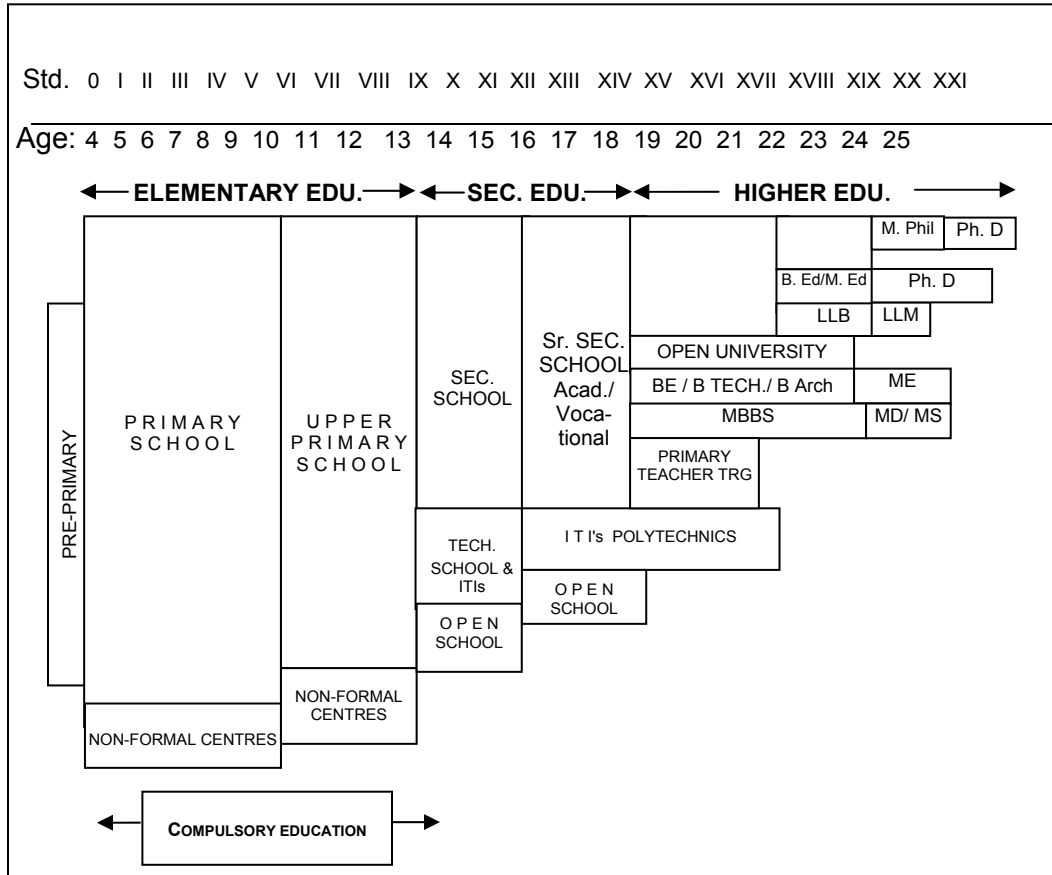
(*) Indicates that Primary Education is compulsory in that State/UT.

@ Indicates that elementary education is compulsory in the State/UT.

(**) No age restriction for admission to Class I

Appendix 'c'

STRUCTURE OF EDUCATION IN INDIA



APPENDIX –“d-1”**UNESCO DEVELOPED INDICATORS OF EDUCATIONAL
DEVELOPMENT FOR EFA 2000**

List of Indicators of Educational Development

- Indicator 1 : Adult Literacy Rate: 15+ Population
- Indicator 2 : Literacy Rate: 15-24 Years Old Population
- Indicator 3 : Literacy Gender Parity Index
- Indicator 4 : Expenditure on Adult and Continuing Education to Total Expenditure on Education
- Indicator 5a : Enrolment in Pre Primary Education Institutions
- Indicator 6 : Gross Enrolment Ratio for Age-group 3-5 Years
- Indicator 7 : Primary Grade I Pupils having attended some form of organized ECCE Programmes
- Indicator 8 : Habitations having Primary Schooling Facilities within 1 km.
- Indicator 9 : Rural Population having access to Primary Schooling Facilities within 1 km.
- Indicator 10 : Number of Primary Schools
- Indicator 11 : Primary Schools with Buildings
- Indicator 12 : Primary Schools without Buildings
- Indicator 13 : Instructional Rooms per School (Primary)
- Indicator 14 : Primary Schools having Toilet Facilities
- Indicator 15 : Primary Schools having Toilet Facilities for Girls
- Indicator 16 : Primary Schools having Drinking Water Facilities
- Indicator 17 : Single Teacher Primary Schools
- Indicator 18 : Apparent Intake Rate
- Indicator 19 : Net Intake Rate
- Indicator 20 : Gross Enrolment Ratio (Primary Education)
- Indicator 20a : Gross Attendance Ratio (Classes I-V)
- Indicator 21 : Net Enrolment Ratio (Primary Education)
- Indicator 22 : Retention Rate at Primary Level (Grade I to V)
- Indicator 22a : Retention Rate at Elementary Level (Grade I to VIII)
- Indicator 23 : Repetition Rate by Grade (I to V)
- Indicator 24 : Coefficient of Efficiency at Primary Level
- Indicator 25 : Average Number of Years taken by Primary Graduates
- Indicator 26 : Survival Rate to Grade V
- Indicator 27 : Number of Teachers (Primary Education)

- Indicator 28 : Primary School Teachers having Required Academic Qualifications
- Indicator 29 : Pupil-Teacher Ratio (Primary Level)
- Indicator 30 : Primary School Teachers who are Certified to Teach According to National Standards
- Indicator 31 : Expenditure on Elementary Education as Proportion to GNP per Capita
- Indicator 32 : Expenditure on Elementary Education as Percentage to Total Expenditure on Education
- Indicator 33 : Household Expenditure on Education
- Indicator 34 : Pupils having reached at least Grade IV of Primary Schooling who masters a set of nationally defined Basic Learning Competencies
- Indicator 35 : Disabled Children of School Age group
- Indicator 35a : Number of Schools for Disabled Children and Enrolment
- Indicator 36 : Number of Upper Primary Schools
- Indicator 36a : Habitations having Upper Primary Schooling Facilities within 3 km
- Indicator 36b : Rural Population having acces to Upper Primary Schooling Facilities within 3 km.
- Indicator 36c : Gross Enrolment Ratio (Upper Primary Level)
- Indicator 37 : Number of Secondary/Higher Secondary Schools
- Indicator 38 : Teachers in Higher Secondary/Junior College (10+2 New Pattern)
- Indicator 39 : Percentage of Trained Teachers (Secondary Education)
- Indicator 40 : Pupil-Teacher Ratio (Secondary Education)
- Indicator 41 : Percentage of Schools having Science Laboratory
- Indicator 42 : Gross Enrolment Ratio (Secondary Education)
- Indicator 43 : Net Enrolment Ratio (Secondary Education)
- Indicator 44 : Enrolment in Vocational Education as a Percentage to Total Higher Secondary Enrolment
- Indicator 45 : Population (age 15 years and above) having completed at least Middle Level
- Indicator 46 : Expenditure on Secondary Education as Proportion to GNP
- Indicator 47 : Expenditure on Secondary Education as Proportion to Total Expenditure on Education
- Indicator 48 : Enrolment (Higher Education) per 100,000 Population
- Indicator 49 : Gross Enrolment Ratio (Higher Education)
- Indicator 50 : Number of Teachers (Higher Education)

- Indicator 51 : Enrolment according to Different Fields of Study (Higher Education)
- Indicator 52 : Expenditure on Higher Education as Proportion to GNP Per Capita
- Indicator 53 : Expenditure on University & Higher Education as Percentage to Total Expenditure on Education

EFA 18 Indicators

Statistical Statements 1

Statistical Statements 2

Indicator 1: Adult Literacy Rate: 15+ Population

Definition

Adult literacy rate is defined as the percentage of the population aged 15 years and over who can both read and write with understanding a short simple statement on his/her everyday life. Generally, the term 'literacy' embraces also 'numeracy', the ability to make simple arithmetic calculations. The adult literacy rate reflects the accumulated achievement of primary education and adult literacy programmes in imparting basic literacy skills to the population, thereby enabling people to apply such skills in daily life and to continue learning and communicating using the written word.

Unit of Measurement

Percentage of the population aged 15+ that is literate

Discussion

A high adult literacy rate suggests the existence of an effective primary education system and/or adult literacy programmes that have enabled a large proportion of the population to acquire the ability of using the written word (and making simple arithmetic calculations) in daily life.

See Also

Literacy Rate: 15-24 years population, literacy gender parity index and expenditure on adult and continuing education programmes

Method of calculation

Divide adult literate population 15+ years with the total population in the ages 15+ years and then multiply the result with 100. The data required is literate population in ages 15+ years, in year t and total population in the same year.

$$\text{Symbolically: } \text{LIT}_{15+}^t = \frac{L_{15+}^t}{P_{15+}^t} * 100$$

Where,

LIT_{15+}^t = Literacy Rate 15+ years in year t.

L_{15+}^t = Number of literate persons in year t.

P_{15+}^t = Total Population 15 + yrs. in year t.

[See also No.1 Education Indicator, 2011]

Known Indicator Limitations

Since the census is conducted once in ten years, the literacy figures in intermediary years based on complete enumeration are not available. The information is based upon the responses of the head of the household. Generally, tests are not conducted to know abilities of the literate population.

Indicator 2: Literacy Rate: 15-24 Years Old Population

Definition

The number of persons aged 15-24 who can both read and write with understanding a short simple statement on their everyday life, divided by the population in that age-group.

Unit of Measurement

Percentage of the population aged 15-24 years that is literate

See Also

Adult Literacy Rate: 15+ Population, literacy gender parity index and expenditure on adult and continuing education programmes

Method of Calculation

Divide the number of literates in Population age-group 15-24 years by the total population in the age-group 15-24 years and then multiply the result with 100.

$$\text{Symbolically: } LIT_{15+24}^t = \frac{L_{15+24}^t}{P_{15-24}^t} * 100$$

Where,

LIT_{15+24}^t = Literacy Rate in 15-24 years, in year t.

L_{15+24}^t = Literate Population in 15-24 years in year t.

P_{15-24}^t = Population in 15-24 years, in year t.

Known Indicator Limitations

Since the census is conducted once in ten years, the literacy figures in intermediary years based on complete enumeration are not available. The information is based upon the responses of the head of the household. Generally, tests are not conducted to know abilities of the literate population.

Indicator 3: Literacy Gender Parity Index

Definition

The ratio of the female to male adult literacy rates measures progress towards gender equity in literacy and the level of learning opportunities available for women in relation to those available to men. It serves also as a significant indicator of the empowerment of women in society.

Unit of Measurement

Ratio of female to male literacy rate.

Discussion

When the literacy gender parity index shows a value equal to one, female literacy and male literacy rates are equal. A value less than one indicates that proportionately fewer women than men have basic literacy skills, and conversely, a value exceeding one indicates that proportionately fewer men have basic literacy skills.

See Also

Adult Literacy Rate: 15+ and 15-24 years population and expenditure on adult and continuing education programmes

Method of Calculation

Divide female literacy rate by Male literacy rate.

$$\text{Symbolically: } \text{LGPI} = \frac{\text{FLIT}}{\text{MLIT}}$$

Where,-

LGPI = Literacy Gender Parity Index.

FLIT = Female Literacy Rate.

MLIT = Male Literacy Rate.

Known Indicator Limitations

Since the literacy rates are available once in ten years, it is not possible to develop the index for intermediary years.

Indicator 4: Expenditure on Adult and Continuing Education to Total Expenditure on Education

Definition

Government expenditure for adult and continuing education expressed as a percentage of total government expenditure on education. This indicator shows the relative share of expenditure on adult and continuing education within overall government expenditure on education. This indicator should be based on

consistent data on government expenditure for each level of education that cover public funding for both government and private educational institutions

Unit of Measurement

Percentage to total public expenditure on education

See Also

Adult Literacy Rate: 15+ and 15-24 years population and literacy gender parity index

Method of Calculation

Divide the total expenditure on adult education and continuing education taken together in year t, by the total expenditure on education for the same year and then multiply the result with 100.

Indicator 5: Villages without Pre Primary Education Facility

Definition

Percentage of villages without pre primary education facility to total number of villages

Unit of Measurement

Absolute number of villages.

Discussion

The percentage of villages without pre primary education facility indicates a state's capacity to prepare young children for primary education and should be viewed in relation to gross enrolment in early childhood care education programmes (age 3-5 years). A high enrolment ratio indicates adequate capacity for this type of programme

See Also

GER for age group 3-5 years

Method of Calculation:

$$\text{Symbolically: VWOPPS} = \frac{\text{TVWOPPS}}{\text{TNV}} * 100$$

Where,

VWOPPS = Villages without Pre-Primary Schools

TVWOPPS = Total Number of villages without Pre-Primary Schools.

TNV = Total Number of villages irrespective of schooling facility

Known Indicator Limitations

Since the NCERT survey is conducted once in 5-7 years, the indicator is not available on regular basis. There is no other source of data for this indicator.

a) Indicator 5a: Enrolment in Pre Primary Education Institutions (ECCE)**Definition**

Enrolment in pre primary education institutions including government, private, and community programmes.

Unit of Measurement

Absolute Number

See Also

GER for age group 3-5 years

Method of Calculation

Actual survey of ECCE facilities in the villages/habitations is required to be done. Simple survey of villages.

Known Indicator Limitations

Since the NCERT survey is conducted once in 5-7 years, the indicator is not available on regular basis. There is no other source of this information that provides complete information. The regular collection of information under the Department of Education covers only the recognized pre primary institutions.

Indicator 6: Gross Enrolment Ratio for Age-group 3-5 Years**Definition**

Total number of children enrolled in early childhood care and education programmes, regardless of age, expressed as a percentage of the population in the relevant official age group i.e. 3-5 years. This indicator measures the general level of participation of young children in early childhood care and education programmes. It also indicates a state's capacity to prepare young children for primary education.

Unit of Measurement

Enrolment (Gross) in ECCE centres expressed as a percentage to the population in the age-group 3-5 years

See Also

Enrolment in pre primary educational institutions (ECCE)

Method of Calculation:

Divide the total enrolment in Pre-Primary Schools in the villages, irrespective of age, by the total population in the age-group 3-5 years in the villages and then multiply the result with 100.

$$\text{Symbolically: } GER_{ECCE}^t = \frac{E_{ECCE}^t}{Popn_{3-5Yrs}} * 100$$

Where,

GER_{ECCE}^t = Gross Enrolment Ratio in ECCE centres in year t.

E_{ECCE}^t = Enrolment in ECCE centres, regardless of age in year t.

$Popn_{3-5Yrs}$ = Population in the official age-group 3-5 in year t.

Known Indicator Limitations

ECCE Enrolment data is not readily available on regular basis.

Indicator 7: Primary Grade I Pupils having attended some form of organized Early Childhood Care & Education Programmes**Definition**

Number of new entrants to primary grade I who have attended some form of organised early childhood development programme equivalent to at least 200 hours, expressed as a percentage of total number of new entrants to primary grade I. This indicator helps to assess the proportion of new entrants to grade I who presumably have received some preparation for primary schooling through ECCE programmes. The percentage of new entrants to primary grade I who have attended some form of organised early childhood development programme cannot exceed 100 per cent if the children in the Grade 1 have been rightly reported on the basis of their birth certificates from the concerned authorities.

Unit of Measurement

Percentage of new entrants to primary grade I who have attended some form of organised ECCE programmes

Discussion

A high percentage of new entrants to grade I of primary education who have attended some form of organised ECCE programme indicates that a large proportion of these children have participated in organised learning activities prior to entering primary school. Progress in schooling is often associated with cognitive abilities acquired at young ages. It is commonly recognised that prior participation in ECCE programmes can play an important role in a child's future education, because they shape attitudes toward learning and develop basic social skills, but the effect of ECCE activities on children's cognitive development may vary according to the programme attended.

See Also

GER for age group 3-5 years and enrolment in pre primary education institutions (ECCE)

Method of Calculation:

Divide the number of Grade I Primary School pupils who have attended some form of ECCE by the total enrolment in Grade I and then multiply the result with 100.

$$\text{Symbolically: } G1P_{ECCE}^t = \frac{PG1P_{ECCE}^t}{TEG1} * 100$$

Where,

$G1P_{ECCE}^t$ = Grade 1 pupils in year t, having attended ECCE

$PG1E_{ECCE}$ = Primary Grade 1 Enrolment having attended some form of ECCE in year t.

$TEG1$ = Total Enrolment of Grade 1 in year t.

Known Indicator Limitations

In the absence of requisite data, it is not possible to construct indicator.

Indicator 8: Habitations having Primary Schooling Facilities within 1 km.**Definition**

Percentage of habitations having population 300 and more, served by primary schooling facilities within a distance of 1 km.

Unit of Measurement

Percentage to total number of habitations having population 300 and more

Discussion

To know whether the existing schooling facilities are equally available or not, indicators of access are used. While analysing accessibility, a number of factors, such as, distance from the house, mode of travel and time need to reach school are considered. Generally, a primary school is supposed to be available within one kilometre from the habitation. Habitation is treated as the lowest unit of planning where schooling facilities are likely to be available.

See Also

Rural population having access to primary schooling facilities within 1 km.

Method of Calculation

Divide the total number of habitations with a population of 300 persons and having Primary Schooling facilities within 1 km. by the total number of habitations in the area and then multiply the result with 100.

Known Indicator Limitations

The data is not available on regular basis. Only recognised institutions have been considered in constructing indicator.

Indicator 9: Rural Population having access to Primary Schooling Facilities within 1 km.**Definition**

Percentage of rural population served by primary schooling facilities within a distance of 1 km.

Unit of Measurement

Percentage to total rural population

Discussion

To know whether the existing schooling facilities are equally available to the people or not, indicators of access are used. While analysing accessibility, a number of factors, such as, distance from the house, mode of travel and time need to reach schools are considered.

See Also

Percentage of habitations having access to primary schooling facilities within 1 km.

Method of Calculation:

Divide rural population of area having access to Primary Schooling Facilities within 1 km by the total Population of the area and then multiply the result with 100.

$$\text{Symbolically: } \%RP_{PS1KM} = \frac{RP_{PS1KM}}{TRP} * 100$$

Where,-

$\%RP_{PS1KM}$ = Percentage of rural population served by Primary schooling facilities within 1 KM.

RP_{PS1KM} = Rural Population served by Primary Schools within 1 km

TRP = Total Rural Population.

Known Indicator Limitations

The data is not available on regular basis. Only recognised institutions have been considered in constructing indicator.

Indicator 10: Number of Primary Schools

Definition

Primary schools are the institutions, which impart education up to grade IV/V and are normally accredited to or sanctioned by some public authority and are known as recognised schools. A recognised school is one in which the course(s) of study followed is prescribed by the government. It runs regular classes. The official entry age for primary education usually varies between five and six years. In principle, this level covers about four/five years of full-time schooling. Primary education constitutes the first cycle of compulsory education.

Unit of Measurement

Absolute Number

See Also

Number of upper primary schools and percentage of rural population and habitations having access to primary schooling facilities within 1 km.

Method of Calculation

Requires actual enumeration of the Schools. This is done through Sarva Shiksha Abhiyan annually.

Indicator 11: Primary Schools with Buildings

Definition

School buildings define the campus of the school. The availability of a school need not guarantee that it has building and other minimum infrastructural facilities required for smooth functioning of the school. Research findings reveal that infrastructural facilities in schools help to attract children and also to retain them in school system. Not only this, the structure of the school buildings is also required to be known.

Unit of Measurement

Percentage to total primary schools

Discussion

School buildings are classified under 'pucca', 'partially pucca', 'kachcha', 'thatched huts', 'tents' and 'open space'. Other facilities, in school, such as, drinking water, toilet facilities, electricity, separate toilet for girls, playground, number of instructional rooms and school boundary should also be analysed.

See Also

Percentage of primary schools having drinking water and toilet facilities and average number of instructional rooms

Method of Calculation:

Divide the actual number of Primary Schools having school buildings by the total number of Primary Schools in the area and then multiply the result with 100.

Symbolically:

$$\text{PSWB} = \frac{\text{PSWB}}{\text{TPS}} * 100$$

Where,

PSWB = Primary Schools with Buildings

TPS = Total number of Primary Schools.

Known Indicator Limitations

The data is available through All India Educational Survey which activity takes place after 5-7 years. Some information is available through SSA.

Indicator 12: Primary Schools without Buildings**Definition**

Number of schools without buildings as percentage to total number of primary schools.

Unit of Measurement

Percentage to total primary schools

See Also

Primary schools with buildings

Method of Calculation

Divide the number of Primary Schools who have no school buildings by the total number of Primary Schools in the area and then multiply the result with 100.

$$\text{Symbolically, } \text{PS}_{\text{WOB}} = \frac{\text{NPS}_{\text{WOB}}}{\text{TNPS}} * 100$$

Where,-

PS_{WOB} = Primary Schools without buildings.

NPS_{WOB} = Number of Primary Schools without School buildings.

TNPS = Total Number of Primary Schools.

Known Indicator Limitations

The indicator is not available on regular basis. Only recognised institutions have been considered in constructing indicator.

Indicator 13: Instructional Rooms per School (Primary)

Definition

Average number of rooms per primary school used for instructional purposes gives significant information regarding teaching learning facilities made available in the school. This should also be viewed in relation to the schemes, like Operation Blackboard, which ensures at least two instructional rooms in a primary school.

Unit of Measurement

Average number of rooms per primary school

See Also

Percentage of primary schools having drinking water and toilet facilities

Method of Calculation

Divide the total number of instructional rooms taken together in all the Primary Schools by the total number of Primary Schools in the area.

$$\text{Symbolically: } IR_{PPS} = \frac{NIR}{TNPS}$$

Where,-

IR_{PPS} = Instructional Rooms per Primary Schools.

NIR = Number of Instructional Rooms.

$TNPS$ = Total Number of Primary Schools.

Known Indicator Limitations

This information is available only through All India Educational Surveys conducted by NCERT after 5-7 years.

Indicator 14: Primary Schools having Toilet Facilities

Definition

One can understand how essential toilet facilities are at a place where the children are to be retained for approximately six hours and then are to be taught.

Unit of Measurement

Percentage to total primary schools

See Also

Percentage of primary schools having drinking water facilities and separate toilet for girls

Method of Calculation

Divide the total number of Primary Schools having toilet facilities in Schools in the area by the total number of Primary Schools in the area and then multiply the result with 100.

$$\text{Symbolically: } PS_{TF} = \frac{NPS_{TF}}{TNPS} * 100$$

Where,

PS_{TF} = Primary Schools having Toilet Facilities.

NPS_{TF} = Number of Primary Schools having Toilet facilities.

$TNPS$ = Total Number of Primary Schools.

Known Indicator Limitations

This data becomes available only through NCERT Surveys which are conducted after 5-7 years. Some data is also available through Sarva Shiksha Abhiyan.

Indicator 15: Primary Schools having Toilet Facilities for Girls**Definition**

Grownup girls can't use the toilets commonly with boys. Hence separate toilets for girls are must. Percentage of primary schools having toilet facilities for girls to total number of primary schools.

Unit of Measurement

Percentage to total primary schools

See Also

Percentage of primary schools having drinking water facilities

Method of Calculation

Divide the number of schools having toilet facilities for Girls in the Schools by the total number of Primary Schools in the area and then multiply the result with 100.

Symbolically:

$$PS_{TFG} = \frac{NPS_{TFG}}{TNPS} * 100$$

Where,-

PS_{TFG} = Primary Schools having Toilet facilities for Girls.

NPS_{TFG} = Number of Primary Schools having Toilet facilities for Girls.

$TNPS$ = Total Number of Primary Schools.

Known Indicator Limitations

The data becomes available in the All India Educational Surveys conducted by NCERT after 5-7 years. Some information is also collected by the Sarva Shiksha Abhiyan.

Indicator 16: Primary Schools having Drinking Water Facilities**Definition**

Percentage of primary schools having drinking water facilities to total number of primary schools. Some children do fetch water from their homes. Notwithstanding this, lot of water is required for cleanliness and other purposes. Therefore, Drinking water facility is a must in the school.

Unit of Measurement

Percentage to total primary schools

See Also

Percentage of primary schools having toilet facilities.

Method of Calculation

Divide the number of Primary Schools having Drinking Water Facilities in the schools by the total number of Primary Schools in the area and then multiply the result with 100.

$$\text{Symbolically: } PS_{DWF} = \frac{NPS_{DWF}}{TNPS} * 100$$

Where,-

PS_{DWF} = Primary Schools having Drinking Water Facility.

NPS_{DWF} = Number of Primary Schools having D.W.F.

$TNPS$ = Total Number of Primary Schools.

Known Indicator Limitations

The data is available through All India Educational Survey of NCERT. Some information is available through Sarva Shiksha Abhiyan.

Indicator 17: Single Teacher Primary Schools**Definition**

Percentage of single teacher primary schools to total number of primary schools.

Unit of Measurement

Percentage to total primary schools.

Discussion

Despite significant improvement, like provision of contract teachers, volunteer teachers, in number of primary schools, a large number of schools still are single teacher Primary schools. The number of single teacher primary schools therefore should be analyzed in relation to grades, sections, pupil-teacher ratio and number of instructional rooms. This should also be viewed in relation to the schemes, like Operation Blackboard, which ensures at least two teachers in a primary school.

See Also

Number of teachers and pupil teacher ratio.

Method of Calculation

Divide the number of single teacher Primary Schools by the total number of Primary Schools in the area and then multiply the result with 100.

$$\text{Symbolically: STPS} = \frac{\text{NSTPS}}{\text{TNPS}} * 100$$

Where,

STPS = Single Teacher Primary Schools.

NSTPS = Number of Single Teacher Primary Schools.

TNPS = Total Number number of Primary Schools.

Known Indicator Limitations

The data is available in the annual collection of data about Sarva Shiksha Abhiyan by NUEPA.

Indicator 18: Apparent Intake Rate (Grade I as Proportion of Official Entry Age)**Definition**

Total number of new entrants in the first grade of primary education, regardless of age, expressed as a percentage of the population at the official primary school-entrance age. The Apparent Intake Rate (AIR) reflects the general level of access to primary education. It also indicates the capacity of the education system to provide access to grade I for the official school-entrance age population. This indicator is used as a substitute for Net Intake Rate (NIR) in the absence of data on new entrants by single years of age.

Unit of Measurement

New entrants in primary grade I expressed as percentage of the population at the official entry age.

See Also

Net intake rate

Method of Calculation

Divide total number of new entrants in Grade 1 irrespective of age by the total Population of the official entry age and then multiply the result with 100.

$$\text{Symbolically: } \text{AIR}^t = \frac{N_1^t}{P_{t_a}} * 100$$

Where,

AIR^t = Apparent Intake Rate in School year t.

N_1^t = Number of New Entrants in Grade 1 of Pry Edu in year t.

P_{t_a} = Population of official Primary School Entrance Age a in school year t.

[See also No.3 Education Indicator, 2011]

Known Indicator Limitations

The indicator is not readily available. The computation of indicator needs enrolment in grade I and single-age population '6'. The enrolment that is available is outdated and population projections not available.

Indicator 19: Net Intake Rate - New Entrants to Primary Grade I**Definition**

New entrants in the first grade of primary education who are of the official primary school-entrance age, expressed as a percentage of the population of the same age. The Net Intake Rate (NIR) gives a more precise measurement of access to primary education of the eligible, primary school-entrance age population than does the Apparent Intake Rate.

Unit of Measurement

New entrants to primary grade 1 who are of the official primary school-entrance age as a percentage of the corresponding population.

Discussion

Data on both new entrants and population used in deriving this indicator should refer strictly to the official school-entrance age. In principle, the value of this indicator can not exceed 100 per cent. Care should be taken not to include repeaters in grade I in the calculation. This can be a problem especially with respect to under-aged pupils who repeat the first grade when they reach the official-entrance age. A high Net Intake Rate indicates a high degree of access to primary education for the official school-entrance age children and a high proportion of pupils of the same age in the first primary grade, which may favour the pedagogical situation. States aiming to universalise primary education will

seek to enrol all children at the official school-entrance age, and thus the Net Intake Rate is a measure of progress in this regard.

See Also

Gross apparent intake rate

Method of Calculation:

Divide the number of children of official Primary school entrance age who enter the first Grade of Primary education by the Population of the same age-group and then multiply the result by 100.

$$\text{Symbolically: } \text{NIR}^t = \frac{N_a^t}{P_a^t} * 100$$

Where,

NIR^t = Net Intake Rate in School year t.

N_a^t = Number of children official Primary school entrance age a who enter the first grade of Primary education in school year t.

P_a^t = Population of official Primary school entrance age a, in school year t.

[See also No.4 Education Indicator, 2011]

Known Indicator Limitations

The computation of indicator needs enrolment in grade I distributed according to age and grade and single-age population '6'. The enrolment that is available is outdated and population projections not available. In the absence of age-grade matrix, it is not possible to construct the indicator. One of the limitations of the indicator is that though the children are in the system but due to over-age and under-age, they are not considered in computing the rate.

Indicator 20: Gross Enrolment Ratio (Primary Education)

Definition

Total enrolment in primary education (grades I-V), regardless of age, expressed as a percentage of the eligible official primary school-age population (6-11 years) in a given school-year. The GER is widely used to show the general level of participation in and capacity of primary education. It is used in place of the net enrolment ratio (NER) when data on enrolment by single years of age are not available. It can also be used together with the NER to measure the extent of over-aged and under-aged enrolment.

Unit of Measurement

Percentage to corresponding school-age population i.e. 6-11 years

Discussion

A high GER indicates a high degree of participation, whether the pupils belong to the official age group or not. A GER value approaching or exceeding 100 per cent indicates that the country is, in principle, able to accommodate all of its

primary school-age population, but it does not indicate the proportion of that population actually enrolled. The achievement of a GER of 100 per cent is therefore a necessary but not sufficient condition for universal primary education. When GER exceeds 90 per cent for primary education, the aggregate number of places for pupils is approaching the number required for full enrolment of the official age-group population. However, in order to achieve universal primary education, the number of under-age and over-age pupils would need to decline in order to free places for pupils in the official primary school age group

See Also

Net enrolment ratio

Method of Calculation:

Divide the number of pupils enrolled in Primary education (classes 1-V) regardless of age, by the population of the official entrance Primary school age-group and multiply the result with 100.

$$\text{Symbolically: GER}_p^t = \frac{E_p^t}{P_{p,a}^t} * 100$$

[See also No.7 Education Indicator, 2011]

Where,

GER_p^t = Gross Enrolment Ratio in Primary education p in school year t.

E_p^t = Enrolment in Primary education p in school year t.

$P_{p,a}^t$ = Population in age-group a which officially corresponds to the Primary level of education p in school year t.

Known Indicator Limitations

The enrolment (final) that is available is outdated and the latest one is provisional in nature. The population projections if not reliable, may dramatically change the ratio.

Indicator 20a: Gross Attendance Ratio (Classes I-V)

Definition

The current attendance status refers to whether person is currently attending any educational institution or not. While every person who is attending an educational institution is necessarily enrolled in that institution, it may so happen that a person who is enrolled is not currently attending the institution. While most of the educational statistics are based on enrolment, the NSSO survey, because of its household approach, bases its analysis on the current attendance status. [52 Round of NSSO].

Unit of Measurement

Percentage to total population of age group 6-10 years

Discussion

GER and NER gives information on coverage of child population in the system but fails to generate information on children whether they attend schools or not. Attendance ratio (gross) provides information on children attending schools, which is calculated by considering number of persons attending classes I-V expressed as a percentage to estimated population of age group 6-10 years. Like GER, the denominator consists of only the official age group, the numerator may include both over-aged and under-aged children as long as they are studying in classes I to V resulting in overestimation.

See Also

Gross enrolment ratio

Method of Calculation

Divide the number of children attending classes I-V, regardless of age, by the estimated child population in the age-group 6-10 (both inclusive) years and multiply the result with 100.

$$\text{Symbolically: } \text{GAR}_{\text{PC}}^t = \frac{\text{N SAPC}^t}{\text{TP}_{6-10}^t} * 100$$

Where,

GAR_{PC}^t = Gross Attendance Ratio in year t of Primary classes

N SAPC^t = No. of students attending Primary classes in year t.

TP_{6-10}^t = Total Population in year t in age-group 6-10

Known Indicator Limitations

Time lag is an important limitation. The survey is not conducted on regular basis, hence the information may not be available for the next 4-5 years.

Indicator 21: Net Enrolment Ratio (Primary Education)**Definition**

Enrolment in primary education (grades I-V) of the official primary school age group (6-11 years) expressed as a percentage of the corresponding population. The NER gives a more precise measurement of the extent of participation in primary education of children belonging to the official primary school age. NER at the primary level should be based on total enrolment in all types of primary schools and equivalent educational institutions, including public, private and all other institutions that provide organised educational programmes at the primary level.

Unit of Measurement

Percentage to corresponding school-age population i.e. 6-11 years.

Discussion

A high NER denotes a high degree of participation in primary education of the official primary school age group. The NER's maximum value is 100 per cent. An NER that increases over time reflects improving participation at the primary level of education. When the NER is compared with the GER, the difference between the two ratios measures the incidence of under-age and over-age enrolment. If the NER is below 100 per cent, then the percentage difference provides a measure of the proportion of primary school-age children not enrolled at the primary level. However, since some primary school-age children could be enrolled at other levels of education, this percentage difference should in no way be considered as indicating the exact percentage of children not enrolled. A more precise complementary indicator is the age-specific enrolment ratio, which shows the level of participation in education of the population at each particular age.

See Also

Gross enrolment ratio

Method of Calculation

Divide the number of pupils enrolled in Primary education who are of the official primary school age-group by the population for the same age-group and multiply the result with 100.

$$\text{Symbolically: } \text{NER}_p^t = \frac{E_p^t}{P_p^t} * 100$$

Where,

NER_p^t = Net Enrolment Ratio at Primary level of education p in school year t.

E_p^t = Enrolment of the official entrance age group at the Primary level of education p in school year t.

P_p^t = Population in age group p which corresponds official Primary school level p in school year t.

[See also No.8 Education Indicator, 2011]

Known Indicator Limitations

The age-grade matrix is not available on regular basis. The population projections if not reliable, may dramatically change the ratio.

Indicator 22: Retention Rate at Primary Level (Grade I to V)

Definition

Enrolment in grade V in a year as a proportion to enrolment in grade I four years back is termed as retention rate at the primary level. Before the rate is computed, the number of repeaters is to be subtracted from enrolment in grades V.

Unit of Measurement

Percentage to total enrolment in grade I four years back

Discussion

This indicator presents significant information on one of the important components of universal enrolment i.e. retention. If computed at disaggregated levels will help planner to identify areas and focus groups that need immediate intervention.

See Also

Coefficient of efficiency at primary level, survival rate to grade V and input per graduate

Method of Calculation

Divide the number of pupils [excluding repeaters] in Grade V by the total enrolment in Grade I four years back.

$$\text{Symbolically: } RR_p^t = \frac{E_{V-R}^t}{E_1^{t-4}} * 100$$

where,

RR_p^t = Retention Rate in year t at primary level of education p.

E_{V-R}^t = Enrolment in year t in class V less repeaters from class V.

E_1^{t-4} = Total enrolment in class 1 in year t four years back.

Known Indicator Limitations

The indicator is not available for the current year and is based upon enrolment data in the recognised schools only. Users often question quality of data reported on repeaters. This is because of the fact that the country is following the policy of no detention up to grade V. Retention rate may serve only limited purpose as it fails to provide information about the grade in which the drop out rate is high. For this purpose, grade-to-grade retention or drop out rate would be the most appropriate one to use. In addition, transition rate from primary to upper primary level may also be a useful indicator.

b) **Indicator 22a: Retention Rate at Elementary Level (Grade I to VIII)**

Definition

Enrolment in grade VIII in a year as a proportion to enrolment in grade I seven years back is termed as retention rate at the elementary level. Before the rate is computed, the number of repeaters is to be subtracted from enrolment in grade VIII.

Unit of Measurement

Percentage to total enrolment in grade I seven years back

Discussion

This indicator presents significant information on one of the important components of universal enrolment i.e. retention. If computed at disaggregated levels will help planner to identify areas and focus groups that need immediate intervention.

See Also

Coefficient of efficiency at primary level, survival rate to grade V and input per graduate.

Method of Calculation:

Divide enrolment in Class VIII excluding repeaters from class VIII enrolment by the enrolment in class 1, seven years back.

$$\text{Symbolically: } RR_{ee} = \frac{E_{VIII}^{t-R}}{E_1^{t-7}} * 100$$

Where,

RR_{ee} = Retention rate at elementary education in year t.

E_{VIII}^{t-R} = Enrollment of class VIII- repeaters of class VIII in year t.

E_1^{t-7} = Enrollment of class I in year t seven years back.

Known Indicator Limitations

The indicator is not available for the current year and is based upon enrolment data in the recognised schools only. Users often question quality of data reported on repeaters. Retention rate may serve only limited purpose as it fails to provide information about the grade in which the drop out rate is high. For this purpose, grade-to-grade retention or drop out rate would be the most appropriate one to use. In addition, transition rate from upper primary to secondary level may also be a useful indicator.

Indicator 23: Repetition Rate by Grade (I to V)**Definition**

Proportion of pupils enrolled in a given grade in a given school year who study in the same grade the following school year. This indicator measures the phenomenon of pupils repeating a grade, and is one of the measures of the internal efficiency of the primary education cycle

Unit of Measurement

Percentage of repeaters in a grade to enrolment in that grade the previous year

Discussion

Repetition rates should ideally approach zero per cent. High repetition rates reveal problems in the internal efficiency of the education system and possibly reflect a poor level of instruction. When compared across grades, the patterns can indicate specific grades with relatively higher repetition rates, hence requiring more in-depth study of the causes and possible remedies. In some cases, low repetition rates merely reflect policies or practices of automatic promotion. Repetition rate plays an important role in measuring the efficiency of education system. The maximum repetition rate and the number of grade repetitions allowed may in some cases be determined by the education authorities in order to cope with limited capacity at certain grade levels and to increase the flow of pupils through the education cycle

See Also

Retention rate at primary level, coefficient of efficiency at primary level and input per graduate.

Method of Calculation

Divide the number of repeaters in a given grade in school year t+1 by the number of pupils enrolled in the same Grade in the previous school year t.

$$\text{Symbolically: } R_i^t = \frac{R_i^{t+1}}{E_i^t}$$

where,

R_i^t = Repetition Rate at grade i, in school year t.

R_i^{t+1} = Number of students repeating Grade i, in school year t+1.

E_i^t = Number of pupils enrolled in Grade i, in school year t.

[See also No.10 Education Indicator, 2011]

Known Indicator Limitations

Since the indicator is not readily available, one has to construct it. Time lag is another important limitation. The repetition rate is derived by analysing data on enrolment and repeaters by grade for two consecutive years. One should therefore ensure that such data are consistent in terms of coverage over time and across grades. The data users often question quality of data reported on repeaters. This is because of the fact that the country is following the policy of no detention up to grade VIII.

Indicator 24: Coefficient of Efficiency at Primary Level (Input-Output Ratio)

Definition

The ideal (optimal) number of pupil-years required (i.e. in the absence of repetition and drop-out) to produce a number of graduates from a given pupil cohort in primary education expressed as a percentage of the actual number of

pupil-years spent to produce the same number of graduates. One school year spent in a grade by a pupil is counted as one pupil-year. The coefficient of efficiency is a synthetic indicator of the internal efficiency of an education system. It summarises the consequences of repetition and dropout on the efficiency of the educational process in producing graduates. The coefficient of efficiency is the reciprocal of the Input-Output ratio, which is often used as an alternative indicator of internal efficiency.

Unit of Measurement

Coefficient of primary cycle, expressed as a percentage of the actual number of pupil-years

Discussion

A coefficient of efficiency approaching 100 per cent indicates a high overall level of internal efficiency and little wastage due to repetition and drop out. A coefficient of efficiency that is less than 100 per cent signals inefficiency due to grade repetition and dropout. Given that this indicator is usually derived using cohort analysis models that are based on a number of assumptions, and owing to its highly synthetic nature, care should be taken in making comparisons across education systems. From a conceptual viewpoint, economic efficiency and resource utilisation are optimal when most pupils graduate within the prescribed duration of the primary cycle, but this does not necessarily imply achievement of the expected learning outcomes. Also, according to this calculation method, early dropout (i.e. in the lower grades) reduces internal efficiency less than late dropout (i.e. in the higher grades). This means that efficiency from the economic point of view can be in contradiction with educational objectives that aim to retain pupils in school as long as possible or at least until they reach the higher grades in the primary cycle when they would have acquired the prescribed basic knowledge and skills.

See Also

Survival to grade V and input per graduate

Method of Calculation

Divide the ideal number of pupil-years, required to produce a number of graduates from a given pupil-cohort in primary education by the actual number of pupil years spent to produce the same number of graduates and multiply the result with 100.

Symbolically:

$$CE_g = \frac{\sum_{j=n}^{N+k} G_{g,j} * n}{\left\{ \sum_{j=n}^{N+k} G_{g,j} * j \right\} + \left\{ \sum_{j=r}^{n+k} D_{g,j} * j \right\}} * 100$$

where,-

CE_g = Coefficient of efficiency for a pupil cohort g .

G_{gj} = the number of pupils graduating from cohort g in final grade n after j years of study.

D_{gj} = the number of pupils [of the cohort g] dropping out after j years of study.

K denotes the number of repetitions allowed;

N the prescribed normal duration of study for the primary level of education; g the pupil-cohort; and j the number of years of study. Details have been given elsewhere under the Chapter 'School Efficiency'.

[See also No.12 Education Indicator, 2011]

Known Indicator Limitations

Since the indicator is not readily available, one has to construct it. Time lag is another important limitation. The data users often question quality of data reported on repeaters. This is because of the fact that the country is following the policy of no detention up to grade VIII.

The computation is based upon certain assumptions, which if not realised makes the indicator meaning less. The method does not take into account the quality of output that the system is producing. The method takes cognisance of only number of students who successfully complete an education cycle that means learners attainment is ignored. The method also assumes that all the members of a cohort have identical facilities in schools, which may not always be true. Also, the method does not facilitate consideration of socio-economic background of students. The method takes into account only the number of dropouts and repeaters as possible causes of an inefficient system but ignores all other factors.

Indicator 25: Average Number of Years taken by Primary Graduates

Definition

Average number of years the system is taking to produce a primary graduate. A graduate is a pupil or student who successfully completes a level of education i.e. primary. The years input per graduate is obtained by dividing the total number of pupil-years spent by the cohort by the total number of graduates.

Unit of Measurement

Years input per graduate.

Discussion

The input per graduate should be compared to the ideal number, which is simply the duration of the education cycle – five years. More than five years input per graduate indicates wastage in the system that may be due to either dropouts or repeaters

See Also

Coefficient of efficiency at primary level and survival to grade V

Method of Calculation

In the cohort analysis, the average number of years comes as Input: Output ratio.

Known Indicator Limitations

Since the indicator is not readily available, one has to construct it. Time lag is another important limitation. The data users often question quality of data reported on repeaters. This is because of the fact that the country is following the policy of no detention up to elementary education.

The computation is based upon certain assumptions, which if not realised makes the indicator meaning less. The method does not take into account the quality of output that the system is producing. The method takes cognisance of only number of students who successfully complete an education cycle that means learners attainment is ignored. The method also assumes that all the members of a cohort have identical facilities in schools, which may not always be true. Also, the method does not facilitate consideration of socio-economic background of students. The method takes into account only the number of dropouts and repeaters as possible causes of an inefficient system but ignores all other factors.

Indicator 26: Survival Rate to Grade V**Definition**

Percentage of a cohort of pupils who enrolled in the first grade of primary education in a given school-year and who eventually reach grade V. Its purpose is to assess the “holding power” and internal efficiency of an education system. The survival rate to grade V indicates the proportion of a pupil cohort that completes grade IV and reaches grade V. Conversely, it indicates the magnitude of dropout before grade V.

Unit of Measurement

Percentage of a pupil cohort actually reaching grade V

Discussion

Survival rate to grade V of primary education is of particular interest because the completion of at least four years of schooling is commonly considered a pre-requisite for a sustainable level of literacy. The distinction between survival rate with and without repetition is necessary to determine the extent of wastage due to dropout and repetition. Given that this indicator is usually estimated using cohort analysis models that are based on a number of assumptions, care should be taken in making comparisons across states.

See Also

Coefficient of efficiency at primary level and input per graduate

Method of Calculation

Divide the total number of pupils belonging to a pupil cohort who reached each successive grade of primary education by the number of pupils in the original pupil cohort, i.e. those pupils who enrolled together in the first grade of primary education and multiply the result with 100.

$$\sum_{t=1}^m P_{g,i}^t$$

$$\text{Symbolically: } SR_{g,i}^k = \frac{\sum_{t=1}^m P_{g,i}^t}{E_g^k} * 100$$

Where,

$$P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$$

Where,

l = grade {1,2,3,...n}

t = year {1,2,3,...m}

g = Pupil-cohort

$SR_{g,i}^k$ = Survival Rate of pupil-cohort g at grade i for a reference year k .

E_g^k = Total number of pupils belonging to a cohort g at a reference year k

$R_{g,i}^k$ = Number of pupils repeating grade i in school year t .

P_i^k = Promotees from E_g^k who would join successive grades i throughout successive years t .

R_i^t = Number of pupils repeating grade l in school year t .

[See also No.11 Education Indicator, 2011]

Known Indicator Limitations

Since the indicator is not readily available, one has to construct it. Time lag is another important limitation. The data users often question quality of data reported on repeaters. This is because of the fact that the country is following the policy of no detention up to elementary education.

The computation is based upon certain assumptions, which if not realised makes the indicator meaning less. The method does not take into account the quality of output that the system is producing. The method takes cognisance of only number of students who successfully complete an education cycle that means learner's attainment is ignored. The method also assumes that all the members of a cohort have identical facilities in schools, which may not always be true. Also, the method does not facilitate consideration of socio-economic background of students. The method takes into account only the number of dropouts and repeaters as possible causes of an inefficient system but ignores all other factors.

Indicator 27: Number of Teachers (Primary Education)

Definition

Number of teachers teaching primary classes. Teacher is one who in his professional capacity, guides and directs pupils' learning experiences in gaining knowledge, attitudes and skills that are prescribed by a defined curriculum programme. This indicator is used to measure the level of human resources input, in terms of number of teachers.

Unit of Measurement

Absolute Number

Discussion

Number of teachers over time may be useful to know the growth that is being taking place. This serves only limited purpose unless it is linked to enrolment and pupil-teacher ratio is computed. The growth in number of teachers should also be linked to trained teachers. This indicator does not take into account differences in teachers' academic qualifications, pedagogical training, professional experience and status, teaching methods, teaching materials and variations in classroom conditions -- all factors that could also affect the quality of teaching/learning and pupil performance. Growth in female teachers should also be measured, as the same in most of the states is not in proportionate to their male counterparts.

See Also

Pupil teacher ratio and percentage of trained primary school teachers

Method of Calculation

Actual survey is required.

Known Indicator Limitations

There is a time-lag in the available information about teachers.

Indicator 28: Primary School Teachers having Required Academic Qualifications

Definition

The number of primary school teachers with at least the minimum academic qualifications required by the public authorities for teaching in primary education, expressed as a percentage of the total number of primary school teachers. This indicator measures the proportion of primary school teachers who meet the basic requirement in terms of academic qualifications as specified by the state authorities. It indicates the general quality of human capital involved in teaching in primary education. Teachers are persons who, in their professional capacity, guide and direct pupils' learning experiences in gaining the knowledge, attitudes and skills that are stipulated in a defined curriculum programme.

Unit of Measurement

Teachers with at least minimum academic qualifications as percentage to total number of primary school teachers.

Discussion

A high percentage of teachers having the required academic qualifications denotes the availability of academically qualified teachers and the general quality of the teaching force. Teachers' academic qualifications, together with pre-service or in-service teacher training, correlate strongly and consistently with pupils' scholastic performance, which of course is also affected by other factors, such as the experience and status of teachers, teaching methods, teaching materials and the quality of classroom conditions

See Also

Percentage of trained primary school teachers

Method of Calculation

Divide the number of teachers possessing minimum academic and professional qualifications, and teaching in primary school by the total number of teachers, regardless of qualifications, teaching in Primary schools and then multiply the result with 100.

Symbolically:

$$\%T_{pq}^t = \frac{T_{pq}^t}{T_p^t} * 100$$

Where,

$\%T_{pq}^t$ = Percentage of Primary School Teachers having the required academic qualifications in year t.

T_{pq}^t = Total number of primary school teachers having the required academic qualifications in year t.

T_p^t = Total number of primary school teachers in year t.

Known Indicator Limitations

The indicator is not available on regular basis. Only recognised institutions have been considered in constructing indicator.

Indicator 29: Pupil-Teacher Ratio (Primary Level)

Definition

Average number of pupils per teacher in primary education in a given school year. Teachers are persons who, in their professional capacity, guide and direct pupils' learning experiences in gaining the knowledge, attitudes and skills that are stipulated in a defined curriculum programme. This indicator is used to measure the level of human resources input, in terms of number of teachers, in relation to the size of the pupil population.

Unit of Measurements

Number of pupils per teacher.

Discussion

The pupil teacher ratio should normally be compared to establish state norms on the number of pupils per teacher for each level or type of education. A high pupil/teacher ratio suggests that each teacher has to deal with a large number of pupils and that, conversely, pupils receive less attention from the teacher. It is generally assumed that a low pupil/teacher ratio signifies smaller classes, which enable the teacher to pay more attention to individual pupils and thus contribute to the better scholastic performance of the pupils.

See Also

Number of teachers and percentage of primary school trained teachers.

Method of Calculation:

Divide the total number of pupils enrolled in primary education by the number of teachers at the same level.

$$\text{Symbolically: } PTR_p^t = \frac{E_p^t}{T_p^t}$$

Where,

PTR_p^t = Pupil-teacher ratio in primary education in school-year t

E_p^t = Total number of pupils in primary education in school-year t.

T_p^t = Total number of teachers in primary education in school-year t

[See also No.19 Education Indicator, 2011]

Known Indicator Limitations

The official statistics includes only recognised institutions and hence the information is not complete. Whatever information is available on enrolment and number of teachers is provisional in nature.

Indicator 30: Primary School Teachers who are Certified (Trained) to Teach According to National Standards**Definition**

The number of primary school teachers who are certified to have received the minimum organised teacher-training (pre-service or in-service) required for teaching in primary education, expressed as a percentage of the total number of primary school teachers. This indicator measures the proportion of primary school teachers trained in pedagogical skills, according to national standards, to effectively teach and use the available instructional materials. It reveals also a state's commitment to invest in the development of its human capital involved in teaching activities. Teachers are persons who, in their professional capacity,

guide and direct pupils' learning experiences in gaining the knowledge, attitudes and skills that are stipulated in a defined curriculum programme.

Unit of Measurement

Percentage to total primary school teachers.

Discussion

A high percentage of teachers certified to teach in primary schools implies that a majority of the teaching force is trained and has the necessary pedagogical skills to teach and use the available instructional materials in an effective manner. This indicator does not take into account differences in teachers' experiences and status, teaching methods, teaching materials and variations in classroom conditions -- all factors that also affect the quality of teaching/learning. The details of the training imparted, duration, training agency etc. may also be analysed along with the indicator.

See Also

Distribution of teachers having required academic qualifications.

Method of Calculation

Divide the number of primary school teachers who are certified to have received the minimum required teacher-training by the total number of primary school teachers, and then multiply the result with 100

Symbolically:

$$\%T_{p,c}^t = \frac{T_{p,c}^t}{T_p^t} * 100$$

Where,

$\%T_{p,c}^t$ = Percentage of primary school teachers certified to have the required teacher-training in year t.

$T_{p,c}^t$ = Total number of primary school teachers certified to have the required teacher-training in year t.

T_p^t = Total number of primary school teachers in year t.

Known Indicator Limitations

The official statistics includes only recognised institutions. Male and female distribution of trained teachers is not available on regular basis. Whatever information is available on teachers is provisional in nature.

Indicator 31 : Expenditure on Elementary Education as Proportion to GNP and Expenditure on Elementary Education as Percentage to GNP Per Capita

Definition

Government current expenditure on elementary education expressed as a percentage of GNP shows the share of the value of the total national production

of goods and services in a given year that has been devoted to elementary education. Public current expenditure per pupil on elementary education expressed as a percentage of GNP per capita in a given financial year measure the average cost of a pupil in elementary education in relation to GNP per capita. Both indicators when compared with similar indicators for other levels of education also measure the relative emphasis given to investment in elementary education.

These two indicators should be based on consistent data on government current expenditure that covers central, provincial and local government spending on all public primary and upper primary schools and subsidies to private educational institutions, teachers and pupils. The use of this indicator must take into account the coverage of government current expenditure for elementary education and the extent to which the GNP estimates represent the true level of national economic production.

Unit of Measurement

Percentage to GNP/GNP per capita.

Discussion

High percentage values for both indicators (31) and (31.1) generally denote a high level of spending on elementary education. Indicator (31) measures the overall proportion of GNP that has been spent on elementary education by the public authorities (central, provincial and local). Indicator (31.1) measures the per pupil cost in elementary education in relation to GNP per capita, thereby relating average spending per pupil to the theoretical average per capita income within the state. One should interpret with care a high level of spending per pupil since this could simply reflect low enrolment. Per pupil expenditure as a percentage of GNP per capita should therefore be viewed in conjunction with enrolment ratios. Low expenditure per pupil and low enrolment in elementary education when compared to high expenditure and/or low enrolment in higher education suggests a need to reconsider resource allocations within the education sector, especially if universal elementary education is being given priority.

See Also

GER and NER at the elementary level and expenditure on other levels of education

Method of Calculation:

- (a) Divide expenditure on elementary education in a given year by the GNP for the same year and multiply the result with 100.
- (b) Divide per pupil expenditure on elementary education in a given year by the GNP per capita for the same year and multiply the result with 100.

Symbolically:

$$(a) \quad \%XEE_{GNP}^t = \frac{XEE^t}{GNP^t} * 100$$

$$(b) \quad \%XEE_{GNPpc}^t = \frac{XEE_{pp}^t}{GNP_{pc}^t} * 100$$

Where,

$\%XEE_{GNP}^t$ = Expenditure on elementary education in year t as % of GNP.

XEE^t = Expenditure on elementary education in year t.

GNP^t = Gross National Product of year t.

$\%XEE_{GNPpc}^t$ = Expenditure on elementary education as % of gross national product per capita.

XEE_{pp}^t = Per pupil expenditure on elementary education in year t.

GNP_{pc}^t = Per capita gross National Product in year t.

Known Indicator Limitations

State-specific indicator is not available. Time lag is another important limitation. The private expenditure on education is not covered. However, all the recognised private institutions are covered in the annual collection.

Indicator 32: Expenditure on Elementary Education as Percentage to Total Expenditure on Education

Definition

Public expenditure for elementary education expressed as a percentage of total public expenditure on education. This indicator shows the relative share of expenditure on elementary education within overall public expenditure on education. This indicator should be based on consistent data on government expenditure for each level of education that cover public funding for both government and private educational institutions.

Unit of Measurement

Percentage to total expenditure on education.

Discussion

A relatively high percentage of public expenditure devoted to elementary education denotes the priority given to elementary education in the national and state educational policies and resource allocation. When interpreting this indicator, one should take into account the corresponding primary level enrolment, GER and NER and then assess the relative current expenditure per pupil accordingly.

See Also

GER and NER at the elementary level and expenditure on other levels of education.

Method of Calculation

Divide total expenditure on elementary education to total expenditure on education and multiply the result with 100. The information is available in the MHRD's annual publications about Government expenditure.

Known Indicator Limitations

Time lag is an important limitation. Private expenditure on education is not covered. However, all the recognised private institutions are covered in the annual collection.

Indicator 33: Household Expenditure on Education**Definition**

Sum total of all the expenditures incurred by the student on general education that includes fees, books and stationery, uniform, transport, private coaching, study tours etc.

Unit of Measurement

Average annual expenditure (Rs.) per student of age 5-24 years.

Discussion

General education is highly subsidised. Despite this, the government is giving a variety of incentives. However, it may be still a costly proposition even if we do not take into consideration the opportunity cost. Payment of fees of different kinds, expenditure on books and stationery, uniform, conveyance, private coaching, study tours etc. for which an individual has to incur expenditure, is called private expenditure on education. This is in addition to public expenditure on general education.

See Also

Expenditure on elementary education as percentage to total expenditure on education

Method of Calculation

The information is available in the household sample survey conducted by the National Sample Survey Organisation. Divide the total household expenditure by the students in the age-group 5-24 years.

Known Indicator Limitations

Time lag is an important limitation. The survey is not conducted on regular basis, hence the information may not be available for the next 4-5 years.

Indicator 34: Pupils having reached at least Grade IV of Primary Schooling who masters a set of nationally defined Basic Learning Competencies

Definition

The number of pupils who have mastered a defined level of basic learning competencies by grade IV (or another grade), expressed as a percentage of the total sample or of the total number of pupils in grade IV (or the corresponding grade). This indicator seeks to measure learning achievement in respect to the minimum basic knowledge and analytical skills expected of pupils having reached that grade.

Data required include the summary results from competency examinations administered to pupils in grade IV (or another grade) or from other assessments of their learning competencies; and the total sample or total number of pupils in grade IV (or the corresponding grade). The instruments used to measure basic learning competencies (e.g. literacy and numeracy) may include standardised examinations, sample surveys, or simply teachers' assessments of pupils' mastery of such competencies.

Unit of Measurement

Percentage to the total number of pupils in grade IV.

Discussion

The intention of this indicator is to gather information on the basic learning competencies of pupils (as measured against national standards) towards the end of the first stage of basic education. A high value suggests that basic learning competencies are mastered by most pupils in grade IV (or another grade). Pupils showing high learning achievement in grade IV (or another grade) are also likely to perform effectively at higher levels of learning. This indicator of mastery of basic learning competencies should be examined in relation to enrolment and completion rates at the primary school level in order to assess the overall effectiveness of primary schooling in respect to promoting learning by individuals and to larger societal development objectives.

See Also

Retention rate at primary level.

Method of Calculation

Divide the number of pupils in grade 4 (or another grade) who master a defined level of basic learning competencies by the total number of pupils in grade IV (or the corresponding grade), and multiply the result with 100.

Data required include the summary results from competency examinations administered to pupils in grade 4 (or another higher grade) or from other assessments of their learning competencies; and the total sample or total number of pupils in grade 4 (or the corresponding grade). The instruments used

to measure basic learning competencies (e.g. literacy and numeracy) may include standardized examinations, sample surveys, or simply teachers' assessments of pupils mastery of such competencies.

Known Indicator Limitations

Generally data is not available. A few studies have been conducted on learner's achievement in different parts of the country but the findings cannot be generalised at the state/national level.

Indicator 35: Disabled Children of School Age group**Definition**

Total disabled children, expressed as a percentage to total school age population.

Unit of Measurement

Percentage to total school age population.

Discussion

The indicator is vital for planning education of disabled children. It is useful to develop integrated programmes for education of disabled children. Further, the disabled children should be analysed according to type of disability

See Also

Number of schools for disabled children and enrolment.

Method of Calculation

Divide the number of disabled children in schools for disabled by the population of disabled in the corresponding school age-group and multiply the result with 100. The disabled population comes through decennial population census while enrolment of disabled children comes from school records.

Known Indicator Limitations

Not available. If available, outdated.

Indicator 35a: Number of Schools for Disabled Children and Enrolment**Definition**

Total number of schools for disabled children and enrolment.

Unit of Measurement

Absolute Number

Discussion

The information on enrolment and number of schools for disabled is vital for planning education of disabled children. It is useful to develop integrated

programmes for education of disabled children. Further, the disabled children should be analysed according to type of disability.

See Also

Disabled children of school age-group.

Method of Calculation:

Actual survey of disabled schools and enrolment of disabled in such schools is required.

Known Indicator Limitations

The indicator is not available on regular basis.

Indicator 36: Number of Upper Primary Schools

Definition

Upper primary schools are the institutions, which impart education up to grade VII/VIII and are normally accredited to or sanctioned by some public authority and are known as recognised schools. A recognised school is one in which the course(s) of study followed is prescribed by the government. It runs regular classes. The official entry age for upper primary education usually varies between ten and eleven years. In principle, this level covers about three years of full-time schooling. Upper primary education constitutes the second cycle of compulsory education

Unit of Measurement

Absolute Number

Discussion

Number of upper primary schools over time may be useful to know the growth that is being taking place. This serves only limited purpose unless it is linked to number of habitations and rural population accessed to upper primary schooling facilities. The growth in upper primary schools should be linked to growth in primary schools. The policy directives in this regard are one upper primary school for every three primary schools, which should be examined over time to have real pattern of opening of schools. Since, education of girls is one of the major concerns in most of the states, the number of schools opened separately for girls may also be useful to analyse so as its rural and urban distribution

See Also

Number of primary schools, percentage of rural population and habitations covered by the upper primary schooling facilities within 3 km.

Method of Calculation:

Actual survey of schooling facilities is required.

Known Indicator Limitations

The official statistics includes only recognised institutions and hence the information is not complete.

Whatever information is available on number of schools is provisional in nature. The year for which the final information is available is 1992-93. Rural and urban distribution of schools is not available.

Indicator 36a: Habitations having Upper Primary Schooling Facilities within 3 km.**Definition**

Percentage of habitations having population 500 and more and served by upper primary schooling facilities within a distance of 3 km.

Unit of Measurement

Percentage to total number of habitations having population 500 and more.

Discussion

To know whether the existing schooling facilities are equally available or not, indicators of access are used. While analysing accessibility, a number of factors, such as, distance from the house, mode of travel and time need to reach school are considered. Generally, an upper primary school is supposed to be available within three kilometres from the habitation. Habitation is treated as the lowest unit of planning where schooling facilities are likely to be available. In addition, percentage of rural population served by the schooling facilities within 3 km. may also be considered as an indicator of access.

See Also

Rural population having access to upper primary schooling facilities within 3 km.

Method of Calculation

Divide the number of habitations having upper primary schooling facilities within 3 kms by the total number of habitations and multiply the result with 100.

Known Indicator Limitations

The indicator is not available on regular basis. Only recognised institutions have been considered in constructing indicator.

Indicator 36b: Rural Population having access to Upper Primary Schooling Facilities within 3 km.**Definition**

Percentage of rural population served by upper primary schooling facilities within a distance of 3 km.

Unit of Measurement

Percentage to total rural population.

Discussion

To know whether the existing schooling facilities are equally available or not, indicators of access are used. While analysing accessibility, a number of factors, such as, distance from the house, mode of travel and time need to reach schools are considered. In addition, percentage of population is served by upper primary schooling facilities within a distance of 3 km. may also be considered as an indicator of access.

See Also

Percentage of habitations having access to upper primary schooling facilities within 3 km.

Method of Collection

The indicator does not form part of the regular collection of statistics. However, it is available from the information generated by the NCERT as a part of its All-India Educational Survey, Sixth survey being the latest one with September 30, 1993 as its date of reference. The information is collected on habitation basis and all the habitations of the country are included. Structured data capture formats are used for the purposes of information collection.

Known Indicator Limitations

The indicator is not available on regular basis. Only recognised institutions have been considered in constructing indicator.

Indicator 36c: Gross Enrolment Ratio (Upper Primary Level)**Definition**

Total enrolment in upper primary (grades VI-VIII) education, regardless of age, expressed as a percentage of the eligible official upper primary school-age population (11-14 years) in a given school-year. The GER is widely used to show the general level of participation in and capacity of upper primary education. It is used in place of the net enrolment ratio (NER) when data on enrolment by single years of age are not available. It can also be used together with the NER to measure the extent of over-aged and under-aged enrolment. GER can sometimes exceed 100 per cent due to the inclusion of over-aged and under-aged pupils and repeaters.

Unit of Measurement

Percentage to corresponding school-age population i.e. 11-14 years.

Discussion

A high GER indicates a high degree of participation, whether the pupils belong to the official age group or not. A GER value approaching or exceeding 100 per cent indicates that the country is, in principle, able to accommodate all of its upper primary school-age population, but it does not indicate the proportion of that population actually enrolled. The achievement of a GER of 100 per cent is therefore a necessary but not sufficient condition for universal elementary education.

See Also

GER and NER at primary level.

Method of Calculation:

Divide the number of students enrolled in upper primary classes, regardless of age, by the population in the relevant official age-group in a given school year t and multiply the result with 100.

Known Indicator Limitations

The computation of indicator needs enrolment in grades VI-VIII. The enrolment (final) that is available is outdated and the latest one is provisional in nature. The population projections if not reliable, may dramatically change the ratio. Because of the over-age and under-age children, the GER may even cross hundred. The Net Enrolment Ratio is the most appropriate one to use.

Indicator 37: Number of Secondary/Higher Secondary Schools**Definition**

Total number of secondary/higher secondary schools. Secondary/Higher Secondary schools are the institutions, which impart education from grades IX to XII and are normally accredited to or sanctioned by some public authority and is known as recognised schools. A recognised school is one in which the course(s) of study followed is prescribed by the government/board.

Unit of Measurement

Absolute Number

Discussion

Number of secondary/higher secondary schools over time may be useful to know the growth that is taking place. This serves only limited purpose unless it is linked to enrolment. Type of courses, number of teachers, availability of laboratory etc. should also be looked in to while analysing growth in number of secondary schools.

See Also

GER and NER at secondary level

Method of Collection

Actual survey work of the schools.

Known Indicator Limitations

The official statistics includes only recognised institutions and hence the information is not complete.

Whatever information is available on number of schools is provisional in nature.

Indicator 38: Teachers in Higher Secondary/Junior College (10+2 New Pattern)**Definition**

Total number of teachers teaching higher secondary classes. Teacher is one who in his professional capacity, guide and direct pupils' learning experiences in gaining knowledge, attitudes and skills that are prescribed by a defined curriculum programme. This indicator is used to measure the level of human resources input, in terms of number of teachers.

Unit of Measurement

Absolute Number

Discussion

Number of teachers over time may be useful to know the growth that is taking place. This serves only limited purpose unless it is linked to enrolment and pupil-teacher ratio is computed. The growth in teachers should also be linked to trained teachers. This indicator does not take into account differences in teachers' academic qualifications, pedagogical training, professional experience and status, teaching methods, teaching materials and variations in classroom conditions -- all factors that could also affect the quality of teaching/learning and pupil performance. Growth in female teachers should also be measured.

See Also

Pupil teacher ratio and percentage of trained teachers

Method of Collection

Actual survey work of the number of teachers in schools.

Known Indicator Limitations

The official statistics includes only recognised institutions and hence the information is not complete. Whatever information is available on teachers is provisional in nature.

Indicator 39: Percentage of Trained Teachers (Secondary Education)

Definition

The number of secondary school teachers who are certified to have received the minimum organised teacher-training (pre-service or in-service) required for teaching in secondary education, expressed as a percentage of the total number of secondary school teachers. This indicator measures the proportion of secondary school teachers trained in pedagogical skills, according to national standards, to effectively teach and use the available instructional materials. It reveals also a state's commitment to invest in the development of its human capital involved in teaching activities. Teachers are persons who, in their professional capacity, guide and direct pupils' learning experiences in gaining the knowledge, attitudes and skills that are stipulated in a defined curriculum programme.

Unit of Measurement

Percentage to total secondary school teachers

Discussion

A high percentage of teachers certified to teach in secondary schools implies that a majority of the teaching force is trained and has the necessary pedagogical skills to teach and use the available instructional materials in an effective manner. This indicator does not take into account differences in teachers' experiences and status, teaching methods, teaching materials and variations in classroom conditions -- all factors that also affect the quality of teaching/learning. The details of the training imparted, duration, training agency etc. may also be analysed along with the indicator.

See Also

Number of teachers and pupil teacher ratio

Method of Calculation

Divide the number of trained teachers teaching at Secondary school stage of education by the total number of teachers teaching at the same school stage of education and multiply the result with 100.

Known Indicator Limitations

The official statistics includes only recognised institutions and hence the information is not complete. Male and female distribution of trained teachers is not available on regular basis. However, the same is available once in 5-7 years from the All-India Educational Survey conducted by the NCERT. Whatever information is available on teachers is provisional in nature.

Indicator 40: Pupil-Teacher Ratio (Secondary Education)**Definition**

Average number of pupils per teacher in secondary education in a given school year. Teachers are persons who, in their professional capacity, guide and direct pupils' learning experiences in gaining the knowledge, attitudes and skills that are stipulated in a defined curriculum programme. This indicator is used to measure the level of human resources input, in terms of number of teachers, in relation to the size of the pupil population.

Unit of Measurements

Number of Pupils per Teacher

Discussion

The pupil teacher ratio should normally be compared to establish national/state norms on the number of pupils per teacher for each level or type of education. A high pupil/teacher ratio suggests that each teacher has to deal with a large number of pupils and that, conversely, each pupil receive less attention from the teacher. It is generally assumed that a low pupil/teacher ratio signifies smaller classes, which enable the teacher to pay more attention to individual pupils and thus contribute to the better scholastic performance of the pupils. This indicator does not take into account differences in teachers' academic qualifications, pedagogical training, professional experience and status, teaching methods, teaching materials and variations in classroom conditions -- all factors that could also affect the quality of teaching/learning and pupil performance.

See Also

Percentage of trained teachers

Method of Calculation:

Divide the total number of students studying in secondary school stage of education by the total number of teachers teaching at secondary school stage of education.

Known Indicator Limitations

The official statistics includes only recognised institutions and hence the information is not complete. Whatever information is available on number of schools is provisional in nature.

Indicator 41: Percentage of Schools having Science Laboratory**Definition**

Secondary schools having science laboratory expressed as percentage to total number of secondary schools.

Unit of Measurement

Percentage to total number of secondary schools

Discussion

The indicator gives information regarding availability of science laboratory in secondary schools. This should be analysed in relation to other facilities available in school and linked to student per section, number of science teachers and also the details of type of equipments that are available in schools.

See Also

Number of secondary/higher secondary schools

Method of Calculation

Divide the total number of schools having laboratories for science subjects by the total number of secondary schools and multiply the result with 100.

Known Indicator Limitations

The indicator is not available on regular basis.

Indicator 42: Gross Enrolment Ratio (Secondary Education)**Definition**

Total enrolment in secondary education (grades IX-XII), regardless of age, expressed as a percentage of the eligible official secondary school-age population (14-18 years) in a given school-year. The GER is widely used to show the general level of participation in and capacity of secondary education. It is used in place of the net enrolment ratio (NER) when data on enrolment by single years of age are not available.

Unit of Measurement

Percentage to total secondary school age group population

Discussion

A high GER indicates a high degree of participation, whether the pupils belong to the official age group or not. A GER value approaching or exceeding 100 percent indicates that the states are, in principle, able to accommodate all of its secondary school-age population, but it does not indicate the proportion of that population actually enrolled.

See Also

Net enrolment ratio at secondary level and GER at elementary education.

Method of Collection

Data on enrolment is available through the regular collection of statistics. The Department of Education, Ministry of Human Resource Development, Government of India is responsible for the collection. Within the Department, the Division of Planning, Monitoring and Statistics is entrusted this task which

disseminates data through their annual publications that contain state-specific information. The structured Data Capture Formats are used to collect information. Information is collected on school basis and all the recognised institutions are included in the collection.

Known Indicator Limitations

Time lag is an important limitation. The enrolment (final) that is available is outdated and the latest one is provisional in nature. The actual population (age group 14-18 years) is also generally not available.

Indicator 43: Net Enrolment Ratio (Secondary Education)**Definition**

Enrolment in secondary education (grades IX-XII) of the official secondary school age group (14-18 years) expressed as a percentage to the corresponding population. The NER gives a more precise measurement of the extent of participation in secondary education of children belonging to the official secondary school age. NER should be based on total enrolment in all types of secondary schools and equivalent educational institutions, including public, private and all other institutions that provide organised educational programmes at the secondary level.

Unit of Measurement

Percentage to total secondary school age group population

Discussion

A high NER denotes a high degree of participation in secondary education of the official secondary school age-group (14-18 years). The maximum value of net enrolment ratio is 100 per cent. An NER that increases over time reflects improving participation at the secondary level of education.

See Also

Gross enrolment ratio at secondary level

Method of Calculation

Divide the number of students studying in secondary school stage of education of the relevant age-group by the population of the relevant age-group and multiply the result with 100.

Known Indicator Limitations

The computation of indicator needs age-grade matrix which is not available so as the projected population (age group 14-18 years).

Indicator 44: Enrolment in Vocational Education as a Percentage to Total Higher Secondary Enrolment

Definition

Enrolment in vocational education expressed as percentage to total higher secondary enrolment.

Unit of Measurement

Percentage to total higher secondary enrolment

Discussion

In accordance with the priority accorded to vocationalisation of education in the National Policy on Education, a Centrally Sponsored Scheme of Vocationalisation of Higher Secondary Education was introduced in 1988. The main objectives of the scheme are to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provide an alternative for those pursuing higher education without particular interest or purpose. The target laid down in the policy was to divert 10 per cent of higher secondary students to the vocational stream by 1995 and 25 per cent by 2000 AD. The percentage of enrolment in vocational education to total higher secondary enrolment would therefore help to know whether the above objectives are achieved or not. The growth in vocational enrolment should be analysed in the light of growth taken place in overall higher secondary enrolment.

See Also

GER at secondary level and at elementary level

Method of Calculation

Divide the number of students undergoing vocational courses at Secondary school stage of education by the total enrolment at the secondary school of education and multiply the result with 100.

Known Indicator Limitations

Time lag is an important limitation. Only recognised institutions have been considered in constructing indicator.

Indicator 45: Population (age 15 years and above) having completed at least Middle Level (Grade VIII)

Definition

Distribution of population of age 15 years and above having completed at least middle level of education.

Unit of Measurement

Per thousand distribution of persons of age 15 years and above

Discussion

Distribution of population by education level is a good measure of the quality of the population. It also presents information on completion of middle level, which reflects state's effort towards achieving the goal of universal enrolment. The attainment of primary and other higher levels by population may also be looked into along with the indicator.

See Also

Literacy rate 15+ population and GER at elementary level

Method of Collection

Household sample survey conducted by the National Sample Survey Organisation.

Known Indicator Limitations

Time lag is an important limitation. The survey is not conducted on regular basis, hence the information may not be available for the next 4-5 years. The indicator is not separately available for school age population i.e. 6-14 years.

Indicator 46: Expenditure on Secondary Education as Proportion to GNP and 46.1 Expenditure on Secondary Education as Percentage to GNP Per Capita**Definition**

Government current expenditure on secondary education expressed as a percentage of GNP shows the share of the value of the total national production of goods and services in a given year that has been devoted to secondary education. Public current expenditure per pupil on secondary education expressed as a percentage of GNP per capita in a given financial year measure the average cost of a pupil in secondary education in relation to GNP per capita. Both indicators when compared with similar indicators for other levels of education also measure the relative emphasis given to investment in secondary education.

These two indicators should be based on consistent data on government current expenditure that covers central, provincial and local government spending on all public secondary schools and subsidies to private educational institutions, teachers and pupils. The use of this indicator must take into account the coverage of government current expenditure for secondary education and the extent to which the GNP estimates represent the true level of national economic production.

Unit of Measurement

Percentage to GNP/GNP per capita

Discussion

High percentage values for both indicators (46) and (46.1) generally denote a high level of spending on secondary education. Indicator (46) measures the overall proportion of GNP that has been spent on secondary education by the public authorities (central, provincial and local). Indicator (46.1) measures the per pupil cost in secondary education in relation to GNP per capita, thereby relating average spending per pupil to the theoretical average per capita income within the country. One should interpret with care a high level of spending per pupil since this could simply reflect low enrolment. Per pupil expenditure as a percentage of GNP per capita should therefore be analysed in conjunction with enrolment ratios. Low expenditure per pupil and low enrolment in secondary education when compared to high expenditure and/or low enrolment in higher education suggests a need to reconsider resource allocations within the education sector.

See Also

GER and NER at secondary level and expenditure on other levels of education

Method of Calculation

- Divide expenditure on secondary education in a given year by the GNP for the same year and multiply the result with 100.
- Divide per pupil expenditure on secondary education in a given year by the GNP per capita for the same year and multiply the result with 100.

Symbolically:

$$(a) \quad \%XSE_{GNP}^t = \frac{XSE^t}{GNP^t} * 100$$

$$(b) \quad \%XSE_{GNPpc}^t = \frac{XSE_{pp}^t}{GNP_{pc}^t} * 100$$

Where,

$\%XSE_{GNP}^t$ = Expenditure on secondary education in year t as % of Gross National Product.

XSE^t = Expenditure on secondary education in year t.

GNP^t = Gross National Product of year t.

$\%XSE_{GNPpc}^t$ = Expenditure on secondary education in year t as % of Gross National Product per capita.

XSE_{pp}^t = Per Pupil expenditure on secondary education in year t.

GNP_{pc}^t = Per capita Gross National Product in year t.

Known Indicator Limitations

State-specific indicator is not available. Time lag is another important limitation. The private expenditure on education is not covered. However, all the recognised private institutions are covered in the annual collection.

Indicator 47: Expenditure on Secondary Education as Proportion to Total Expenditure on Education

Definition

Public expenditure for secondary education expressed as a percentage to total public expenditure on education. This indicator shows the relative share of expenditure on secondary education within overall public expenditure on education. This indicator should be based on consistent data on government expenditure for each level of education that cover public funding for both government and private educational institutions.

Unit of Measurement

Percentage to total expenditure on education

Discussion

A relatively high percentage of public expenditure devoted to secondary education denotes the priority given to this sector in the national and state educational policies and resource allocation. When interpreting this indicator, one should take into account the corresponding secondary level enrolment, the GER and NER, and then assess the relative current expenditure per pupil accordingly.

See Also

GER and NER at secondary level and expenditure on other levels of education

Method of Calculation:

Divide total expenditure on secondary education of school year t by the total expenditure on education for the same year and multiply the result with 100.

Known Indicator Limitations

Time lag is an important limitation. Private expenditure on education is not covered. However, all the recognised private institutions are covered in the annual collection.

Indicator 48: Enrolment (Higher Education) per 100,000 Population

Definition

Number of students enrolled in higher education per 100,000 population

Unit of Measurement

Number of students per 100,000 population

Discussion

The indicator shows extent of higher education facilities that are being used by inhabitants. To see the male and female participation in higher education, the indicator should be separately developed for male and female population. A low ratio means that the higher education facilities are not being fully utilised. It would

be better to consider the relevant age-specific population i.e. 18-23 years in place of total population and GER is calculated.

See Also

GER and percentage of enrolment according to different field of study

Method of Calculation

Divide enrolment in Higher Education by 1,00,000

Known Indicator Limitations

Indicator is not readily available. Time lag is another important limitation. It needs projected population, which if not reliable, may change the indicator, dramatically. In case of a few states, enrolment data is clubbed together and presented.

Indicator 49: Gross Enrolment Ratio (Higher Education)**Definition**

Total enrolment in higher education, regardless of age, expressed as a percentage to the eligible official population (18-23 years) in a given school year. The GER is widely used to show the general level of participation in and capacity of higher education. It is used in place of the net enrolment ratio (NER) when data on enrolment by single years of age are not available.

Unit of Measurement

Percentage to corresponding population i.e. 18-23 years

Discussion

A high GER indicates a high degree of participation, whether the pupils belong to the official age group or not. A GER value approaching or exceeding 100 percent indicates that the state is, in principle, able to accommodate all of its higher education age group population, but it does not indicate the proportion of that population actually enrolled.

See Also

Enrolment per 100,000 population

Method of Calculation

Divide the total enrolment in higher education in academic year t , by the population in the relevant age group 18-23 for the same year.

Known Indicator Limitations

Indicator is not available.

Indicator 50: Number of Teachers (Higher Education)**Definition**

Number of teachers teaching in university and other institutions of higher education. Teacher is one who in his professional capacity, guide and direct pupils' learning experiences in gaining knowledge, attitudes and skills that are prescribed by a defined curriculum programme. This indicator is used to measure the level of human resources input, in terms of number of teachers.

Unit of Measurement

Absolute Number

Discussion

Number of teachers over time may be useful to know the growth that is taking place. This serves only limited purpose unless it is linked to enrolment and pupil-teacher ratio is computed. This indicator does not take into account differences in teachers' academic qualifications, pedagogical training, professional experience and status, teaching methods, teaching materials and variations in classroom conditions -- all factors that could also affect the quality of teaching/learning and pupil performance.

See Also

Enrolment per 100,000 population and expenditure on higher education as percentage to total expenditure on education

Method of Calculation

Actual survey of higher education is required.

Known Indicator Limitations

State-specific number of teachers is not available. Time lag is another important limitation.

Indicator 51: Enrolment according to Different Fields of Study (Higher Education)**Definition**

Enrolment in higher education, in the broad field of study specified, expresses as a percentage to the total enrolment in higher education.

Unit of Measurement

Percentage to total higher education enrolment

Discussion

The students in higher education system are enrolled in different fields of study, namely, arts, science, commerce, education, engineering, medicine, agriculture, veterinary science, law etc. The percentage of enrolment in a field of study gives

details of their contribution to total enrolment in higher education. This should be analysed separately for master courses and courses leading to doctorates and other research programmes. It should also be of interest to know the distribution of students according to affiliated colleges and those in universities and their constituent colleges. To capture the trend in enrolment under different fields of study, it would be better to analyse enrolment over time and growth rates are calculated. This should also be analyzed in view of the manpower requirements both at the state and national levels.

See Also

Enrolment per 100,000 population

Method of Calculation

Divide the total enrolment in different broad fields of study for year t, by the total enrolment of higher education for the same year and multiply the result by 100. The process may be repeated for different broad fields of study and colleges etc.

Known Indicator Limitations

Time lag is an important limitation. State-specific information is not available.

Indicator 52(a): Expenditure on Higher Education as Proportion to GNP and 52(b) Expenditure on Higher Education as Percentage to GNP Per Capita**Definition**

Government current expenditure on higher education expressed as a percentage of GNP shows the share of the value of the total national production of goods and services in a given year that has been devoted to higher education. Public current expenditure per pupil on higher education expressed as a percentage of GNP per capita in a given financial year measures the average cost of a pupil in higher education in relation to GNP per capita. Both indicators when compared with similar indicators for other levels of education, also measure the relative emphasis given to investment in higher education.

These two indicators should be based on consistent data on government current expenditure that covers central, provincial and local government spending on all university and higher education institutions and subsidies to private educational institutions, teachers and pupils. The use of this indicator must take into account the coverage of government current expenditure for higher education and the extent to which the GNP estimates represent the true level of national economic production.

Unit of Measurement

Percentage GNP/GNP per capita

Discussion

High percentage values for both indicators (52) and (52.1) generally denote a high level of spending on higher education. Indicator (52) measures the overall proportion of GNP that has been spent on higher education by the public authorities (central, provincial and local). Indicator (52.1) measures the per pupil cost in higher education in relation to GNP per capita, thereby relating average spending per pupil to the theoretical average per capita income. One should interpret with care a high level of spending per pupil since this could simply reflect low enrolment.

See Also

Enrolment per 100,000 population and expenditure on other levels of education

Method of Calculation:

- (a) Divide expenditure on higher education in a given year by the GNP for the same year and multiply the result with 100.
- (b) Divide per pupil expenditure on higher education in a given year by the GNP per capita for the same year and multiply the result with 100.

Symbolically:

$$(a) \quad \%XHE_{GNP}^t = \frac{XHE^t}{GNP^t} * 100$$

$$(b) \quad \%XHE_{GNPpc}^t = \frac{XHE_{pp}^t}{GNP_{pc}^t} * 100$$

Where,

$\%XHE_{GNP}^t$ = Expenditure on Higher education as % of Gross National Product in year t.

XHE^t = Expenditure on Higher education in year t.

GNP^t = Gross National Product in year t.

$\%XHE_{GNPpc}^t$ = Expenditure on Higher education in year t as % of gross national product per capita.

XHE_{pp}^t = Per pupil expenditure on higher education in year t.

GNP_{pc}^t = Per capita gross national product in year t.

Known Indicator Limitations

Time lag is an important limitation. The private expenditure on education is not covered. However, all the recognised institutions of university and higher education are included in the annual collection.

Indicator 53: Expenditure on University & Higher Education as Percentage to Total Expenditure on Education

Definition

Government expenditure on higher education expressed as a percentage of total public expenditure on education. This indicator shows the relative share of expenditure on higher education within overall public expenditure on education. This indicator should be based on consistent data on government expenditure for each level of education that cover public funding for both government and private educational institutions.

Unit of Measurement

Percentage to total expenditure on education

Discussion

A relatively high percentage of public expenditure devoted to higher education denotes the priority given to this sector in national educational policies and resource allocation. When interpreting this indicator, one should take into account the corresponding enrolment and then assess the relative current expenditure per pupil accordingly.

See Also

Enrolment per 100,000 population and expenditure on other levels of education

Method of Calculation

Divide total expenditure on university higher education of year t by the total expenditure on education for the same year and multiply the result with 100.

Known Indicator Limitations

Time lag is an important limitation. The private expenditure on education is not covered. However, all the recognised institutions of university and higher education are included in the annual collection.

School Life Expectancy

Definition: School life expectancy is defined as the total number of years of schooling which a child of a certain age can expect to receive in the future, assuming that the probability of his or her being enrolled in school at any particular age is equal to the current enrolment ratio for that age.

Purpose : This indicator shows the overall level of development of an educational system in terms of the number of years of education that a child can expect to achieve.

Calculation method : For a child of a certain age a , the school life expectancy is calculated as the sum of the age specific enrolment ratios for the reference age-range a to n .

Formula:

$$SLE_a^t = \sum_{i=a}^n \frac{E_i^t}{P_i^t}$$

Where,

SLE_a^t = School Life Expectancy at an age a in year t .

E_i^t = Enrolment of the population of age i (for $i = a, a+1, \dots, n$) in school-year t ; n denotes the theoretical upper age-limit of schooling.

P_i^t = Population of age i in school-year t .

Data required : Enrolment by age at all levels of education; population of official school-age for all levels of education by single years of age. Or, alternatively, the age specific enrolment ratios for all levels of education.

Data source : School register, school survey or census for data on enrolment by age. Population censuses and estimates for school-age population.

Type of disaggregation : School life expectancy is to be disaggregated by gender and by geographical location (region, urban/rural).

Interpretation : Relatively higher school life expectancy indicates greater probability for children to spend more years in education and higher overall retention within the education system. It must be noted that the expected number of years does not necessarily coincide with the expected number of grades of education completed, because of grade repetition.

Quality standards : School life expectancy requires complete and reliable data on enrolment and population by single-years of age corresponding to all levels of education for the entire duration of schooling, including tertiary education.

Limitations : Caution is required when school life expectancy is used for inter-country comparison; neither the length of the school-year nor the quality of education is necessarily the same in each country. In addition, as this indicator does not directly take into account the effects of repetition, it is not strictly comparable between countries with automatic promotion and those allowing grade repetition. It should also be noted that, depending on countries, the enrolment data do not account for many types of continuing education and training. For these reasons, this indicator should be interpreted in the light of complementary indicators like repetition rates.

[See also No.5 Education Indicator, 2011]

TRANSITION RATES

Definition: The number of pupils (or students) admitted to the first grade of a higher level of education in a given year, expressed as a percentage of the

number of pupils (or students) enrolled in the final grade of the lower level of education in the previous year.

Purpose: This indicator conveys information on the degree of access or transition from one cycle or level of education to a higher one. Viewed from the lower cycle or level of education, it is considered as an output indicator, viewed from the higher educational cycle or level, it constitutes an indicator of access. It can also help in assessing the relative selectivity of an education system, which can be due to pedagogical or financial requirements.

Calculation method: Divide the number of new entrants in the first grade of the specified higher cycle or level of education by the number of pupils who were enrolled in the final grade of the preceding cycle or level of education in the previous school year, and multiply by 100.

Formula:

$$TR_{h,h+1}^t = \frac{E_{h+1,1}^{t+1} - R_{h+1,1}^{t+1}}{E_{h,f}^t} * 100$$

Where,

$TR_{h,h+1}^t$ = Transition rate (from cycle or level of education **h** to **h+1** in school year **t**)

$E_{h+1,1}^{t+1}$ = Number of pupils enrolled in the **first** grade at level of education **h+1** in school-year **t+1**

$R_{h+1,1}^{t+1}$ = Number of pupils repeating the **first** grade at level of education **h+1** in school-year **t+1**

$E_{h,f}^t$ = Number of pupils enrolled in **final** grade **f** at level education **a** in school year **t**.

[See also No.6 Education Indicator, 2011]

Data required: Enrolment in the final grade of a given cycle or level of education and new entrants to (or enrolment minus repeaters) the first grade of the higher cycle or level of education.

Data source: School register, school survey or census.

Data disaggregation: Transition rate is to be disaggregated by gender, level of education and geographical location (region, rural/urban).

Interpretation: High transition rates indicate a high level of access or transition from one level of education to the next. They also reflect the intake capacity of the next level of education. Inversely, low transition rates can signal problems in the bridging between two cycles or levels of education, due to either deficiencies in the examination system, or inadequate admission capacity in the higher cycle or level of education, or both.

Quality standards: This indicator should be based on reliable data on new entrants (or on enrolment and repeaters) especially in the first grade of the higher cycle or level of education.

Limitations: This indicator can be distorted by incorrect distinction between new entrants and repeaters, especially in the first grade of the specified higher level of education. Students who interrupted their studies for one or more years after having completed the lower level of education, together with the migrant students could also affect the quality of this indicator.

PERCENTAGE OF REPEATERS

Definition: Total number of pupils who are enrolled in the same grade as in a previous year, expressed as a percentage of the total enrolment to the specified grade.

Purpose: This indicator measures the extent and patterns of repetition by grade, as part of the internal efficiency of education system.

Calculation method: Divide the number of pupils (or students) repeating a given grade in a given school-year by the number of pupils or students enrolled in the same grade in the same school-year and multiply by 100.

Formula:

$$PR_i^t = \frac{R_i^t}{E_i^t} * 100$$

Where,

PR_i^t = Percentage of repeaters in grade i , in school-year t .

R_i^t = Number of pupils repeating grade i in school-year t .

E_i^t = Number of pupils enrolled in grade i , in school-year t .

[See also No.14: Education Indicator, 2011]

Data required: Number of repeaters and enrolment by grade for the same school-year.

Data source: School register, school census or surveys for data on repeaters and enrolment by grade.

Types of disaggregation: This indicator is to be calculated by gender, geographical location (region, rural/urban areas) and level of education.

Interpretation: Ideally percentage of repeaters should be zero percent indicating absence of grade repetition. Higher PR means there are serious problems of grade repetition, hence of internal efficiency of the education system.

Quality standards: The definition of repeaters above should be unambiguously applied to include even pupils or students repeating more than once in the same grade and those who repeat the same grade while transferring from one school

to another. Pupils or students who were not studying in the same grade in the previous year should be excluded, for example, those who were in a higher or lower grade.

Limitations: The level and maximum number of grade repetitions allowed can in some cases be determined by the educational authorities with the aim of coping with limited grade capacity and increasing the internal efficiency and flow of pupils (or students). Care should be taken in interpreting this indicator, especially in comparisons between education systems.

REPETITION RATES

Definition: Proportion of pupils from a cohort enrolled in a given grade at a given school-year who study in the same grade in the following school-year.

Purpose: It measures the phenomenon of pupils repeating a grade, and its effect on the internal efficiency of educational systems. In addition, it is one of the key indicators for analysing and projecting pupil flows from grade to grade within an educational cycle.

Calculation method: Divide the number of repeaters in a given grade in school-year $t+1$ by the number of pupils from the same cohort enrolled in the same grade in the previous school-year t .

Formula:

$$r_i^t = \frac{R_i^{t+1}}{E_i^t}$$

Where,

r_i^t = Repetition Rate at grade i in school-year t .

R_i^{t+1} = Number of pupils repeating grade i , in school-year $t+1$.

E_i^t = Number of pupils enrolled in grade i , in school-year t .

[See also No.10: Education Indicator, 2011]

Data required: Enrolment by grade for school-year t and number of repeaters from the same cohort by grade for year $t+1$.

Data source: School register, school survey or census for data on enrolment and repeaters by grade.

Type of disaggregation: Repetition Rate can be disaggregated by sex, by geographical location (regions, urban/rural),by level of education and by type of institution (public/private).

Interpretation: Repetition Rate ideally should approach zero percent; a high Repetition Rate reveals problems in the internal efficiency of the educational

system. When compared across grades, the patterns can indicate specific grades for which there is higher repetition, hence requiring more in depth study of causes and possible remedies.

Quality standard: Like other pupil-flow rates (promotion and drop-out rates), the repetition rate is derived by analysing data on enrolment and repeaters by grade for two consecutive years. One should therefore ensure that such data are consistent in terms of coverage over time and across grades (cohort analysis). Special attention should also be paid to minimizing some common errors which may bias these flow-rates, such as: Over-reporting enrolment/repeaters (particularly in grade one); incorrect distinction between new entrants and repeaters; transfers of pupils between grades and schools.

Limitations: The level and maximum number of grade repetitions allowed can in some cases be determined by the educational authorities with the aim of coping with limited grade capacity and increasing the internal efficiency and flow of pupils (or students). Care should be taken in interpreting this indicator, especially in comparisons between education systems.

SURVIVAL RATES BY GRADE

Definition: Percentage of a cohort of pupils (or students) enrolled in the first grade of a given level or cycle of education in a given school-year who are expected to reach each successive grades.

Purpose: Survival rate measures the holding power and internal efficiency of an education system. It illustrates the situation regarding retention of pupils (or students) from grade to grade in schools, and conversely the magnitude of drop-out by grade.

Calculation method: Divide the total number of pupils belonging to a school-cohort who reached each successive grade of the specified level of education by the number of pupils in the school-cohort i.e. those originally enrolled in the first grade of the same level of education, and multiply the result by 100.

Formula:

$$SR_{g,i}^k = \frac{\sum_{t=1}^m P_{g,i}^t}{E_g^k} * 100$$

$$\text{Where, - } P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$$

i = grade (1, 2, 3, ..., n) t = year (1, 2, 3, ..., m) g = pupil-cohort.

$SR_{g,i}^k$ = Survival Rate of pupil-cohort **g** at grade **i** for a reference year **k**.

E_g^k = Total number of pupils belonging to a cohort **g** at a reference year **k**.

$P_{g,i}^t$ = Promotees from E_g^k who would join successive grades i throughout successive years t .

R_i^t = Number of pupils repeating grade i in school-year t .

[See also No.11: Education Indicator, 2011]

Data required: Enrolment by grade for two consecutive years (years t and $t+1$); number of repeaters by grade for year $t+1$.

Data source: School register, school survey or census.

Type of disaggregation: Survival Rates can be disaggregated by gender, by geographical location (region, urban/rural) and type of institution (private/public). It can also be disaggregated between survival with and without repetition.

Interpretation: Survival Rate approaching 100% indicates a high level of retention and low incidence of drop-out. Survival Rate may vary from grade to grade, giving indications of grades with relatively more or less drop-outs. The distinction between survival rate with and without repetition is necessary to compare the extent of wastage due to drop-out and repetition. Survival rate to grade 5 of primary education is of particular interest since this is commonly considered as pre-requisite for sustainable literacy.

Quality standards: Since the calculation is based on pupil-flow rates, the reliability of the Survival Rate depends on the consistency of data on enrolment and repeaters in term of coverage over time and across grades.

Limitations: Given that this indicator is usually estimated using cohort analysis models that are based on a number of assumptions, care should be taken in using of the results in comparisons.

COEFFICIENT OF EFFICIENCY

Definition: The ideal (optimal) number of pupil-years required (i.e. in the absence of repetition and drop-out) to produce a number of graduates from a given school-cohort for a cycle or level of education expressed as a percentage of the actual number of pupil-years spent to produce the same number of graduates. Input-Output ratio, which is the reciprocal of the coefficient of efficiency, is often used as an alternative.

N.B. One school-year spent in a grade by a pupil is counted as one pupil-year.

Purpose: This is a synthetic indicator of the internal efficiency of an educational system. It summarises the consequences of repetition and drop-out on the efficiency of the educational process in producing graduates.

Calculation method: Divide the ideal number of pupil-years required to produce a number of graduates from a given school-cohort for the specified level of education, by the actual number of pupil-years spent to produce the same number of graduates, and multiply the result by 100.

For more details, see the flow diagram on cohort analysis.

$$\text{Symbolically: } CE_g = \frac{\sum_{j=n}^{N+k} G_{g,j} * n}{\left\{ \sum_{j=n}^{N+k} G_{g,j} * j \right\} + \left\{ \sum_{j=1}^{n+k} D_{g,j} * j \right\}} * 100$$

Where,

CE_g = Coefficient of Efficiency for a pupil-cohort g .

$G_{g,n}$ = the number of pupils graduating from cohort g in final grade n after n years of study (without repetition)

$G_{g,j}$ = the number of pupils graduating from cohort g in final grade n after j years of study

$D_{g,j}$ = the number of pupils (of the cohort g) dropping out after j years of study

k denotes the number of repetitions allowed; n the prescribed normal duration of study for a cycle or level of education; g the pupil-cohort; and j the number of years of study.

[See also No.12: Education Indicator, 2011]

Data required: Number of graduates and drop-outs by length of study. These data can also be derived using the reconstructed cohort model, which requires enrolment by grade for two consecutive years (years t and $t+1$); number of repeaters by grade for year $t+1$ and number of graduates for year t .

Data source: School register, school survey or census for data on repeaters and enrolment.

Type of disaggregation: The Coefficient of Efficiency can be disaggregated by gender, by geographical location (region, urban/rural), and by school type (private/public).

Interpretation: A Coefficient of Efficiency approaching 100% indicates a high overall level of internal efficiency and no wastage due to repetition and drop-out. Coefficient of Efficiency of less than 100% signals inefficiency due to grade repetition and drop-out. As the reciprocal, the optimum input-output ratio is unity i.e. 1, and inefficiency arises from any point which is greater than one.

Quality standards: Since the calculation of this indicator is based on pupil-flow rates, its reliability depends on the consistency of data on enrolment and repeaters in term of coverage over time and across grades. Differences in national regulations concerning the number of repetitions allowed constitute an aspect to be taken into account when using this indicator for inter-country comparisons.

Limitations: Given that this indicator is usually derived using cohort analysis models that are based on a number of assumptions, and owing to the highly synthetic nature of this indicator, care should be taken in the use of the results in comparing education systems. From a conceptual viewpoint, having most pupils (or students) graduating within the prescribed duration of the cycle is optimal with regard to economic efficiency and resource utilization, but this does not necessarily imply achievement of the expected learning outcomes. Also, according to this calculation method, early drop-outs (i.e. from lower grades) can result in higher internal efficiency than late drop-out (i.e. from higher grades); this means that efficiency from the economic point of view can be in contradiction with educational objectives aiming at retaining pupils in schools until higher grades when they would have acquired the desired knowledge and skills.

YEARS-INPUT PER GRADUATE

Definition: The estimated average number of pupil-years spent by pupils (or students) from a given cohort who graduate from a given cycle or level of education, taking into account the pupil-years wasted due to drop-out and repetition.

N.B. One school-year spent in a grade by a pupil is equal to one pupil-year.

Purpose: To assess the extent of educational internal efficiency in terms of the estimated average number of years to be invested in producing a graduate.

Calculation method: Divide the total number of pupil-years spent by a pupil-cohort (graduates plus drop-outs) in the specified level of education by the sum of successive batch of graduates belonging to the same cohort.

Formula :

$$YIG_g = \frac{\left\{ \sum_{j=n}^{n+k} G_{g,j} * j \right\} + \left\{ \sum_{j=1}^{n+k} D_{g,j} * j \right\}}{\sum_{j=n}^{n+k} G_{g,j}} ;$$

For more details, see the flow diagram on cohort analysis

Where,

YIG_g = Years input per graduate (for graduates belonging to cohort **g**)

$G_{g,j}$ = Graduates from cohort **g** after **j** years of study.

k = number of grade (or duration) in the cycle.

k denotes the number of repetitions allowed; **n** the prescribed normal duration of study for a cycle or level of education; **g** the pupil-cohort; and **j** the number of years of study.

[See also No.13: Education Indicator, 2011]

Data required: Total number of pupil-years spent by the pupil-cohort and the total number of graduates from the same cohort. These data can be derived using cohort reconstructed model, which requires enrolment by grade for two consecutive years (years t and $t+1$); number of repeaters by grade for year $t+1$ and number of graduates for year t .

Data source: School register, school survey or census or records.

Type of disaggregation: The years input per graduate can be disaggregated by gender, by geographical location (region, urban/rural) and by type of institution (private/public).

Interpretation: The closer the value of this indicator is to the theoretical number of grades (or duration) of the specified education cycle, the higher the internal efficiency and the lesser the negative effects of repetition and drop-out. A high number of pupil-years per graduate as compared to the normal duration, denotes waste of resources and hence inefficiency.

Quality standards: Since the calculation of this indicator is based on pupil-flow rates, its reliability depends on the consistency of data on enrolment and repeaters in term of coverage over time and across grades. Differences in national regulations concerning the number of repetitions allowed constitute an aspect to be taken into account when using this indicator for inter-country comparisons.

Limitations: From a conceptual viewpoint, having most pupils (or students) graduating within the prescribed duration of the cycle is optimal with regard to economic efficiency and resource utilization, but this does not necessarily imply achievement of the expected learning outcomes. Also, according to this calculation method, early drop-outs (i.e. from lower grades) can result in higher internal efficiency than late drop-out (i.e. from higher grades); this means that efficiency from the economic point of view can be in contradiction with educational objectives aiming at retaining pupils in schools until higher grades when they would have acquired the desired knowledge and skills.

Source: UNESCO, PARIS

Appendix “d-2”UNESCO INSTITUTE *for* STATISTICS**Education Indicators 2011-Technical Guidelines****TABLE OF CONTENTS**

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(1) **ADULT LITERACY OR ILLITERACY RATES.**

Definition: Adult literacy rate is defined as the percentage of population aged 15 years and over who can both read and write with understanding a short simple statement on his/her everyday life. Adult illiteracy is defined as the percentage of the population aged 15 years and over who cannot both read and write with understanding a short simple statement on his/her everyday life.

Purpose: Adult literacy rate shows the accumulated achievement of primary education and literacy programmes in imparting basic literacy skills to the population, thereby enabling them to apply such skills in daily life and to continue learning and communicating using the written word. Literacy represents a potential for further intellectual growth and contribution to economic-socio-cultural development of society. Illiteracy rates indicate the extent of need for policies and efforts in organizing adult literacy programmes and quality primary education.

Calculation method: Divide the number of literates aged 15+ years by the corresponding age-group population and multiply the result by 100. Alternatively, apply the same method using the number of illiterates to derive the illiteracy rate; or by subtracting literacy rate from 100%.

Formula:

$$LIT_{15+}^t = \frac{L_{15+}^t}{P_{15+}^t} * 100 \quad \text{where,}$$

$$LIT_{15+}^t = \frac{L_{15+}^t}{P_{15+}^t} * 100 \quad \text{or} \quad ILL_{15+}^t = \frac{ILL_{15+}^t}{P_{15+}^t} * 100$$

Where,

LIT_{15+}^t = Adult Literacy Rate (15+) in year t.

ILL_{15+}^t = Adult illiteracy Rate (15+) in year t.

L_{15+}^t = Adult Literate Population (15+) in year t.

P_{15+}^t = Adult Population (15+) in year t.

ILL_{15+}^t = Adult Illiterate Population (15+) in year t.

$LIT_{15+}^t + ILL_{15+}^t = 100\%$

Data required: Population and number of literates (or illiterates) aged 15 years and over.

Data source: Mainly National population census; household and/or labour force surveys.

Types of disaggregation: This indicator is to be calculated by gender, geographical location (region, urban/rural) and by the following five-year age-

groups: 15-19; 20-24; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; 60-64; 65 and above.

Interpretation: High literacy rate (or low illiteracy rate) indicates a wide coverage of the primary education system and/or literacy programmes in that a large proportion of the population have acquired the ability of using the written word in daily life and to continue learning. It is common practice to present and analyse literacy rates together with the absolute **number of adult illiterates** as improvements in literacy rates may sometimes be accompanied by increases in the illiterate population due to the changing demographic structure.

Quality standards: It will be useful to align measurements of literacy with the standard international definition given above, and to administer literacy tests on a sample basis to verify and improve the quality of literacy statistics.

Limitations: It has been observed that some countries apply definitions and criteria for literacy which are different from the international standards defined above, or equate persons with no schooling to illiterates, or change definitions between censuses. Practices for identifying literates and illiterates during actual census enumeration may also vary, as well as errors in literacy self-declaration can affect the reliability of literacy statistics.

(2) **NUMBER OF ADULT ILLITERATES.**

Definition: The population aged 15 years and above who cannot both read and write with understanding a short simple statement on their every day life is the number of adult illiterates.

Purpose: The purpose of this indicator is to identify the size and if possible also the whereabouts and characteristics of the illiterate population aged 15 years and above who should be targeted for policies and efforts in expanding adult literacy programmes.

Calculation method: Either use data on the number of adult illiterates collected during population census or survey or subtract the number of adult literates from the total population aged 15 years and above.

Data required: Population and number of illiterates aged 15 years and above by sex.

Data sources: Population census, household, fertility and labour force surveys.

Type of disaggregation: This indicator is to be calculated by sex, geographical location, (region, rural/urban areas) and by the following five-year age-groups: 15-19, 20-24, 25-29,....,60-64, 65 and above.

Interpretation: The higher the illiterate population of the country, the more the need for expanding primary education and adult literacy programmes. When disaggregated by geographical locations, it can pinpoint the areas needing most literacy efforts, and policies may be set to target such efforts at priority population groups of a particular gender and age-group(s).

Quality standards: It will be useful to align all measurements of literacy with the standard international definition and to administer literacy tests on sample basis to verify and improve the quality of literacy statistics.

Limitations: It has been observed that some countries apply definitions and criteria of literate (illiterate) which are different from the international standards or equate persons with no schooling as illiterates. Practices for identifying literates and illiterates during actual census enumeration may also vary, as well as errors in literacy self-declaration can also affect the reliability of literacy statistics.

(3) APPARENT INTAKE RATE

Definition: Total number of new entrants in the first grade of primary education, regardless of age, expressed as a percentage of the population at the official primary school-entrance age.

Purpose: Apparent Intake Rate indicates the general level of access to primary education. It also indicates the capacity of the education system to provide access to grade 1 for the official school-entrance age population. This indicator is used as a substitute to Net Intake Rate (NIR) in the absence of data on new entrants by single years of age.

Calculation method: Divide the number of new entrants in grade 1, irrespective of age, by the population of official school-entrance age, and multiply the result by 100.

Formula:

$$\text{AIR}^t = \frac{N^t}{P_a^t} * 100 \quad \text{where:}$$

Where,

AIR^t = Apparent Intake Rate in school-year t.

N^t = Number of new entrants in the first grade of primary education in school-year t.

P_a^t = Population of official primary school entrance age, in school year t.

N.B.: When data on new entrants are not separately reported, they can be derived by subtracting the number of repeaters from enrolment in the first grade, before calculating the apparent intake rate.

Data required: New entrants in the first grade of primary education (or enrolment minus repeaters in the first grade); population of the official primary school-entrance age.

Data source: School register, school survey or census for data on new entrants by age. Population census or estimates for primary school-entrance age population.

Type of disaggregation: The Apparent Intake Rate is to be disaggregated by gender and by geographical location (region, rural/urban).

Interpretation: A high Apparent Intake Rate indicates a high degree of access to primary education. As this calculation includes all new entrants to first grade (regardless of age), the Apparent Intake Rate can be more than 100%, due to over-aged and under-aged children entering primary school for the first time.

Quality standards: Data on population used in deriving this indicator should refer strictly to the official school entrance age. Care should be taken not to include repeaters in grade 1 in the calculation, since this will lead to an inflated Apparent Intake Rate.

Limitations: A high Apparent Intake Rate may be the effect of a backlog of over-aged children who have not entered school when they were at the official primary school-entrance age. 6

(4) NET INTAKE RATE

Definition: New entrants in the first grade of primary education who are of the official primary school-entrance age, expressed as a percentage of the population of the same age.

Purpose: To show the level of access to primary education of the eligible population of primary school-entrance age.

Calculation method: Divide the number of children of official primary school-entrance age who enter the first grade of primary education by the population of the same age, and multiply the result by 100.

Formula:

$$NIR^t = \frac{N_a^t}{P_a^t} * 100 ;$$

Where,

NIR^t = Net Intake Rate in school-year t.

N_a^t = Number of children of official Primary school entrance age a who enter the first grade of Primary education in school-year t.

P_a^t = Population of official Primary school entrance age a, in school –year t.

Data required: New entrants in first grade of primary education by single years of age; population of official primary school-entrance age.

Data source: School register, school survey or census for data on new entrants by age. Population census or estimates for school-entrance age population.

Type of disaggregation: The Net Intake Rate is to be disaggregated by gender and by geographical location (region, rural/urban).

Interpretation: A high Net Intake Rate indicates a high degree of access to primary education for the official primary school-entrance age children. For countries which have subscribed to the policy goal of universal primary education, a NIR of 100% will be a necessary condition.

Quality standards: Data on both new entrants and population used in deriving this indicator should refer strictly to the official school-entrance age. NIR in principle should not exceed 100%.

Limitations: This indicator can be distorted by an incorrect distinction between new entrants and repeaters in the first grade. This can be the case especially for under-aged pupils who may repeat the first grade at the official-entrance age. 7

(5) SCHOOL-LIFE EXPECTANCY

Definition: School life expectancy is defined as the total number of years of schooling which a child of a certain age can expect to receive in the future, assuming that the probability of his or her being enrolled in school at any particular age is equal to the current enrolment ratio for that age.

Purpose: This indicator shows the overall level of development of an educational system in terms of the number of years of education that a child can expect to achieve.

Calculation method: For a child of a certain age **a**, the school life expectancy is calculated as the sum of the **age specific enrolment ratios** for the reference age-range **a** to **n**.

Formula:

$$SLE_a^t = \sum_{i=a}^n \frac{E_i^t}{P_i^t}$$

where,

SLE_a^t = School Life Expectancy at an age **a** in year **t**.

E_i^t = Enrolment of the population of age **i** (for $i=a, a+1 \dots n$) in school year **t**, **n** denotes the theoretical upper age limit of schooling.

P_i^t = Population of age **i**, in school year **t**.

Data required: Enrolment by age at all levels of education; population of official school-age for all levels of education by single years of age. Or, alternatively, the age specific enrolment ratios for all levels of education.

Data source: School register, school survey or census for data on enrolment by age. Population censuses and estimates for school-age population.

Type of disaggregation: School life expectancy is to be disaggregated by gender and by geographical location (region, urban/rural).

Interpretation: Relatively higher school life expectancy indicates greater probability for children to spend more years in education and higher overall retention within the education system. It must be noted that the expected number of years does not necessarily coincide with the expected number of grades of education completed, because of grade repetition.

Quality standards: School life expectancy requires complete and reliable data on enrolment and population by single years of age corresponding to all levels of education for the entire duration of schooling, including tertiary education.

Limitations: Caution is required when school life expectancy is used for inter-country comparison; neither the length of the school-year nor the quality of education is necessarily the same in each country. In addition, as this indicator does not directly take into account the effects of repetition, it is not strictly comparable between countries with automatic promotion and those allowing grade repetition. It should also be noted that, depending on countries, the enrolment data do not account for many types of continuing education and training. For these reasons, this indicator should be interpreted in the light of complementary indicators,

(6) TRANSITION RATES

Definition: The number of pupils (or students) admitted to the first grade of a higher level of education in a given year, expressed as a percentage of the number of pupils (or students) enrolled in the final grade of the lower level of education in the previous year.

Purpose: This indicator conveys information on the degree of access or transition from one cycle or level of education to a higher one. Viewed from the lower cycle or level of education, it is considered as an output indicator, viewed from the higher educational cycle or level, it constitutes an indicator of access. It can also help in assessing the relative selectivity of an education system, which can be due to pedagogical or financial requirements.

Calculation method: Divide the number of new entrants in the first grade of the specified higher cycle or level of education by the number of pupils who were enrolled in the final grade of the preceding cycle or level of education in the previous school year, and multiply by 100.

$$\text{Formula: } TR_{h,h+1}^t = \frac{E_{h+1,1}^{t+1} - R_{h+1,1}^{t+1}}{E_{h,f}^t} * 100$$

Where,

$TR_{h,h+1}^t$ = Transition rate (from cycle or level of education **h** to **h+1** in school year **t**)

$E_{h+1,1}^{t+1}$ = Number of pupils enrolled in the **first** grade at level of education **h+1** in school-year **t+1**

$R_{h+1,1}^{t+1}$ = Number of pupils repeating the **first** grade at level of education **h+1** in school-year **t+1**

$E_{h,f}^t$ = Number of pupils enrolled in **final** grade **f** at level education **a** in school year **t**.

Data required: Enrolment in the final grade of a given cycle or level of education and new entrants to (or enrolment minus repeaters) the first grade of the higher cycle or level of education.

Data source: School register, school survey or census.

Data disaggregation: Transition rate is to be disaggregated by gender, level of education and geographical location (region, rural/urban).

Interpretation: High transition rates indicate a high level of access or transition from one level of education to the next. They also reflect the intake capacity of the next level of education. Inversely, low transition rates can signal problems in the bridging between two cycles or levels of education, due to either deficiencies in the examination system, or inadequate admission capacity in the higher cycle or level of education, or both.

Quality standards: This indicator should be based on reliable data on new entrants (or on enrolment and repeaters) especially in the first grade of the higher cycle or level of education.

Limitations: This indicator can be distorted by incorrect distinction between new entrants and repeaters, especially in the first grade of the specified higher level of education. Students who interrupted their studies for one or more years after having completed the lower level of education, together with the migrant students could also affect the quality of this indicator.

(7) GROSS ENROLMENT RATIO

Definition: Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school-year.

Purpose: Gross Enrolment Ratio is widely used to show the general level of participation in a given level of education. It indicates the capacity of the education system to enrol students of a particular age-group. It is used as a substitute indicator to net enrolment ratio (**NER**) when data on enrolment by single years of age are not available. Furthermore, it can also be a complementary indicator to NER by indicating the extent of over-aged and under-aged enrolment.

Calculation method: Divide the number of pupils (or students) enrolled in a given level of education regardless of age by the population of the age-group which officially corresponds to the given level of education, and multiply the result by 100.

Formula:

$$GER_h^t = \frac{E_h^t}{P_{h,a}^t} * 100$$

Where,

GER_h^t = Gross Enrolment Ratio at level of education h in school-year t.

E_h^t = Enrolment at the level of education h in school-year t.

$P_{h,a}^t$ = Population in age group a which officially corresponds to the level of education h in school-year t.

Data required: Total enrolment for a given level of education. Population of the age-group corresponding to the specified level.

Data source: School register, school survey or census for data on enrolment by level of education. Population censuses or estimates for school-age population normally obtained from the Central Statistical Office.

Types of disaggregation: This indicator is to be disaggregated by gender, by geographical location (region, urban/rural) and by level of education.

Interpretation: A high GER generally indicates a high degree of participation, whether the pupils belong to the official age-group or not. A GER value of 100 percent indicates that a country is, in principle, able to accommodate all of its school-age population, but it does not indicate the proportion already enrolled. The achievement of a GER of 100 percent is therefore a necessary but not sufficient condition for enrolling all eligible children in school. When the GER exceeds 90 percent for a particular level of education, the aggregate number of places for pupils is approaching the number required for universal access of the official age-group. However, this is a meaningful interpretation only if one can expect the under-aged and over-aged enrolments to decline in the future to free places for pupils from the expected age-group.

Quality standards: GER at each level of education should be based on total enrolment in all types of schools and education institutions, including public, private and all other institutions that provide organised educational programmes.

Limitations: GER can be over 100% due to the inclusion of over-aged and under-aged pupils/students because of early or late entrants, and grade repetition. In this case, a rigorous interpretation of GER needs additional information to assess the extent of repetition, late entrants, etc.

(8) NET ENROLMENT RATIO

Definition: Enrolment of the official age-group for a given level of education expressed as a percentage of the population in the corresponding age-group for that education level.

Purpose: To show the extent of participation in a given level of education of children and youths belonging to the official age-group corresponding to the given level of education.

Calculation method: Divide the number of pupils enrolled who are of the official age-group for a given level of education by the population for the same age-group and multiply the result by 100.

Formula:

$$\text{NER}_h^t = \frac{E_{h,a}^t}{P_{h,a}^t} * 100$$

Where,

NER_h^t = Net Enrolment Ratio at level of education h in school-year t.

$E_{h,a}^t$ = Enrolment of population of age group a at level of education h in school year t.

$P_{h,a}^t$ = Population in age group a which officially corresponds to level of education h in school year t.

Data required: Enrolment by single years of age for a given level of education. Population of the age-group corresponding to the given level of education.

Data source: School register, school survey or census for data on enrolment by age. Population censuses or estimates for school-age population normally obtained from the Central Statistical Office.

Types of disaggregation: This indicator is to be disaggregated by gender, by geographical location (region, urban/rural) and by level of education.

Interpretation: A high NER denotes a high degree of participation of the official school-age population. The theoretical maximum value is 100%. Increasing trends can be considered as reflecting improving participation at the specified level of education. When the NER is compared with the GER the difference between the two ratios highlights the incidence of under-aged and over-aged enrolment. If the NER is below 100%, then the complement, i.e. the difference with 100% provides a measure of the proportion of children not enrolled at the specified level of education. However, since some of these children/youth could be enrolled at other levels of education, this difference should in no way be considered as indicating the percentage of students not enrolled. A more precise complementary indicator is the age-specific enrolment ratio (**ASER**) which shows the participation of the population of a particular age in education.

Quality standards: NER at each level of education should be based on total enrolment in all types of schools and education institutions, including public, private and all other institutions that provide organized educational programmes.

Limitations: For tertiary education, this indicator is not pertinent because of the difficulties in determining an appropriate age-group due to the wide variations in the duration of programmes at this level of education. As regards primary and secondary education, certain difficulties arise when calculating the NER for

countries where the net enrolment ratios should be of the order of 100%. Three cases can be mentioned:

1. When the reference date for entry to primary education does not coincide with the birthdays of all of the cohort eligible to enrol at this level of education.
2. When an important part of the population starts primary school earlier than the prescribed age and consequently finishes earlier as well.
3. When there is an increase in the entrance age to primary education with the durations unchanged.

N.B. Although the NER cannot exceed 100%, values up to 105% have been obtained and in these cases there are inconsistencies in the enrolment and/or population data.

(9) AGE SPECIFIC ENROLMENT RATIO

Definition: Percentage of the population of a specific age enrolled, irrespective of the level of education.

Purpose: To show the extent of the participation of a specific age cohort in educational activities.

Calculation method: Divide the number of pupils (or students) of a specific age enrolled in educational institutions at all levels of education by the population of the same age and multiply the result by 100.

Formula:

$$ASER_a^t = \frac{E_a^t}{P_a^t} * 100 ;$$

Where,

$ASER_a^t$ = Age Specific enrolment Ratio of the Population of age a in school-year t.

E_a^t = Enrolment of the population of age a in school-year t.

P_a^t = Population of age a in school-year t.

N.B. This method may also be used separately to calculate ASER by individual levels of education. The calculation is the same, the sole difference being that the enrolment refers only to one level of education, for example primary education.

Data required: Enrolment by single years of age. Population of the corresponding age.

Data source: School register, school survey or census for data on enrolment by age. Population censuses or estimates for single year school-age population normally obtained from the Central Statistical Office.

Types of disaggregation: This indicator is to be disaggregated by gender, geographical location (region, urban/rural) and by level of education.

Interpretation: A high ASER denotes a high degree of educational participation of the population of the particular age. The theoretical maximum value is 100%. Increasing trends can be considered as reflecting improving participation of the particular age. If the ASER is below 100%, then the complement, i.e. the difference with 100% provides a measure of the proportion of the population of the particular age who are not enrolled.

Quality standards: ASER at each level of education should be based on total enrolment in all types of schools and education institutions, including public, private and all other institutions that provide organised educational programmes. The enrolment and population data should refer to the same date. Further, it must be ensured that the enrolment data covers all levels of education to avoid excluding some members of the age cohort.

Limitations: This indicator does not give an indication of the grade or the level of education in which pupils or students are enrolled.

(10) REPETITION RATES

Definition: Proportion of pupils from a cohort enrolled in a given grade at a given school-year who study in the same grade in the following school-year.

Purpose: It measures the phenomenon of pupils from a cohort repeating a grade, and its effect on the internal efficiency of educational systems. In addition, it is one of the key indicators for analysing and projecting pupil flows from grade to grade within the educational cycle.

Calculation method: Divide the number of repeaters in a given grade in school-year $t+1$ by the number of pupils from the same cohort enrolled in the same grade in the previous school-year t .

Formula:

$$R_i^t = \frac{R_i^{t+1}}{E_i^t}$$

Where,

R_i^t = Repetition Rate at grade I in school year t.

R_i^{t+1} = Number of pupils repeating in grade i, in school-year t+1.

E_i^t = Number of pupils enrolled in grade i in school year t.

Data required: Enrolment by grade for school-year t and number of repeaters from the same cohort by grade for year t+1.

Data source: School register, school survey or census for data on enrolment and repeaters by grade.

Type of disaggregation: Repetition Rate can be disaggregated by grade, by sex, by geographical location (regions, urban/rural), by level of education and by type of institution (public/private).

Interpretation: Repetition Rate ideally should approach zero percent; a high repetition rate reveals problems in the internal efficiency of the educational system. When compared across grades, the patterns can indicate specific grades for which there is higher repetition, hence requiring more in depth study of causes and possible remedies.

Quality standard: Like other pupil-flow rates (promotion and drop-out rates), the repetition rate is derived by analysing data on enrolment and repeaters by grade for two consecutive years. One should therefore ensure that such data are consistent in terms of coverage over time and across grades. Special attention should also be paid to minimizing some common errors which may bias these flow-rates, such as: Over-reporting enrolment/repeaters (particularly in grade one); incorrect distinction between new entrants and repeaters; transfers of pupils between grades and schools.

Limitations: The level and maximum number of grade repetitions allowed can in some cases be determined by the educational authorities with the aim of coping with limited grade capacity and increasing the **internal efficiency** and flow of pupils (or students). Care should be taken in interpreting this indicator, especially in comparisons between education systems.

(11) SURVIVAL RATES BY GRADE

Definition: Percentage of a cohort of pupils (or students) enrolled in the first grade of a given level or cycle of education in a given school-year who are expected to reach successive grades.

Purpose: Survival rate measures the holding power and **internal efficiency** of an education system. It illustrates the situation regarding retention of pupils (or students) from grade to grade in schools, and conversely the magnitude of drop-out by grade.

Calculation method: Divide the total number of pupils belonging to a school-cohort who reached each successive grade of the specified level of education by the number of pupils in the school-cohort i.e. those originally enrolled in the first grade of primary education, and multiply the result by 100.

Formula:

$$SR_{g,i}^k = \frac{\sum_{i=1}^m P_{g,i}^t}{E_g^k} * 100$$

Where,

$$P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$$

i = Grade (1,2,3...n);

t = Year (1,2,3,...m);

g = Pupil-cohort

- $SR_{g,i}^k$ = Survival Rate of Pupil Cohort g at grade i for reference year k.
 E_g^k = Total number of pupils belonging to a cohort g at a reference year k.
 $P_{g,i}^t$ = Promotees from E_g^k who would join successive grades i throughout successive years t.
 R_i^t = Number of pupils repeating grade i in school-year t.

[see indicator no. 26 EFA 2000]

Data required: Enrolment by grade for two consecutive years (years t and t+1); number of repeaters by grade for year t+1.

Data source: School register, school survey or census.

Type of disaggregation: Survival Rates can be disaggregated by gender, by geographical location (region, urban/rural) and by type of institution (private/public). It can also be disaggregated between survival with and without repetition.

Interpretation: Survival Rate approaching 100% indicates a high level of retention and low incidence of drop-out. Survival Rate may vary from grade to grade, giving indications of grades with relatively more or less drop-outs. The distinction between survival rate with and without repetition is necessary to compare the extent of wastage due to drop-out and repetition. Survival rate to grade 5 of primary education is of particular interest since this is commonly considered as pre-requisite for sustainable literacy.

Quality standards: Since the calculation of this indicator is based on pupil-flow rates, the reliability of the Survival Rate depends on the consistency of data on enrolment and repeaters in term of coverage over time and across grades.

Limitations: Given that this indicator is usually estimated using **cohort analysis** models that are based on a number of assumptions, care should be taken in using of the results in comparisons.

(12) COEFFICIENT OF EFFICIENCY

Definition: The ideal (optimal) number of pupil-years required (i.e. in the absence of repetition and drop-out) to produce a number of graduates from a given school-cohort for a cycle or level of education expressed as a percentage of the actual number of pupil-years spent to produce the same number of graduates. Input-output ratio, which is the reciprocal of the coefficient of efficiency, is often used as an alternative.

N.B. One school-year spent in a grade by a pupil is counted as one pupil-year.

Purpose: This is a synthetic indicator of the internal efficiency of an educational system. It summarises the consequences of repetition and drop-out on the efficiency of the educational process in producing graduates.

Calculation method: Divide the ideal number of pupil-years required to produce a number of graduates from a given school-cohort for the specified level of

education, by the actual number of pupil-years spent to produce the same number of graduates, and multiply the result by 100.

Formula:

$$CE_g = \frac{\sum_{j=n}^{n+k} G_{g,j} * n}{\left\{ \sum_{j=n}^{n+k} G_{g,j} * j \right\} + \left\{ \sum_{j=1}^{n+k} D_{g,j} * j \right\}} * 100$$

Where,

CE_g = Coefficient of Efficiency for a pupil cohort g.

$G_{j,n}$ = The number of pupils graduating from cohort g in final grade n after n years of study (without repetition).

$G_{g,j}$ = The number of pupils graduating from cohort g in final grade n after j years of study.

$D_{g,j}$ = The number of pupils (of the cohort g) dropping out after j years of study.

(K denotes the number of repetitions allowed; n the prescribed normal duration of study or a cycle or level of education; g the pupil cohort and j the number of years of study.)

Data required: Number of graduates and drop-outs by length of study. These data can also be derived using the reconstructed cohort model, which requires enrolment by grade for two consecutive years (years t and t+1); number of repeaters by grade for year t+1 and number of graduates for year t.

Data source: School register, school survey or census for data on repeaters and enrolment.

Type of disaggregation: The Coefficient of Efficiency can be disaggregated by gender, by geographical location (region, urban/rural) and by school type (private/public).

Interpretation: A Coefficient of Efficiency approaching 100% indicates a high overall level of internal efficiency and no wastage due to repetition and drop-out. Coefficient of Efficiency of less than 100% signals inefficiency due to grade repetition and drop-out. As the reciprocal, the optimum input-output ratio is unity i.e. 1, and inefficiency arises from any point which is greater than one.

Quality standards: Since the calculation of this indicator is based on pupil-flow rates, its reliability depends on the consistency of data on enrolment and repeaters in term of coverage over time and across grades. Differences in national regulations concerning the number of repetitions allowed constitute an aspect to be taken into account when using this indicator for inter-country comparisons.

Limitations: Given that this indicator is usually derived using cohort analysis models that are based on a number of assumptions, and owing to the highly synthetic nature of this indicator, care should be taken in the use of the results in comparing education systems. From a conceptual viewpoint, having most pupils (or students) graduating within the prescribed duration of the cycle is optimal with regard to economic efficiency and resource utilization, but this does not necessarily imply achievement of the expected learning outcomes. Also, according to this calculation method, early drop-outs (i.e. from lower grades) can result in higher internal efficiency than late drop-out (i.e. from higher grades); this means that efficiency from the economic point of view can be in contradiction with educational objectives aiming at retaining pupils in schools until higher grades when they would have acquired the desired knowledge and skills.

(13) YEARS-INPUT PER GRADUATE

Definition: The estimated average number of pupil-years spent by pupils (or students) from a given cohort who graduate from a given cycle or level of education, taking into account the pupil-years wasted due to drop-out and repetition.

N.B. One school-year spent in a grade by a pupil is equal to one pupil-year.

Purpose: To assess the extent of educational **internal efficiency** in terms of the estimated average number of years to be invested in producing a graduate.

Calculation method: Divide the total number of pupil-years spent by a pupil-cohort (graduates plus drop-outs) in the specified level of education by the sum of successive batch of graduates belonging to the same cohort.

Formula:

$$YIG_g = \frac{\left\{ \sum_{j=n}^{n+k} G_{g,j} * j \right\} + \left\{ \sum_{j=1}^{n+k} D_{g,j} * j \right\}}{\sum_{j=n}^{n+k} G_{g,j}} ;$$

Where,

YIG_g = Years input per graduate (for graduates belonging to cohort g)

$G_{g,j}$ = Graduates from cohort g after j years of study.

$D_{g,j}$ = Drop outs from cohort g after j years of study.

K denotes the number of repetitions allowed; n the prescribed normal duration of study for a cycle or level of education; g the pupil cohort; and j number of years of study.

For more details, see the flow diagram on **cohort analysis** in chapter k School Efficiency.

Data required: Total number of pupil-years spent by the pupil-cohort and the total number of graduates from the same cohort. These data can be derived

using cohort reconstructed model, which requires enrolment by grade for two consecutive years (years t and t+1); number of repeaters by grade for year t+1 and number of graduates for year t.

Data source: School register, school survey, census or records.

Type of disaggregation: The years input per graduate can be disaggregated by gender, by geographical location (region, urban/rural) and by type of institution (private/public).

Interpretation: The closer the value of this indicator is to the theoretical number of grades (or duration) of the specified education cycle, the higher the internal efficiency and the lesser the negative effects of repetition and dropout. A high number of pupil-years per graduate as compared to the normal duration, denotes waste of resources and hence inefficiency.

Quality standards: Since the calculation of this indicator is based on pupil-flow rates, its reliability depends on the consistency of data on enrolment and repeaters in term of coverage over time and across grades. Differences in national regulations concerning the number of repetitions allowed constitute an aspect to be taken into account when using this indicator for inter-country comparisons.

Limitations: From a conceptual viewpoint, having most pupils (or students) graduating within the prescribed duration of the cycle is optimal with regard to economic efficiency and resource utilization, but this does not necessarily imply achievement of the expected learning outcomes. Also, according to this calculation method, early drop-outs (i.e. from lower grades) can result in higher internal efficiency than late drop-out (i.e. from higher grades); this means that efficiency from the economic point of view can be in contradiction with educational objectives aiming at retaining pupils in schools until higher grades when they would have acquired the desired knowledge and skills.

(14) **PERCENTAGE OF REPEATERS**

Definition: Total number of pupils who are enrolled in the same grade as in a previous year, expressed as a percentage of the total enrolment to the specified grade.

Purpose: This indicator measures the extent and patterns of repetition by grade, as part of the internal efficiency of education system.

Calculation method: Divide the number of pupils/students repeating a given grade in a given school-year by the number of pupils or students enrolled in the same grade in the same school-year and multiply by 100.

Formula:

$$PR_i^t = \frac{R_i^t}{E_i^t} * 100;$$

Where,

PR_i^t = Percentage of repeaters in grade i, in school-year t.

R_i^t = Number of pupils repeating grade i in school year t.

E_i^t = Number of pupils enrolled in grade i, in school-year t.

Data required: Number of repeaters and enrolment by grade for the same school-year.

Data source: School register, school census or surveys for data on repeaters and enrolment by grade.

Types of disaggregation: This indicator is to be calculated by gender, geographical location (region, rural/urban areas) and level of education.

Interpretation: Ideally percentage of repeaters should be zero percent indicating absence of grade repetition. Higher PR means there are serious problems of grade repetition, hence of internal efficiency of the education system.

Quality standards: The definition of repeaters above should be unambiguously applied to include even pupils or students repeating more than once in the same grade and those who repeat the same grade while transferring from one school to another. Pupils or students who were not studying in the same grade in the previous year should be excluded, for example, those who were in a higher or lower grade.

Limitations: The level and maximum number of grade repetitions allowed can in some cases be determined by the educational authorities with the aim of coping with limited grade capacity and increasing the **internal efficiency** and flow of pupils (or students). Care should be taken in interpreting this indicator, especially in comparisons between education systems.

(15) PUBLIC EXPENDITURE ON EDUCATION AS PERCENTAGE OF GROSS NATIONAL PRODUCT

Definition: Total public expenditure on education (current and capital) expressed as a percentage of the Gross National Product (GNP) in a given financial year.

Purpose: This indicator shows the proportion of a country's wealth generated during a given financial year that has been spent by government authorities on education.

Calculation method: Divide total public expenditure on education in a given financial year by the GNP of the country for the corresponding year and multiply by 100.

Formula:

$$\%XGNP_t = \frac{PXE_t}{GNP_t} * 100;$$

Where,

$\%XGNP_t$ = Percentage public expenditure on education in financial year t.

PXE_t = Total Public expenditure on Education in financial year t.

GNP_t = Gross National Product in financial year t.

Data required: Total public expenditure on education and the Gross National Product for a given financial year.

Data sources: Annual financial reports by central or federal governments, state or provincial or regional administrations. Data on GNP are normally available from National Accounts reports from the Bureau of Statistics.

Type of disaggregation: This indicator is normally calculated at the national level only.

Interpretation: In principle a high percentage of GNP devoted to public expenditure on education denotes a high level of attention given to investment in education by the government; and vice versa.

Quality standards: Total public expenditure on education should include those incurred by all concerned ministries and levels of administration. Total public expenditure on education refers to all expenditure on education by the central or federal government, state governments, provincial or regional administrations and expenditure by municipal and other local authorities. Central government includes ministerial departments, agencies and autonomous institutions which have education responsibilities. The statistics on expenditure should cover transactions made by all departments or services with education responsibility at all decision-making levels.

Limitations: In some instances data on total public expenditure on education refers only to the Ministry of Education, excluding other ministries that spend a part of their budget on educational activities.

(16) **PUBLIC EXPENDITURE ON EDUCATION AS PERCENTAGE OF TOTAL GOVERNMENT EXPENDITURE**

Definition: Total public expenditure on education (current and capital) expressed as a percentage of total government expenditure in a given financial year.

Purpose: The share of total public expenditure devoted to education allows to assess the government's policy emphasis on education relative to the perceived value of other public investments. It reflects also the commitment of a government to invest in human capital development.

Calculation method: Divide total public expenditure on education incurred by all government agencies/departments in a given financial year by the total government expenditure for the same financial year and multiply by 100.

Formula:

$$\%PXE_t = \frac{PXE_t}{TPX_t} * 100;$$

Where,

$\%PXE_t$ = Public expenditure on education as a percentage of total government expenditure in financial year t .

PXE_t = Total public expenditure on education in financial year t .

TPX_t = Total government expenditure in financial year t .

Data required: Total public expenditure on education; and total government expenditure.

Data sources: Annual financial reports prepared by the Ministry of Finance; National accounts reports by the Central Statistical Office and financial reports from the various government departments engaged in education activities especially the Ministry of Education.

Data disaggregation: This indicator can be disaggregated by level of administration, by geographical location (region, urban/rural), and by purpose of expenditure (emoluments, teaching material, etc.).

Interpretation: A higher percentage of government expenditure on education shows a high government policy priority for education relative to the perceived value of other public investments, including defence and security, health care, social security for unemployment and elderly, and other social or economic sectors.

Quality standards: Total public expenditure on education should include those incurred by all concerned ministries and levels of administration. Public expenditure on education as a percentage of government expenditure can never be 100% since the latter includes expenditure on many economic and social sectors, besides education. The fact that the fiscal year and educational year budget periods may be different should also be taken into consideration.

Limitations: In some instances data on total public expenditure on education refers only to the Ministry of Education, excluding other ministries that spend a part of their budget on educational activities.

(17) PERCENTAGE DISTRIBUTION OF PUBLIC CURRENT EXPENDITURE ON EDUCATION BY LEVEL

Definition: Public current expenditure for each level of education, expressed as a percentage of total public current expenditure on education.

Purpose: This indicator shows how financial resources for education have been distributed across the different levels or stages of education. It measures the relative emphasis of government spending on a particular level of education within the overall educational expenditure.

Calculation method: Divide public current expenditure devoted to each level of education by the total public current expenditure on education, and multiply the result by 100.

Formula:

$$\%PCXE_h^t = \frac{PCXE_h^t}{\sum_{h=1}^n PCXE_h^t} * 100$$

Where ,

$\%PCXE_h^t$ = Percentage public current expenditures on level of education **h** in financial year **t**.

$PCXE_h^t$ = Total public current expenditures on level of education **h** in financial year **t**.

Data required: Total public current expenditure on education; current public expenditures by level of education.

Data source: Annual financial reports prepared by the Ministry of Finance; National accounts reports by the Central Statistical Office and financial reports from the various government departments engaged in educational activities especially the Ministry of Education.

Type of disaggregation: This indicator can be disaggregated by level of administration, by geographical location (region, urban/rural) and by various purposes of current expenditures (emoluments, teaching materials, scholarships, welfare services, etc.).

Interpretation: Relatively high percentage of current expenditures devoted to a specific level of education denotes the priority given to that level in national educational policy and resource allocation. When interpreting this indicator, one may also take into account the corresponding distribution of enrolment by level and then assess the relative current expenditure per student.

Quality standards: This indicator should be based on consistent data on current expenditure for each level of education that cover public funding for both public and private educational institutions at all level of the educational administration. The sum of the percentage distributions for all levels of education should add up to 100%.

Limitations: In some instances data on current public expenditure on education refers only to the Ministry of Education, excluding other ministries that spend a part of their budget on educational activities.

(18) **PUBLIC CURRENT EXPENDITURE PER PUPIL (STUDENT) AS % OF GNP PER CAPITA**

Definition: Public current expenditure per pupil (or student) at each level of education, expressed as a percentage of GNP per capita in a given financial year.

Purpose: This indicator measures the share of per capita income that has been spent on each pupil or student. It helps in assessing a country's level of investment in human capital development. When calculated by level of education, it also indicates the relative costs and emphasis placed by the country on a particular level of education.

Calculation method: Divide per pupil public current expenditure on each level of education in a given year by the GNP per capita for the same year and multiply by 100.

Formula:

$$\%PCXE_{h,GNPc}^t = \frac{PCXE_h^t}{E_h^t} / \frac{GNP^t}{P^t} * 100;$$

Where,

$\%PCXE_{h,GNPc}^t$ = Public current expenditure per pupil of education level h as % of GNP per capita in financial year t.

$PCXE_h^t$ = Public current expenditure on education level h in financial year t.

E_h^t = Total Enrolment in education level h in school-year t.

GNP^t = Gross National Product in financial year t.

P^t = Total National Population in year t.

Data required: Public current expenditure by level of education; the number pupils enrolled in each level of education; GNP; population.

Data sources: Annual financial reports prepared by the Ministry of Finance; National accounts reports by the Central Statistical Office; Financial reports from various government departments engaged in educational activities especially the Ministry of Education; school register, school survey or census for data on enrolment; population census.

Data disaggregation: This indicator can be disaggregated by level of education.

Interpretation: A high percentage figure for this indicator denotes a high share of per capita income being spent on each pupil/student in a specified level of education. It represents a measure of the financial cost per pupil/student in relation to average per capita income.

Quality standards: Public expenditure per pupil as percentage of GNP per capita can exceed 100%. This indicator should be based on consistent data on public expenditure that covers all subsidies to both public and private educational

institutions. The use of this indicator must take into account the degree of coverage represented by the educational expenditure figure and the ability of the GNP estimate to represent the level of national economic capacity accurately.

Limitations: This indicator may be distorted by inaccurate estimation of GNP, current population or enrolment by level of education. The fact that fiscal year and educational year budget periods may be different should also be taken into consideration.

(19) PUPIL-TEACHER RATIO

Definition: Average number of pupils (students) per teacher at a specific level of education in a given school-year. Teachers are defined as persons whose professional activity involves the transmitting of knowledge, attitudes and skills that are stipulated in a formal curriculum programme to students enrolled in a formal educational institution.

Purpose: This indicator is used to measure the level of human resources input in terms of number of teachers in relation to the size of the pupil population. It should normally be used to compare with established national norms on the number of pupils per teacher for each level or type of education.

Calculation method: Divide the total number of pupils enrolled at the specified level of education by the number of teachers at the same level.

Formula:

$$PTR_h^t = \frac{E_h^t}{T_h^t};$$

Where,

PTR_h^t = Pupil: Teacher Ratio at level of education h, in school-year t.

E_h^t = Total number of pupils or (students) at level of education h in school-year t.

T_h^t = Total number of teachers at level of education h in School-year t.

Data required: Number of pupils enrolled and teaching staff for the specific level of education.

Data source: School registers, teacher records, school census or surveys for data on enrolment and teaching staff.

Type of disaggregation: Data is to be disaggregated by level of education, by type of institutions (private/public) and by geographical location (region,urban/rural).

Interpretation: A high teacher pupil-ratio suggests that each teacher has to be responsible for a large number of pupils. In other words, the higher the pupil/teacher ratio, the lower is the relative access of pupils to teachers. It is generally assumed that a low pupil-teacher ratio signifies smaller classes, which

enables the teacher to pay more attention to individual students, which may in the long run result in a better performance of the pupils.

Quality standards: In computing and interpreting this indicator, one should take into account the existence of parttime teaching, school-shifts, multi-grade classes and other practices that may affect the precision and meaningfulness of pupil-teacher ratios. If feasible, the number of part-time teachers is to be converted to 'full-time equivalent' teachers; a double-shift teacher is to be counted twice, etc. Care should be exercised to include all staff involved in teaching.

Limitations: This indicator does not take into account differences in teachers' qualifications, pedagogical training, experiences and status, teaching methods, teaching materials and variations in classroom conditions, factors which could affect the quality of teaching/learning.

(20) **PERCENTAGE OF FEMALE TEACHERS**

Definition: The number of female teachers at a given level of education expressed as a percentage of total number of teachers (male and female) at the same level in a given school-year. Teachers are defined as persons whose professional activity involves the transmitting of knowledge, attitudes and skills that are stipulated in a formal curriculum programme to students enrolled in a formal educational institution.

Purpose: This indicator shows the gender composition of the teaching force. It helps also in assessing the need for opportunities and/or incentives to encourage women to participate in teaching activities at a given level of education.

Calculation method: Divide the total number of female teachers at a given level of education by the total number of teachers (male and female) at the same level in a given school-year, and multiply by 100.

Formula:

$$\%FT_h^t = \frac{FT_h^t}{T_h^t} * 100;$$

Where,

$\%FT_h^t$ = Percentage female teachers in educational level h in year t.

FT_h^t = Number of female teachers in educational level h in year t.

T_h^t = Total number of teachers (male and female) in educational level h in year t.

Data required: Number of teachers by gender.

Data source: School census or surveys and teachers' records.

Type of disaggregation: This indicator can be calculated by level of education, by geographical location (region, rural/urban), by type of institutions (public and private), by teacher's age-groups and by teacher's qualifications.

Interpretation: Percentage of female teachers approaching 50% indicates gender parity in the composition of the teaching force. A value of greater than 50% reveals more opportunities and/or preference for women to participate in teaching activities at a specific level, grade or programme of education.

Quality standards: This indicator should be based on reliable data on teaching staff by gender (full and/or part-time teachers) at each level of education. When calculating this indicator, care should be exercised to ensure that the number of female teachers and the total number of teachers correspond to the same type of institution, full or parttime. Such calculation should include all staff involved in teaching.

Limitations: This indicator measures the level of gender representation in the teaching profession rather than the effectiveness and quality of teaching.

(21) **PERCENTAGE OF STUDENTS IN TERTIARY EDUCATION BY ISCED LEVEL**

Definition: Enrolment in tertiary education at each **ISCED** level as a percentage of total enrolment in tertiary education.

Purpose: This indicator shows the distribution of tertiary students by ISCED levels. It also helps to understand the way in which degrees and qualification structures for tertiary education are organised within countries.

Calculation method: Divide the number of students in each tertiary ISCED level by the total enrolment in tertiary education in a given academic year, and multiply the result by 100.

Formula:

$$\%E_h^t = \frac{E_h^t}{\sum_{s=5}^7 E_h^t} * 100 ;$$

Where,

$\%E_h^t$ = Percentage of tertiary students in ISCED level h in academic year t.

E_h^t = Enrolment in tertiary ISCED level h in academic year t.

Note: Instead of the levels 5, 6 and 7 in ISCED 1976, tertiary education is composed of two levels according to the newly revised ISCED 1997: level 5 (corresponding to the first stage of tertiary education not leading directly to an advanced research qualification) and level 6 (corresponding to the second stage of tertiary education leading to an advanced research qualification).

Data required: Enrolment in tertiary education by ISCED level.

Data source: Censuses, surveys or records of tertiary educational institutions and programmes.

Type of disaggregation: This indicator is to be disaggregated by gender and mode of enrolment (part/full-time students, distance learning).

Interpretation: The relative concentration of students in particular programmes (long/short programmes) or levels is likely to be driven by job opportunities related to those levels. It also reflects capacities and policies for the development of a particular ISCED level.

Quality standards: This indicator requires complete and reliable data on enrolment in tertiary education and consistency in definitions of different levels and programmes according to ISCED.

Limitations: Caution is required when using this indicator for inter-country comparison and over time, since tertiary education programmes can vary widely in duration, intensity and degree of theoretical and applied content, and their correspondence to ISCED may be subject to changes.

(22) **PERCENTAGE OF FEMALE STUDENTS IN EACH ISCED LEVEL OF TERTIARY EDUCATION**

Definition: Female enrolment in each ISCED tertiary education level as a percentage of total enrolment (male plus female) in the same ISCED level.

Purpose: This indicator helps to assess gender disparity with regard to participation in different levels of tertiary education.

Calculation method: Divide the number of female tertiary students enrolled in a specified ISCED level by the total number of students (male plus female) in that level in a given academic-year, and multiply the result by 100.

Formula:

$$\%FE_h^t = \frac{FE_h^t}{E_h^t} * 100;$$

Where,

$\%FE_h^t$ = Percentage of female students in ISCED tertiary education level h in academic year t.

FE_h^t = Female students in ISCED tertiary education level h in academic year t.

E_h^t = Total enrolment (male plus female) in ISCED tertiary level h in academic year t.

Data required: Enrolment in tertiary education by ISCED level and by gender.

Data source: Census, surveys or records of tertiary educational institutions and programmes.

Type of disaggregation: This indicator is to be disaggregated by field of education and mode of enrolment (part/fulltime students, distance learning).

Interpretation: Percentage of female students that approaches 50% indicates a good level of gender parity. By comparing the percentages of female students for

different levels and fields of education, one can identify the relative degree of gender disparity among the different levels or programmes of tertiary education.

Quality standards: This indicator requires complete and reliable data on enrolment by gender in tertiary education and consistency in definitions of different levels and programmes according to ISCED.

Limitations: Caution is required when using this indicator for inter-country comparison and over time, since tertiary education programmes vary widely in duration, intensity and degree of theoretical and applied content and their correspondence to ISCED may be subject to changes.

(23) STUDENTS IN TERTIARY EDUCATION BY ISCED FIELDS OF EDUCATION

Definition: Enrolment in each **ISCED** field of education in tertiary education, expressed as a percentage of the total enrolment in tertiary education.

Purpose: By showing the distribution of tertiary students by field of education, this indicator can be used to gauge the level of development of tertiary education in terms of the range of fields offered, the capacity in each field as well as student preferences, thus reflecting both the potential demand and supply of qualified human resources in different specializations.

Calculation method: Divide the number of students enrolled in each field of education by the total enrolment in tertiary education in a specific academic-year, and multiply the result by 100.

Formula:

$$\%E_f^t = \frac{E_f^t}{\sum_{f=1}^n E_f^t} * 100;$$

Where,

$\%E_f^t$ = Percentage of students enrolled in field of education f in academic year t.

E_f^t = Number of students enrolled in field of education f in academic year t.

n = **Number** of fields of education.

Data required: Enrolment in tertiary education by field of education.

Data source: Censuses, surveys or records of tertiary educational institutions and programmes.

Type of disaggregation: This indicator is to be disaggregated by gender, by ISCED level in tertiary education and by mode of enrolment (part/full-time).

Interpretation: Relative concentration of students in particular fields of education depicts on the one hand high preference and capacity, and on the other hand may reflect job opportunities as well as relative earnings across different occupations and industries.

Quality standards: This indicator requires complete and reliable data on enrolment by fields of education in tertiary education and clear distinction between different fields of education.

Limitations: Inter-country comparisons rely heavily on how far countries have used consistent field definitions. Detailed or aggregated information may not be fully comparable at the international level due to exclusions, double counting of students, partial data, etc. Also, differences in duration, intensity and degree of theoretical and applied content, together with inappropriate correspondence with ISCED, can bias comparisons between countries.

(24) **PERCENTAGE DISTRIBUTION OF GRADUATES BY ISCED FIELDS OF EDUCATION IN TERTIARY EDUCATION**

Definition: The number of graduates from each **ISCED** field of education in tertiary education, expressed as a percentage of the total number of graduates in tertiary education.

Purpose: This indicator shows the distribution of tertiary graduates over different fields of education. It indicates also the development of tertiary education in terms of the range of fields offered as well as the supply of qualified human resources in different specializations.

Calculation method: Divide the number of graduates in each field of education by the total number of graduates in tertiary education in a given academic-year, and multiply the result by 100.

Formula:

$$\%G_f^t = \frac{G_f^t}{\sum_{f=1}^n G_f^t} * 100;$$

Where,

$\%G_f^t$ = Percentage of students graduating from the field of education f in academic year t.

G_f^t = Number of students graduating from the field of education f in academic year t.

n = Number of fields of education.

Data required: Graduates in tertiary education by field of education.

Data source: Census, surveys or records of tertiary educational institutions and programmes.

Type of disaggregation: This indicator is to be disaggregated by gender and by ISCED levels of tertiary education.

Interpretation: Relative concentration of graduates in particular fields of education depicts on the one hand high preference and capacity, on the other

hand may reflect job opportunities as well as relative earnings across different occupations and industries.

Quality standards: This indicator requires complete and reliable data on the number of graduates by field of education in tertiary level and clear distinction between different fields of education.

Limitations: Inter-country comparisons rely heavily on how far countries have used consistent field definitions. Detailed or aggregated information may not be fully comparable at the international level due to exclusions, double counting of students, partial data, etc. Also, differences in duration, intensity and degree of theoretical and applied content can bias comparisons between countries.

(25) PERCENTAGE OF PRIVATE ENROLMENT

Definition: Enrolment in private educational institutions at a given level of education expressed as a percentage of total enrolment at the same level. By 'Private' is meant here all educational institutions not operated by a public authority, whether or not they receive financial support from such authorities.

Purpose: This indicator gives the relative weight of private education in terms of enrolment, hence the scale and capacity of private education within a country.

Calculation method: Divide the number of pupils (or students) enrolled in private educational institutions in a given level of education by the total enrolment (public and private) at the same level of education, and multiply the result by 100.

Formula:

$$\%Ep_h^t = \frac{Ep_h^t}{E_h^t} * 100 ;$$

Where,

$\%Ep_h^t$ = Percentage of pupils enrolled in private institutions at level of education h in school-year t.

Ep_h^t = Number of pupils enrolled in private institutions at level of education h in school year t.

E_h^t = Total number of pupils enrolled in all types of institutions at level of education h in school-year t.

Data required: Enrolment by level of education and by type of institution (public/private).

Data source: Schools census or surveys.

Type of disaggregation: This indicator is to be disaggregated by gender, by geographical location (region, urban/rural) and by level of education.

Interpretation: A high percentage of enrolment in private educational institutions indicates a strong involvement of the non-governmental sector (including religious bodies, non-governmental organisations, associations, communities, private enterprises or persons) in providing organized educational programmes.

Quality standards: This indicator should be based on complete and reliable data on enrolment in each of the different types of educational institutions, applying consistent definitions and criteria to distinguish between public and private educational institutions.

Limitations: In countries where private institutions are substantially subsidized or aided by the government, the distinction between private and public educational institutions may be less clear-cut especially when certain pupils (or students) are directly financed through government scholarships. The fact that some religious or private schools are not registered with the government nor follow the common national curriculum may also result in them not being included in official statistics, hence preventing a realistic assessment of the share of enrolment in private education.

(26) **PERCENTAGE TEACHING STAFF IN PRIVATE EDUCATIONAL INSTITUTION**

Definition: Number of teachers in private educational institutions at a given level of education expressed as a percentage of the total teaching staff in all types of institutions at the same level of education. By 'Private' is meant here all educational institutions not operated by a public authority, whether or not they receive financial support from such authorities.

Purpose: This indicator gives the relative weight of private education in terms of teaching staff, hence the scale and human resources in private education within a country. When analysed together with the corresponding pupil-teacher ratio, this indicator shows the relative size of the teaching force in relation to enrolment in private education.

Calculation method: Divide the number of teachers in private educational institutions in a given level of education by the total number of teachers (in both public and private educational institutions) at the same level, and multiply the result by 100.

Formula:

$$\%Tp_h^t = \frac{Tp_h^t}{T_h^t} * 100;$$

Where,

$\%Tp_h^t$ = Percentage of teaching staff in private institutions at the level of education h in school-year t.

Tp_h^t = Teaching staff in private institutions at the level of education h in school year t.

T_h^t = Total number of teachers (in public and private educational institutions) of level at education h in school year t.

Data required: Teaching staff by level of education and by type of institution (public/private).

Data source: Schools census or surveys; teachers' records.

Type of disaggregation: This indicator is to be disaggregated by gender, by geographical location (region, urban/rural) and by level of education.

Interpretation: A high percentage of teaching staff in private institutions indicates high involvement of the nongovernmental sector (including religious bodies, associations, communities, private enterprises or persons) in providing organized educational programmes. By comparing the corresponding pupil-teacher ratios, one can assess the relative quantitative strength of the teaching force in public and private institutions in relation to the respective size of enrolment.

Quality standards: This indicator requires complete and reliable data on teaching staff for all types of educational institutions, applying consistent definitions and criteria to distinguish between public and private institutions.

Limitations: In countries where private institutions are substantially subsidized or aided by the government, the distinction between private and public educational institutions may be less clear-cut especially when certain teachers are paid by government. The fact that some religious or private schools are not registered with the government nor follow the common national curriculum may also result in them not being included in official statistics, hence preventing a realistic assessment of the share of teachers in private education.

(27) **EDUCATIONAL ATTAINMENT OF THE POPULATION AGED 25 YEARS AND ABOVE**

Definition: Percentage distribution of population aged 25 years and above according to the highest level of education attained or completed with reference to **ISCED**.

Purpose: This indicator shows the educational composition of the population aged 25 years and above, hence the stock and quality of human capital within a country, so as to gauge needs and establish policies for upgrading it. This indicator also reflects the structure and performance of the education system and its accumulated impact on human capital formation.

Calculation method: Divide the number of persons aged 25 years and above with respect to the highest level of education attained by the total population of the same age-group, and multiply by 100.

Formula:

$$\%P_{25+,h}^t = \frac{P_{25+,h}^t}{P_{25+}^t} * 100;$$

Where,

$\%P_{25+,h}^t$ = Percentage of population aged 25 years and above that attained educational level h in year t.

$P_{25+,h}^t$ = Population aged 25 years and above that attained educational level h in year t.

P_{25+}^t = Total Population aged 25 years and above in year t.

Data required: Population aged 25 years and above by highest level of education attained.

Data source: Mainly national population census; household and/or labour force surveys.

Type of disaggregation: This indicator is to be disaggregated by gender, by geographical location (region, urban/rural), by age-group, and by professional sector.

Interpretation: A relative high concentration of the adult population in a given level of education reflects the capacity of the educational system in the corresponding level of education. Educational attainment is closely related to the skills and competencies of a country's population, and could be seen as a proxy of both the quantitative and qualitative aspects of the stock of human capital.

Quality standards: This indicator should be based on complete and reliable census or survey data, applying clear classification of levels of education in accordance with ISCED.

Limitations: Caution is required when using this indicator for inter-country comparison, since the countries do not always classify degrees and qualifications at the same ISCED levels, even if they are received at roughly the same age or after a similar number of years of schooling. Also, certain educational programmes and study courses cannot be easily classified within actual ISCED system. This indicator only measures the educational attainment in terms of level of education attained, i.e. years of schooling, and do not necessarily reveal the quality of the education (learning achievement and other impacts).

(28) NUMBER OF STUDENTS IN TERTIARY EDUCATION PER 100,000 INHABITANTS

Definition: Number of students enrolled in tertiary education in a given academic-year per 100,000 inhabitants.

Purpose: This indicator shows the general level of participation in tertiary education by indicating the proportion (or density) of students within a country's population.

Calculation method: Divide the total number of students enrolled in tertiary education in a given academic-year by the country's population and multiply the result by 100,000.

Formula:

$$S_{100,000}^t = \frac{\sum_{h=5}^n E_h^t}{P^t} * 100,000;$$

Where,

$S_{100,000}^t$ = Number of students in tertiary education per 100,000 inhabitants in year t.

E_h^t = Number of students enrolled in ISCED level h in tertiary education in year t.

P^t = Country's population in year t.

Note: Instead of the levels 5, 6 and 7 in ISCED 1976, tertiary education is composed of two levels according to the newly revised ISCED 1997: level 5 (corresponding to the first stage of tertiary education not leading directly to an advanced research qualification) and level 6 (corresponding to the second stage of tertiary education leading to an advanced research qualification).

Data required: Enrolment in tertiary education and total population.

Data source: Censuses, surveys or records of tertiary educational institutions and programmes, and population census.

Type of disaggregation: This indicator is to be disaggregated by gender and by geographical location (region, urban/rural).

Interpretation: A high number of students per 100,000 inhabitants indicates a generally high level of participation in tertiary education in relation to a country's population.

Quality standards: This indicator should be based on complete and reliable data on students in all levels and types of tertiary education. In principle, it should refer to all students within a country's territory, irrespective of nationality or origin, and it should not take into account nationals studying in another country nor those enrolled in branches of national tertiary education in another country.

Limitations: As this indicator takes into account the entire population in a country instead of the age-group corresponding to tertiary education, its comparability may be affected by the relative weight of this latter within the entire population. When data are available for students and/or population by age, more precise assessment of participation in tertiary education can be made by using the age specific and/or gross enrolment ratios. (**ASER, GER**).

(29) ENROLMENT IN SECONDARY EDUCATION BY TYPE OF EDUCATION

Definition: Percentage distribution of students enrolled in secondary education, according to the type of education, i.e. general and vocational/technical education, including teacher training.

Purpose: This indicator gives an idea of the type of secondary education offered, the capacity in each type as well as the potential supply of skilled workers in different specializations.

Calculation method: Divide the number of students enrolled in each type of secondary education by the total enrolment in secondary education in a given year, and multiply the result by 100.

Formula:

$$\%E_s^t = \frac{E_s^t}{\sum_{s=1}^n E_s^t} * 100;$$

Where,

$\%E_s^t$ = Percentage of students enrolled in type s secondary education in school-year t.

E_s^t = Number of students enrolled in type s secondary education in school-year t.

n = Number of types of secondary education.

Data required: Enrolment in secondary education by type of education.

Data source: Census, surveys or records of secondary educational institutions and programmes.

Type of disaggregation: This indicator is to be disaggregated by gender, by type of institution (public/private), and by geographical location (region, urban/rural).

Interpretation: The relative concentration of students in a particular type of education depicts on the one hand high preference and capacity, on the other hand may reflect job opportunities as well as relative earnings across different occupations and industries.

Quality standards: This indicator requires complete and reliable data on enrolment by type of secondary education and clear distinction between different types of education.

Limitations: Inter-country comparability of this indicator can be affected by different ways in which national secondary education systems are organized according to different types (e.g. general, technical-vocational, etc.).

(30) **PUBLIC CURRENT EXPENDITURE ON EDUCATION AS PERCENTAGE OF TOTAL PUBLIC EXPENDITURE ON EDUCATION.**

Definition: Public current expenditure on education expressed as a percentage of total public expenditure on education (current and capital) in a given financial year.

Purpose: This indicator shows the share of current expenditure within total public expenditure, thereby indicating the pattern of government spending on education in terms of the relative weight between current and capital expenditure.

Calculation method: Divide public current expenditure on education in a given financial year by the total public expenditure on education for the same financial year and multiply by 100.

Formula:

$$\%PCXE_t = \frac{PCXE_t}{TPXE_t} * 100$$

Where,

$\%PCXE_t$ = Percentage public current expenditure on education in financial year **t**.

$PCXE_t$ = Total public current expenditure on education in financial year **t**.

$TPXE_t$ = Total public expenditure in financial year **t**.

Data required: Total public current expenditure on education and total public expenditure on education (current plus capital).

Data sources: Annual financial reports prepared by the Ministry of Finance; National accounts reports by the Central Statistical Office and financial reports from the various government departments engaged in education activities especially the Ministry of Education.

Data disaggregation: This indicator is usually calculated at the national level only. It can be disaggregated by level of administration (central, regional, local government).

Interpretation: A high percentage of public current expenditure on education reflects the need to devote a large share of public funding to maintain the education system operations, taking into account current and projected changes in enrolment, in the salary levels of educational personnel and in other operational costs. The difference between this percentage and 100 reflects the proportion of public expenditure on education devoted to capital expenditure.

Quality standards: This indicator should be based on consistent and comprehensive data on all public current expenditure on education, including those incurred by regional and local government, and other ministries than the Ministry of Education.

Limitations: In many instances data on total public current expenditure on education cover only the Ministry of Education, excluding other ministries that spend a sizeable part of their budget on educational activities.

(31) **TEACHERS' EMOLUMENTS AS PERCENTAGE OF PUBLIC CURRENT EXPENDITURE ON EDUCATION**

Definition: Public expenditure devoted to teachers' emoluments expressed as a percentage of total public current expenditure on education.

Purpose: This indicator measures the share of teachers' emoluments within public current expenditure on education, in relation to spending on administration, teaching materials, scholarships, etc.

Calculation Method: Divide public current expenditure devoted to teachers' emoluments in a given financial year by the total public current expenditure on education for the same financial year and multiply by 100.

Formula:

$$\%TX_t = \frac{TX_t}{PCXE_t} * 100 ;$$

Where,

$\%TX_t$ = Percentage of public current expenditure on education devoted to teachers' emoluments in financial year t .

TX_t = Total public current expenditure on teachers' emoluments in financial year t .

$PCXE_t$ = Total public current expenditure on education in financial year t .

Data required: Total public current expenditure on education and public current expenditure on teachers' emoluments.

Data sources: Annual financial reports prepared by the Ministry of Finance; National Accounts reports by the Central Statistical Office and financial reports from the various government departments engaged in education activities especially the Ministry of Education.

Data disaggregation: This indicator can be disaggregated by level of education and by level of administration (central, regional, local government).

Interpretation: A higher percentage of public current expenditure devoted to teachers' emoluments denotes the preponderance of spending on teachers' compensation to the detriment spending on administration, teaching materials, scholarships, etc. The way in which educational spending is allocated between these different purposes i.e. teachers' salaries and the condition of education facilities (e.g. expenditure on teaching materials, etc) can affect the quality of education.

Quality standard: This indicator should be based on reliable data on teachers' emoluments, including emoluments of all staff (full and/or part-time) involved in teaching, covering both salaries and fringe benefits.

Limitations: In many instances data on total public current expenditure on education cover only the Ministry of Education, excluding other ministries that spend a part of their budget on educational activities. It may sometimes be difficult to account for the share of emoluments of educational personnel who share their hours between teaching and other tasks.

Appendix-“d-3”

Tabular Description of ISCED-97, Classification Criteria, and Sub-categories

0	Pre-Primary Level of Education	Main Criteria	Auxiliary Criteria		Sub-Categories	
	Initial stage of organized instruction, designed primarily to introduce very young children to a school-type environment.	Should be centre or school-based, be designed to meet the educational and development needs of children at least 3 year of age and have staff that are adequately trained (i.e. qualified) to provide an educational program for the children.	Pedagogical qualifications for the teaching staff; implementation of a curriculum with educational elements.			
1	Primary level of Education	Main Criteria	Auxiliary Criteria			
	Normally designed to give students a sound basic education in reading, writing and mathematics .	Beginning of systematic studies characteristic of primary education, e.g. reading, writing and mathematics. Entry into the nationally designated primary institutions or program.	In countries where the age of compulsory attendance (or at least the age at which virtually all students begin their education) comes after the beginning of systematic study in the subjects noted, the first year of compulsory attendance should be used			

							to determine the boundary between ISCED 0 and ISCED 1.			
		The commencement of reading activities alone is not a sufficient criterion for classification of an educational program at ISCED 1.								
2	Lower Secondary Level of Education	Main Criteria	Auxiliary Criteria		Destination for which the programs have been designed to prepare Students			Programme Orientation		
	The Lower Secondary level of education generally continues the basic programs of the primary level, although teaching is typically more subject-focused, often employing more specialised teachers who conduct classes in their field of specialisation	Programs at the start of Level 2 should correspond to the point where programs are beginning to be organised in a more subject-oriented pattern, using more specialised teachers conducting classes in their field of specialisation.	If there is no clear break-point for this organisational change, however, then countries should artificially split national program into ISCED 1 and 2 at the end of 6 years of primary education.	A	Program designed to prepare students for direct access to Level 3 in a sequence which would ultimately lead to tertiary education, that is, entrance to ISCED 3A or 3B.		1	Education which is not designed explicitly to prepare participants for a specific class of occupations or trades or for entry into further vocational/technical education programs. Less than 25% of the program content is vocational or technical.		

		<p>If this organisational transition point does not correspond to a natural split in the boundaries between national educational programs, then programs should be split at the point where national programs begin to reflect this organisational change.</p>	<p>In countries with no system break between Lower Secondary and Upper Secondary education, and where Lower Secondary education lasts for more than 3 years, only the first 3 years following primary education should be counted as Lower Secondary education.</p>	<p>B</p>	<p>Programs designed to prepare students for direct access to programs at Level 3C.</p>	<p>2</p>	<p>Education, mainly designed as an introduction to the world of work and as preparation for further vocational or technical education. It does not lead to a labour-market relevant qualification. Content is at least 25% vocational or technical.</p>
				<p>C</p>	<p>Programs primarily designed for direct access to the labour market at the end of this level (sometimes referred to as 'terminal' programs)</p>	<p>3</p>	<p>Education, which prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programs leads to a labour-market relevant vocational qualification.</p>

3	Upper Secondary Level of Education	Main Criteria	Modular Programs		Destination for which the programs have been designed to prepare Students		Program Orientation
	The final stage of secondary education in most OECD countries. Instruction is often more organised along subject-matter lines than ISCED Level 2 and teachers typically need to have a higher level or more subject-specific qualification than at ISCED 2.	National boundaries between Lower Secondary and Upper Secondary education should be the dominant factor for splitting Levels 2 and 3.	An educational qualification is earned in a modular program by combining blocks of courses or modules into a program meeting specific curricular requirements.	A	ISCED 3A programs at Level 3 designed to provide direct access to ISCED 5A.	1	Education which is not designed explicitly to prepare participants for a specific class of occupations or trades or for entry into further vocational/ technical education programs. Less than 25% of the program content is vocational or technical.
		Admission into educational programs usually requires the completion of ISCED 2 or a combination of basic education	A single module, however, may not have a specific educational or labour market destination or a particular program orientation.	B	ISCED 3B programs at level 3 designed to provide access to ISCED 5B		Education mainly designed as an introduction to the world of work and as preparation for further vocational or technical education. It does not lead to a labour market relevant qualification.

		and life experience that demonstrates the ability to handle ISCED 3 subject matter.				Content is at least 25% vocational or technical.
	There are substantial differences in the typical duration of ISCED 3 programs both across and between countries, typically ranging from 2 to 5 years of schooling.		Modular programs should be classified at Level 3 only, without reference to the educational or labour market destination of the program.	C	ISCED 3C programs at Level 3 not designed to lead directly to ISCED 5A or 5B. Therefore, these programs lead directly to labour market, ISCED 4 programs or other ISCED 3 programs.	3 Education which prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programs leads to a labour-market relevant vocational qualification.
4	Post-Secondary Non-Tertiary	Main Criteria	Types of Programs that can fit into level		Destination for which the programs have been designed to prepare students	Program Orientation
	These programs straddle the boundary between Upper	Students entering ISCED 4 programs will typically have	The first types are short vocational programs where either the content is	A	Programs at Level 4 designed to provide direct access to ISCED	1 Education which is not designed explicitly to prepare participants for a specific class of

	Secondary and Post-Secondary education from an international point of view, even though they might clearly be considered as Upper Secondary or Post-Secondary programs in a national context.	completed ISCED 3	not considered 'tertiary' in many OECD countries or the program dose not meet the duration requirement for ISCED 5B at least 2 years FTE since the start of Level 5.		5A.		occupations or trades or for entry into further vocational/ technical education programs. Less than 25% if the program content is vocational or technical.
	They are often not significantly more advanced than programs at ISCED 3 but they serve to broaden the knowledge of participants who have already completed a program at Level 3. The students are typically older that those in ISCED 3 programs.	Program duration : ISCED 4 programs typically have a full time equivalent duration of between 6 months and 2 years.	These programs are often designed for students who have completed Level 3, although a formal ISCED Level 3 qualification may not be required for entry.	B	Programs at Level 4, designed to provide direct access to ISCED 5B.	2	Education mainly designed as an introduction to the world of work and as preparation for further vocational or technical education. It does not lead to a labour-market relevant qualification. Content is at least 25% vocational or technical.
			The second type of programs are nationally	C	Programs at Level 4 not designed to lead directly		Education which prepares participants for direct entry

			considered as Upper Secondary programs, even though entrants to these programs will have typically already completed another Upper Secondary program (i.e. second-cycle programs).		to ISCED 5A or 5B. These programs lead directly to labour market or other ISCED 4 programs.		without further training into specific occupations. Successful completion of such programs leads to a labour-market relevant vocational qualification.
5	First Stage of Tertiary Education	Classification Criteria for Level and Sub-categories (5a and 5b)			Cumulative Theoretical Duration of Tertiary		Position in the National Degree and Qualification Structure
	ISCED 5 programs have an educational content more advanced than those offered at Levels 3 and 4.	Entry to these programs normally requires the successful completion of ISCED Level 3A or 3B or a similar qualification at ISCED Level 4A or 4B.					

<p>5 A</p>	<p>ISCED 5A programs that are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programs and professions with high skills requirements.</p>	<p>The minimum cumulative theoretical duration (at tertiary level) is of three years (FTE). The faculty must have advanced research credentials. Completion of a research project or thesis may be involved.</p>	<p>The programs provide the level of education required for entry into a profession with high skills requirements or an advanced research program.</p>	<p>A</p>	<p>Duration Categories: Medium 3 to less than 5 years; Long 5 to 6 years; Very long more than 6 years.</p>	<p>A</p>	<p>Categories: Intermediate; First; Second; Third and further.</p>
<p>5 B</p>	<p>ISCED 5B programs that are generally more practical/technical/occupationally specific than ISCED 5A programs.</p>	<p>Programs are more practically-oriented and occupationally specific than programs at ISCED 5A and they do not prepare students for direct access to advanced research programs. They have a minimum of two years full-time equivalent duration.</p>	<p>The program content is typically designed to prepare students to enter a particular occupation.</p>	<p>B</p>	<p>Duration categories: short: 2 to less than 3 years; Medium: 3 to less than 5 years; Long : 5 to 6 years; Very long more than 6 years.</p>	<p>B</p>	<p>Categories: Intermediate/ First, Second. Third and further.</p>

6	SECOND STAGE OF TERTIARY EDUCATION (LEADING TO AN ANVANCED RESEARCH QUALIFICATION)					
	This level is reserved for tertiary programs that lead to the award of an advanced research qualification. The programs are devoted to advanced study and original research.	The level requires the submission of a thesis or dissertation of publishable quality that is the product of original research and represents a significant contribution to knowledge. It is not solely based on course-work.	It prepares recipients for faculty posts in institutions offering ISCED 5A programs as well as research posts in government and industry.			

Appendix “e-1”

**UNITED NATIONS EDUCATIONAL, SCIENTIFIC
AND CULTURAL ORGANIZATION**



**International
Standard
Classification
of Education**

I S C E D 1997

November 1997

P r e f a c e

The International Standard Classification of Education (ISCED) was designed by UNESCO in the early 1970's to serve 'as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally'. It was approved by the International Conference on Education (Geneva, 1975), and was subsequently endorsed by UNESCO's General Conference when it adopted the Revised Recommendation concerning the International Standardization of Educational Statistics at its twentieth session (Paris, 1978).

Experience over the years with the application of ISCED by national authorities and international organizations has shown the need for its updating and revision. This would further facilitate the international compilation and comparison of education statistics and take into account new developments and changes in education and anticipate future trends in the various regions of the world, such as

the multiplication and growth of different forms of vocational education and training,

the increasing diversity of education providers, and

the increasing recourse to distance education and other modalities based on new technologies.

The present classification, now known as ISCED 1997, was approved by the UNESCO General Conference at its 29th session in November 1997. It was prepared by a Task Force established by the Director-General to that effect and is the result of extensive consultations of worldwide representation. ISCED 1997 covers primarily two cross-classification variables: levels and fields of education.

UNESCO's data-collection programme will be adjusted to these new standards and Member States are invited to apply them in the reporting of education statistics so as to increase their international comparability. To this end, an operational manual, aimed at giving guidance on the interpretation and practical application of ISCED 1997, will be prepared in close collaboration with national experts.

During the 1998/99 biennium work on additional aspects such as types of education and education providers will be undertaken and incorporated in the present classification.

INTRODUCTION

1. ISCED is designed to serve as an instrument suitable for assembling, compiling and presenting comparable indicators and statistics of education both within individual countries and internationally. It presents standard concepts, definitions and classifications. ISCED covers all organized and sustained learning opportunities for children, youth and adults including those with special needs education, irrespective of the institution or entity providing them or the form in which they are delivered.
2. ISCED is a multi-purpose system, designed for education policy analysis and decision making, whatever the structure of the national education systems and whatever the stage of economic development of a country. It can be utilized for statistics on many different aspects of education such as statistics on pupil enrolment, on human or financial resources invested in education or on the educational attainment of the population. The basic concept and definitions of ISCED have therefore been designed to be universally valid and invariant to the particular circumstances of a national education system. However, it is necessary for a general system to include definitions and instructions that cover the full range of education systems.
3. The original version of ISCED classified educational programmes by their content along two main axes: levels of education and fields of education. These axes, referred to as cross-classification variables, are retained in the revised taxonomy. In the light of experience with the implementation and application of the original version of ISCED in a majority of countries over the last two decades, the rules and criteria for allocating programmes to a level of education have been clarified and tightened and the fields of education have been further elaborated.
4. Information compiled according to ISCED can be utilized for assembling statistics on many different aspects of education of interest to policy-makers and other users. Whilst ISCED may be easier to use for collecting enrolment data, it should be stressed that it is a classification of educational programmes and does not deal with the flow of students through the education system (see paragraph 22). As regards the collection of data on the educational attainment of the population, there is need to adapt ISCED and this will be detailed in the operational manual.
5. Taking into account that the comprehensive operational manual will be prepared, the text of the revised ISCED has been made as concise as possible and is structured in five sections:
How ISCED works
What ISCED covers

The concept of the 'Educational Programme' in ISCED

Application of ISCED to programmes outside regular education

Cross-classification variables

I - Levels of education

II - Broad groups and fields of education

SCOPE AND COVERAGE

WHAT ISCED COVERS

6. ISCED does not intend to provide a comprehensive definition of education, still less to impose an internationally standardized concept of the philosophy, aims or content of education, or to reflect its cultural aspects. Indeed, for any given country the interplay of cultural traditions, local customs, socio-economic conditions, at the very least, will have resulted in a concept of education in many ways unique to that country, and any attempt to impose a common definition would not be productive. However, for the purposes of ISCED, it is necessary to prescribe the scope and coverage of the educational activities to be covered by the classification.
7. Within the framework of ISCED, the term education is thus taken to comprise all deliberate and systematic activities designed to meet learning needs. This includes what in some countries is referred to as cultural activities or training. Whatever the name given to it, education is understood to involve organized and sustained communication designed to bring about learning. The key words in this formulation are to be understood as follows:
8. **COMMUNICATION:** a relationship between two or more persons involving the transfer of information (messages, ideas, knowledge, strategies, etc.). Communication may be verbal or non-verbal, direct/face-to-face or indirect/remote, and may involve a wide variety of channels and media.
9. **LEARNING:** any improvement in behaviour, information, knowledge, understanding, attitude, values or skills.
10. **ORGANIZED:** planned in a pattern or sequence with explicit or implicit aims. It involves a providing agency (person or persons or body) which sets up the learning environment and a method of teaching through which the communication is organized. The method is typically someone who is engaged in

communicating or releasing knowledge and skills with a view to bringing about learning, but it can also be indirect/inanimate e.g. a piece of computer software, a film, or tape, etc.

11. SUSTAINED: intended to mean that the learning experience has the elements of duration and continuity. No minimum duration is stipulated, but appropriate minima will be stated in the operational manual.
12. ISCED embraces both initial education at the early stages of a person's life prior to entry into the world of work, as well as continuing education throughout a person's life. It follows that education for the purpose of ISCED includes a variety of programmes and types of education which are designated in the national context, such as regular education, adult education, formal education, non-formal education, initial education, continuing education, distance education, open-education, life-long education, part-time education, dual systems, apprenticeships, technical-vocational education, training, special needs education. A provisional glossary of definitions is annexed to this document.
13. It follows that education, for the purposes of ISCED, excludes communication that is not designed to bring about learning. It also excludes various forms of learning that are not organized. Thus, while all education involves learning, many forms of learning are not regarded as education. For example, incidental or random learning which occurs as a by-product of another event, such as something that crystallizes during the course of a meeting, is excluded because it is not organized i.e. does not result from a planned intervention designed to bring about learning.

HOW ISCED WORKS

14. ISCED provides an integrated and consistent statistical framework for the collection and reporting of internationally comparable education statistics. It contains two components:
 - A *statistical framework* for the comprehensive statistical description of national education and learning systems along a set of variables that are of key interest to policy makers in international educational comparisons; and
 - A *methodology* that translates national educational programmes into an internationally comparable set of categories for (i) the levels of education; and (ii) the fields of education.
15. The application of ISCED facilitates the transformation of detailed national education statistics on participants, providers and sponsors of education, compiled on the basis of national concepts and definitions, into aggregate categories that are internationally comparable and that can be meaningfully interpreted.
16. ISCED rests on three components: (i) internationally agreed concepts and definitions, (ii) the classification systems, and (iii) an operational instructional manual and a well-defined implementation process. Comprehensive, and detailed operational specifications are an integral part of ISCED – that is,

inseparable from the basic taxonomy. The same applies to the implementation process. The operational manual will give specific and operational instructions. Without them, no individual country, no matter how strong its intention to facilitate international comparisons, is in a position to determine whether its method of assigning programmes to international categories is compatible with the methods of other countries.

THE CONCEPT OF THE 'EDUCATIONAL PROGRAMME' IN ISCED

17. The basic unit of classification in ISCED remains the educational programme. Educational programmes are defined on the basis of their educational content as an array or sequence of educational activities which are organized to accomplish a pre-determined objective or a specified set of educational tasks. Objectives can, for example, be preparation for more advanced study, qualification for an occupation or range of occupations, or simply an increase of knowledge and understanding.
18. Accomplishment of a pre-determined objective often means the presence of a set of structured learning experiences that lead to a completion point which sometimes is formally certified through an award or other form of recognition. Usually educational programmes, while containing courses and other learning experiences, are not merely the sum of their components because they are supposed to be organized (see para. 17). In many cases – though not always – it is required that an institution or other provider recognizes the existence of such a programme and certifies completion of it.
19. The term 'educational activity' implies a broader meaning than the term 'course or combination of courses' which is important because education at a given level comprises not only courses organized into programmes but also free-standing courses and a variety of non-course activities as well. Programmes sometimes include major components not normally characterized as courses – for example, interludes of work experience in enterprises, research projects, and preparation of dissertations.
20. It should be noted that not all courses are parts of programmes of regular education. For instance, many participants in adult and continuing education and training in enterprises take individual courses to acquire specific kinds of skills (see paragraph 26 to determine the level for these courses).
21. It must be recognized, though, that ISCED has natural limitations for the direct classification and assessment of competences and qualifications of the participants in educational activities. This is because there is no close and universal relationship between the programmes a participant is enrolled in and actual educational achievement. The educational programmes an individual has participated in or even successfully completed are, at best, a first approximation to the skills and competences he or she has actually obtained. Furthermore, for a programme-based taxonomy it is very difficult to capture educational activities that are not organized in the form of educational programmes of regular education.

22. There is another serious limitation with a programme-based taxonomy of the levels of education. Although it is reasonable to assume that educational activities will result in an increase of skills and competences for an individual so that the pathway of an individual through the education system can be understood as an ordered increase in the educational attainment, the underlying educational programmes can often be ordered only to a limited extent: individuals can arrange their educational pathways in many ways. To respond to this, education systems provide multiple branching paths, alternative programme sequences, and 'second chance' provisions. There is also an increase in 'horizontal' movements through education systems in which a participant can broaden his or her education with only a partial increase in the 'level' of education. It thus becomes increasingly difficult to attribute the programme itself to a particular level of education. A taxonomy which is programme-based necessarily loses partly the information on the pathway of the participants through the education system. A hierarchy of educational programmes can thus reflect the reality of education systems only to a limited extent.

APPLICATION OF ISCED TO PROGRAMMES OUTSIDE REGULAR EDUCATION

23. Some educational activities cannot be easily described in terms of an educational programme in the above sense even though they clearly involve *organized* and *sustained communication* designed to bring about *learning* so that they fall, in principle, under the scope of ISCED. Family-centred early childhood education can serve as an example.
24. Within the framework of ISCED, the universe of education includes, as mentioned in paragraphs 1 and 12, in addition to regular education, adult education and special needs education. The content of the educational programmes designed for the latter two sub-groups are often adjusted to cover their particular needs.
25. For other types of educational activities the provision of education can be defined in terms of an educational programme in the above sense but it is very difficult to identify the participants in the programme. An educational broadcasting programme might serve as an example for such cases. In yet other cases educational programmes may have special characteristics that do not meet the usual criteria that are chosen in ISCED for the classification of programmes but still fall under the coverage of ISCED. For example, an educational course provided through the Internet may be similar in content and objectives to a programme provided in regular education.
26. All such educational activities should be classified based on their equivalence with the educational content of regular programmes. In other words, they should be classified together with those regular educational programmes to which they are most similar with respect to the criteria provided. For example, where family-centred early childhood education satisfies the content-based criteria of ISCED level 0, it should be classified as an ISCED level 0 pre-primary programme. Sometimes the qualifications or certifications awarded upon successful

completion of a programme can help to classify an educational activity. For example, the level of educational content of a distance education programme might be classified based on the type of qualifications that are awarded upon its successful completion.

CROSS-CLASSIFICATION VARIABLES

27. Educational programmes are cross-classified by levels and fields of education, each variable being independent. Thus, every educational programme can be classified into one and only one cell in the level-field matrix. Obviously, not every combination of level and field exists, or can exist.

I. LEVELS OF EDUCATION

28. The notion of 'levels' of education is taken to be broadly related to gradations of learning experiences and the competences which the contents of an educational programme require of participants if they are to have a reasonable expectation of acquiring the knowledge, skills and capabilities that the programme is designed to impart. Broadly speaking, the level is related to the degree of complexity of the content of the programme. This does not imply that levels of education constitute a ladder where the access of prospective participants to each level necessarily depends on having successfully completed the previous level. It also does not preclude the possibility that some participants in educational programmes at a given level may have previously successfully completed programmes at a higher level.
29. The notion of 'levels' of education, therefore, is essentially a construct based on the assumption that educational programmes can be grouped, both nationally and cross-nationally, into an ordered series of categories broadly corresponding to the overall knowledge, skills and capabilities required of participants if they are to have a reasonable expectation of successfully completing the programmes in these categories. These categories represent broad steps of educational progression from very elementary to more complex experiences with the more complex the programme, the higher the level of education.
30. The classification of the levels of education is undertaken within an overall taxonomic framework that considers the educational system as a whole, and specifically for parameters that are of key interest to policy-makers in international educational comparisons or that are closely related to the definition of the levels of education. Such parameters can be the general orientation of the programme, the field of education, the service provider and the educational setting or location, the mode of service provision, the type of participant or the mode of participation. Some of these parameters do not necessarily provide

direct attributes of the educational programmes but are rather attributes of the institutions that provide the programmes or general attributes of the modes of provision. However, these attributes serve an important function in distinguishing the nature of the programmes in many countries. They further play a crucial role when defining the scope of data collections. Thus, while ISCED is a classification system of educational programmes, these other – often closely interrelated – parameters will help to establish an overall reference framework.

HOW TO ASSESS THE LEVEL OF CONTENT OF A PROGRAMME

31. While the classification of educational programmes by level should be based on educational content, it is clearly not possible to directly assess and compare the content of the educational programmes in an internationally consistent way. Curricula are far too diverse, multi-faceted and complex to permit unambiguous determinations that one curriculum for students of a given age or grade belongs to a higher level of education than another. International curricula standards that are needed to support such judgements do not as yet exist.
32. Empirically, ISCED assumes that there exists several criteria which can help point to the level of education into which any given educational programme should be classified. Depending on the level and type of education concerned, there is a need to establish a hierarchical ranking system between criteria: main criteria, and subsidiary criteria (typical entrance qualification, minimum entrance requirement, minimum age, staff qualification, etc., see Table 1). It is very important to apply these criteria in a manner that they do not exclude but rather complement each other. After applying the criteria, the level of the programme is determined.
33. To help users classify educational activities and programmes appropriately, and to provide reliable tools to collect data and to calculate pertinent and comparative indicators, there is a need to subdivide certain levels. For example, Level 5 is disaggregated using three independent variables (called complementary dimensions) - cumulative duration, national degree and qualification structure, and type of programmes. This type of disaggregation facilitates many kinds of cross-classifications and the derivation of pertinent comparative indicators.

HOW TO APPLY THE PROXIES IN PRACTICE

34. When using the criteria for the classification of a programme, it should be borne in mind that the primary classification criterion is the educational content. It is of fundamental importance that institutional characteristics of national programmes are not used as substitutes for educational content. Sole reliance on institutional criteria could sacrifice the objective of international comparability for a wide range of comparisons since institutional structures are not usually internationally comparable.
35. Flexibility is, however, required when applying the criteria to determine the level of education of an educational programme. While it is a principal objective of ISCED to promote the collection of comparable data on education for the various programme groupings, it is recognized that nationally disparate conditions may

exist which preclude strict adherence to the level definitions. Two examples to highlight this are the starting age and the duration.

First, it is stated that the starting age for pre-primary education is three years but this does not preclude younger children from participating.

A second example, the duration of ISCED 1 as stated is six years of full-time equivalent schooling. This, however, does not automatically imply that countries with seven years of primary education are requested to divide statistics on, for example, the financial and teaching resources in primary education in two parts. Instead ISCED recognizes that the statistical reporting will be done in the context of the national education system and the constraints of statistical reporting systems.

What is important is that as far as institutional transition points are used as criteria for allocating a programme to an ISCED level, the choice of national transition points for matching the international classification categories is determined by the content of the underlying educational programmes. Each duration given in ISCED is intended to serve as a guide, and variations could be envisaged. These examples are also valid for levels 2 and 3.

36. Short terms are used to describe some complementary dimensions. The complete definitions are the following:
- the type of subsequent education or destination: the type of subsequent education or destination for which completers are eligible or type of labour market positions for which they prepare graduates;
 - the programme orientation: the programme orientation, understood here as the degree to which the programme is specifically oriented towards a specific class of occupations or trades.

Table 1: LEVELS OF EDUCATION AT A GLANCE

How to determine the level of a programme				
Proxy criteria for contents		Name of the level	Code	Complementary dimensions
Main criteria	Subsidiary criteria			
Educational properties School or centre-based Minimum age Upper age limit	Staff qualification	Pre-primary education	0	None
Beginning of systematic apprenticeship of reading, writing and mathematics	Entry into the nationally designated primary institutions or programmes	Primary education First stage of basic education	1	None

	Start of compulsory education			
Subject presentation Full implementation of basic skills and foundation for lifelong learning	Entry after some 6 years of primary education End of the cycle after 9 years since the beginning of primary education End of compulsory education Several teachers conduct classes in their field of specialization	Lower secondary education Second stage of basic education	2	Type of subsequent education or destination Programme orientation
Typical entrance qualification Minimum entrance requirement		(Upper) secondary education	3	Type of subsequent education or destination Programme orientation Cumulative duration since the beginning of ISCED level 3
Entrance requirement, Content, Age, Duration		Post-secondary non tertiary education	4	Type of subsequent education or destination Cumulative duration since the beginning of ISCED level 3 Programme orientation
Minimum entrance requirement, Type of certification obtained, Duration		First stage of tertiary education (not leading directly to an advanced research qualification)	5	Type of programmes Cumulative theoretical duration at tertiary National degree and qualification structure
Research oriented content, Submission of thesis or dissertation	Prepare graduates for faculty and research posts	Second stage of tertiary education (leading to an advanced research qualification)	6	None

LEVEL 0 - PRE-PRIMARY EDUCATION

Principal characteristics

37. Programmes at level 0, (pre-primary) defined as the initial stage of organized instruction are designed primarily to introduce very young children to a school-type environment, i.e. to provide a bridge between the home and a school-based atmosphere. Upon completion of these programmes, children continue their education at level 1 (primary education).

Classification criteria

38. For the definition of the beginning and the end of pre-primary education, i.e. the boundary between pre-primary education and childcare or between pre-primary and primary education, the following criteria are relevant:

Main criteria

The educational properties of the programme;
 School or centre based;
 The minimum age of the children catered for; and
 The upper age limit of the children.

Subsidiary criterion

The staff qualifications.

39. For a programme to be considered as pre-primary education, it has to be school-based or centre-based. These terms are used to distinguish activities in settings such as primary school, pre-schools and kindergartens from services provided in households or family settings.
40. Such programmes are designed for children aged at least 3 years. This age has been chosen since programmes destined for younger children do not normally satisfy the educational criteria in ISCED.
41. The upper age limit depends in each case on the typical age for entry into primary education.
42. Where appropriate, the requirement of pedagogical qualifications for the teaching staff can be a good proxy criterion for an educational programme in all those countries, in which such a requirement exists. It serves to distinguish pre-primary education from child-care for which para-medical or no qualifications are required.

Includes also:

43. This level includes organized instruction for children with special needs education. This education may be also provided in hospitals or in special schools or training centres. In this case no upper age limit can be specified.

Excludes:

44. Adult education.

LEVEL 1 - PRIMARY EDUCATION OR FIRST STAGE OF BASIC EDUCATION**Principal characteristics**

45. Programmes at level 1 are normally designed on a unit or project basis to give students a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects such as history, geography, natural science, social science, art and music. In some cases religious instruction is featured.
46. The core at this level consists of education provided for children, the customary or legal age of entrance being not younger than five years or older than seven years. This level covers in principle six years of full-time schooling.
47. Throughout this level the programmes are organized in units or projects rather than by subjects. This is a principal characteristic differentiating programmes at this level in most countries from those at level 2.

Classification criteria

48. For the definition of the boundary between education levels 0 and 1 (pre-primary and primary education) the following criteria are relevant:

Main criterion

The beginning of systematic studies characteristic of primary education, e.g. reading, writing and mathematics.

Subsidiary criteria

Entry into the nationally designated primary institutions or programmes; and

The start of compulsory education where it exists.

Includes also:

49. In countries where primary education is part of 'basic education', only the first stage should be included in level 1. If 'basic education' is not officially divided into stages, only the first six years should be classified as level 1.
50. This level category also includes programmes suited to children with special needs education.
51. Literacy programmes within or outside the school system which are similar in content to programmes in primary education for those considered too old to enter elementary schools are also included at this level because they require no previous formal education.

LEVEL 2 - LOWER SECONDARY OR SECOND STAGE OF BASIC EDUCATION

Principal characteristics

52. The contents of education at this stage are typically designed to complete the provision of basic education which began at ISCED level 1. In many, if not most countries, the educational aim is to lay the foundation for lifelong learning and human development on which countries may expand, systematically, further educational opportunities. The programmes at this level are usually on a more subject-oriented pattern using more specialized teachers and more often several teachers conducting classes in their field of specialization. The full implementation of basic skills occurs at this level. The end of this level often coincides with the end of compulsory education where it exists.

Classification criteria

53. For the definition of this level, the following criteria are relevant:

Main criteria

- The beginning of subject presentation using more qualified teachers than for level 1; and
- The full implementation of basic skills and foundation for lifelong learning.

Subsidiary criteria

- Entry is after some 6 years of primary education (see paragraph 35);
- The end of this level is after some 9 years of schooling since the beginning of primary education (see paragraph 35);
- The end of this level often coincides with the end of compulsory education in countries where this exists; and
- Often, at the beginning of this level, several teachers start to conduct classes in their field of specialization.

Complementary dimensions

54. Two complementary dimensions are needed to describe this level:
- The type of subsequent education or destination (see paragraph 36); and
 - The programme orientation (see paragraph 36).

Type of subsequent education or destination

55. ISCED level 2 programmes can be subclassified according to the destination for which the programmes have been designated, resulting in the following distinction (see paragraph 66):
- ISCED 2A: programmes designed for direct access to level 3 in a sequence which would ultimately lead to tertiary education, i.e. entrance to ISCED 3A or 3B;

- ISCED 2B: programmes designed for direct access to level 3C;
- ISCED 2C: programmes primarily designed for direct access to the labour market at the end of this level (sometimes referred to as 'terminal' programmes).

Programme orientation

56. This second complementary dimension subdivides the programmes into three categories:

General education

57. Education which is mainly designed to lead participants to a deeper understanding of a subject or group of subjects, especially, but not necessarily, with a view to preparing participants for further (additional) education at the same or a higher level. Successful completion of these programmes may or may not provide the participants with a labour-market relevant qualification at this level. These programmes are typically school-based. Programmes with a general orientation and not focusing on a particular specialization should be classified in this category.

Pre-vocational or pre-technical education

58. Education which is mainly designed to introduce participants to the world of work and to prepare them for entry into vocational or technical education programmes. Successful completion of such programmes does not yet lead to a labour-market relevant vocational or technical qualification. For a programme to be considered as pre-vocational or pre-technical education, at least 25 per cent of its content has to be vocational or technical. This minimum is necessary to ensure that the vocational subject or the technical subject is not only one among many others.

Vocational or technical education

59. Education which is mainly designed to lead participants to acquire the practical skills, know-how and understanding necessary for employment in a particular occupation or trade or class of occupations or trades. Successful completion of such programmes lead to a labour-market relevant vocational qualification recognized by the competent authorities in the country in which it is obtained (e.g. Ministry of Education, employers' associations, etc.).

Programmes in this category may be subdivided into two types:

- Those which are primary theoretically oriented; and
- Those which are primarily practically oriented.

These three categories are also used for levels 3 and 4.

How the two complementary dimensions work at level 2

Type of subseq. educ. or destination Programme orientation	ISCED level 2 programmes		
	ISCED 2A progr. giving access to 3A or 3B programmes	ISCED 2B progr. giving access to 3C programmes	Programmes not giving access to level 3: ISCED 2C programmes preparing only for direct entry into the labour market
General			
Pre-vocat. or pre-technical			
Vocational or technical			

Includes also:

60. In countries where primary education is part of 'basic education', the second stage of 'basic education' should be included in level 2. If 'basic education' is not officially divided into stages, the years after the sixth should be classified as level 2.
61. This level includes special needs education programmes and all adult education which are similar in content to the education given at this level, e.g. the education which gives to adults the basic skills necessary for further learning.

LEVEL 3 (UPPER) SECONDARY EDUCATION

Principal characteristics

62. This level of education typically begins at the end of full-time compulsory education for those countries that have a system of compulsory education. More specialization may be observed at this level than at ISCED level 2 and often teachers need to be more qualified or specialized than for ISCED level 2. The entrance age to this level is typically 15 or 16 years.
63. The educational programmes included at this level typically require the completion of some 9 years of full-time education (since the beginning of level 1) for admission or a combination of education and vocational or technical experience and with as minimum entrance requirements the completion of level 2 or demonstrable ability to handle programmes at this level.

Classification criteria

64. For the definition of this level, the following criteria are relevant:

Main criteria

The typical entrance qualifications (some nine years of full-time education since the beginning of level 1; see paragraph 35); and

The minimum entrance requirements (usually the completion of level 2).

Complementary dimensions

65. Three dimensions are needed to subclassify this level:
- Type of subsequent education or destination (see paragraph 36);
 - Programme orientation (see paragraph 36); and
 - Cumulative theoretical duration in full time equivalent since the beginning of level 3.

Type of subsequent education or destination

66. The first of these dimensions results in three distinct groupings (see paragraph 84):
- ISCED 3A: programmes at level 3, designed to provide direct access to ISCED 5A;
 - ISCED 3B: programmes at level 3 designed to provide direct access to ISCED 5B;
 - ISCED 3C: programmes at level 3 not designed to lead directly to ISCED 5A or 5B.

Therefore, these programmes lead directly to labour market, ISCED 4 programmes or other ISCED 3 programmes.

Programme orientation

67. This second complementary dimension has the same categories as for level 2 (see paragraphs 56 to 59):
- General education;
 - Pre-vocational or pre-technical education; and
 - Vocational or technical education.

Cumulative theoretical duration

68. This third dimension, the cumulative theoretical duration of the programme, in full-time equivalent, is calculated from the beginning of level 3. This dimension is particularly useful for level 3C programmes.

How the three complementary dimensions work at level 3						
Type of	ISCED level 3 programmes					
subseq. educ. or destination	Programmes giving access to ISCED level 5			Programmes not giving access to level 5 programmes		
→ Programme ↓	ISCED 3A progr. giving access to 5A programmes	ISCED 3B progr. giving access to 5B programmes	ISCED 3C programmes giving access to labour market, level 4 programmes or other level 3 programmes			
orientation			<= 6 months	6 mo < <=1 y	1y < <=2y	> 2 yrs
General						
Pre-vocat. or						
pre-technical						
Vocational or technical						

Includes also:

69. This level includes also special needs education programmes and adult education.

Excludes:

70. Remedial programmes that are designed for participants who have pursued a programme at ISCED level 2 but who have not attained the objectives of ISCED level 2 programmes (and which can therefore not be regarded as equivalent in content to any of the ISCED 3 programmes described below) should not be classified at ISCED level 3 but at ISCED level 1 or 2 depending on the content of the programmes.

LEVEL 4 - POST-SECONDARY NON-TERTIARY EDUCATION**Principal characteristics**

71. ISCED 4 captures programmes that straddle the boundary between upper-secondary and post-secondary education from an international point of view, even though they might clearly be considered as upper-secondary or post-secondary programmes in a national context.

72. ISCED 4 programmes can, considering their content, not be regarded as tertiary programmes. They are often not significantly more advanced than programmes at ISCED 3 but they serve to broaden the knowledge of participants who have already completed a programme at level 3.
73. Typical examples are programmes designed to prepare students for studies at level 5 who, although having completed ISCED level 3, did not follow a curriculum which would allow entry to level 5, i.e. pre-degree foundation courses or short vocational programmes. Second cycle programmes can be included as well.

Classification criteria

74. It requires as a rule the successful completion of level 3, i.e. successful completion of any programme at level 3A or 3B, or, for 3C programmes, a cumulative theoretical duration of typically 3 years at least. However, the criterion of successful completion of ISCED 3 should be interpreted in the context of the duration of the programme. For example, a programme that builds on a 2-year programme at ISCED 3 and has a duration of 4 years, would normally be classified at ISCED 4 even though the preceding 2-year programme at ISCED 3 does not qualify for the completion of ISCED 3.

The programme content can be expected to be more specialized or detailed and the applications to be more complex in some cases than those offered at the upper-secondary level, and this irrespective of the institutional setting of the programme.

- The students are typically older than those in upper secondary programmes.
- It has a typical full-time equivalent duration of between 6 months and 2 years.

Complementary dimensions

75. Three dimensions are needed to subclassify this level:
- Type of subsequent education or destination (see paragraph 36);
 - The cumulative theoretical duration in full-time equivalence since the beginning of level 3; and
 - The programme orientation (see paragraph 36).

Type of subsequent education or destination

76. According to this first dimension, level 4 can be subdivided into:
- 4A programmes that prepare for entry to ISCED 5; and
 - 4B programmes not giving access to level 5 (primarily designed for direct labour market entry).

Cumulative theoretical duration

77. This duration is to be considered from the beginning of ISCED 3.

Programme orientation

78. The three categories are defined above in paragraphs 56 to 59:
 General education;
 Pre-vocational or pre-technical education; and
 Vocational or technical education.

How the three complementary dimensions work at level 4

Type of subseq. educ. or destination	ISCED level 4 programmes							
	Programmes giving access to level 5 programmes				Programmes not giving access to level 5 programmes			
→	ISCED 4A programmes				ISCED 4B programmes			
Programme orientation ↓	<= 2 years	2y < <=3 y	3y < <=4y	> 4 years	<= 2 years	2y < <=3 y	3y < <=4y	> 4 years
General								
Pre-vocat. or pre-technical								
Vocational or technical								

Cumulative duration is to be considered from the beginning of ISCED3

Includes also:

79. This level includes adult education. For example, technical courses given during an individual's professional life on specific subjects as computer software could be included in this level.

**LEVEL 5 - FIRST STAGE OF TERTIARY EDUCATION
 (NOT LEADING DIRECTLY TO AN ADVANCED RESEARCH
 QUALIFICATION)**

Principal characteristics

80. This level consists of tertiary programmes having an educational content more advanced than those offered at levels 3 and 4. Entry to these programmes normally requires the successful completion of ISCED level 3A or 3B or a similar qualification at ISCED level 4A.

81. All degrees and qualifications are cross-classified by type of programmes, position in national degree or qualification structures (see below) and cumulative duration at tertiary.

Classification criteria

82. For the definition of this level, the following criteria are relevant:
- Normally the minimum entrance requirement to this level is the successful completion of ISCED level 3A or 3B or ISCED level 4A;
 - Level 5 programmes do not lead directly to the award of an advanced research qualification (level 6); and
 - These programmes must have a cumulative theoretical duration of at least 2 years from the beginning of level 5.

Complementary dimensions

83. Three complementary dimensions are needed to subdivide this level:
- the type of programmes dividing programmes into theoretically based/research preparatory/giving access to professions with high skills requirements programmes on the one hand, practical/technical/occupationally specific programmes on the other hand;
 - the cumulative theoretical duration in full time equivalence; and
 - the position in the national degree or qualification structure (first, second or further degree, research).

Combining these three independent dimensions is the only way to capture the broad variety in the provision of tertiary education. The choice of the combination depends on the problems to analyse.

Type of programmes

84. The first dimension to be considered is the distinction between the programmes which are theoretically based/research preparatory (history, philosophy, mathematics, etc.) or giving access to professions with high skills requirements (e.g. medicine, dentistry, architecture, etc.), and those programmes which are practical/technical/occupationally specific. To facilitate the presentation, the first type will be called 5A, the second, 5B.
85. With the increasing demand for tertiary education in many countries, the distinction between long streams and short streams is very important. The long stream programmes are more theoretical and can lead to advanced research programmes or a profession with high skills requirements. The short streams are more practically oriented.
86. As the organizational structure of tertiary education programmes varies greatly across countries, no single criterion can be used to define boundaries between ISCED 5A and ISCED 5B. The following criteria are the minimum requirements for classifying a programme as ISCED 5A, although programmes not satisfying a single criterion should not be automatically excluded. If a programme is similar in

content to other programmes meeting each of these criteria, it should be classified at level 5A.

87. ISCED level 5A programmes are tertiary programmes that are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes and profession with high skills requirements. They must satisfy a sufficient number of the following criteria:
- They have a minimum cumulative theoretical duration (at tertiary) of three years' full-time equivalent, although typically they are of 4 or more years. If a degree has 3 years' full-time equivalent duration, it is usually preceded by at least 13 years of previous schooling (see paragraph 35). For systems in which degrees are awarded by credit accumulation, a comparable amount of time and intensity would be required;
 - They typically require that the faculty have advanced research credentials;
 - They may involve completion of a research project or thesis;
 - They provide the level of education required for entry into a profession with high skills requirements (see paragraph 84) or an advanced research programme.
88. Qualifications in category 5B are typically shorter than those in 5A and focus on occupationally specific skills geared for entry into the labour market, although some theoretical foundations may be covered in the respective programme.
89. The content of ISCED level 5B programmes is practically oriented/occupationally specific and is mainly designed for participants to acquire the practical skills, and know-how needed for employment in a particular occupation or trade or class of occupations or trades - the successful completion of which usually provides the participants with a labour-market relevant qualification.
90. A programme should be considered as belonging to level 5B if it meets the following criteria:
- It is more practically oriented and occupationally specific than programmes at ISCED 5A, and does not provide direct access to advanced research programmes;
 - It has a minimum of two years' full-time equivalent duration but generally is of 2 or 3 years. For systems in which qualifications are awarded by credit accumulation, a comparable amount of time and intensity would be required;
 - The entry requirement may require the mastery of specific subject areas at ISCED 3B or 4A; and
 - It provides access to an occupation.

Cumulative theoretical duration

91. For initial programmes at tertiary, the cumulative theoretical duration is simply the theoretical full-time equivalent duration of those programmes from the beginning of level 5.

92. For programmes that require completion of other tertiary programmes prior to admission (see national degree and qualification structure below), cumulative duration is calculated by adding the minimum entrance requirements of the programme (i.e. full-time equivalent years of tertiary education prerequisites) to the full-time equivalent duration of the programme. For degrees or qualifications where the full-time equivalent years of schooling is unknown (i.e. courses of study designed explicitly for flexible or part-time study), cumulative duration is calculated based on the duration of more traditional degree or qualification programmes with a similar level of educational content.
93. The categories to be considered would be:
- And less than 3 years (particularly for ISCED level 5B);
 - And less than 4 years;
 - And less than 5 years;
 - And less than 6 years;
 - 6 Years and more.

National degree and qualification structure

94. This dimension cross-classifies both ISCED 5A and 5B qualifications by their position in the national qualification structure for tertiary education within an individual country.
95. The main reason the national degree and qualification structure is included as a separate dimension is that the timing of these awards mark important educational and labour market transition points within countries. For example, in country A a student who completes a three year Bachelor's degree programme will have access to a wide range of occupations and opportunities for further education, whereas the same student studying in country B (which does not distinguish between a first and second university degree) will only obtain a labour market relevant qualification after the completion of a full four or five year degree programme, even though the content may be similar to that of a second (Master's) degree programme in country A.
96. The 'position' of a degree or qualification structure is assigned (first, second or further research) based on the internal hierarchy of awards within national education systems. For example, a first theoretically based degree or qualification (cross-classifying 'theoretically based' type of programme 5A with 'first' in the national degree and qualifications structure) would necessarily meet all of the criteria listed above for a theoretically based programme and lead to the first important educational or labour market qualification within this type of programme. The research degree is intended for the countries which have a non-doctoral research degree such as the Master of Philosophy in some countries and want to have it clearly distinguished in international statistics.
97. When 'theoretically based' programmes are organized and provide sequential qualifications, usually only the last qualification gives direct access to level 6, but all these programmes are allocated to level 5A.

98. Bachelor's degrees in many English-speaking countries, the 'Diplom' in many German-speaking countries, and the Licence in many French-speaking countries meet the content criteria for the first theoretically based programmes. Second and higher theoretically based programmes (e.g. Master's degree in English-speaking countries and Maîtrise in French-speaking countries) would be classified separately from advanced research qualifications, which would have their own position in ISCED 6 (see below).
99. Degrees or qualifications with a different numerical ranking in two countries may be equivalent in educational content. For instance, programmes leading to a 'graduate' or second degree in many English-speaking countries have to be classified at level 5 as is the case for long first degrees in many German-speaking countries. It is only by combining national degree structure with other tertiary dimensions, such as cumulative theoretical duration and programme orientation, that enough information is available to group degrees and qualifications of similar education content.

How the three complementary dimensions work at level 5

Theoretical cumulative duration at tertiary level ↓	LEVEL 5				
	5A Programmes			5B Programmes	
	First degree	Sec. and further degree	Research	First qualificat.	Second qualification
2 and < 3 years					
3 and < 4 years					
4 and < 5 years					
5 and < 6 years					
6 years and +					

Includes also:

100. This level includes all the research programmes which are not part of a doctorate, such as any type of Master's degree.
101. In some countries, students beginning tertiary education enrol directly for an advanced research qualification. In this case, the part of the programme concentrating on advanced research should be classified as level 6 and the initial years as level 5.
102. Adult education programmes equivalent in content with some ISCED 5 programmes could be included at this level.

LEVEL 6 - SECOND STAGE OF TERTIARY EDUCATION (LEADING TO AN ADVANCED RESEARCH QUALIFICATION)

Principal characteristics

103. This level is reserved for tertiary programmes which lead to the award of an advanced research qualification. The programmes are therefore devoted to advanced study and original research and are not based on course-work only.

Classification criteria

104. For the definition of this level, the following criteria are relevant:

Main criterion

It typically requires the submission of a thesis or dissertation of publishable quality which is the product of original research and represents a significant contribution to knowledge.

Subsidiary criterion

It prepares graduates for faculty posts in institutions offering ISCED 5A programmes, as well as research posts in government, industry, etc.

Complementary dimensions

105. As the scope of this level is very restricted, no complementary dimension is needed.

Includes also:

106. The part concentrating on advanced research in those countries where students beginning tertiary education enrol directly for an advanced research programme (see paragraph 101).

II. BROAD GROUPS AND FIELDS OF EDUCATION

107. The fields of education in the original ISCED have been modified to eliminate overlapping, and increased to include new fields. Thus, there are now 25 fields of education as compared to 21 in the original version. Another innovation is the establishment of broad groups composed of fields of education having similarities. One such example is the broad group Health and Welfare comprising educational programmes in medicine, medical services, nursing, dental services and social services.
108. Further, it should also be stated that UNESCO intends to insert new fields as and when the need arises. Member States would be accordingly advised when this occurs. It is also recommended that inter- or multi-disciplinary programmes should be classified according to a majority rule, i.e. in the field of education in which the students spend most of their time.
109. A code list describing exactly how educational programmes/subject groups are allocated to the different fields of education will be given in the operational manual.

General Programmes	
	01 Basic programmes
	Basic general programmes pre-primary, elementary, primary, secondary, etc.
	08 Literacy and numeracy
	Simple and functional literacy, numeracy.
	09 Personal development
	Enhancing personal skills, e.g. behavioural capacities, mental skills, personal organizational capacities, life orientation programmes.
Education	
	14 Teacher training and education science
	Teacher training for pre-school, kindergarten, elementary school, vocational, practical, non-vocational subject, adult education, teacher trainers and for handicapped children. General and specialized teacher training programmes. Education science: curriculum development in non-vocational and vocational subjects. Educational assessment, testing and measurement, educational research, other education science.
Humanities and Arts	
	21 Arts
	Fine arts: drawing, painting, sculpture; Performing arts: music, drama, dance, circus; Graphic and audio-visual arts: photography, cinematography, music production, radio and TV production, printing and publishing; Design; Craft skills.
	22 Humanities
	Religion and theology; Foreign languages and cultures: living or 'dead' languages and their literature, area studies; Native languages: current or vernacular language and its literature; Other humanities: interpretation and translation, linguistics, comparative literature, history, archaeology, philosophy, ethics.
Social sciences, business and law	
	31 Social and behavioural science

	Economics, economic history, political science, sociology, demography, anthropology (except physical anthropology), ethnology, futurology, psychology, geography (except physical geography), peace and conflict studies, human rights.
	32 Journalism and information
	Journalism; library technician and science; technicians in museums and similar repositories; Documentation techniques; Archival sciences.
	34 Business and administration
	Retailing, marketing, sales, public relations, real estate; Finance, banking, insurance, investment analysis; Accounting, auditing, bookkeeping; Management, public administration, institutional administration, personnel administration; Secretarial and office work.
	38 Law
	Local magistrates, 'notaires', law (general, international, labour, maritime, etc.), jurisprudence, history of law.
Science	
	42 Life sciences
	Biology, botany, bacteriology, toxicology, microbiology, zoology, entomology, ornithology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences.
	44 Physical sciences
	Astronomy and space sciences, physics, other allied subjects, chemistry, other allied subjects, geology, geophysics, mineralogy, physical anthropology, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, marine science, vulcanology, palaeoecology.
	46 Mathematics and statistics
	Mathematics, operations research, numerical analysis, actuarial science, statistics and other allied fields.
	48 Computing
	Computer sciences: system design, computer programming, data processing, networks, operating systems - software development only (hardware development should be classified with the engineering fields).

Engineering, manufacturing and construction	
	52 Engineering and engineering trades
	Engineering drawing, mechanics, metal work, electricity, electronics, telecommunications, energy and chemical engineering, vehicle maintenance, surveying.
	54 Manufacturing and processing
	Food and drink processing, textiles, clothes, footwear, leather, materials (wood, paper, plastic, glass, etc.), mining and extraction.
	58 Architecture and building
	Architecture and town planning: structural architecture, landscape architecture, community planning, cartography; Building, construction; Civil engineering.
Agriculture	
	62 Agriculture, forestry and fishery
	Agriculture, crop and livestock production, agronomy, animal husbandry, horticulture and gardening, forestry and forest product techniques, natural parks, wildlife, fisheries, fishery science and technology.
	64 Veterinary
	Veterinary medicine, veterinary assisting.
Health and welfare	
	72 Health
	Medicine: anatomy, epidemiology, cytology, physiology, immunology and immunoaematology, pathology, anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, neurology, psychiatry, radiology, ophthalmology; Medical services: public health services, hygiene, pharmacy, pharmacology, therapeutics, rehabilitation, prosthetics, optometry, nutrition; Nursing: basic nursing, midwifery; Dental services: dental assisting, dental hygienist, dental laboratory technician, odontology.
	76 Social services
	Social care: care of the disabled, child care, youth services, gerontological services; Social work: counselling, welfare n.e.c.

Services	
	81 Personal services
	Hotel and catering, travel and tourism, sports and leisure, hairdressing, beauty treatment and other personal services: cleaning, laundry, dry-cleaning, cosmetic services, domestic science.
	84 Transport services
	Seamanship, ship's officer, nautical science, air crew, air traffic control, railway operations, road motor vehicle operations, postal service.
	85 Environmental protection
	Environmental conservation, control and protection, air and water pollution control, labour protection and security.
	86 Security services
	Protection of property and persons: police work and related law enforcement, criminology, fire-protection and fire fighting, civil security; Military.
Not known or unspecified	
	(This category is not part of the classification itself but in data collection '99' is needed for 'fields of education not known or unspecified'.)

Glossary

Course

A course for this purpose is taken to be a planned series of learning experiences in a particular range of subject-matters or skills offered by a sponsoring agency and undertaken by one or more students.

Formal education

(or initial education or regular school and university education)

Education provided in the system of schools, colleges, universities and other formal educational institutions that normally constitutes a continuous 'ladder' of full-time education for children and young people, generally beginning at age five

to seven and continuing up to 20 or 25 years old. In some countries, the upper parts of this 'ladder' are constituted by organized programmes of joint part-time employment and part-time participation in the regular school and university system: such programmes have come to be known as the 'dual system' or equivalent terms in these countries.

Non-formal education

Any organized and sustained educational activities that do not correspond exactly to the above definition of formal education. Non-formal education may therefore take place both within and outside educational institutions, and cater to persons of all ages. Depending on country contexts, it may cover educational programmes to impart adult literacy, basic education for out-of-school children, life-skills, work-skills, and general culture. Non-formal education programmes do not necessarily follow the 'ladder' system, and may have differing duration.

Special needs education

Educational intervention and support designed to address special education needs. The term 'special needs education' has come into use as a replacement for the term 'special education'. The older term was mainly understood to refer to the education of children with disabilities that takes place in special schools or institutions distinct from, and outside of, the institutions of the regular school and university system. In many countries today a large proportion of disabled children are in fact educated in institutions of the regular system. Moreover, the concept of 'children with special educational needs' extends beyond those who may be included in handicapped categories to cover those who are failing in school for a wide variety of other reasons that are known to be likely to impede a child's optimal progress. Whether or not this more broadly defined group of children are in need of additional support depends on the extent to which schools need to adapt their curriculum, teaching and organization and/or to provide additional human or material resources so as to stimulate efficient and effective learning for these pupils.

Adult education

(or continuing or recurrent education)

The entire body of organized educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adults by the society to which they belong, improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose:

- to complete a level of formal education;
- to acquire knowledge and skills in a new field;
- to refresh or update their knowledge in a particular field.

Appendix “e-2”



36 C

36 C/19

5 September 2011

Original: English

Item **5.5** of the provisional agenda

**REVISION OF THE INTERNATIONAL
STANDARD CLASSIFICATION OF EDUCATION
(ISCED) OUTLINE**

Source: 34 C/Resolution 20

Background: The International Standard Classification of Education (ISCED) is a framework which allows for the standardized reporting of a wide range of policy relevant education statistics according to an internationally agreed set of common definitions and concepts thus ensuring cross-national comparability of resulting indicators. The General Conference adopted 34 C/Resolution 20, at its 34th session inviting the Director-General to initiate a review and revision of the 1997 version of the ISCED taking account of changes in education policies and structures over the preceding decade. An interim progress report was presented to the General Conference at its 35th session. Regular reports have also been submitted to the Committee on Conventions and Recommendations of the Executive Board.

Purpose: To submit to the General Conference, for approval, the revised International Standard Classification of Education (ISCED 2011).

Decision required: paragraph 6.

1. The 34th session of the General Conference adopted 34 C/Resolution 20 which, *inter alia*, "Invites the Director-General to initiate a consultation of experts, with the participation of representatives of UNESCO and Member States concerned, and also representatives from other relevant international organizations, with a view to submitting an interim report to it at "its 35th session, and the revised version of the International Standard Classification of Education to it at its 36th session."
2. The above interim report (35 C/INF.14), presented to the 35th session of the General Conference, detailed the activities undertaken since its 34th session, including the establishment of an ISCED Technical Advisory Panel of 15 international experts on education and statistics from Brazil, Denmark, France, Germany, India, Italy, Jordan, Latvia, Mauritania, Mauritius, Mexico, the Philippines, Saint Lucia, the United Kingdom of Great Britain and northern Ireland and Zimbabwe including representatives of Eurostat, OECD, UNICEF and UNESCO. The report also set out the scope of the planned revision and the strategy to be adopted for consulting Member States and relevant international and regional organizations on the review.
3. Since the preparation of that report, detailed proposals for the revision developed in collaboration with the Technical Advisory Panel were discussed in separate regional meetings of experts from the Arab States, Asia, Latin America and the Caribbean, and sub-Saharan Africa. Discussions on the proposals also took place with national experts attending meetings on education statistics held by Eurostat and OECD and with representatives of international organizations at an inter-agency meeting.
4. The initial proposals were revised in the light of feedback from the national, regional and international experts consulted and a global consultation of the draft ISCED 2011 text was launched in June 2010. All Member States of UNESCO – including Ministries of Education; with the assistance of the United Nations Statistical Division, all National Statistical Offices – were invited to comment. In

addition, the proposals were sent to members of the United Nations' Expert Group on International Economic and Social Classifications, members of the ISCED Technical Advisory Panel, national and regional experts who participated in the regional meetings and discussions on ISCED in 2009 and 2010, relevant international agencies and national contacts responsible for submitting data on education, literacy or educational attainment to the UIS or its education data collection partners, OECD and Eurostat.

5. The detailed feedback was reviewed by the Editorial Subgroup of the Technical Advisory Panel in December 2010 and a revised draft proposal was deliberated by the full Technical Advisory Panel at its final meeting in February 2011. The proposal submitted to the General Conference in Annex to this document takes account of the comments and suggestions received from over 110 respondents representing more than 80 countries and is endorsed by the Technical Advisory Panel.

Proposed resolution

6. In the light of the above, the General Conference may wish to adopt the following resolution: The General Conference,
 1. Having examined document 35 C/19,
 2. Recalling 34 C/Resolution 20, concerning the Revision of the International Standard Classification of Education (ISCED),
 3. Noting with satisfaction that in accordance with this resolution a Technical Advisory Panel was established and that detailed proposals were presented to and discussed with a large number of experts and ministries of education and national statistical offices,
 4. Approves the revised version of ISCED contained in Annex as ISCED 2011.
 5. Invites the Director-General:
 - (a) To prepare an operational manual aimed at providing guidance to users on the interpretation and application of ISCED 2011;
 - (b) To provide training and capacity-building support to countries to prepare them for the implementation of ISCED 2011 in national and international data collections exercises in the coming years;
 - (c) To work with Member States to update the mappings of their national education systems to ISCED 2011 and to make these available to users of national and international education statistics;
 - (d) To continue to review periodically and to revise the ISCED to ensure that it is consistent with developments in the policies and structures of education and training, in particular to undertake a review of the ISCED 1997 fields of education and training and to report back, ideally with a proposal for a revised classification of the fields, at an appropriate future session;
 - (e) To submit a progress report of the work accomplished to the Executive Board at its 191st session and biennially thereafter.

UNESCO INSTITUTE FOR STATISTICS
International Standard Classification of Education 2011

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1. WHAT IS ISCED?

1. The International Standard Classification of Education (ISCED) belongs to the United Nations International Family of Economic and Social Classifications, which are applied in statistics world-wide with the purpose of assembling, compiling and analysing cross-nationally comparable data. ISCED is the reference classification for organizing educational programmes and related qualifications by education levels and fields. ISCED is a product of international agreement and adopted formally by the General Conference of UNESCO Member States.
2. ISCED is designed to serve as a framework to classify educational activities as defined in programmes and the resulting qualifications into internationally agreed categories. The basic concepts and definitions of ISCED are therefore intended to be internationally valid and comprehensive of the full range of education systems irrespective of the situation in a particular system.
3. ISCED classifies educational programmes by their content using two main cross-classification variables: levels of education (see Section 9) and fields of education (see Section 24 – Annex 4). This version of ISCED (ISCED 2011) presents a revision of the ISCED 1997 levels of education classification. It also introduces a related classification of educational attainment levels based on recognized educational qualifications. The ISCED 1997 fields of education have been retained for the present time.
4. Information compiled according to ISCED can be used for assembling statistics on many different aspects of education of interest to policy-makers and other users of international education statistics. These aspects include enrolment and attendance, human or financial resources invested in education, and the educational attainment of the population.
5. The application of ISCED facilitates the transformation of detailed national education statistics on participants, providers and sponsors of education, compiled on the basis of national concepts and definitions, into aggregate categories that can be compared and interpreted internationally.
6. Data collections of education statistics assembled according to ISCED can be based on different data sources such as administrative registers, individual and household surveys, and macro-economic aggregated statistics. Guidance on the implementation of ISCED 2011 in statistical sources will be included in an operational manual and other training materials (see Section 8 on governance).
7. ISCED 2011 rests on three components: (i) internationally agreed concepts and definitions; (ii) the classification systems; and (iii) ISCED mappings of educational programmes and related qualifications in countries worldwide.
8. ISCED mappings are an essential tool for organizing information about national education systems, their programmes and related qualifications in order to ensure the comparability of ISCED level information and to support their interpretation for international statistical purposes.

9. ISCED mappings ensure a transparent process of coding national educational programmes and related qualifications into comparable categories for use in international statistics by linking the classification criteria to the properties of the educational programmes and their related qualifications.

2. UNIT OF CLASSIFICATION

10. The basic units of classification in ISCED are the national (and sub-national) educational programme and the related recognized educational qualification.
11. In ISCED, an **educational programme** is defined as a coherent set or sequence of educational activities or communication designed and organized to achieve predetermined learning objectives or accomplish a specific set of educational tasks over a sustained period. Objectives encompass improving knowledge, skills and competencies within any personal, civic, social and/or employment related context. Learning objectives are typically linked to the purpose of preparing for more advanced studies and/or for an occupation or trade or class of occupations or trades but may be related to personal development or leisure. A common characteristic of an educational programme is that, upon fulfilment of learning objectives or educational tasks, successful completion is certified. The key concepts in this formulation are to be understood as follows:
 12. **EDUCATIONAL ACTIVITIES:** deliberate activities, involving some form of communication intended to bring about learning.
 13. **COMMUNICATION:** a relationship between two or more persons or an inanimate medium and persons, involving the transfer of information (messages, ideas, knowledge, strategies, etc.). Communication may be verbal or non-verbal, direct/faceto-face or indirect/remote, and may involve a wide variety of channels and media.
 14. **LEARNING:** individual acquisition or modification of information, knowledge, understanding, attitudes, values, skills, competencies or behaviours through experience, practice, study or instruction.
 15. **ORGANIZED:** planned in a pattern or sequence with explicit or implicit aims. It involves a providing agency (person or persons or body) that facilitates a learning environment, and a method of instruction through which communication is organized. Instruction typically involves a teacher or trainer who is engaged in communicating and guiding knowledge and skills with a view to bringing about learning. The medium of instruction can also be indirect, e.g. through radio, television, computer software, film, recordings, internet or other communication technologies.
 16. **SUSTAINED:** the learning experience has the elements of duration and continuity.
 17. An educational programme can in a national context be strictly defined and regulated. The ISCED definition of an educational programme caters for the multiple possibilities available in different countries with the purpose of reaching comparability at the international level.

18. Within an educational programme, educational activities may also be grouped into subcomponents variously described in national contexts as “courses”, “modules”, “units” and/or “subjects”. In ISCED a “course” is equivalent in meaning to a “module”, “unit” and/or “subject”. An educational programme may have major components not normally characterized as courses – for example, play-based activities, periods of work experience, research projects, and preparation of dissertations.
19. The classification of educational programmes determines the reporting of statistics on education systems, e.g., enrolment, entrants, teachers and other human and financial resources. Statistics on an educational programme can provide information on the links between inputs (entrants into the system), the process (participation) and the output (the qualification).
20. Within the context of ISCED, an educational qualification is the official confirmation, usually in the form of a document certifying the successful completion of an educational programme or of a stage of a programme. Qualifications can be obtained through: (i) successful completion of a full educational programme; (ii) successful completion of a stage of an educational programme (intermediate qualifications); or (iii) validation of acquired knowledge, skills and competencies independent of participation in an educational programme. Successful completion of a programme is normally granted when a student has achieved specified learning objectives. Individual credits awarded for successful completion of individual courses (e.g. modules or subjects) are not considered as qualifications within ISCED. In such cases, a sufficient number of credits or subjects equivalent in duration and/or covering the curriculum of a full programme would represent a qualification.
21. ISCED 2011 considers the recognized qualifications corresponding to an educational programme as a related unit of the classification. In ISCED, the term “qualification” is synonymous with “credential”. Other terms such as “certificate”, “degree” or “diploma” are types of qualification and are treated as being synonymous with each other within ISCED. The classification of qualifications officially recognized by the relevant national education authorities is the basis for statistics on educational attainment.
22. In ISCED, educational programmes are classified first and qualifications are subsequently classified. The ISCED mapping is the tool to show the links between educational programmes and qualifications. Normally one educational programme leads to one qualification. However, in some cases several programmes can lead to the same qualification, and one programme can lead to a number of different qualifications.
23. The recognition of (prior) learning through non-formal education or informal learning has become more common in many countries over the last decade. ISCED 2011 specifically allows for the classification of qualifications obtained through the demonstrated acquisition of skills, knowledge and competencies comparable to successful completion of a formal educational programme and thereby measurable through a formal qualification.

24. ISCED 2011 is not designed to directly assess the competencies of individuals because there is no direct relationship between educational programmes or qualifications and actual educational achievement. The educational programmes that an individual has participated in or has successfully completed are, at best, only an approximation of the skills, knowledge and competencies mastered at the time of completion.
 25. National and regional qualification frameworks can be useful tools for distinguishing knowledge, skills and competencies related to programmes and qualifications. Such frameworks exist in many countries for describing competencies and skill levels for the population in the sense of possibilities for educational achievement. It is recommended that countries make the links transparent between ISCED and their national or regional qualification framework where one exists.
- 3. PROGRAMMES SPANNING ISCED LEVELS, SEQUENTIAL PROGRAMMES AND MODULAR PROGRAMMES**
26. When classifying national educational programmes by ISCED levels, transition points between national programmes and exit points into the labour market may not always coincide with transition points between ISCED levels. Three such cases can be identified: (i) programmes that span two or more ISCED levels; (ii) two or more sequential programmes that together constitute one ISCED level; and (iii) programmes which are provided in modules or courses without clearly defined sequencing.
 27. A national educational programme with a duration exceeding the duration criteria provided for ISCED levels (see Paragraphs 70 and 71) is considered as spanning more than one level. It is therefore necessary to identify the transition point (or points) from one ISCED level to the next within the course of the programme according to the level criteria. For example, when a national primary education programme lasts for eight years or longer, the final grades are to be classified as ISCED level 2 (e.g. the first 6 grades in ISCED level 1 and the last 2 grades in ISCED level 2).
 28. To classify a programme spanning more than one ISCED level, existing transition points within the programme, such as stages or intermediate qualifications, should be used to assign the relevant grades of the programme to corresponding ISCED levels. If no such transition point exists, the typical cumulative duration of the ISCED level (see Paragraph 71), provides guidance on how to identify the boundaries between ISCED levels. Further instructions are given in Sections 10 to 19 on ISCED levels.
 29. Programmes spanning more than one ISCED level typically do not provide a qualification at the end of the lower ISCED level. In these cases, other criteria, for example having fully attended the final grade classified at the lower ISCED level or having access to the grades classified at the higher ISCED level may be used to define level completion.

30. There are special considerations for reporting on programmes that span across ISCED levels. Enrolment numbers are to be reported by ISCED level, typically using statistics by grade or year to make the distinction. Financial and human resources may also need to be estimated by level (or groups of levels, e.g. tertiary). When reporting new entrants to or graduates of an ISCED level, all levels that the programme spans are considered separately.
 31. In order to comply with the duration criteria for ISCED levels (see Paragraphs 70 and 71), it may be necessary to classify two or more sequential programmes at the same ISCED level if only their *combined* duration meets the minimum duration criteria. In such cases, the progression from the first to the second or subsequent programme in the education system is not reflected in reporting data in ISCED levels, but can be reflected by reporting any recognized intermediate qualifications obtained in subcategory “partial level completion” at ISCED levels 2 and 3 or “no level completion” at other ISCED levels (see Paragraph 60). Such a situation may occur if in an education system a sequence of four rather than two or three programmes forms ISCED levels 1 to 3.
 32. Two or more sequential programmes constituting one ISCED level require special consideration in reporting. Enrolment should be combined for all programmes in the level. Data on entrants consider only those entering the first programme in the ISCED level, while data on graduates consider only those completing the final programme in the sequence within the level. For educational attainment, only recognized successful completion of the final programme in the sequence counts as level completion. Recognized successful completion of earlier programmes in the sequence in the ISCED level is reported as the subcategories “partial level completion” or “no level completion” (see Paragraph 60).
 33. Modular programmes allow students to compose the content of their education in a flexible way by combining different courses or modules. A combination of modules is considered as an educational programme if it meets the ISCED definition for an educational programme (see Paragraph 11).
 34. All participants in any modules that make up an educational programme are counted as enrolled in the programme, even if they only follow some of the modules, which on their own may be shorter than the typical duration of the given ISCED level. A modular programme is considered as successfully completed when the required number and kinds of modules for the educational programme have been successfully completed.
- 4. SCOPE OF EDUCATION IN ISCED**
35. ISCED 2011 covers formal and non-formal educational programmes offered at any stage of a person’s life. Qualifications which are recognized by the relevant national educational authorities however they are obtained (e.g. by successful completion of a formal educational programme or via a non-formal educational programme or informal learning activity) are used for the purpose of measuring educational attainment. ISCED does not cover programmes of informal,

incidental or random learning nor qualifications which are not recognized. Formal and non-formal education cover a variety of educational programmes that are designed within a national context, such as initial education, regular education, second chance programmes, literacy programmes, adult education, continuing education, open and distance education, apprenticeships, technical or vocational education, training, or special needs education.

36. **Formal education** is defined as education that is institutionalized, intentional, planned through public organizations and recognized private bodies and, in their totality, make up the formal education system of a country. Formal education programmes are thus recognized as such by the relevant national educational authorities or equivalent, e.g. any other institution in co-operation with the national or sub-national educational authorities. Formal education consists mostly of initial education. Vocational education, special needs education and some parts of adult education are often recognized as being part of the formal education system. Qualifications from formal education are by definition recognized and are therefore within the scope of ISCED. Institutionalized education occurs when an organisation provides structured educational arrangements, such as student-teacher relationships and/or interactions, that are specially designed for education and learning.
37. Formal education typically takes place in institutions that are designed to provide fulltime education for pupils and students in a system designed as a continuous educational pathway. This is referred to as initial education defined as formal education of individuals before their first entrance to the labour market, i.e. when they will normally be in full-time education.
38. Formal education also includes education for all age groups with programme content and qualifications that are equivalent to those from initial education. Programmes that take place partly in the workplace may also be considered formal education if they lead to a qualification that is recognized by national educational authorities or equivalent. These programmes are often provided in cooperation between educational institutions and employers (e.g. apprenticeships).
39. Like formal education but unlike informal, incidental or random learning, **non-formal education** is defined as education that is institutionalized, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or a complement to formal education within the process of the lifelong learning of individuals. It is often provided in order to guarantee the right of access to education for all. It caters for people of all ages but does not necessarily apply a continuous pathway-structure; it may be short in duration and/or low in intensity; and it is typically provided in the form of short courses, workshops or seminars. Non-formal education mostly leads to qualifications that are not recognized as formal or equivalent to formal qualifications by the relevant national or sub-national educational authorities or to no qualifications at all. Nevertheless, formal recognized qualifications may be obtained through exclusive participation in

specific non-formal educational programmes: this often happens when the non-formal programme completes the competencies obtained in another context.

40. Depending on the national context, non-formal education can cover programmes contributing to adult and youth literacy and education for out-of-school children, as well as programmes on life skills, work skills, and social or cultural development. It can include training in a workplace for improving or adapting existing qualifications and skills, training for unemployed or inactive persons, as well as alternative educational pathways to formal education and training in some cases. It can also include learning activities pursued for self development and thus is not necessarily job-related.
41. The successful completion of a non-formal educational programme and/or a non-formal qualification does not normally give access to a higher level of education unless it is appropriately validated in the formal education system and recognized by the relevant national or sub-national educational authorities (or equivalent).
42. In ISCED 2011, there is a clear distinction between formal and non-formal education for statistical purposes. ISCED 2011 recommends using the criteria of equivalency of content and/or of resulting qualifications for the classification of non-formal educational programmes. Further guidance regarding the classification of non-formal educational programmes is provided in Section 26 – Annex 6. Currently, international data collection exercises on education (mappings, surveys, censuses, etc.) are mainly focused on formal education.
43. **Informal learning** does not fall within the scope of ISCED for measuring participation in education although recognized qualifications obtained via informal learning are considered when determining educational attainment levels. Informal learning is defined as forms of learning that are intentional or deliberate, but not institutionalized. It is consequently less organized and less structured than either formal or non-formal education. Informal learning may include learning activities that occur in the family, in the work place, in the local community, and in daily life, on a self-directed, family directed or socially directed basis. Like formal and non-formal education, informal learning can be distinguished from incidental or random learning.
44. ISCED also excludes **incidental or random learning**, i.e. various forms of learning that are not organized or that involve communication that is not designed to bring about learning. Incidental or random learning may occur as a by-product of day-to-day activities or other events or communication that are not designed as deliberate educational or learning activities. Examples may include learning that takes place during the course of a meeting, or whilst listening to a radio programme or watching a television broadcast that is not designed as an educational programme.

5. CROSS-CLASSIFICATION VARIABLES

45. The main cross-classification variables of ISCED are levels and fields of education (for fields of education see Section 24 – Annex 4). Within ISCED levels, programmes and qualifications are further classified by complementary

dimensions. These include the programme orientation; completion of the ISCED level; access to higher ISCED levels; and position in the national degree and qualification structure. Not all complementary dimensions apply to all levels. In addition, ISCED level 0 is further subdivided according to the type of programme and age group targeted. The categories and subcategories provided by these complementary dimensions allow more detailed collecting and reporting of cross-nationally comparable data. The following subsections describe the complementary dimensions further.

46. Other descriptive characteristics and attributes of programmes and qualifications beyond those described in ISCED may include the education provider, the educational setting or location, the institutional context, the mode of education provision, the type of participant or the mode of participation. Although not specifically included in ISCED as complementary dimensions, these characteristics serve an important function in distinguishing the nature of the programmes in many countries and in defining the scope of data collections.

LEVELS

47. The notion of “levels” of education is represented by an ordered set of categories, intended to group educational programmes in relation to gradations of learning experiences and the knowledge, skills and competencies which each programme is designed to impart. The concept of the ISCED level reflects the degree of complexity and specialisation of the content of an educational programme, from foundational to complex.
48. Levels of education are therefore a construct based on the assumption that educational programmes can be grouped into an ordered series of categories. These categories represent broad steps of educational progression, in terms of the complexity of educational content. The more advanced the programme, the higher the level of education.
49. Classifying educational programmes into a progression of levels aims to reflect the full range of educational pathways available in education systems: Most education systems provide several possible pathways from ISCED level 0/1 to 8 (see Figure 2 in Section 21 – Annex 1). Individuals can arrange their educational pathways in many ways, as education systems provide multiple branching paths, alternative programme sequences and second chance provisions. However, individuals rarely pass through all possible levels.
50. The classification of educational programmes by level aims to reflect their content. However, curricula are too diverse, multi-faceted and complex to directly assess and compare the content of programmes across education systems in a consistent way. Due to the absence of direct measures to classify educational content, ISCED employs proxy criteria that help to classify a given educational programme to the appropriate ISCED level. The proxy criteria are at times specific for each ISCED level and are explained in the respective sections. The general criteria for duration and cumulative duration per level are summarized at the end of this section.

51. These proxy criteria are comprised of main and subsidiary criteria. Main criteria indicate necessary characteristics of educational programmes at the respective ISCED level. Subsidiary criteria indicate characteristics shared by many but not all educational programmes at this ISCED level (see Sections 10 to 19).
52. The primary criterion for classifying a programme is the complexity and specialization of its educational content and how the content is reflected in the proxy criteria. The institutional context should not be used as a substitute for educational content as a classification criterion. For example, ISCED 4 programmes may take place in institutions that typically provide ISCED 5 or 6 programmes.

ORIENTATION

53. The orientation of a programme is distinguished at ISCED levels 2 to 5, with the possibility of use at ISCED levels 6-8. There are two categories of orientation: general and vocational education. At tertiary education levels the terms academic and professional will be used in place of general and vocational respectively. ISCED 2011 does not yet define academic and professional more precisely for higher ISCED levels, but opens up the possibility of distinguishing academic and professional orientations in the future based for example on fields of education. At ISCED level 5, the definitions of general and vocational education will be used until definitions of academic and professional have been developed.
54. **Vocational** education is defined as educational programmes that are designed for learners to acquire the knowledge, skills and competencies specific for a particular occupation or trade or class of occupations or trades. Such programmes may have work-based components (e.g. apprenticeships). Successful completion of such programmes leads to labour-market relevant vocational qualifications which are acknowledged as occupationally oriented by the relevant national authorities and/or the labour market.
55. **General** education is defined as educational programmes that are designed to develop learners' general knowledge, skills and competencies and literacy and numeracy skills, often to prepare participants for more advanced educational programmes at the same or a higher ISCED level and to lay the foundation for lifelong learning. These programmes are typically school - or college-based. General education includes educational programmes that are designed to prepare participants for entry into vocational educational programmes but do not prepare for employment in a particular occupation or trade or class of occupations or trades, nor lead directly to a labour market relevant qualification.

COMPLETION AND ACCESS TO HIGHER LEVELS OF EDUCATION

56. The requirements for successful completion of an education programme, i.e. achievement of its learning objectives, are normally stipulated in the programme specifications and usually include:
- Attendance requirements (enrol and regularly attend through the final year of a programme); and/or

- Demonstrated acquisition of expected knowledge, skills and competencies.
57. The acquisition of the knowledge, skills and competencies forming the learning objective of an educational programme is normally validated by:
- Passing (i.e. succeeding in) a final, curriculum-based examination or series of examinations;
 - Accumulating the specified number of study credits; or
 - A successful formal assessment of the knowledge, skills and competencies acquired. In formal education, successful completion usually results in a qualification that is recognized by the relevant national education authorities.
58. Educational programmes at ISCED levels 1 and 2 (and occasionally at ISCED levels 3 or 4) do not always conclude with a qualification. In these cases, other criteria in place of qualifications should be used to determine successful completion; for example having attended the full final year of the programme or having access to a higher level of education.
59. Successful completion of programmes at ISCED levels 1 to 3 is considered as level completion when the qualification obtained is designed to provide direct access to a higher ISCED level. In the case of ISCED level 3, “higher ISCED level” is taken to mean ISCED levels 5, 6 or 7. Qualifications are considered as giving access to a higher ISCED level even if this access is limited to only some of the programmes at the higher ISCED level. Successful completion of programmes classified at ISCED levels 4-8 is considered as level completion. However, recognized qualifications obtained before completing the programme (e.g. from the successful completion of a stage of the programme resulting in a recognized intermediate qualification) are classified at a lower ISCED level.
60. Educational programmes and corresponding qualifications within ISCED levels 2 and 3 are distinguished by four subcategories:
1. **No level completion** (and thus without direct access to a higher ISCED level – which in the case of ISCED 3 is to levels 5, 6 or 7);
 2. **partial level completion without direct access** to a higher ISCED level;
 3. **level completion without direct access** to a higher ISCED level; and
 4. **level completion with direct access** to a higher ISCED level (which in the case of ISCED 3 is to first tertiary programmes at levels 5, 6 or 7).
61. Successful completion of programmes at ISCED levels 2 or 3 which do not give access to programmes at a higher ISCED level (which in the case of ISCED level 3 is ISCED levels 5, 6 or 7) is considered as level completion or partial level completion if the programme meets the following criteria: (i) the programme has a duration of at least 2 years of study at the given ISCED level; and (ii) the cumulative duration since the start of ISCED level 1 is at least 8 years for ISCED level 2 programmes and at least 11 years for ISCED level 3 programmes. Successful completion of shorter programmes at either ISCED level is regarded as the successful completion of the programme only.

62. Programmes which do not meet the content, minimum duration and cumulative duration criteria are classified as category 1 (no level completion). Programmes which meet the content, minimum duration and cumulative duration criteria which are part of a sequence of programmes within the same ISCED level and which do not give direct access to a higher ISCED level are classified as category 2 (partial level completion). Terminal programmes which meet the content, minimum duration and cumulative duration criteria are classified as category 3 (level completion without direct access). Such programmes usually lead directly to labour market relevant qualifications. In addition, ISCED level 3 programmes which give access to ISCED level 4 programmes only are also classified as category 3 (level completion without direct access). Programmes which give direct access to tertiary education at ISCED levels 5, 6 or 7 are classified as category 4 (level completion with direct access).
63. Programmes for specific groups of participants (adults or individuals with special needs) may have a shorter or longer duration than similar programmes in regular education at a given ISCED level. However, successful completion of a programme should only count as level completion if the qualification obtained indicates the acquisition of an equivalent level of knowledge, skills and competencies as in regular education programmes at the same level.
64. Participation in a programme without successful completion does not qualify for level completion or partial completion and, except at ISCED levels 0 and 1, is not considered for the purposes of determining educational attainment levels. Thus the educational attainment level of individuals who do not successfully complete a given programme is at the level of attainment they had achieved before entering the programme.
65. While the criteria for level completion apply to successful completion and are thus only directly applicable to individuals, educational programmes as a whole are classified according to the highest possible qualification they are designed to prepare for, even if some participants will not obtain this qualification.

POSITION IN THE NATIONAL DEGREE AND QUALIFICATION STRUCTURE

66. Programmes at ISCED levels 6 and 7 are distinguished by their position in the national degree and qualification structure. Considering the sequence of national programmes and qualifications is necessary in order to correctly count first time entrants to and graduates of tertiary education (or its constituent levels). The position of a programme is assigned based on the sequence of degrees and qualifications within national tertiary education systems.
67. ISCED level 6 programmes that do not require prior completion of another level 6 programme for entry are classified as first degree/qualification programmes. All other ISCED level 6 programmes are classified as second or further degree/qualification programmes.
68. ISCED level 7 programmes that do not require prior completion of a level 6 programme for entry are classified as first degree/qualification programmes.

Other level 7 programmes may require either prior completion of a level 6 programme or of another level 7 programme. These programmes are classified separately in ISCED in order to better identify first-time entrants to and graduates from ISCED level 7.

DURATION AND CUMULATIVE DURATION CRITERIA

69. Because of their importance to the classification of programmes to levels and identification of level completion, the duration criteria are described in detail here. The remaining criteria are described in Sections 10 to 19.
70. ISCED uses the following ranges of programme duration as criteria for classifying formal educational programmes by level:
- ISCED 0 : No duration criteria, however a programme should account for at least the equivalent of 2 hours per day and 100 days a year of educational activities in order to be covered;
 - ISCED 1 : Programme duration typically varies from 4 to 7 years. The most common duration is 6 years;
 - ISCED 2 : Programme duration typically varies from 2 to 5 years. The most common duration is 3 years;
 - ISCED 3 : Programme duration typically varies from 2 to 5 years. The most common duration is 3 years;
 - ISCED 4 : Programme duration typically varies from 6 months to 2-3 years;
 - ISCED 5 : Programme duration typically from 2 to 3 years;
 - ISCED 6 : Programme duration typically varies from 3 to 4 or more years when directly following ISCED level 3 and 1-2 years when following another ISCED level 6 programme;
 - ISCED 7 : Programme duration typically varies from 1 to 3 years when following ISCED level 6 or from 5 to 7 years when directly following ISCED level 3; and
 - ISCED 8 : Programmes typically have duration of at least 3 years, but may be longer
71. ISCED uses the following ranges of cumulative duration as criteria for classifying formal education programmes by level:
- ISCED 1+2 : The typical cumulative duration is 9 to 10 years, but may range from 8 to 11 years; and
 - ISCED 1+2+3 : The typical cumulative duration is 12 years, but may range from 11 to 14 years. Entrance to tertiary education requires a minimum of 11 years of education at ISCED levels 1 to 3.
72. When applying the criteria of duration to part-time or modular programmes, the theoretical programme duration should be measured in full-time equivalents.
73. While the main aim of ISCED is to promote the collection and use of comparable education data, it is recognized that nationally distinct conditions may exist that

require flexibility in the definition of duration by level. Therefore, Paragraphs 70 and 71 provide a range of years of duration. Ideally, the most common or typical duration is used when classifying programmes.

74. The duration by level and cumulative duration as given in Paragraphs 70 and 71 serve as a guide. However, institutional transition points may be used as criteria for assigning a programme to an ISCED level. The choice of national transition points for matching the international categories is primarily determined by the content of the educational programmes, not (cumulative) duration.

6. TYPES OF DATA AND ISCED

75. ISCED is mostly used for statistics on participants, entrants, graduates and educational attainment. ISCED does not constitute a guide for data collection and does not define in detail how to make statistical units operational and the coverage of the data collections. However, in the implementation of ISCED for different types of statistics, the following principles are considered.

ENROLMENT, ATTENDANCE AND ENTRANTS

76. In order to accurately measure enrolment, attendance and entrants by ISCED levels and categories, students must be assigned to an ISCED level, category and subcategory. The institutional context should not be used as basis for assembling statistics. Students within the same institution in different ISCED levels and categories need to be reported separately, if necessary using estimation. Students in educational programmes spanning ISCED levels should be reported using statistics by grade or stage.
77. Students are assigned to ISCED levels and categories according to the characteristics of the programme and not the characteristics of individual students. For example, the category pre-primary education targets children age 3 and above, but children below that age who are enrolled in such programmes should also be reported in this category. Similarly, statistics using categories on access to a higher level should be based on the programme design and not on individual students' pathways.
78. New entrants to an ISCED level must be distinguished from entrants to educational programmes but who do not enter a new level (i.e. who have entered the same ISCED level before). Entrants to an educational programme that is preceded by a programme at the same level are excluded when reporting entrants to a level. For programmes spanning two ISCED levels, participants entering the first grade of the higher ISCED level need to be considered as entrants to an ISCED level even though from a national point of view they continue their education within the same programme.

GRADUATES

79. Graduates from an ISCED level include those who entered and successfully completed an educational programme classified as "level completion". In principle, only those students who successfully complete the full level or a set of

levels (for instance first graduation in tertiary education) in which they enrolled should be counted in order to maintain the link between entrants, enrolments and graduations. Students who receive the same or equivalent qualification by successfully completing only a stage of a level should not be counted as graduates.

80. Graduates should only be counted once at any given ISCED level at the level of the highest programme successfully completed. This is especially relevant for upper secondary and tertiary education, where a sequence of programmes may follow each other within the same ISCED level. The accurate measurement of graduates would imply that the individual student could be followed throughout the level (or set of levels) from entrance to completion. This is often not possible in practice and the development of estimation methods for deriving the number of graduates, for instance through a cohort follow-up survey based on a sample, will often be necessary.

EDUCATIONAL ATTAINMENT

81. The educational attainment of an individual is defined as the highest ISCED level the individual has completed. For operational purposes, educational attainment is usually measured with respect to the highest educational programme successfully completed, which is typically certified by a recognized qualification. Recognized intermediate qualifications are classified at a lower level than the programme itself.
82. The concept of “educational programme successfully completed” usually corresponds to the situation in which a pupil or student attends and completes a formal educational programme (see also Paragraphs 56 to 58).
83. Relevant national educational authorities may recognize qualifications obtained through non-formal education programmes or through the validation of skills gained by means of informal learning as equivalent to formal educational qualifications. These qualifications are also covered by the concept of educational attainment as defined by ISCED. Qualifications from non-formal education or validation of skills that are *not* recognized as equivalent to formal qualifications are not within the scope of ISCED (see Paragraph 35).
84. The ISCED definition of education attainment should be distinguished from other concepts related to an individual’s educational achievements. These may include educational levels attended but not successfully completed, or an individual’s actual knowledge, skills and competencies (e.g. levels of literacy and numeracy) as may be determined through standardised testing or years of schooling.
85. Individuals who attend only part of an educational programme or who do not meet the completion requirements (e.g. fail the final exams) do not qualify for successful completion of the programme. They should be classified according to the highest ISCED level successfully completed (i.e. before entering the programme that was not successfully completed).

86. For the classification of educational attainment, level 0 has a different meaning than for the classification of educational programmes: it means not having successfully completed ISCED level 1. This includes individuals who have never attended an educational programme, or who have attended early childhood or primary education without successfully completing primary education. Several subcategories are considered for this attainment level (see table 5).
87. Educational attainment can be classified according to completed (or partially completed) ISCED level, programme orientation and access to higher ISCED levels. If an individual has successfully completed the same ISCED level more than once (e.g. by taking two different programmes which are normally offered as parallel options), the characteristics of the most recent qualification obtained should be reported.
88. Educational attainment statistics report on individuals of all age groups, some or many of whom may have completed educational programmes or obtained qualifications different from those currently provided. In order to achieve comparability of educational attainment indicators over time and across education cohorts, educational attainment should be classified on the basis of the characteristics of educational programmes and recognized qualifications at the time of successful completion.

7. THE ISCED CLASSIFICATION AND CODING SCHEMES

89. The ISCED classification consists of parallel coding schemes for educational programmes (ISCED-Programmes or ISCED-P) and levels of educational attainment (ISCED-Attainment or ISCED-A). Within both schemes nine separate levels are identified. Within each level, complementary dimensions are used to identify further categories and sub-categories, if applicable. Three-digit coding systems are used both for educational programmes and for educational attainment.

Table 1. ISCED coding: First digit – levels

ISCED Programmes (ISCED-P)	ISCED Attainment (ISCED-A)
0 Early childhood education	0 Less than primary
1. Primary	1 Primary
2 Lower secondary	2 Lower secondary
3 Upper secondary	3 Upper secondary
4 Post-secondary non-tertiary	4 Post-secondary non-tertiary
5 Short-cycle tertiary	5 Short-cycle tertiary
6 Bachelor or equivalent	6 Bachelor or equivalent
7 Master or equivalent	7 Master or equivalent
8 Doctoral or equivalent	8 Doctoral or equivalent
9 Not elsewhere classified	9 Not elsewhere classified

Table 2. ISCED coding: Second digit – categories¹

ISCED Programmes (ISCED-P)	ISCED Attainment (ISCED-A)
0 Not further defined	
1 Early childhood educational development	1 Never attended an educational programme
2 Pre-primary education	2 Some early childhood education
3 Not used	3 Some primary (without completion of ISCED level 1)
4 General / academic	4 General / academic
5 Vocational / professional	5 Vocational / professional
6 Orientation unspecified ²	6 Orientation unspecified ³
7 Not used	7 Not used
8 Not used	8 Not used
9 Not elsewhere classified	9 Not elsewhere classified

1. Programmes: type of programme (ISCED-P level 0), orientation (ISCED-P levels 2-8), not further defined (ISCED-P level 1)

Attainment: participation (ISCED-A level 0), orientation (ISCED-A levels 2-5), not further defined

(ISCED-A levels 1 and 6-8)

2. Used at ISCED-P levels 6-8
3. Used at ISCED-A levels 5-8

Table 3. ISCED coding: Third digit – sub-categories¹

ISCED Programmes (ISCED-P)	ISCED Attainment (ISCED-A)
0 Not further defined	0 Not further defined
1 Recognized successful completion of programme is insufficient for completion or partial completion of ISCED level (and thus without direct access to programmes at a higher ISCED level)	1 Not used
2 Recognized successful completion of programme is sufficient for partial completion of ISCED level but without direct access to programmes at a higher ISCED level	2 Partial level completion – without direct access to programmes at a higher ISCED level
3 Recognized successful completion of programme is sufficient for completion of ISCED level but	3 Level completion – without direct access to programmes at

without direct access to programmes at a higher ISCED level3	a higher ISCED level2
4 Recognized successful completion of programme is sufficient for completion of ISCED level and with direct access to programmes at a higher ISCED level3,4	4 Level completion - with direct access to programmes at a higher ISCED level2,3, 5
5 First degree/qualification programme - bachelor or equivalent (3-4 years)	5 Not used
6 Long first degree/qualification programme - bachelor or master, or equivalent	6 Not used
7 Second or further degree/ qualification programme - following a bachelor or equivalent programme	7 Not used
8 Second or further degree/qualification programme - following a master or equivalent programme	8 Not used
9 Not elsewhere classified	9 Not elsewhere classified

1. Programmes: completion/access (ISCED-P levels 2-5 and 8), position in national degree/qualification structure (ISCED-P levels 6-7), not further defined (ISCED-P levels 0-1) Attainment: completion/ access (ISCED-A levels 2-4), not further defined (ISCED-A levels 0-1 and 5-8)
 2. At ISCED-A levels 1 and 5-7, including successful completion of a programme or a stage of a programme at a higher ISCED level insufficient for level or partial level completion.
 3. In the case of ISCED level 3, 'higher ISCED level' refers to ISCED-P levels 5-7.
 4. In the case of ISCED levels 5 and 8, all (full) programmes are classified as type 4 regardless of whether they give access to higher ISCED levels or not.
 5. At ISCED-A levels 2-4, including successful completion of a programme or a stage of a programme at a higher ISCED level insufficient for level or partial level completion.
90. Not all combinations of categories and subcategories exist or are widespread. The three-digit codes provided in this document are thus limited to the combinations in use. Full listings of these codes are given in Sections 22 and 23 (Annexes 2 and 3) of this document. If users of ISCED identify additional combinations of categories and sub-categories, the list of three-digit codes can be expanded using the existing codes provided for the complementary dimensions.

8. ISCED GOVERNANCE

91. The UNESCO Institute for Statistics (UIS) is the custodian of ISCED and is thus responsible for the development, maintenance, updating and revision of this reference classification and for guidance on the effective and consistent use of ISCED for data collection and analysis. UIS should aim to maintain links with custodians of other relevant classifications, in order to ensure consistency across related classifications.
92. Further responsibilities of the UIS include: describing how the structure and details of the classification are used when producing and presenting statistics; promoting the use of ISCED for cross-nationally comparable statistics; providing guidance materials, training and technical support to countries to ensure the effective implementation and utilization of the classification throughout the world; establishing monitoring mechanisms for proper feedback from ISCED users about problems in its use; and forming an ISCED Committee with other data collection partners to review the classification, and to advise on its implementation (see Paragraphs 96 and 97).
93. The UIS plans to produce an operational manual to facilitate the work with countries in classifying and mapping national education systems (initially on formal educational programmes and qualifications) to ISCED. The manual should provide detailed guidelines and explanatory notes (including some country examples) for the interpretation of ISCED. Additional guidance and training materials could be provided as necessary and as requested by users of the classification. Where appropriate, these materials should be made publicly available in electronic form on the UIS website.
94. Training for implementation should be arranged through regional workshops and technical assistance and cooperation, in accordance with countries' needs and existing capacities. UIS will also work closely with data collection partners on training materials and their content. Particular attention should be given to the transformation of mappings from the ISCED 1997 to the ISCED 2011 version and to guidance on the classification of new or reformed programmes. It is expected that the first international education data collections using ISCED 2011 will begin in 2013 or 2014.
95. The UIS plans to maintain a database comprising mappings of national education systems (formal educational programmes and qualifications) to ISCED which will be accessible on the UIS website and updated as appropriate to reflect changes over time in national education systems.
96. To ensure compliance with the new ISCED, quality assurance mechanisms should be established for the implementation of the ISCED. The UIS plans to work closely with countries and partner data collection agencies (including Eurostat and OECD) to ensure that mappings are in accordance with the ISCED classification and updated as needed. A mechanism for the peer review of mappings of formal national educational programmes and qualifications should be established, working with member states and other relevant agencies.

97. An ISCED Committee should be formed in order to advise UIS regarding the classification of national programmes and qualifications, to review the current version of ISCED and to identify potential areas for further development, although ISCED revisions are not expected to be within its remit. The Committee should consist of UNESCO (as lead agency within the UN system of organizations), custodians of other related classifications as appropriate, and key education data collection partners, such as OECD and Eurostat, as permanent members. The composition of the Committee Membership should aim to be balanced both technically and geographically, and therefore would include in addition a number of educational, statistical and classification experts with knowledge of ISCED and representing different regions of the world on a non-permanent basis as well as representatives from the research and user community.

9. ISCED LEVELS

98. The following sections define the nine ISCED levels. The sections for each ISCED level are structured as follows
- A. *Principal characteristics* describe the objectives of programmes at different ISCED levels, the way in which instruction is organized (characteristics of the teaching-learning process and typical assessment methods, if applicable), as well as their entry requirements. For some ISCED levels, common or well-known national names of programmes are indicated to facilitate understanding of the correspondence between national educational programmes and ISCED levels.
 - B. Classification *criteria* define more formally how educational programmes are classified at the respective ISCED level using main and subsidiary criteria. For more information on the general concept of a “level” in ISCED, see Section 5.
 - C. Considerations *concerning programmes spanning ISCED levels* provide further guidelines for the classification of educational programmes that encompass but also extend beyond one ISCED level. For more information on the underlying concept of educational programmes spanning ISCED levels, see Section 3.
 - D. Complementary *dimensions* define characteristics that distinguish different types of programmes within ISCED levels according to programme orientation, level completion and access to higher ISCED level programmes, programme duration, or position in the national degree/qualification structure. For more general information on these complementary dimensions in ISCED, see Section 5.
 - E. Programmes *also included in ISCED level* indicate less typical or non-formal educational programmes (e.g. in special needs, second chance or adult education) that may not fulfil all classification criteria (e.g. typical entry age), but which are equivalent to other programmes classified at this ISCED level in terms of complexity of content. These programmes are therefore also classified at the respective ISCED level.

- F. Classification of *educational programmes* provides the detailed codes for ISCED-P levels, categories and subcategories that are assigned to educational programmes.
 - G. Classification of *educational attainment* provides the detailed codes for ISCED-A levels, categories and subcategories that are assigned to educational qualifications and similar measures of the successful completion of educational programmes. It also indicates in which cases an educational qualification needs to be classified at a different ISCED-A level than the ISCED-P level of the respective educational programme through which the qualification is usually obtained.
99. Following the description of the ISCED levels, Section 20 provides correspondence tables (Table 20 and Table 21) linking ISCED 2011 to ISCED 1997.

10. ISCED LEVEL 0 – EARLY CHILDHOOD EDUCATION

A. PRINCIPAL CHARACTERISTICS

100. Programmes at ISCED level 0, or “early childhood education”, are typically designed with a holistic approach to support children’s early cognitive, physical, social and emotional development and introduce young children to organized instruction outside of the family context. ISCED level 0 refers to those early childhood programmes that have an intentional education component. These programmes aim to develop socioemotional skills necessary for participation in school and society and to develop some of the skills needed for academic readiness and to prepare them for entry into primary education.
101. In this level, programmes are not necessarily highly structured but are designed to provide an organized and purposeful set of learning activities in a safe physical environment. They allow children to learn in interaction with other children under the guidance of staff/educators, typically through creative and play-based activities.
102. ISCED level 0 programmes target children below the age of entry into ISCED level 1. There are two categories of ISCED level 0 programmes: early childhood educational development and pre-primary education. The former has educational content designed for younger children (in the age range 0-2 years) whilst the latter is designed for children from age 3 years to the start of primary education.
103. Programmes classified at ISCED level 0 are referred to in many ways across the world, for example early childhood education and development, play school, reception, preprimary or pre-school or *educación inicial*. For programmes provided in *crèches*, daycare centres, nurseries or *guarderías*, it is important to ensure that they meet the ISCED level 0 classification criteria specified below. For international comparability purposes the term “early childhood education” is used to label ISCED level 0.

B. CLASSIFICATION CRITERIA

104. For the definition of early childhood education, the following criteria are relevant:

Main criteria

- a. Educational properties of the programme (see Paragraph 105 and 106);
- b. Institutional context (see Paragraph 107);
- c. Typical target age of children for which the programme is designed (see Paragraphs 102 and 108); and
- d. Programme intensity/duration (see Paragraph 110).

Subsidiary criteria

- a. Staff qualifications (see Paragraph 111);
- b. Existence of a regulatory framework (see Paragraph 112); and
- c. Typically not part of compulsory education (see Paragraph 113).

105. The educational properties of **early childhood educational development** can be described as follows: the learning environment is visually stimulating and language-rich and fosters self-expression with an emphasis on language acquisition and the use of language for meaningful communication. There are opportunities for active play so that children can exercise their coordination and motor skills under supervision and in interaction with staff. Programmes providing only childcare (supervision, nutrition and health) are not covered by ISCED.
106. The educational properties of pre-primary education can be described as follows: through interaction with peers and educators, children improve their use of language and their social skills, start to develop logical and reasoning skills, and talk through their thought processes. They are also introduced to alphabetical and mathematical concepts, understanding and use of language, and encouraged to explore their surrounding world and environment. Supervised gross motor activities (i.e., physical exercise through games and other activities) and play-based activities can be used as learning opportunities to promote social interactions with peers and to develop skills, autonomy and school readiness.
107. ISCED level 0 programmes are usually school-based or otherwise institutionalized in a context organised for a group of children (e.g. centre-based, community-based, homebased). ISCED level 0 excludes purely family-based arrangements that may be purposeful but are not organized in a “programme” (e.g. informal learning by children from their parents, other relatives or friends).
108. Within ISCED 0, early childhood educational development programmes are targeted at children aged 0-2 years; and pre-primary education programmes are targeted at children aged 3 to the start of ISCED 1. The upper age limit for the pre-primary education category depends in each case on the theoretical age of entry into ISCED level 1, i.e. primary education (but see Paragraph 117).
109. Integrated early childhood education programmes that span the two sub-categories of ISCED 0 (i.e. educational programmes for children aged 0 to the

start of ISCED 1) need special consideration for classification. For programmes divided into years, stages or cycles: those corresponding to the content criteria in Paragraph 105 should be classified as early childhood educational development, and those corresponding to the content criteria in Paragraph 106 should be classified as pre-primary education. Where no subdivision of the programme exists, classification into the two categories should be based on the ages of the participants.

110. ISCED recommends the following minimum intensity and duration to improve crossnational comparability: educational programmes must account for at least the equivalent of 2 hours per day and 100 days a year of educational activities in order to be classified in ISCED.
111. Where appropriate, the requirement of pedagogical qualifications for educators is a good proxy criterion for an educational programme in those education systems in which such a requirement exists. It serves to distinguish early childhood education from child care for which no explicitly pedagogically trained staff is required.
112. Where relevant, the existence of a reference or regulatory framework issued or recognized by relevant national authorities (e.g. a Ministry of Education, other relevant Ministry or affiliated institution) is a good proxy criterion for an educational programme. This would include guidelines, standards or instructions that describe the learning opportunities provided to young children.
113. In education systems that have compulsory schooling, non-compulsory educational programmes which are designed to take place before they start of compulsory education and which fulfil the criteria above are classified as ISCED level 0. In addition, in some countries the first stage or cycle of compulsory education may also be classified at ISCED level 0 if it fulfils the criteria at this level. Thus, the beginning of compulsory education is not a sufficient criterion to distinguish ISCED level 0 programmes from ISCED level 1 programmes even though this may be the case in some education systems.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

114. Educational programmes spanning ISCED levels 0 and 1 need special consideration for classification. In education systems where a part of early childhood education is included in “basic education”, only those grades, stages or cycles corresponding to the criteria given in Paragraph 104 should be classified as ISCED level 0. Those grades, stages or cycles corresponding to the criteria given in Paragraph 124 should be classified as ISCED level 1.
115. If use of the classification criteria does not result in a clear boundary between ISCED levels 0 and 1, ISCED recommends:
 - i) For programmes spanning ISCED levels 0 and 1 that are organized in stages, the end of the stage closest to 6 years of age should be used as the transition point between ISCED levels 0 and 1;

- ii) For programmes spanning ISCED levels 0 and 1 not divided into stages, grades targeting children under the age of 6 should be classified as ISCED level 0, and the remaining grades should be classified as ISCED level 1.

D. COMPLEMENTARY DIMENSIONS

116. One dimension differentiates educational programmes in ISCED level 0:
- Target age group (see Paragraph 102).

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 0

117. ISCED level 0 includes programmes for children with special needs corresponding to the criteria described in Paragraph 104, irrespective of the age of the children.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 0

118. Educational programmes in ISCED level 0 are coded 010 for early childhood educational development programmes and 020 for pre-primary education programmes (see Paragraph 102). There are no sub-categories differentiated by the third digit.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVELS 0 AND 1

119. For classifying educational attainment, level 0 (less than primary) is used for individuals who never attended an educational programme, who attended some early childhood education (ISCED 0), or who attended some primary but have not successfully completed ISCED level 1 (with or without having attended ISCED 0). Classification codes for educational attainment related to pre-primary and primary education are provided in Table 4.

11. ISCED LEVEL 1 – PRIMARY

A. PRINCIPAL CHARACTERISTICS

120. Programmes at ISCED level 1, or “primary” education, are typically designed to provide students with fundamental skills in reading, writing and mathematics (i.e. literacy and numeracy), and to establish a sound foundation for learning and understanding of core areas of knowledge, personal and social development, preparing for lower secondary education. It focuses on learning at a basic level of complexity with little if any specialisation.
121. Educational activities at ISCED level 1 (particularly in the early grades) are often organized around units, projects or broad learning areas often with an integrated approach rather than providing instruction in specific subjects. Typically, there is one main teacher charge of a group of pupils who organizes the learning process, although a class may have more than one teacher, especially for certain subjects or units.

122. Age is typically the only entry requirement at this level. The customary or legal age of entry is usually neither younger than 5 years nor older than 7 years. Most programmes at this level last 6 years, although their duration ranges between four and seven years. Primary education typically lasts until age 10 to 12 (see Paragraphs 132 to 134). Upon completion of primary education programmes, children may continue their education at ISCED level 2 (lower secondary education).
123. Programmes classified at ISCED level 1 are referred to in many ways across the world, e.g. primary education, elementary education or basic education (stage 1/lower grades if an education system has one programme that spans ISCED levels 1 and 2). For international comparability purposes the term “primary” is used to label ISCED level 1.

B. CLASSIFICATION CRITERIA

124. For the definition of primary, the following criteria are relevant:

Main criteria

- a. Systematic instruction in fundamental knowledge, skills and competencies (see Paragraph 125);
- b. Typical entrance age and duration (see Paragraph 122); and
- c. Instruction organized typically by one main class teacher (see Paragraph 126)

Subsidiary criteria

- a. Part of compulsory education (see Paragraph 127).
125. The boundary between ISCED level 0 and ISCED level 1 coincides with the transition point in an education system where systematic teaching and learning in reading, writing and mathematics begins. Although some ISCED level 0 programmes may already provide some introduction in reading, writing and mathematics, these programmes do not yet give children sound basic skills in these areas, therefore not sufficiently fulfilling the criteria to classify them in ISCED level 1. The transition from pre-primary to primary education is typically marked by entry into the nationally designated primary, elementary or basic educational institutions or programmes.
126. Typically, one main teacher is in charge of a group of children and facilitates the learning process, often organized around units, projects or broad learning areas with an integrated approach (particularly in the early years of primary education). However, a class may have other teachers, especially for certain specialized subjects. Teachers at ISCED level 1 are typically trained in pedagogical approaches for core subjects. In contrast, in ISCED level 2 programmes, there may be more than one teacher instructing different subject areas, often with more in-depth training in particular subjects.
127. The beginning of primary education often coincides with the beginning of compulsory education, except for education systems where some or all of pre-

primary education is already compulsory. Therefore, where compulsory education is legislated, it starts with ISCED level 1 *or before*.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

128. Educational programmes spanning ISCED levels 0 and 1 or 1 and 2 need special consideration for classification. In education systems where primary education is part of an educational programme of 8 or more years, only those grades, stages or cycles corresponding to the criteria given in Paragraph 124 should be classified as ISCED level 1. Any grades, stages or cycles corresponding to the criteria given in Paragraph 104 should be classified as ISCED level 0, and any of those corresponding to the criteria given in Paragraph 143 should be classified as ISCED level 2.
129. If use of the classification criteria does not result in a clear boundary between ISCED levels 0 and 1, criteria to determine the end of ISCED level 0 and the beginning of ISCED level 1 are provided in Paragraphs 114 and 115.
130. If use of the classification criteria does not result in a clear boundary between ISCED levels 1 and 2, the following is recommended: i) for programmes spanning ISCED levels 1 and 2 that are organized in stages, the end of the stage closest to 6 years after the start of ISCED level 1 should be used as the transition point between ISCED levels 1 and 2; ii) for programmes spanning ISCED levels 1 and 2 not divided into stages, only the first 6 years should be classified as ISCED level 1, and the remaining years are classified as ISCED level 2 (see Paragraph 149).

D. COMPLEMENTARY DIMENSIONS

131. None.

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 1

132. ISCED level 1 also includes programmes suited to individuals with special needs if the programme provides systematic teaching and learning in the fundamental skills of reading, writing and mathematics, irrespective of the age of the participant.
133. This level also includes primary level second chance or re-integration programmes. Such educational programmes usually target individuals who left school before completing primary, allowing them to re-enter the education system and complete primary education; or who completed primary but wish to enter an educational programme or occupation for which they are not yet qualified. Participants are typically older than the target age group for ISCED level 1 (but not necessarily adults).
134. Formal and non-formal literacy programmes that are similar in complexity of content to programmes in primary, for adults and youth older than typical ISCED level 1 students, are also included at this level.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 1

135. All educational programmes in ISCED level 1 are coded 100. There are no categories or subcategories to be differentiated by the second or third digit.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVELS 0 AND 1

136. When coding educational attainment, special consideration is required for the classification of individuals who attended but did not complete primary education.
137. For educational attainment, recognized qualifications from ISCED level 2 programmes which are not considered sufficient for ISCED level 2 completion or partial completion are classified as ISCED level 1 (e.g., programmes with less than 2 years duration at ISCED level 2 or with less than 8 years cumulative duration since the start of ISCED level 1).
138. The classification codes for educational attainment related to ISCED level 0 and 1 programmes and qualifications from lower secondary education programmes not sufficient for consideration as completion or partial completion of ISCED level 2 are shown in Table 4.

Table 4. Classification codes for educational attainment related to ISCED levels 0 to 1 (ISCED-A)

ISCED-A		Category		Sub-category	
01	Less than Primary	01	Never attended an educational programme	010	Never attended an educational programme
		02	Some early child-hood education	020	Some early child-hood education
		03	Some Primary education (without level completion)	030	Some Primary education (without level completion)
1	Primary	10	Primary	100	Including recognized successful completion of a lower secondary programme in-sufficient for level completion or partial level completion

12. ISCED LEVEL 2 – LOWER SECONDARY

A. PRINCIPAL CHARACTERISTICS

139. Programmes at ISCED level 2, or “lower secondary” education, are typically designed to build upon the learning outcomes from ISCED level 1. Usually, the educational aim is to lay the foundation for lifelong learning and human development on which education systems may systematically expand further educational opportunities. Some education systems may already offer vocational education programmes at ISCED level 2 to provide individuals with skills relevant to employment.
140. Programmes at this level are usually organized around a more subject-oriented curriculum, introducing theoretical concepts across a broad range of subjects. Teachers typically have pedagogical training in specific subjects and, more often than at ISCED level 1, a class of students may have several teachers who have specialized knowledge of the subjects they teach.
141. ISCED level 2 begins after 4 to 7 years of ISCED level 1 education, with 6 years of ISCED level 1 being the most common duration. Students enter ISCED level 2 typically between age 10 and 13 (age 12 being the most common).
142. Programmes classified at ISCED level 2 are referred to in many ways across the world, for example secondary school (stage one/lower grades if there is nationally one programme that spans ISCED levels 2 and 3), junior secondary school, middle school or junior high school. If a programme spans ISCED levels 1 and 2, the terms elementary education or basic school (stage two/upper grades) are often used. For international comparability purposes the term “lower secondary” is used to label ISCED level 2.

B. CLASSIFICATION CRITERIA

143. For the definition of lower secondary, the following criteria are relevant:

Main criteria

- a. Transition to more subject-oriented instruction (see Paragraph 144);
- b. Entry requirements (see Paragraph 145); and
- c. Cumulative duration since the beginning of ISCED level 1 (see Paragraph 146).

Subsidiary criteria

- a. Typical entry age (see Paragraph 141);
 - b. Instruction by subject teachers and teacher qualifications (see Paragraph 147); and
 - c. Relationship with compulsory education (see Paragraph 148).
144. The boundary between ISCED level 1 and ISCED level 2 coincides with the transition point in education systems from which subject-oriented instruction is emphasized.

145. This level requires completion of ISCED level 1 or the ability to study ISCED level 2 content through a combination of prior education and life and work experience. The successful completion of ISCED level 1 or a specific level of achievement may be required for entering some or all ISCED level 2 programmes in a specific country.
146. ISCED level 2 ends after 8 to 11 years of education from the start of ISCED level 1, with 9 years being the most widespread cumulative duration. At the end of ISCED level 2, pupils are typically age 14 to 16 (most often age 15).
147. The required teacher qualifications may be different at ISCED level 2 compared to ISCED level 1. Teachers at ISCED level 2 are often qualified in one or more specific subjects, as well as in pedagogy. In addition, the organization of instruction can differ from ISCED level 1 as there are more often several teachers for one class, who teach in their respective field or fields of specialization.
148. In many education systems with compulsory education legislation, the end of lower secondary education coincides with the end of compulsory (general) education.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

149. Educational programmes spanning ISCED levels 1 and 2 or 2 and 3 need special consideration for classification. Only those grades, stages or cycles corresponding to the criteria given in Paragraph 143 should be classified as ISCED level 2. Those grades, stages or cycles corresponding to the criteria given in Paragraph 124 should be classified as ISCED level 1, and those corresponding to the criteria given in Paragraph 166 should be classified as ISCED level 3.
150. If use of the classification criteria does not result in a clear boundary between ISCED levels 1 and 2, it is recommended to use the criteria provided in Paragraphs 128 and 130 to determine the end of ISCED level 1 and the beginning of ISCED level 2.
151. If use of the classification criteria does not result in a clear boundary between ISCED levels 2 and 3, the following is recommended:
- i) For programmes spanning ISCED levels 2 and 3 that are organized in stages, the end of the stage closest to 9 years after the start of ISCED level 1 should be used as the transition point between ISCED levels 2 and 3;
 - ii) For programmes spanning ISCED levels 2 and 3 not divided into stages, only the grades between the end of ISCED level 1 until the end of 9 years of schooling after the start of ISCED level 1 should be classified as ISCED level 2, and the remaining years are classified as ISCED level 3 (see Paragraph 171).

D. COMPLEMENTARY DIMENSIONS

152. Two dimensions differentiate educational programmes in ISCED level 2:
- Programme orientation (see Paragraph 153);
 - Level completion and access to higher ISCED level programmes (see Paragraph 154).

Programme orientation

153. The following two orientation categories are defined in Paragraphs 55 and 54: □ General; and □ Vocational.

Level completion and access to higher ISCED level programmes

154. The following four level completion and access sub-categories are defined for ISCED level 2:
1. *No completion of ISCED level 2 (and thus without direct access to higher ISCED levels):* short terminal programmes (or sequence of programmes) with a duration of less than 2 years at ISCED level 2 or that end after less than 8 years cumulative duration since the beginning of ISCED level 1. These do not give access to ISCED level 3. Successful completion of such programmes does not count as completion of ISCED level 2.
 2. *Partial completion of ISCED level 2 without direct access to higher ISCED levels:* programmes which are part of a sequence of programmes at ISCED level 2 with a duration of at least 2 years at the level and that end after at least 8 years cumulative duration since the beginning of ISCED level 1. These programmes do not give direct access to ISCED level 3. Successful completion of such programmes is considered as partial completion of the level only (as only the final programme in the sequence is likely to give access to ISCED level 3).
 3. *Completion of ISCED level 2 without direct access to higher ISCED levels:* programmes with a duration of at least 2 years at ISCED level 2 and that end after at least 8 years cumulative duration since the beginning of ISCED level 1 but which do not give access to ISCED level 3. Although these programmes are considered terminal successful completion of them qualifies for completion of ISCED level 2.
 4. *Completion of ISCED level 2 with direct access to higher ISCED levels:* any programmes that give direct access to ISCED level 3 regardless of their duration at the level or their cumulative duration since the start of ISCED level 1.

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 2

155. ISCED level 2 also includes programmes suited to individuals with special needs that are designed to build upon the fundamental teaching and learning processes that begin at ISCED level 1 and/or to provide skills relevant to employment.

156. This level also includes lower secondary level second chance or re-integration programmes. Such educational programmes usually target individuals who left education after completing primary but before completing lower secondary education, allowing them to re-enter the education system and complete a lower secondary education programme or who completed lower secondary but wish to enter an educational programme or occupation for which they are not yet qualified. Participants are typically older than the target age group for ISCED level 2.
157. This level also includes adult education programmes equivalent in complexity of content to the education given in other programmes at this level.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 2

158. The use of two complementary dimensions allows for reporting using orientation as categories and level completion and access to the next higher ISCED level as subcategories. The codes for lower secondary programmes are shown in Table 5.

Table 5. Classification codes for educational programmes at ISCED level 2 (ISCED-P)

Categories (Orientation)	Sub-categories (Level completion and access to higher level programmes)
24 Lower Secondary General	241 Insufficient for level completion or partial Completion or partial completion and with-out direct access to upper Secondary. 242 Sufficient for partial level completion and without direct access to upper secondary. 243 Sufficient for level completion without direct access to upper secondary. 244 Sufficient for level completion, with direct access to upper secondary.
25 Lower Secondary Vocational	251 Insufficient for level completion or partial completion and without direct access to upper secondary. 252 Sufficient for partial level completion and without direct access to upper secondary. 253 Sufficient for level completion, without direct access to upper secondary. 254 Sufficient for level completion, with direct access to upper secondary.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVEL 2

159. For educational attainment, recognized qualifications from ISCED level 2 programmes which are not considered sufficient for ISCED level 2 completion or partial completion are classified as ISCED level 1 (also Table 4).
160. Similarly, recognized qualifications from ISCED level 3 programmes which are insufficient for consideration as ISCED level 3 completion or partial completion are classified as ISCED level 2.
161. The classification codes for educational attainment related to lower secondary and for qualifications from upper secondary programmes insufficient for level or partial level completion are shown in Table 6.

Table 6. Classification codes for educational attainment related to ISCED level 2 (ISCED-A)

Categories (Orientation)	Sub-categories (Level completion and access to higher level programmes)
10 Primary	100 Recognized successful completion of a lower Secondary programme insufficient for level Completion or partial completion.
24 Lower Secondary General	242 Partial level completion and without direct Access to upper secondary. 243 Level completion without direct access to upper Secondary. 244 Level completion, with direct access to upper Secondary.
25. Lower Secondary Vocational	252 Partial level completion and without direct Access to upper secondary. 253 Level completion, with direct access to upper Secondary. 254 Level completion, with direct access to upper Secondary.

1. Including recognized successful completion of a programme or a stage of a programme at upper secondary insufficient for level or partial level completion.

13. ISCED LEVEL 3 – UPPER SECONDARY

A. PRINCIPAL CHARACTERISTICS

162. Programmes at ISCED level 3, or “upper secondary” education, are typically designed to complete secondary education in preparation for tertiary education, or to provide skills relevant to employment, or both.
163. Programmes at this level offer students more varied, specialised and in-depth instruction than programmes at ISCED level 2. They are more differentiated, with an increased range of options and streams available. Teachers are often highly

qualified in the subjects or fields of specialisation they teach, particularly in the higher grades.

164. ISCED level 3 begins after 8 to 11 years of education since the beginning of ISCED level 1. Pupils enter this level typically between age 14 and 16. ISCED level 3 programmes usually end 12 or 13 years after the beginning of ISCED level 1 (or around age 18), with 12 years being the most widespread cumulative duration. However, exit from upper secondary may range across education systems from usually 11 to 14 years of education since the beginning of ISCED level 1 (or around age 17 to 20).
165. Programmes classified at ISCED level 3 are referred to in many ways across the world, e.g. secondary school (stage two/upper grades), senior secondary school or (senior) high school. For international comparability purposes the term “upper secondary” is used to label ISCED level 3.

B. CLASSIFICATION CRITERIA

166. For the definition of upper secondary, the following criteria are relevant:

Main criteria

- a. Second/final stage of general and vocational secondary education (see Paragraph 167);
- b. Entry requirements (see Paragraph 168); and
- c. Cumulative duration since the beginning of ISCED level 1 (see Paragraph 164).

Subsidiary criteria

- a. More differentiated programmes, with an increased range of options and streams (see Paragraph 169); and
 - b. Teacher qualifications (see Paragraph 170).
167. Programmes which form the second/final stage of secondary education may be either general or vocational ISCED level 3 programmes. Some of these programmes allow direct access to ISCED 4, and/or 5, 6 or 7. When identifying transition points between ISCED levels, correspondence between general and vocational pathways should be ensured.
168. ISCED level 3 requires the completion of lower secondary (ISCED level 2) or the ability to handle ISCED level 3 content through a combination of prior education and life and work experience. A specific ISCED level 2 qualification or a specific level of achievement may be required for entering some or all ISCED level 3 programmes.
169. The transition from ISCED level 2 to ISCED level 3 coincides with the transition point in education systems at which programmes offer students more varied, specialised and in-depth instruction in specific subjects or fields. Typically, programmes are more differentiated, with an increased range of options and streams available.

170. Standards for teacher qualifications may be different at ISCED level 3 compared to ISCED level 2. In addition to pedagogical training, teachers may be more qualified with respect to the subject matter they teach.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

171. Educational programmes spanning ISCED levels 2 and 3 or 3 and 5 need special consideration for classification. Only those grades, stages or cycles corresponding to the criteria given in Paragraph 166 should be classified as ISCED level 3. Those grades, stages or cycles corresponding to the criteria given in Paragraph 143 should be classified as ISCED level 2, and those corresponding to the criteria given in Paragraph 211 should be classified as ISCED level 5.
172. If use of the classification criteria does not result in a clear boundary between ISCED levels 2 and 3, criteria to determine the end of ISCED level 2 and the beginning of ISCED level 3 are provided in Paragraphs 149 and 151.
173. If the theoretical duration of a vocational ISCED level 3 programme is two or more years longer than the theoretical duration of a general ISCED level 3 programme in the same education system, the programme should be regarded as spanning upper secondary (ISCED level 3) and post-secondary non-tertiary (ISCED level 4) or shortcycle tertiary (ISCED level 5). The grades, stages or cycles which extend beyond the general ISCED level 3 programme should be classified as ISCED levels 4 or 5 depending on the complexity of their content.

D. COMPLEMENTARY DIMENSIONS

174. Two dimensions differentiate educational programmes in ISCED level 3:
- Programme orientation (see Paragraph 175); and
 - Level completion and access to higher ISCED level programmes (see Paragraph 176).

Programme orientation

175. The following two orientation categories are defined in Paragraphs 55 and 54: General; and Vocational.

Level completion and access to higher ISCED level programmes

176. The following four level completion and access subcategories are defined for ISCED level 3:
1. *No completion of ISCED level 3 (and thus without direct access to first tertiary programmes at ISCED levels 5, 6 or 7):* short terminal (or sequence of) programmes with a duration of less than 2 years at ISCED level 3 or that end after less than 11 years cumulative duration since the beginning of ISCED level 1. These programmes do not give direct access to ISCED levels 5, 6 or 7. Successful completion of such programmes does not count

as completion of ISCED level 3. Note also that these programmes do not give direct access to ISCED level 4 either.

2. *Partial completion of ISCED level 3 without direct access to first tertiary programmes at ISCED levels 5, 6 or 7:* programmes which are part of a sequence of programmes at ISCED level 3 with a duration of at least 2 years at the level and that end after at least 11 years cumulative duration since the beginning of ISCED level 1. These programmes do not give direct access to ISCED levels 5, 6 or 7. Successful completion of such programmes is considered as partial completion of the level only (as only the final programme in the sequence is likely to give access to tertiary education at ISCED levels 5, 6 or 7). Note also that these programmes do not give direct access to ISCED level 4 either.
3. *Completion of ISCED level 3 without direct access to first tertiary programmes at ISCED levels 5, 6 or 7:* programmes with a duration of at least 2 years at the level and that end after at least 11 years cumulative duration since the beginning of ISCED level 1. These programmes may be terminal or may give direct access to ISCED level 4. Successful completion of such programmes qualifies for completion of ISCED level 3.
4. *Completion of ISCED level 3 with direct access to first tertiary programmes at ISCED levels 5, 6 or 7:* any programmes that give direct access to first tertiary programmes at ISCED levels 5, 6 or 7 regardless of their duration at the level or their cumulative duration since the start of ISCED level 1. These programmes may also give direct access to ISCED level 4.

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 3

177. ISCED level 3 also includes programmes suited to individuals with special needs that are equivalent in complexity of content to other ISCED level 3 programmes.
178. This level can include some second cycle vocational programmes in cases where the transition points at the end of the second cycle correspond to transition points between levels in other, mainly general, pathways offered in the system.
179. This level also includes upper secondary level second chance or re-integration programmes. Such educational programmes usually target individuals who left education before completing upper secondary education, allowing them to re-enter the education system and complete upper secondary education or who completed upper secondary but wish to enter an educational programme or occupation for which they are not yet qualified. Participants are typically older than the target age group for ISCED level 3.
180. This level also includes adult education programmes equivalent in complexity of content to the education given in other programmes at this level.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 3

181. The use of two complementary dimensions allows for reporting using orientation as categories and level completion and access to higher ISCED levels as

subcategories. Not all combinations of orientation and completion and access exist or are widespread across education systems. The codes for upper secondary programmes are shown in Table 7.

Table 7. Classification codes for educational programmes at ISCED level 3 (ISCED-P)

Categories (Orientation)	Sub-categories (Level completion and access to higher programmes)
34 Upper Secondary General	341 Insufficient for level completion or partial and without direct access to post secondary, non-tertiary. 342 Sufficient for partial level completion, and without direct access to post secondary con-tertiary or tertiary. 343 Sufficient for level completion, without direct access to tertiary (but may give direct access to post- Secondary, non- tertiary) 344 Sufficient for level completion, with direct access to tertiary (may also give direct access to ISCED level 4
35 Upper Secondary Vocational	351 Insufficient for level completion or partial and without direct access to post secondary, non-tertiary. 352 Sufficient for partial level completion, and without direct access to post secondary non-tertiary or tertiary. 353 Sufficient for level completion, without direct access to tertiary (but may give direct access to post- Secondary, non-tertiary) 354 Sufficient for level completion, with direct access to tertiary (may also give direct access to ISCED level 4

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVEL 3

182. For educational attainment, recognized qualifications from ISCED level 3 programmes which are not considered as sufficient for ISCED level 3 completion are classified at ISCED level 2.
183. Similarly, recognized qualifications from ISCED level 4 programmes which are insufficient for consideration as ISCED level 4 completion are classified as ISCED level 3.
184. The classification codes for educational attainment related to upper secondary Programmes and qualifications are shown in Table 8.

Table 8. Classification codes for educational attainment related to ISCED level 3 (ISCED-A)

Categories (Orientation)	Sub-categories (Level completion and access to higher level programmes)
24 Lower Secondary General	244 Recognized successful completion of an upper Secondary general programme insufficient for level completion or partial completion.
25. Lower Secondary Vocational	254 Recognized successful completion of an upper secondary vocational programme insufficient for level completion or partial completion.
34 Lower Secondary General	342 Partial level completion without direct access to post Secondary non-tertiary or tertiary. 343 Level completion, without direct access to tertiary (but may give direct access to post secondary non-tertiary). 344 Level completion, with direct access to tertiary (may also give direct access to ISCED level 4).
35. Lower Secondary Vocational	352 Partial level completion without direct access to post Secondary non-tertiary or tertiary. 353 Level completion, without direct access to tertiary (but may give direct access to ISCED level 4). 354 Level completion, with direct access to tertiary (may also give direct access to ISCED level 4).

1. Including recognized successful completion of a stage of a programme at post-secondary non-tertiary insufficient for level completion.

14. ISCED LEVEL 4 – POST-SECONDARY NON-TERTIARY

A. PRINCIPAL CHARACTERISTICS

185. Post-secondary non-tertiary education provides learning experiences building on secondary education and preparing for labour market entry as well as tertiary education. It aims at the individual acquisition of knowledge, skills and competencies below the high level of complexity characteristic of tertiary education. Programmes at ISCED level 4, or “post-secondary non-tertiary” education, are typically designed to provide individuals who completed ISCED level 3 with non-tertiary qualifications that they require for progression to tertiary education or for employment when their ISCED level 3 qualification does not grant such access. For example, graduates from general ISCED level 3 programmes may choose to complete a non-tertiary vocational qualification; or graduates from vocational ISCED level 3 programmes may choose to increase their level of qualification or specialise further. Given the complexity of their

content, ISCED level 4 programmes cannot be regarded as tertiary education programmes, although they are clearly post-secondary education.

186. The completion of an ISCED level 3 programme is required to enter ISCED level 4 programmes. However, these entry requirements may be lower than for tertiary programmes at ISCED levels 5, 6 or 7.
187. Usually, programmes at this level are designed for direct labour market entry. In some education systems, there are general programmes at this level. Such programmes typically target students who have completed ISCED level 3 but who want to increase their opportunities to enter tertiary education.
188. Programmes to be classified at ISCED level 4 are referred to in many ways across the world, e.g. technician diploma, primary professional education, *préparation aux carrières administratives*. For international comparability purposes the term “postsecondary non-tertiary” is used to label ISCED level 4.

B. CLASSIFICATION CRITERIA

189. For the definition of post-secondary non-tertiary the following criteria are relevant:

Main criteria

- a. Orientation (see Paragraph 190);
- b. Complexity of content higher than ISCED level 3 and below the level of tertiary education (see Paragraph 191); and
- c. Entry requirements (see Paragraph 186).

Subsidiary criteria

None.

190. ISCED level 4 programmes are not considered as tertiary education and are typically vocational and terminal programmes that prepare for the labour market. General programmes at this level can exist in some education systems. However, programmes designed to review the contents of ISCED level 3 programmes – for example, with the aim of preparing students for tertiary education entrance examinations – should be included in ISCED level 3.
191. ISCED level 4 programmes often serve to broaden rather than deepen the knowledge, skills and competencies of participants who have completed a programme at ISCED level 3. Programmes are often not significantly more advanced than programmes at ISCED level 3, but the content is typically more specialized or detailed than at the upper secondary level. Programmes are clearly less advanced than at the tertiary level, and can be provided in a variety of institutional settings, not only those considered as post-secondary non-tertiary.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

192. Not applicable.

D. COMPLEMENTARY DIMENSIONS

193. Two dimensions differentiate educational programmes in ISCED level 4:
- Programme orientation (see Paragraph 194); and
 - Access to higher ISCED level programmes (see Paragraph 195).

Programme orientation

194. The following two orientation categories are defined in Paragraphs 55 and 54:
- General; and
 - Vocational.

Access to higher ISCED level programmes

195. The following three level completion and access subcategories are defined for ISCED level 4:
- No completion of ISCED level 4: modules or stages of programmes which are too short for level completion. These do not give access to first tertiary education programmes at ISCED levels 5-7. Successful completion of such modules or stages does not count as completion of ISCED level 4.*
 - Completion of ISCED level 4 without direct access to first tertiary programmes at ISCED levels 5, 6 or 7 (primarily designed for direct labour market entry); and*
 - Completion of ISCED level 4 with direct access to first tertiary programmes at ISCED levels 5, 6 or 7 or expanding access to tertiary education.*

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 4

196. This level also includes adult education programmes similar in complexity of content to the education given in other programmes at this level.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 4

197. The use of two complementary dimensions allows for reporting using orientation as a category and completion and access as subcategories. Not all combinations of categories and subcategories exist or are widespread across education systems. The classification for post-secondary non-tertiary is shown in Table 9.

Table 9. Classification codes for educational programmes at ISCED level 4 (ISCED-P)

Categories (Orientation)	Sub-categories (Access to higher level programmes)
44 Post Secondary General	441 Insufficient for level completion, and without direct access to tertiary. 443 Sufficient for level completion, without direct access to Tertiary. 444 Sufficient for level completion, with direct access to Tertiary.
45 Post Secondary General	451 Insufficient for level completion, and without direct access to tertiary. 453 Sufficient for level completion, without direct access to Tertiary. 454 Sufficient for level completion, with direct access to Tertiary.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVEL 4

198. For educational attainment, recognized intermediate qualifications from successful completion of a stage of an ISCED level 5 programme which are not considered as sufficient for completion of ISCED level 5, are classified at ISCED level 4.
199. The classification codes for educational attainment related to post-secondary nontertiary qualifications are shown in Table 10.

Table 10. Classification codes for educational attainment at ISCED level 4 (ISCED-A)

Categories (Orientation)	Sub-categories (Access to higher level programmes)
34 Upper Secondary general	344 Recognized sufficient completion of a stage of a post Secondary, non tertiary general programme insufficient for level completion.
35 Upper Secondary Vocational	354 Recognized sufficient completion of a stage of a post Secondary, non tertiary vocational programme insufficient for level completion.
44 Post Secondary Non-tertiary general	443 Level completion, without direct access to tertiary. 454 Level completion, with direct access to tertiary.
45 Post Secondary Non- Tertiary Vocational	453 Level completion, without direct access to tertiary. 454 Level completion, with direct access to tertiary.

1. Including recognized successful completion of a programme or a stage of a programme at short-cycle tertiary insufficient for level completion.

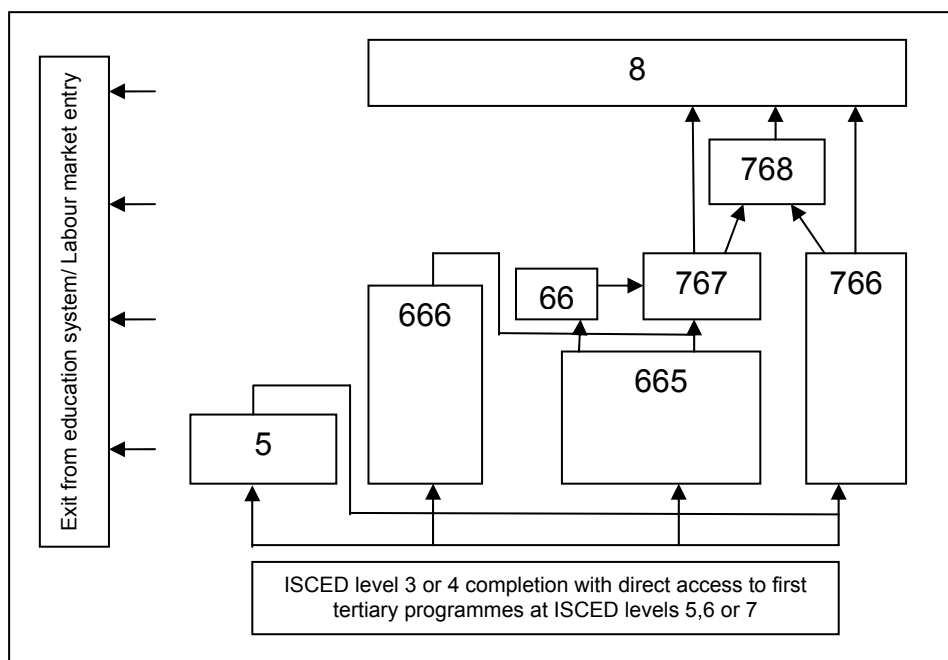
15. TERTIARY EDUCATION

200. Tertiary education builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education, but is broader than that because it also includes advanced vocational or professional education. Tertiary education comprises ISCED levels 5, 6, 7 and 8, which are labelled as short-cycle tertiary, bachelor or equivalent, master or equivalent and doctoral or equivalent, respectively. The content of programmes at the tertiary level is more complex and advanced than in lower ISCED levels.
201. First programmes at ISCED levels 5, 6 or 7 require the successful completion of ISCED level 3 programmes that give direct access to first tertiary programmes. Access may also be possible from ISCED level 4. In addition to qualification requirements, entry to educational programmes at these levels may depend on subject choice and/or grades achieved at ISCED level 3 or 4. Further, it may be necessary to take and succeed in entrance examinations.
202. In tertiary education, an educational programme is always classified at the same level as the level of the qualification awarded on its successful completion (unless a programme is partly classified as ISCED level 3, see Paragraph 173). Therefore, in contrast to ISCED levels 0, 1, 2 and 3, the concept of programmes spanning ISCED levels is not used for tertiary education.
203. There is usually a clear hierarchy between qualifications granted by tertiary education programmes. However, unlike programmes at ISCED levels 1, 2, 3 and 4, national programmes at ISCED levels 5, 6 and 7 can exist in parallel rather than as one ISCED level building sequentially on another. Completion of an ISCED level 3 or 4 programme may provide access to a range of first tertiary programmes at ISCED levels 5, 6 or 7, depending on the availability in a specific education system and/or on additional entry requirements which may be specified. These include:
- Short-cycle tertiary programmes at ISCED level 5 (at least 2 years);
 - Bachelor or equivalent first degree programmes at ISCED level 6 (3-4 years);
 - Bachelor or equivalent long first degree programmes at ISCED level 6 (more than 4 years); or
 - Master or equivalent long first degree programmes at ISCED level 7 (at least 5 years).
204. The transition between programmes at the tertiary level is not always clearly distinguished and it may be possible to combine programmes and transfer credits from one programme to another. In certain cases, credits received from previously completed educational programmes may also be counted towards the completion of a programme at a higher ISCED level. For example, having obtained credits in an ISCED level 5 programme can reduce the number of

credits or study duration required to complete a level 6 programme. In some systems, individuals may transfer to an educational programme at ISCED level 6 after completion of an ISCED level 5 programme, which may reduce the time required for an individual to complete an ISCED level 6 programme. Others may directly enter ISCED level 6 or 7 from ISCED level 3. In many education systems, most students must first complete ISCED level 6 before gaining entry to ISCED level 7.

205. The successful completion of ISCED level 7 is usually required for entry into ISCED level 8.
206. Figure 1 illustrates the categories of tertiary education programmes and the pathways between them.

Figure 1. Tertiary education pathways in ISCED



16. ISCED LEVEL 5 – SHORT-CYCLE TERTIARY

A. PRINCIPAL CHARACTERISTICS

207. Programmes at ISCED level 5, or “short-cycle tertiary” education, are often designed to provide participants with professional knowledge, skills and competencies. Typically, they are practically based, occupationally specific and prepare students to enter the labour market. However, programmes may also

provide a pathway to other tertiary education programmes. Academic tertiary education programmes below the level of a bachelor programme or equivalent are also classified as ISCED level 5.

208. Entry to ISCED level 5 programmes requires the successful completion of ISCED level 3 or 4 with access to tertiary education. Programmes at ISCED level 5 have more complex content than programmes in ISCED levels 3 and 4, but they are shorter and usually less theoretically oriented than ISCED level 6 programmes.
209. Although ISCED level 5 programmes are usually designed to prepare for employment, they may give credit for transfer into ISCED level 6 or 7 programmes. Upon completion of these ISCED level 5 programmes, individuals may in some education systems continue their education at ISCED level 6 (bachelor or equivalent) or long first degree ISCED level 7 (master or equivalent) programmes.
210. Programmes to be classified at ISCED level 5 are referred to in many ways across the world, e.g. master craftsman programme, (higher) technical education, community college education, technician or advanced/higher vocational training, associate degree or *bac + 2* programmes. For international comparability purposes the term "short-cycle tertiary" is used to label ISCED level 5.

B. CLASSIFICATION CRITERIA

211. For the definition of short-cycle tertiary, the following criteria are relevant:

Main criteria

- a. Content of short-cycle tertiary programmes (see Paragraph 212);
- b. Entry requirements (see Paragraph 208); and
- c. Minimum duration of programme (see Paragraph 213).

Subsidiary criteria

- a. Institutional transition point (see Paragraph 214);
- b. Typical duration of programme (see Paragraph 213).

212. ISCED level 5 captures the lowest level of tertiary education. The content of programmes at this level is more complex than in secondary (ISCED level 3) or postsecondary non-tertiary education (ISCED level 4), but less than in ISCED level 6 (bachelor or equivalent) programmes.
213. ISCED level 5 programmes have a minimum of two years duration and are typically but not always shorter than three years. For education systems with modular programmes where qualifications are awarded by credit accumulation, a comparable amount of time and intensity would be required.
214. The transition point from non-tertiary to tertiary educational institutions can help to identify the boundary between upper secondary education (ISCED level 3), postsecondary non-tertiary education (ISCED level 4) and tertiary education.

ISCED level 5 programmes are often provided by different educational institutions than ISCED level 6, 7 and 8 programmes.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

215. Educational programmes spanning ISCED levels 3 and 5 need special consideration for classification. Only those grades, stages or cycles corresponding to the criteria given in Paragraph 211 should be classified as ISCED level 5. Those grades, stages or cycles corresponding to the criteria given in Paragraph 166 should be classified as ISCED level 3. If use of the classification criteria does not result in a clear boundary between ISCED levels 3 and 5, criteria to determine the end of ISCED level 3 and the beginning of ISCED level 5 are provided in Paragraph 173.

D. COMPLEMENTARY DIMENSIONS

216. Two dimensions differentiate educational programmes at ISCED level 5:
- Programme orientation (see Paragraph 217); and
 - Level completion (see Paragraph 218).

Programme orientation

217. The following two orientation categories are defined:

- General; and
- Vocational.

Once definitions of academic and professional programmes have been developed they will be used at ISCED level 5 too.

Level completion

218. Two level completion categories are defined for ISCED level 5:
- No completion of ISCED level 5:* stage (or programme) at ISCED level 5 of less than two years duration, therefore insufficient for completion of ISCED level 5.
 - Completion of ISCED level 5:* programme at ISCED level 5 with duration of two or more years, therefore sufficient for completion of ISCED level 5.

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 5

219. This level also includes adult or continuing education programmes equivalent in complexity of content to the education given in other programmes at this level.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 5

220. The use of two complementary dimensions allows for reporting using orientation as categories and level completion as subcategories. The codes to be used for ISCED level 5 are provided in Table 11.

Table 11. Classification codes for educational programmes at ISCED level 5 (ISCED-P)

Categories (Orientation)	Sub-categories (Level completion)
54. Short-cycle tertiary general	541. Insufficient for level completion. 544 Sufficient for level completion
55. Short-cycle tertiary vocational	551 Insufficient for level completion. 554 Sufficient for level completion.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVEL 5

221. For educational attainment, recognized intermediate qualifications from the successful completion of a stage (or programme) at ISCED level 5 which are insufficient for ISCED level 5 completion are classified at ISCED level 4. Participation without recognized successful completion in a programme at ISCED level 5 is disregarded for the purposes of determining educational attainment levels.
222. Recognized intermediate qualifications from the successful completion of a stage of programmes (prior to the first degree) are not considered as sufficient for ISCED level 6 completion and are classified at ISCED level 5 for educational attainment.
223. The classification codes for educational attainment related to ISCED level 5 are provided in Table 12.

Table 12. Classification codes for educational attainment related to ISCED level 5 (ISCED-A)

Categories (Orientation)	Sub-categories (Level completion)
44 Post Secondary Non-tertiary general	444 Recognized successful completion of a short-cycle tertiary academic programme (or stage) insufficient for level completion.
45 Post Secondary Non-tertiary vocational	454 Recognized successful completion of a short-cycle tertiary professional programme (or stage) insufficient for level completion.
54 Short-cycle Tertiary general	540 Not further defined. ¹
55 Short-cycle Tertiary vocational	550 Not further defined. ¹
56 Short-cycle tertiary Orientation unspecified	560 Not further specified. ^{1,2}

1. Including recognized successful completion of a programme at short-cycle tertiary sufficient for ISCED 5 level completion or of a programme or a stage of a programme at bachelor and equivalent level insufficient for ISCED 6 level completion.
2. To be used in the absence of internationally agreed definitions of academic and professional orientations of bachelor and equivalent programmes and qualifications.

17. ISCED LEVEL 6 – BACHELOR OR EQUIVALENT

A. PRINCIPAL CHARACTERISTICS

224. Programmes at ISCED level 6, or “bachelor or equivalent”, are often designed to provide participants with intermediate academic and/or professional knowledge, skills and competencies, leading to a first degree or equivalent qualification. Programmes at this level are typically theoretically based but may include practical components and are informed by state of the art research and/or best professional practice. They are traditionally offered by universities and equivalent tertiary educational institutions.
225. Instruction at this level often takes the form of lectures by staff who are typically required to have attained ISCED levels 7 or 8 or have achieved experience as a senior professional in the field of work. Programmes at this level do not necessarily involve the completion of a research project or thesis, but if they do, it

is less advanced or less independent or is undertaken with more guidance than those at ISCED levels 7 or 8.

226. Entry to these programmes normally requires the successful completion of an ISCED level 3 or 4 programme with access to tertiary education. Entry to educational programmes at this level may depend on subject choice and/or grades achieved at ISCED levels 3 and/or 4. Additionally, it may be required to take and succeed in entry examinations. Entry or transfer into ISCED level 6 is also sometimes possible after the successful completion of ISCED level 5. Upon completion of ISCED level 6 programmes, individuals may continue their education at ISCED level 7 (master level education or equivalent) although not all ISCED level 6 programmes provide access to ISCED level 7. ISCED level 6 programmes do not usually give direct access to programmes at ISCED level 8 (doctoral or equivalent).
227. Programmes to be classified at ISCED level 6 are referred to in many ways across the world, such as bachelor programme, *licence* or first university cycle. However, it is important to note that programmes with a similar name to “bachelor” should only be included in ISCED level 6 if they satisfy the criteria described in Paragraph 228. For international comparability purposes the term “bachelor or equivalent” is used to label ISCED level 6.

B. CLASSIFICATION CRITERIA

228. For the definition of bachelor or equivalent, the following criteria are relevant:

Main criteria

- a. Theoretically and/or professionally based content (see Paragraph 224);
- b. Entry requirements (see Paragraph 226);
- c. Minimum cumulative duration of (first degree) programme (see Paragraph 229); and
- d. Position in the national degree and qualification structure (see Paragraph 230).

Subsidiary criteria

- a. Staff qualifications (see Paragraph 231);
 - a. No direct access to ISCED level 8 programmes (see Paragraph 226).
229. Programmes at this level typically have duration of three to four years of full-time study at the tertiary level. For systems in which degrees are awarded by credit accumulation, a comparable amount of time and intensity would be required.
230. Programmes at this level typically lead to first degrees and equivalent qualifications in tertiary education (although individuals may have completed an ISCED level 5 qualification prior to enrolling in an ISCED level 6 programme). They may include practical components and/or involve periods of work-experience as well as theoretically-based studies. Long first degrees of more than 4 years duration are included at this level if equivalent to bachelor programmes in terms of the complexity of content. In addition, programmes

leading to a second or further degree may be included in ISCED level 6 if they are equivalent in complexity of content to programmes already classified at this level in the same education system *and* fulfil the other main criteria. Second or further degree programmes at this level are typically of 1-2 years' duration, are often professionally-oriented offering more specialization than the first degree but do not include substantially more complex content. Programmes at ISCED level 6 do not necessarily require the preparation of a substantive thesis or dissertation.

231. Where appropriate, the requirement of ISCED level 8 qualifications for some of the teaching staff may be a good proxy criterion for educational programmes at this level in education systems where such a requirement exists. This serves to distinguish ISCED level 5 programmes from ISCED level 6 programmes.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

232. Not applicable.

D. COMPLEMENTARY DIMENSIONS

233. Two dimensions may be used to differentiate educational programmes in ISCED level 6:
- Programme orientation (see Paragraph 234); and
 - Programme duration and position in the national degree and qualification structure (see Paragraph 235).

Programme orientation

234. The following two orientation categories are available:
- Academic; and
 - Professional.

Programme duration and position in the national degree and qualification structure

235. The following four sub-categories for programme duration and position in the national degree and qualification structure are defined for ISCED level 6:
- Stage (or programme) within a first degree at bachelor or equivalent level with a cumulative theoretical duration (at tertiary level) of less than three years, therefore insufficient for completion of ISCED level 6;*
 - First degree programme at bachelor or equivalent level with a cumulative theoretical duration (at tertiary level) of three to four years;*
 - Long first degree programme at bachelor or equivalent level with a cumulative theoretical duration (at tertiary level) of more than four years; and*
 - Second or further degree programme at bachelor or equivalent level (following successful completion of a bachelor or equivalent programme).*

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 6

236. This level also includes adult or continuing education programmes equivalent in complexity of content to the education given in other programmes at this level.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 6

237. The use of two complementary dimensions allows for reporting using orientation as categories and programme duration / position in the national degree and qualification structure combined as subcategories. The codes to be used for ISCED level 6 are provided in Table 13.

Table 13. Classification codes for educational programmes at ISCED level 6 (ISCED-P)

Categories (Orientation)	Sub-categories (Duration/Position)	Description
64 Bachelor or equivalent academic	641	Insufficient for level completion
	645	First degree (3-4 years)
	646	Long first degree (more than 4 years)
	647	2 nd or further degree (following successful completion of a Bachelor or equivalent programme)
65 Bachelor or equivalent professional	651	Insufficient for level completion
	655	First degree (3-4 years)
	656	Long first degree (more than 4 years)
	657	2 nd or further degree (following successful completion of a Bachelor or equivalent programme)
66 Bachelor or equivalent Orientation unspecified	661	Insufficient for level completion
	665	First degree (3-4 years)
	666	Long first degree (more than 4 years)
	667	2 nd or further degree (following successful completion of a Bachelor or equivalent programme)

1. To be used in the absence of internationally agreed definitions of academic and professional orientations of bachelor and equivalent programmes.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVEL 6

238. For educational attainment, recognized intermediate qualifications from the successful completion of stages of programmes (prior to the first degree) which are insufficient for ISCED level 6 completion are classified at ISCED level 5. Participation without recognized successful completion in a first programme at ISCED level 6 is disregarded for the purposes of determining educational attainment levels.
239. Recognized intermediate qualifications from the successful completion of stages of a first programme at ISCED level 7 (either a long first master or a master or equivalent following a bachelor programme) insufficient for ISCED level 7 completion are classified at ISCED level 6 for educational attainment.
240. The classification codes for educational attainment related to ISCED level 6 are shown

Table 14. Classification codes for educational attainment at ISCED level 6 (ISCED-A)

Category (Orientation)	Sub-category (Duration/Position)	Description
54 Short- Tertiary general	540	Not further defined ₁
55 Short cycle Tertiary Vocational	550	Not further defined ₁
56 Short cycle Orientation unspecified	560	Not further defined ₁
64 Bachelor or Equivalent academic	640	Not further defined. ₃
65 Bachelor or equivalent professional	650	Not further defined. ₃
66 Bachelor or equivalent Orientation unspecified	660	Not further defined ₃

1. Including recognized successful completion of a programme at short-cycle tertiary sufficient for ISCED 5 level completion or of a programme or a stage of a programme at bachelor and equivalent level insufficient for ISCED 6 level completion.
2. To be used in the absence of internationally agreed definitions of academic and professional orientations of bachelor or master and equivalent programmes and qualifications.
3. Including recognized successful completion of a programme at bachelor or equivalent level sufficient for ISCED 6 level completion or of a programme or a stage of a programme at master and equivalent level insufficient for ISCED 7 level completion.

18. ISCED LEVEL 7 – MASTER OR EQUIVALENT

A. PRINCIPAL CHARACTERISTICS

241. Programmes at ISCED level 7, or “master or equivalent”, are often designed to provide participants with advanced academic and/or professional knowledge, skills and competencies, leading to a second degree or equivalent qualification. Programmes at this level may have a substantial research component, but do not yet lead to the award of a doctoral qualification. Typically, programmes at this level are theoretically based but may include practical components and are informed by state of the art research and/or best professional practice. They are traditionally offered by universities and other tertiary educational institutions.
242. Instruction at this level often takes the form of lectures by staff who are typically required to have attained ISCED levels 7 or 8. Programmes at this level may involve the completion of a research project or thesis that is more advanced than those expected in ISCED level 6 and less advanced than those expected in ISCED level 8.
243. Entry to ISCED level 7 programmes preparing for a second or further degree normally requires the successful completion of an ISCED level 6 or 7 programme. In the case of long programmes that prepare for a first degree equivalent to a master degree, entry requires the successful completion of an ISCED level 3 or 4 programme with access to tertiary education. Entry to such programmes may depend on subject choice and/or grades achieved at ISCED levels 3 and/or 4. Additionally, it may be required to take and succeed in entry examinations. ISCED level 7 programmes have a significantly more complex content than programmes at ISCED level 6 and are usually more specialised. Upon completion, individuals may usually continue their education at ISCED level 8 (doctoral level education) although not all ISCED level 7 programmes give direct access to ISCED level 8.
244. Programmes to be classified at ISCED level 7 are referred to in many ways across the world such as master programmes or *magister*. However, it is important to note that programmes with a similar name to “master” should only be included in ISCED level 7 if they satisfy the criteria described in Paragraph 245. For international comparability purposes the term “master or equivalent” is used to label ISCED level 7.

B. CLASSIFICATION CRITERIA

245. For the definition of master or equivalent, the following criteria are relevant:

Main criteria

- a. Theoretically and/or professionally based content (see Paragraph 241);
- b. Position in the national degree and qualification structure (see Paragraphs 246 and 247); and
- c. Entry requirements (see Paragraph 243).

Subsidiary criteria

- a. Minimum cumulative duration of long first degree programme (see Paragraph 247); and
 - b. Direct access to ISCED level 8 programmes (see Paragraph 249).
246. Programmes at this level typically prepare for a *second or further degree* following a first degree from ISCED level 6 or 7 programmes. Equivalent qualifications such as post-graduate professional qualifications are also classified at ISCED level 7, unless already classified at ISCED level 6 (see Paragraph 230).
247. Programmes of at least five years duration preparing for a *first degree/qualification* are included in this level if equivalent to master level programmes in terms of the complexity of content. Such programmes usually involve the preparation of a substantive thesis or dissertation. In this case, the degree/qualification awarded gives direct access to ISCED level 8 or the programme is equivalent to a second or further degree programme already classified at the ISCED 7 level. Highly specialized professional studies of similar or greater cumulative duration in tertiary education (e.g. medicine, dentistry, veterinary science and in some cases law or engineering) which cover – in both breadth and depth – an equivalent amount of content though typically without the preparation of a thesis or dissertation are also included at this level.
248. Second or further degree programmes at this level typically have durations of one to four years of full-time study. For education systems in which degrees are awarded by credit accumulation, a comparable amount of time and intensity would be required. The cumulative duration of studies at the tertiary level thus lasts from usually five to eight years or even longer.
249. Tertiary education programmes providing direct access to ISCED level 8 are normally classified at ISCED level 7. However, not all ISCED level 7 programmes provide access to ISCED level 8.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

250. Not applicable.

D. COMPLEMENTARY DIMENSIONS

251. Two dimensions differentiate educational programmes in ISCED level 7:
- Programme orientation (see Paragraph 252);
 - Position in the national degree and qualification structure (see Paragraph 253).

Programme orientation

252. The following two orientation categories are available:
- Academic; and

- Professional.

Position in the national degree and qualification structure

253. The following four categories for a programme's position in the national degree and qualification structure are defined for ISCED level 7:
- Stage (or programme) within a first degree at master or equivalent level with a cumulative theoretical duration (at tertiary level) of less than five years, therefore insufficient for completion of ISCED level 7;*
 - First degree programme at a master or equivalent level with a cumulative theoretical duration (at tertiary level) of at least five years (that does not require prior tertiary education);*
 - Second or further degree programme at master or equivalent level (following successful completion of a bachelor or equivalent programme); and*
 - Second or further degree programme at master or equivalent level (following successful completion of another master or equivalent programme).*

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 7

254. ISCED level 7 includes programmes leading to the award of research qualifications that are designed explicitly to train participants in conducting original research, but are below the level of a doctoral degree. These programmes will often meet many of the same criteria as an ISCED level 8 programme, although they tend to be of shorter duration (cumulative duration of five to six years from the start of tertiary education), typically lack the level of independence required of students seeking an advanced research qualification, and prepare for entry into ISCED level 8 programmes. Completion of ISCED level 7 programmes may reduce the study duration in a subsequent doctoral programme to less than three years. Within the level, they are classified depending on their position in the national degree and qualification structure.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 7

255. The use of two complementary dimension allows for reporting using orientation as categories and position in the national degree and qualification structure as subcategories. The codes to be used for ISCED level 7 are shown in Table 15.

Table 15. Classification codes for educational programmes at ISCED level 7 (ISCED-P)

Category (Orientation)	Subcategory (Duration/Position)	Description
74 Master or Equivalent academic	741	Insufficient for level completion
	746	Long first degree (atleast 5 years)
	747	Second or further degree(following Successful completion of a bachelor or Equivalent programme)
	748	Second or further degree (following Successful completion of a master or equivalent programme)
75 Master or Equivalent professional	751	Insufficient for level completion
	756	Long first degree (atleast 5 years)
	757	Second or further degree(following Successful completion of a bachelor or Equivalent programme)
	758	Second or further degree (following Successful completion of a master or equivalent programme)
76 Master of Equivalent orientation unspecified	761	Insufficient for level completion
	766	Long first degree (atleast 5 years)
	767	Second or further degree(following Successful completion of a bachelor or Equivalent programme)
	768	Second or further degree(following Successful completion of a bachelor or Equivalent programme)

1. To be used in the absence of internationally agreed definitions of academic and professional orientations of bachelor or master and equivalent programmes and qualifications.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVEL 7

256. For educational attainment, recognized intermediate qualifications from the successful completion of stages (or programmes) within a first degree at master or equivalent level but insufficient for ISCED level 7 completion are classified at

ISCED level 6. Participation without recognized successful completion in any first degree at ISCED level 7 or a second or further degree at ISCED level 7 following successful completion of a bachelor or equivalent programme is disregarded for the purposes of determining educational attainment levels.

257. Recognized intermediate qualifications from the successful completion of stages (or programmes) at doctoral or equivalent level but insufficient for ISCED level 8 completion are classified at ISCED level 7 for educational attainment.
258. The classification codes for educational attainment related to ISCED level 7 are shown in Table 16.

Table 16. Classification codes for educational attainment at ISCED level 7 (ISCED-A)

Category (Orientation)	Subcategory (Completion)	Description
64 Bachelor or equivalent academic	640	Not further defined ₁
65 Bachelor or equivalent professional	650	Not further defined ₁
66 Bachelor or equivalent orientation Unspecified ₂	660	Not further defined ₁
74 Master or Equivalent academic	740	Not further defined ₃
75 Master or Equivalent professional	750	Not further defined ₃
76 Master of Equivalent Orientation unspecified	760	Not further defined ₃

1. Including recognized successful completion of a programme at bachelor or equivalent level sufficient for ISCED 6 level completion or of a programme or a stage of a programme at master and equivalent level insufficient for ISCED 7 level completion.
2. To be used in the absence of internationally agreed definitions of academic and professional orientations of bachelor or master and equivalent programmes and qualifications.
3. Including recognized successful completion of a programme at master or equivalent level sufficient for ISCED 7 level completion or of a programme or a stage of a programme at doctoral and equivalent level insufficient for ISCED 8 level completion.

19. ISCED LEVEL 8 – DOCTORAL OR EQUIVALENT

A. PRINCIPAL CHARACTERISTICS

259. Programmes at ISCED level 8, or “doctoral or equivalent”, are designed primarily to lead to an advanced research qualification. Programmes at this ISCED level are devoted to advanced study and original research and typically offered only by research-oriented tertiary educational institutions such as universities. Doctoral programmes exist in both academic and professional fields.
260. ISCED level 8 usually concludes with the submission and defence of a thesis, dissertation or equivalent written work of publishable quality representing a significant contribution to knowledge in the respective field of study. These programmes therefore are typically based on research and not only on course-work. In some education systems, ISCED level 8 programmes contain very limited course-work, or none at all, and individuals working towards a doctoral degree engage in research mostly independently or in small groups with varying degrees of supervision. In some education systems, doctoral research is undertaken by individuals employed by the university as junior researchers or research assistants in addition to their being enrolled as doctoral students.
261. Entry to ISCED level 8 programmes or junior research positions normally requires the successful completion of specific ISCED level 7 programmes. ISCED level 8 qualifications give access to professions with high academic skill requirements and research posts in government and industry as well as research and teaching positions in educational institutions offering education at ISCED levels 6, 7 and 8.
262. Programmes to be classified at ISCED level 8 are referred to in many ways across the world such as PhD, DPhil, D.Lit, D.Sc, LL.D, Doctorate or similar terms. However, it is important to note that programmes with a similar name to “doctor” should only be included in ISCED level 8 if they satisfy the criteria described in Paragraph 263. For international comparability purposes, the term “doctoral or equivalent” is used to label ISCED level 8.

B. CLASSIFICATION CRITERIA

263. For the definition of doctoral or equivalent, the following criteria are relevant:

Main criteria

- a. Written work requirements (see Paragraph 264);
- b. Entry requirements (see Paragraph 261); and
- c. Minimum duration of programme (see Paragraph 265).

Subsidiary criteria

- a. Doctoral degree/qualification required for specific occupations (see 266).
264. Successful completion of an ISCED level 8 programme requires the submission of a thesis, dissertation or equivalent written work of publishable quality that is

the product of original research and represents a significant contribution to knowledge in the respective field of study.

265. ISCED level 8 programmes require at least three years of full-time equivalent study, making a total cumulative duration of at least seven years of full-time education at the tertiary level. Prior completion of an advanced research programme at ISCED level 7 may reduce the time required for an individual to complete an ISCED level 8 36 C/19 Annex – page 59 programme (see Paragraph 254). Shorter, non-doctoral advanced research programmes are classified in ISCED level 7.
266. Achievement of an ISCED level 8 qualification is often a condition for entering faculty posts in educational institutions that offer ISCED level 6, 7 and 8 programmes, as well as research posts in government and industry.

C. CONSIDERATIONS CONCERNING PROGRAMMES SPANNING ISCED LEVELS

267. Not applicable.

D. COMPLEMENTARY DIMENSIONS

268. One dimension may be used to differentiate educational programmes in ISCED level 8:
- Programme orientation (see Paragraph 270).

Programme orientation

269. The following two orientation categories are available:
- Academic; and
 - Professional.

E. PROGRAMMES ALSO INCLUDED IN ISCED LEVEL 8

270. Second advanced research qualifications or higher doctorates requiring the submission of a second substantial piece of research (further to the first doctoral thesis) usually at a considerably later stage of an academic career and often without formal supervision. Examples are the *habilitation* or *doktor nauk* qualifications, although most education systems only have one advanced research qualification granting doctoral degrees or equivalent qualifications. Second research qualifications are not separately accounted for by ISCED. They are not usually linked with an educational programme. Honorary doctorates given by universities on the basis of other considerations and not any research work are not covered under ISCED 8.

F. CLASSIFICATION OF EDUCATIONAL PROGRAMMES AT ISCED LEVEL 8

271. Educational programmes in ISCED level 8 are either full doctoral level programmes or stages (or programmes) at the doctoral level insufficient for completion of ISCED level 8. The use of one complementary dimension allows

for reporting using orientation as categories. The codes to be used for ISCED level 8 are shown in Table 17.

Table 17. Classification codes for educational programmes at ISCED level 8 (ISCED-P)

Category (Orientation)	Subcategory	Description
84 Doctoral or equivalent academic	841	Insufficient for level completion
	844	Sufficient for level completion
85 Doctoral or equivalent professional	851	Insufficient for level completion
	854	Sufficient for level completion
86 Doctoral or equivalent Orientation unspecified	861	Insufficient for level completion
	864	Sufficient for level completion

1. To be used in the absence of internationally agreed definitions of academic and professional orientations of master or doctoral and equivalent programmes and qualifications.

G. CLASSIFICATION OF EDUCATIONAL ATTAINMENT AT ISCED LEVEL 8

272. For educational attainment, recognized intermediate qualifications from the successful completion of stages (or programmes) within a first degree at doctoral or equivalent level but insufficient for ISCED level 8 completion are classified at ISCED level 7. Participation without recognized successful completion in any first programme at ISCED level 8 is disregarded for the purposes of determining educational attainment levels.
273. The classification codes for educational attainment related to ISCED level 8 are shown in Table 18.

Table 18. Classification codes for educational attainment at ISCED level 8 (ISCED-A)

Category (Orientation)	Subcategory	Description
74 Master or equivalent academic	740	Not further defined ¹
75 Master or equivalent professional	750	Not further defined ¹

76	Master or equivalent orientation unspecified ₂	760	Not further defined ₁
84	Doctoral or equivalent academic	840	Not further defined
85	Doctoral or equivalent professional	850	Not further defined
86	Doctoral or equivalent orientation Unspecified ₂	860	Not further defined

1. Including recognized successful completion of a programme at master or equivalent level sufficient for ISCED 7 level completion or of a programme or a stage of a programme at doctoral and equivalent level insufficient for ISCED 8 level completion.
2. To be used in the absence of internationally agreed definitions of academic and professional orientations of master or doctoral and equivalent programmes and qualifications.

20. CORRESPONDENCE BETWEEN ISCED 2011 AND ISCED 1997 LEVELS

274. This section describes the correspondence between ISCED levels in the ISCED 2011 classification and the earlier version, ISCED 1997.
275. In ISCED 2011, level 0 covers early childhood education for all ages, including very young children. Programmes are sub-classified into two categories depending on the level of complexity of the educational content of the programmes: early childhood educational development (code 010) and pre-primary education (code 020). Early childhood educational development programmes (code 010) are generally designed for children younger than three years. It was first introduced in ISCED 2011 and no corresponding category exists in ISCED 1997. Pre-primary education (code 020) corresponds exactly to level 0 in ISCED 1997.
276. Level 1, primary education, in ISCED 2011 corresponds to level 1 in ISCED 1997.
277. ISCED 2011 levels 2 and 3, lower secondary and upper secondary education, correspond mainly to levels 2 and 3 in ISCED 1997. However, due to the clarification of criteria and subsidiary criteria, ISCED 2011 may be implemented differently than ISCED 1997 (i.e. with some programmes being classified at different levels than before). Such differences may affect time series data for some countries.
278. ISCED 2011 simplifies the complementary dimensions at ISCED levels 2 and 3 compared to 1997:
- Programme orientation in ISCED 2011 differentiates only between vocational programmes and general programmes. ISCED 1997 classified pre-vocational education separately. Such programmes do not provide labour market relevant qualifications and are now mainly classified as general education;

- ISCED 2011 identifies only one group of programmes that provide access to higher ISCED levels. By comparison, ISCED 1997 differentiated access to education at higher ISCED levels in categories A and B, dependent on the type of subsequent education. The ISCED 2011 category “level completion with access to higher ISCED levels” corresponds to the combined categories A and B in ISCED 1997;
 - ISCED 2011 sub-classifies programmes not providing access to higher ISCED levels into the categories “partial level completion” and “level completion”. These two categories in ISCED 2011 typically correspond to the category C and at ISCED level 3 to categories “C short” and “C long” in ISCED 1997.
- 279. ISCED 2011 level 4, post-secondary non-tertiary education, corresponds largely to level 4 in ISCED 1997. However, programmes leading to a qualification equivalent to upper secondary general are classified as level 3 in ISCED 2011, while they were often classified as level 4 in ISCED 1997. In addition, due to the clarification of criteria and subsidiary criteria, ISCED 2011 may be implemented differently than ISCED 1997. Such differences may affect time series data for some countries.
- 280. ISCED 2011 simplifies the orientation dimensions at ISCED level 4 as for levels 2 and 3 (see Paragraphs 194, 153, 175). The ISCED 2011 subcategories “access to higher ISCED levels” and “no access to higher ISCED levels” correspond to the destinations A and B, respectively, in ISCED 1997.
- 281. ISCED 2011 has four levels of tertiary education, compared to two levels in ISCED 1997. Levels 5, 6 and 7 in ISCED 2011 together correspond to level 5 in ISCED 1997. Level 8 in ISCED 2011 corresponds to level 6 in ISCED 1997.
- 282. ISCED 2011 simplifies the complementary dimensions at the tertiary ISCED levels compared to 1997:
 - At level 5 in ISCED 2011, vocational programmes are differentiated from general programmes at the second digit. In ISCED 1997, this differentiation did not exist. The possibility of distinguishing between academic and professional orientations is also allowed for within ISCED at levels 6-8 once internationally agreed definitions have been developed.
 - At levels 6 and 7 of ISCED 2011, the third digit of the classification distinguishes between programmes according to programme duration and position in the national degree and qualification structure for the calculation of statistics such as entry and graduation rates. In ISCED 1997, programme orientation or “type of programme” was used to sub-classify ISCED 5A into first degree programmes and second and further degree programmes (ISCED levels 6 and 7 combined in ISCED 2011). The third digit of the programme classification distinguishes between first degree and second or further degrees at both levels.
- 283. Table 19 shows the correspondence between ISCED levels in the 1997 and 2011 versions.

Table 19. Correspondence between ISCED 1997 and ISCED 2011 levels

ISCED 1997	ISCED 2011
-	ISCED 01
ISCED 0	ISCED 02
ISCED Level 1	ISCED Level 1
ISCED Level 2	ISCED Level 2
ISCED Level 3	ISCED Level 3*
ISCED Level 4	ISCED Level 4*
ISCED Level 5	ISCED Level 5
	ISCED Level 6
	ISCED Level 7
ISCED Level 6	ISCED Level 8

* content of category slightly changed

284. Table 20 and Table 21 and show the correspondence between ISCED 2011 and ISCED 1997, including complementary dimensions, categories and subcategories.

Table 20. Correspondence between ISCED 2011 and ISCED 1997 in detail. Levels 0 to 4

ISCED 2011					ISCED 1997			
Level Label	Level	Category	Sub-category	Notes on subcategories	Level label	Level	Destination	Orientation
Early childhood educational development	0	01	010	Educational programmes targeting under 3 year olds	Not covered in ISCED 1997			
Pre-primary education		02	020		Pre-primary education	0	N.A	N.A
Primary	1	10	100		Primary education or first stage of basic education	1	N.A	N.A
Lower secondary	2	24 general	241	Insufficient for level completion or partial completion and without direct access to upper secondary	Lower secondary education or second stage of	2	C	General/pre-vocational

			242	Partial level completion and without direct access to upper secondary	basic education		C	
			243	Level completion, with direct access to upper secondary			C	
			244	Level completion, with direct access to upper secondary			A/B	
		25 vocational	251	Insufficient for level completion or partial completion and without direct access to upper secondary			C	vocational
			252	Partial level completion and without direct access to upper secondary			C	
			253	Level completion, without direct access to upper secondary			C	
			254	Level completion, with direct access to upper secondary			A/B	
ISCED 2011								
ISCED 2011					ISCED 1997			
Level Label	Level	Category	Sub-category	Notes on subcategories	Level label	Level	Destination	Orientation
Upper secondary	3	34 general	341	Insufficient for level completion or partial completion and thus without direct access to tertiary	Upper secondary education	3	C	General/pre-vocational
			342	Partial level completion and without direct access to tertiary			C	
			343	Level completion, without direct access to first tertiary programmes [but may give direct access to post secondary non-tertiary] ¹			C	
			344	Level completion, with direct access to first tertiary programmes [may also give direct access to post-secondary non-tertiary] ¹			A/B	
			351	Insufficient for level completion or partial			C	

		35 vocational		completion and without direct access to tertiary				
			352	Partial level completion and without direct access to tertiary			C	vocational
			353	Level completion, without direct access to first tertiary programmes [but may give direct access to post-secondary non-tertiary] ¹			C	
		354	Level completion, with direct access to first tertiary programmes [may also give direct access to post-secondary non-tertiary] ¹			A/B		
Post-secondary non-tertiary	3	44 general	441	Insufficient for level completion and without direct access to tertiary ²	Post-secondary non-tertiary education	4	B	General/pre-vocational
			443	Level completion, without direct access to first tertiary programmes ²			B	
			444	Level completion, with direct access to first tertiary programmes ²			A	
	4	45 vocational	451	Insufficient for level completion and without direct access to tertiary ²			B	vocational
			453	Level completion, without direct access to first tertiary programmes ²			B	
			454	Level completion, with direct access to first tertiary programmes ²			A	

1. May include programmes previously classified at ISCED level 4 if they are equivalent to ISCED level 3 programmes
2. Except programmes previously classified at ISCED level 4 if they are equivalent to ISCED level 3 programmes

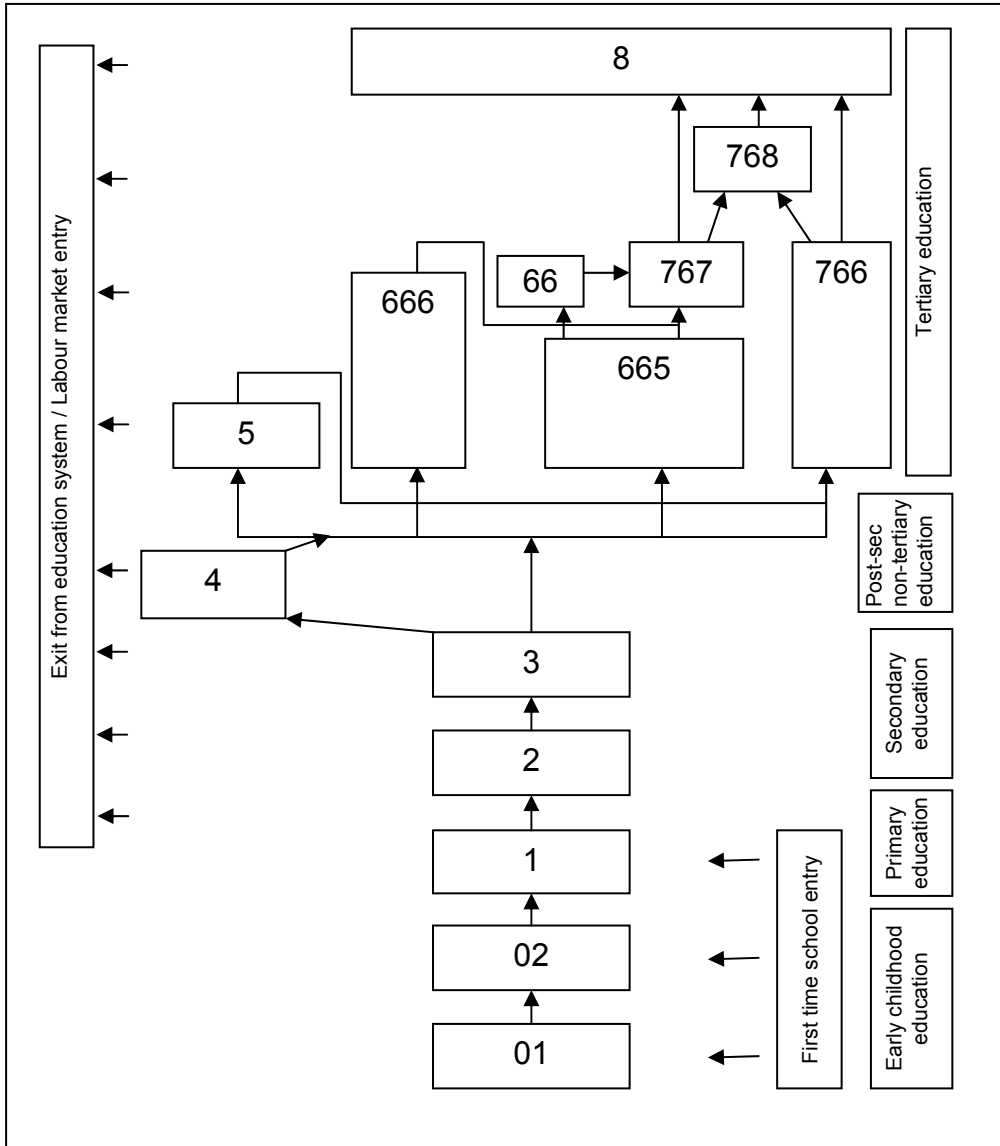
Table 21. Correspondence between ISCED 2011 and ISCED 1997 in detail: Tertiary levels

ISCED 2011						ISCED 1997				
Level Label	Level	Category	Sub-category	Notes on (sub) Categories	Notes	Level Label	Level	Type	Position	Cummulative duration in tertiary
Short			541	Insufficient for level completion			5	B	n.a	< 2 Years
Cycle	5	54	544	Sufficient for level completion			5	B	n.a	< 3 years
Tertiary		General	551	Insufficient for level completion			5	B	n.a.	< 2 Years
			554	Sufficient for level completion			5	B	n.a.	< 3 Years
Bachelor	6	66	661	Insufficient for level completion			5	A	Intermedi ate	< 3 Years
Or			665	1 st Degree (3-4 years)			5	A	1 st	3-4 Years
Equivalent			666	Long 1 st Degree (> 4 years)			5	A	1 st	> 4 Years
			667	2 nd or further degree (following	If equivalent to		5	A	2 nd	> 4 Years
				a bachelor or equivalent)	Further programme- s already classified in level 6				further	
Master or	7	76	761	Insufficient for level completion			5	A	Intermedi ate	< 3 Years
equivalent			766	Long 1 st degree (2-5 years)			5	A	1 st	> 5 Years
			767	2 nd or further degree (following			5	A	2 nd further	> 4-5 Years
				a bachelor or equivalent)						
			768	2 nd or further degree (following			5	A	2 nd further	> 6 Years
				master or equivalent)						
Doctoral of	8	86								
Equivalent		Orientation	861	Insufficient for level completion	Programme that lead	Tertiary	6	n.a	n.a	n.a
		unspecified	864	Sufficient for level completion	Directly to a doctoral	Education	6	n.a	n.a	n.a
					degree only	II Stage				

1. The correspondences for academic and professional programmes at ISCED levels 6, 7 and 8 are identical to those for programmes where orientation is unspecified.

21. ANNEX 1: ISCED 2011 POTENTIAL EDUCATIONAL PATHWAYS

– Figure 2. ISCED 2011 potential educational pathways



22. ANNEX 2: CODING OF EDUCATIONAL PROGRAMMES

0 Early childhood education

- 01 early childhood educational development
 - 010 early childhood educational development
- 02 pre-primary
 - 020 pre-primary

1 Primary

- 10 primary
 - 100 primary

2 Lower secondary

- 24 general
 - 241 insufficient for level completion or partial completion and without direct access to upper secondary
 - 242 sufficient for partial level completion and without direct access to upper secondary
 - 243 sufficient for level completion, without direct access to upper secondary
 - 244 sufficient for level completion, with direct access to upper secondary
- 25 vocational
 - 251 insufficient for level completion or partial completion and without direct access to upper secondary
 - 252 sufficient for partial level completion and without direct access to upper secondary
 - 253 sufficient for level completion, without direct access to upper secondary
 - 254 sufficient for level completion, with direct access to upper secondary

3 Upper secondary

- 34 general
 - 341 insufficient for level completion or partial completion and without direct access to tertiary
 - 342 sufficient for partial level completion and without access to tertiary
 - 343 sufficient for level completion, without direct access to tertiary
 - 344 sufficient for level completion, with direct access to tertiary
- 35 vocational
 - 351 insufficient for level completion or partial completion and without direct access to tertiary
 - 352 sufficient for partial level completion and without direct access to tertiary
 - 353 sufficient for level completion, without direct access to tertiary
 - 354 sufficient for level completion, with direct access to tertiary

4 Post-secondary non-tertiary

44 general

441 insufficient for level completion and without direct access to tertiary education

443 sufficient for level completion, without direct access to tertiary education

444 sufficient for level completion, with direct access to tertiary education

45 vocational

451 insufficient for level completion and without direct access to tertiary education

453 sufficient for level completion, without direct access to tertiary education

454 sufficient for level completion with, direct access to tertiary education

5 Short cycle tertiary

54 general

541 insufficient for level completion

544 sufficient for level completion

55 vocational

551 insufficient for level completion

554 sufficient for level completion

6 Bachelor or equivalent

64 academic

641 insufficient for level completion

645 first degree (3-4 years)

646 long first degree (more than 4 years)

647 second or further degree (following a bachelor or equivalent programme)

65 professional

651 insufficient for level completion

655 first degree (3-4 years)

656 long first degree (more than 4 years)

657 second or further degree (following a bachelor or equivalent programme)

66 orientation unspecified

661 insufficient for level completion

665 first degree (3-4 years)

666 long first degree (more than 4 years)

667 second or further degree (following a bachelor or equivalent programme)

7 Master or equivalent

74 academic

741 insufficient for level completion

746 long first degree (at least 5 years)

747 second or further degree (following a bachelor or equivalent programme)

748 second or further degree (following a master or equivalent programme)

75 professional

751 insufficient for level completion

756 long first degree (at least 5 years)

757 second or further degree (following a bachelor or equivalent programme)

758 second or further degree (following a master or equivalent programme)

76 orientation unspecified

761 insufficient for level completion

766 long first degree (at least 5 years)

767 second or further degree (following a bachelor or equivalent programme)

768 second or further degree (following a master or equivalent programme)

8 Doctoral or equivalent

84 academic

841 insufficient for level completion

844 sufficient for completion of level

85 professional

851 insufficient for level completion

854 sufficient for completion of level

86 orientation unspecified

861 insufficient for level completion

864 sufficient for completion of level

9 Not elsewhere classified

99 not elsewhere classified

999 not elsewhere classified

23. ANNEX 3: CODING OF EDUCATIONAL ATTAINMENT**0 Less than primary**

01 never attended an educational programme

010 never attended an educational programme

02 some early childhood education

020 some early childhood education

03 some primary education (without level completion)

030 some primary education (without level completion)

1 Primary

10 primary

100 including recognized successful completion of a lower secondary programme insufficient for level completion or partial level completion

2 Lower secondary₁

24 general₁

242 partial level completion and without direct access to upper secondary

243 level completion, without direct access to upper secondary

244 level completion, with direct access to upper secondary₁

25 vocational₁

252 partial level completion and without direct access to upper secondary

253 level completion, without direct access to upper secondary

254 level completion, with direct access to upper secondary₁

3 Upper secondary₁

34 general₁

342 partial level completion and without direct access to tertiary

343 level completion, without direct access to tertiary

344 level completion, with direct access to tertiary₁

35 vocational₁

352 partial level completion and without direct access to tertiary

353 level completion, without direct access to tertiary

354 level completion, with direct access to tertiary₁

4 Post-secondary non-tertiary₁

44 general₁

443 level completion, without direct access to tertiary

444 level completion, with direct access to tertiary₁

45 vocational₁

453 level completion, without direct access to tertiary

454 level completion, with direct access to tertiary₁

1. Including successful completion of a programme at the given level sufficient for level completion or successful completion of a programme or a stage of a programme at a higher ISCED level insufficient for completion or partial completion of the higher level

5 Short-cycle tertiary₁

54 general_{1,2}

540 not further defined₁

- 55 vocational_{1,2}
 - 550 not further defined₁
- 56 orientation unspecified_{1,2}
 - 560 not further defined₁

6 Bachelor or equivalent₁

- 64 academic₁
 - 644 not further defined₁
- 65 professional₁
 - 654 not further defined₁
- 66 orientation unspecified_{1,2}
 - 664 not further defined₁

7 Master or equivalent₁

- 74 academic₁
 - 744 not further defined₁
- 75 professional₁
 - 754 not further defined₁
- 76 orientation unspecified_{1,2}
 - 764 not further defined₁

8 Doctoral or equivalent₁

- 84 academic₁
 - 840 not further defined
- 85 professional₁
 - 850 not further defined
- 86 orientation unspecified_{1,2}
 - 860 not further defined

9 Not elsewhere classified

- 99 not elsewhere classified
 - 999 not elsewhere classified

1. Including successful completion of a programme at the given level sufficient for level completion or successful completion of a programme or a stage of a programme at a higher ISCED level insufficient for completion or partial completion of the higher level
2. To be used in the absence of internationally agreed definitions of academic and professional orientations of programmes at ISCED levels 6-8.

24. ANNEX 4: BROAD GROUPS AND FIELDS OF EDUCATION

285. Note: Fields of education remain unchanged from the ISCED 1997 version. Starting in 2011 the UIS plans to develop a three-digit detailed classification of fields of education and training building on a draft coding developed for UNESCO in 1999. This coding has been used by Eurostat and OECD for more than a decade but requires further updating. The UIS will present the new coding for global review and consultation during 2012 with a view to adopting the classification in 2013. Once the new classification of fields of education and training has been formally adopted by the UNESCO General Conference of Member States, it will be established as a separate and independent classification from ISCED and this section of the current ISCED will be removed.

286. There are 25 fields of education organized in nine broad groups. It is recommended that inter - or multi-disciplinary programmes should be classified according to a majority rule, i.e. in the field of education in which the students spend most of their time.

ISCED Fields of Education:

0 General Programmes

01 Basic programmes

Basic general programmes pre-primary, elementary, primary, secondary, etc.

08 Literacy and numeracy

Simple and functional literacy, numeracy.

09 Personal development

Enhancing personal skills, e.g. behavioural capacities, mental skills, personal organizational capacities, life orientation programmes.

1 Education

14 Teacher training and education science

Teacher training for pre-school, kindergarten, elementary school, vocational, practical, non-vocational subject, adult education, teacher trainers and for handicapped children. General and specialized teacher training programmes.

Education science: curriculum development in non-vocational and vocational subjects. Educational assessment, testing and measurement, educational research, other education science.

2 Humanities and Arts

21 Arts

Fine arts: drawing, painting, sculpture;

Performing arts: music, drama, dance, circus;

Graphic and audio-visual arts: photography, cinematography, music Production, radio and TV production, printing and publishing; Design; Craft skills.

: living or “dead” languages and their literature, area studies; Native languages: current or vernacular language and its literature; Other humanities: interpretation and translation, linguistics, comparative literature, history, archaeology, philosophy, ethics.

3 Social sciences, business and law

31 Social and behavioural science

Economics, economic history, political science, sociology, demography, anthropology (except physical anthropology), ethnology, futurology, psychology, geography (except physical geography), peace and conflict studies, human rights.

32 Journalism and information

Journalism; library technician and science; technicians in museums and similar repositories; Documentation techniques; Archival sciences.

34 Business and administration

Retailing, marketing, sales, public relations, real estate; Finance, banking, insurance, investment analysis; Accounting, auditing, bookkeeping; Management, public administration, institutional administration, personnel administration; Secretarial and office work.

38 Law

Local magistrates, “notaires”, law (general, international, labour, maritime, etc.), jurisprudence, history of law.

4 Science

42 Life sciences

Biology, botany, bacteriology, toxicology, microbiology, zoology, entomology, ornithology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences.

44 Physical sciences

Astronomy and space sciences, physics, other allied subjects, chemistry, other allied subjects, geology, geophysics, mineralogy, physical anthropology, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, marine science, vulcanology, palaeoecology.

46 Mathematics and statistics

Mathematics, operations research, numerical analysis, actuarial science, statistics and other allied fields.

48 Computing

Computer sciences: system design, computer programming, data processing, networks, operating systems - software development only (hardware development should be classified with the engineering fields).

5 Engineering, manufacturing and construction**52 Engineering and engineering trades**

Engineering drawing, mechanics, metal work, electricity, electronics, telecommunications, energy and chemical engineering, vehicle maintenance, surveying.

54 Manufacturing and processing

Food and drink processing, textiles, clothes, footwear, leather, materials (wood, paper, plastic, glass, etc.), mining and extraction.

6 Agriculture**62 Agriculture, forestry and fishery**

Agriculture, crop and livestock production, agronomy, animal husbandry, horticulture and gardening, forestry and forest product techniques, natural parks, wildlife, fisheries, fishery science and technology.

64 Veterinary

Veterinary medicine, veterinary assisting.

7 Health and welfare**72 Health**

Medicine: anatomy, epidemiology, cytology, physiology, immunology and immunohaematology, pathology, anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, neurology, psychiatry, radiology, ophthalmology; Medical services: public health services, hygiene, pharmacy, pharmacology, therapeutics, rehabilitation, prosthetics, optometry, nutrition; Nursing: basic nursing, midwifery; Dental services: dental assisting, dental hygienist, dental laboratory technician, odontology.

76 Social services

Social care: care of the disabled, child care, youth services, gerontological services; Social work: counselling, welfare n.e.c.

8 Services**81 Personal services**

Hotel and catering, travel and tourism, sports and leisure, hairdressing, beauty treatment and other personal services: cleaning, laundry, dry-cleaning, cosmetic services, domestic science.

84 Transport services

Seamanship, ship's officer, nautical science, air crew, air traffic control, railway operations, road motor vehicle operations, postal service.

85 Environmental protection

Environmental conservation, control and protection, air and water pollution control, labour protection and security.

86 Security services

Protection of property and persons: police work and related law enforcement, criminology, fire-protection and fire fighting, civil security; Military.

Not known or unspecified

(This category is not part of the classification itself but in data collection “99” is needed for “fields of education not known or unspecified”.)

25. ANNEX 5: GLOSSARY**Core concepts:**

- 1 – Learning concepts
- 2 – Learning types
- 3 – Education concepts
- 4 – Education types
- 5 – Educational programme elements
- 6 – Educational programme process characteristics
- 7 – Qualifications & Educational attainment
- 8 – Education levels
- 9 – Duration
- 10 – Fields of Education

**Alphabetic list of Glossary items:
(Core concept number in parentheses)**

Academic year (9)
 Adult education (4)
 Assessment of learning outcomes (7)
 Completion (of an educational programme) (6)
 Completion (of an ISCED level) (7)
 Course (5)
 Credit (7)
 Cumulative duration (9)
 Degree (7)
 Dual system educational programmes (4)
 Early childhood education (ISCED-P level 0) (8)
 Education (3)
 Education provider (3)
 Educational activity (3)
 Educational attainment (7)
 Educational institution (3)
 Educational programme (3)

Enrolment (6)
Entrants (6)
Entry (6)
Field of education (10)
First degree (7)
Formal education (4)
Further degree (7)
General education (4)
Grade (5)
Graduate (of an educational programme) (6)
Graduation (from an educational programme) (6)
Incidental or random learning (2)
Informal learning (2)
Initial education (4)
Intermediate qualification (7)
Learning (1)
Learning activity (1)
Learning objectives (1)
Less than primary (ISCED-A level 0) (8)
Levels of education (8)
Lower secondary education (ISCED level 2) (8)
Minimum duration (9)
Modular programmes (5)
Module (5)
Non-formal education (4)
Non-formal (educational) qualification (7)
(Learning) outcomes (1)
Partial completion (of an ISCED level) (7)
Participant (6)
Participation (6)
Post-secondary non-tertiary education
(ISCED level 4) (8)
Primary education (ISCED level 1) (8)
Qualification (7)
Random learning (2)
Recognized qualification (7)
Regular education (4)

School- or college-based education (4)
 Second chance education (4)
 Second or further degree (7)
 Secondary education (ISCED levels 2-3) (8)
 Special needs education (4)
 Stage (5)
 Successful completion (of an educational programme) (6)
 Tertiary education (ISCED levels 5-8) (8)
 Theoretical duration (9)
 Training (4)
 Typical duration (9)
 Unsuccessful completion (of an educational programme) (6)
 Upper secondary education (ISCED level 3) (8)
 Validation of learning outcomes (7)
 Vocational education (4)
 Work-based education (4)

1. **LEARNING CONCEPTS**

Learning - The individual acquisition or modification of information, knowledge, understanding, attitudes, values, skills, competencies, or behaviours through experience, practice, study or instruction.

Learning activity - Deliberate activity in which an individual participates with the intention to learn.

Learning objectives - Specification of learning outcomes to be achieved upon completion of an educational or learning activity. These encompass improving knowledge, skills and competencies within any personal, civic, social or employment related context. Learning objectives are typically linked to the purpose of preparing for more advanced studies and/or for an occupation or trade or class of occupations or trades.

(Learning) outcomes - The totality of information, knowledge, understanding, attitudes, values, skills, competencies or behaviours an individual is expected to master upon successful completion of an educational programme.

2. **2 – LEARNING TYPES**

Incidental or random learning - Various forms of learning that are not organized or that involve communication not designed to bring about learning. Incidental or random learning may occur as a by-product of day-to-day activities or other events or communication that are not designed as deliberate educational or learning activities. Examples include learning that takes place during the course of a meeting, or whilst listening to a radio programme or watching a television broadcast that is not designed as an educational programme.

Informal learning - Forms of learning that are intentional or deliberate but are not institutionalized. They are less organized and structured than either formal or non-formal education. Informal learning may include learning activities that occur in the family, in the work place, in the local community, and in daily life, on a self-directed, family-directed or socially-directed basis.

Random learning - See Incidental or random learning.

3. **EDUCATION CONCEPT**

Education - The processes by which societies deliberately transmit their accumulated information, knowledge, understanding, attitudes, values, skills, competencies and behaviours across generations. It involves communication designed to bring about learning.

Educational activity - Deliberate activity involving some form of communication intended to bring about learning.

Educational institution - Established institution that provides education as its main purpose, such as a school, college, university or training centre. Such institutions are normally accredited or sanctioned by the relevant national education authorities or equivalent. Educational institutions may also be operated by private organizations, such as religious bodies, special interest groups or private educational and training enterprises, both for profit and non-profit.

Educational programme - A coherent set or sequence of educational activities designed and organized to achieve pre-determined learning objectives or accomplish a specific set of educational tasks over a sustained period. Within an educational programme, educational activities may also be grouped into sub-components variously described in national contexts as 36 C/19 Annex – page 80 “courses”, “modules”, “units”, and/or “subjects”. A programme may have major components not normally characterized as courses, units, or modules – for example, play-based activities, periods of work experience, research projects and the preparation of dissertations.

Education provider - Organisation that provides education, either as a main or ancillary objective. This can be a public educational institution as well as a private enterprise, non-governmental organization or non-educational public body.

4. **EDUCATION TYPES**

Adult education - Education specifically targeting individuals who are regarded as adults by the society to which they belong to improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose to complete a level of formal education, or to acquire knowledge, skills and competencies in a new field or to refresh or update their knowledge in a particular field. This also includes what may be referred to as “continuing education”, “recurrent education” or “second chance education”.

Dual system educational programmes - Programmes that combine school- or college- and workbased education. Both components are substantial (i.e. go beyond a single internship or occasional class), although the work-based part usually occupies 50% of the programme time or more.

Formal education - Education that is institutionalized, intentional and planned through public organizations and recognized private bodies and, in their totality, make up the formal education system of a country. Formal education programmes are thus recognized as such by the relevant national educational authorities or equivalent, e.g. any other institution in co-operation with the national or sub-national educational authorities. Formal education consists mostly of initial education. Vocational education, special needs education and some parts of adult education are often recognized as being part of the formal education system.

General education - Education that is designed to develop learners' general knowledge, skills and competencies and literacy and numeracy skills, often to prepare students for more advanced educational programmes at the same or higher ISCED levels and to lay the foundation for lifelong learning. General educational programmes are typically school- or college-based. General education includes educational programmes that are designed to prepare students for entry into vocational education, but that do not prepare for employment in a particular occupation or trade or class of occupations or trades, nor lead directly to a labour market relevant qualification.

Initial education - Formal education of individuals before their first entrance to the labour market, i.e. when they will normally be in full-time education. It thus targets individuals who are regarded as children, youth and young adults by the society to which they belong. It is typically provided by educational institutions in a continuous educational pathway.

Non-formal education - Education that is institutionalized, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or a complement to formal education within the process of the lifelong learning of individuals. It is often provided to guarantee the right of access to education for all. It caters for people of all ages, but does not necessarily apply a continuous pathway-structure; it may be short in duration and/or low intensity, and it is typically provided in the form of short courses, workshops or seminars. Non-formal education mostly leads to qualifications that are not recognized as formal qualifications by the relevant national educational authorities or to no qualifications at all. Non-formal education can cover programmes contributing to adult and youth literacy and education for out-of-school children, as well as programmes on life skills, work skills, and social or cultural development.

Regular education - Initial education designed for individuals without special educational needs.

Second chance education - Education specifically targeting individuals who, for a variety of reasons, never attended school or left school either before completion of the level of education in which they were enrolled or who completed the level but wish to enter an educational programme or occupation for which they are not yet qualified. Participants are often older than the typical target age group for the given ISCED level programme (but not necessarily adults). Sometimes also referred to as “bridging programmes” or “re-integration programmes”.

Special needs education - Education designed to facilitate the learning of individuals who, for a wide variety of reasons, require additional support and adaptive pedagogical methods in order to participate and meet learning objectives in an educational programme. Reasons may include (but are not limited to) disadvantages in physical, behavioural, intellectual, emotional and social capacities. Educational programmes in special needs education may follow a similar curriculum as that offered in the parallel regular education system, however they take individuals’ particular needs into account by providing specific resources (e.g. specially trained personnel, equipment, or space) and, if appropriate, modified educational content or learning objectives. These programmes can be offered for individual students within already existing educational programmes, or be offered as a separate class in the same or separate educational institutions.

School- or college-based education - Educational activities taking place in institutions established for the education of children and youth in the course of initial educational programmes which aim to achieve specific learning objectives through classroom instruction including courses in specialised learning environments (e.g. laboratory, music room, computer room or gym) and group work under the guidance of a teacher or teachers. Students are often grouped by grade, age or level of ability.

Training - Education designed to achieve particular learning objectives, especially in vocational education. The definition of education in ISCED includes training.

Vocational education - Education that is designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation or trade or class of occupations or trades. Vocational education may have work-based components (e.g. apprenticeships). Successful completion of such programmes leads to labour-market relevant vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labour market.

Work-based education - Educational activities taking place in a work environment, usually in the context of vocational educational programmes which aim to achieve specific learning objectives through practical instruction and participation in work activities under the guidance of experienced workers or trainers.

5. EDUCATIONAL PROGRAMME ELEMENTS

Course - A unit of instruction comprising a sequence of educational activities in a particular field or range of related fields of education. This can also be referred to as a “module”, “unit” or “subject”.

Grade - A specific stage of instruction in initial education usually covered during an academic year. Students in the same grade are usually of similar age. This is also referred to as a “class”, “cohort” or “year”.

Modular programmes - Educational programmes in which students may compose the content of their education in a flexible way by combining different courses or modules. Modular programmes thus often do not have clearly defined sequencing.

Module - A course or part of a course in the context of a modular programme. A module may be taken singularly or combined with other modules offered.

Stage - A sub-level of an educational programme, defined in terms of theoretical duration or a specified set of modules to complete or credits to achieve. A specific stage has characteristics which are distinct from other stages of the same educational programme and may be individually certified by an intermediate qualification.

6. EDUCATIONAL PROGRAMME PROCESS CHARACTERISTICS

Completion (of an educational programme) - Participation in all components of an educational programme (including final exams if any), irrespective of the result of any potential assessment of achievement of learning objectives.

Enrolment - Individuals officially registered in a given educational programme, or stage or module thereof, regardless of age.

Entrants - Individuals enrolling at the start of an educational level, set of levels, programme, or stage or module thereof, regardless of age.

Entry - The fact of starting participation in an educational level, set of levels, programme, or stage or module thereof.

Graduate of an educational programme - Individuals who have successfully completed an educational programme.

Graduation (from an educational programme) - The successful completion of an educational programme. Note that it is possible for a single graduate to have more than one graduation (even within the same academic year) if they were enrolled simultaneously in two or more programmes and successfully completed them.

Participant - Individuals who attend or take part in an educational programme, or stage or module thereof.

Participation - Attendance in or undertaking an educational programme, or stage or module thereof.

Successful completion (of an educational programme) - Achievement of the learning objectives of an educational programme typically validated through the assessment of acquired knowledge, skills and competencies. Successful completion of an educational programme is usually documented by the award of an educational qualification.

Unsuccessful completion (of an educational programme) - Failure to achieve the learning objectives of an educational programme despite having attended or taken part in all components of the educational programme (including final exams if any). Unsuccessful completion implies that some assessment of the achievement of the learning objectives has been undertaken but the demonstrated acquired knowledge, skills or competencies were judged insufficient.

7. **QUALIFICATIONS & EDUCATIONAL ATTAINMENT**

Assessment of learning outcomes - Evaluation of individuals' achievement of learning objectives, using a variety of assessment methods (written, oral and practical tests/examinations, projects and portfolios) during or at the end of an educational programme.

Completion (of an ISCED level) - Successful completion of an educational programme sufficient for level completion. At ISCED levels 1 and 4-8, the successful completion of a programme meeting the content and minimum duration criteria for the given level is considered as level completion. At ISCED levels 2 and 3 the successful completion of any programme granting access to programmes at higher ISCED levels (i.e. ISCED level 3 in the case of ISCED level 2 programmes and ISCED levels 5, 6 or 7 in the case of ISCED level 3 programmes) is counted as level completion as is the completion of any terminal programme meeting the content, minimum duration (2 years) and cumulative duration criteria for the respective ISCED level (i.e. 8 years since the start of ISCED level 1 in the case of ISCED level 2 programmes and 11 years in the case of ISCED level 3 programmes).

Credit - Unit in which the successful completion of courses or modules is earned and documented during and at the end of an educational programme. Credits express the volume of learning based on the workload students typically need in order to achieve the expected learning objectives.

Degree - Educational qualification awarded upon successful completion of specific educational programmes in tertiary education (traditionally by universities and equivalent institutions).

Educational attainment - The highest ISCED level of education an individual has successfully completed. This is usually measured with respect to the highest educational programme successfully completed which is typically certified by a recognized qualification. Recognized intermediate qualifications are classified at a lower level than the programme itself.

First degree - A degree awarded on the successful completion of an educational programme at ISCED level 6 or 7 that does not require prior successful completion of any degree at ISCED level 6 for entry into the respective educational programme

Further degree - See Second or further degree.

Intermediate qualification - The official confirmation, usually in the form of a document certifying the successful completion of a stage of an educational programme.

Non-formal (educational) qualification - Qualification awarded upon achievement of the learning objectives of an educational programme in non-formal education that is not recognized by the relevant national education authorities as being equivalent to a formal qualification.

Partial completion (of an ISCED level) - At ISCED levels 2 or 3 only, the successful completion of a programme in a sequence within the given level which meets the content, minimum duration (2 years) and cumulative duration criteria for the respective ISCED level (i.e. 8 years since the start of ISCED level 1 in the case of ISCED level 2 programmes and 11 years in the case of ISCED level 3 programmes) but is not the last programme within the sequence in that ISCED level.

Qualification - The official confirmation, usually in the form of a document certifying the successful completion of an educational programme or of a stage of a programme. Qualifications can be obtained through: i) successful completion of a full programme; ii) successful completion of a stage of a programme (intermediate qualifications); or iii) validation of acquired knowledge, skills and competencies, independent of participation in such programmes. This may also be referred to as a “credential”.

Recognized qualification - The official sanction by the relevant national educational authorities of a qualification awarded upon achievement of the learning objectives of an educational programme.

Second or further degree - A degree awarded on the successful completion of an educational programme at ISCED level 6 or 7 that requires prior successful completion of a programme at ISCED level 6 or 7 for entry into the respective educational programme.

Validation of learning outcomes - Evaluation of individuals' achievement of learning objectives using a variety of assessment methods (written, oral and practical tests/examinations, projects and portfolios) not presuming participation in an educational programme.

8. EDUCATION LEVELS

Levels of education - An ordered set of categories, intended to group educational programmes in relation to gradations of learning experiences and the knowledge, skills and competencies which each programme is designed to

impart. The concept of the ISCED level reflects the degree of complexity and specialisation of the content of an educational programme, from foundational to complex.

Early childhood education (ISCED-P level 0) - Early childhood education provides learning and educational activities with a holistic approach to support children's early cognitive, physical, social and emotional development and introduce young children to organized instruction outside of the family context to develop some of the skills needed for academic readiness and to prepare them for entry into primary education.

Less than primary (ISCED-A level 0) - A broad level of educational attainment covering no participation in education, some participation in early childhood education and/or some participation in primary education.

Primary education (ISCED level 1) - Primary education provides learning and educational activities typically designed to provide students with fundamental skills in reading, writing and mathematics (i.e. literacy and numeracy), and to establish a sound foundation for learning and solid understanding of core areas of knowledge and personal development, preparing for lower secondary education. It aims at learning at a basic level of complexity with little if any specialisation.

Secondary education (ISCED levels 2-3) - Secondary education provides learning and educational activities building on primary education and preparing for both first labour market entry as well as post-secondary non-tertiary and tertiary education. Broadly speaking, secondary education aims at learning at an intermediate level of complexity. ISCED distinguishes lower and upper secondary education.

Lower secondary education (ISCED level 2) - Programmes at ISCED level 2, or "lower secondary" education, are typically designed to build upon the fundamental teaching and learning processes which begin at ISCED level 1. Usually, the educational aim is to lay the foundation for lifelong learning and human development on which education systems may systematically expand further educational opportunities. Programmes at this level are usually organized around a more subject-oriented curriculum, introducing theoretical concepts across a broad range of subjects.

Upper secondary education (ISCED level 3) - Programmes at ISCED level 3, or "upper secondary" education, are typically designed to complete secondary education in preparation for tertiary education, or to provide skills relevant to employment, or both. Programmes at this level offer students more varied, specialised and in-depth instruction than programmes at lower 36 C/19 Annex – page 85 secondary education (ISCED level 2). They are more differentiated, with an increased range of options and streams available.

Post-secondary non-tertiary education (ISCED level 4) - Post-secondary non-tertiary education provides learning and educational activities building on secondary education preparing for both labour market entry as well as tertiary

education. It typically targets students who have completed upper secondary (ISCED level 3) but who want to increase their opportunities either to enter the labour market or to progress to tertiary education. Programmes are often not significantly more advanced than those at upper secondary as they typically serve to broaden rather than deepen knowledge, skills and competencies. It therefore aims at learning below the high level of complexity characteristic of tertiary education.

Tertiary education (ISCED levels 5-8) - Tertiary education builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education, but is broader than that because it also includes advanced vocational or professional education.

9. DURATION

Academic year - The annual teaching or examination period during which students attend courses or take final examinations, not taking minor breaks into account. It may be shorter than 12 months, but would typically not be shorter than 9 months. It may vary for different levels of education or between different types of educational institutions within a country. This is also referred to as the *school year*, mainly for the pre-tertiary level.

Cumulative duration - The total theoretical duration of a sequence of educational programmes. In ISCED, cumulative duration from the beginning of ISCED level 1 or 3 or since the beginning of tertiary education is often required for the purpose of classifying an educational programme.

Minimum duration - The minimum theoretical duration of an educational programme for the purposes of classifying a programme at a given ISCED level or for determining completion or partial completion of a given ISCED level.

Theoretical duration - The time, expressed in academic years, it takes to deliver an educational programme assuming regular participation on a full-time basis.

Typical duration - The time, expressed in academic years, it usually takes students to successfully complete an educational programme assuming regular participation on a full-time basis.

10. FIELDS OF EDUCATION

Field of education - Broad domain, branch or area of content covered by an educational programme, course or module. Often referred to as a “subject” or “discipline”. This may also be referred to as ‘field of study’.

26. ANNEX 6: NON-FORMAL EDUCATION IN ISCED: FURTHER ISSUES

287. Paragraphs 39 to 42 of ISCED 2011 defines non-formal education (paragraph 39), provides the types of non-formal education (paragraph 40), underlines that non-formal education does not normally give access to a higher level of education unless it is appropriately validated in the formal education system

- (paragraph 41) and recommends using the criteria of equivalency of content and/or of resulting qualifications for the classification of non-formal education programmes (paragraph 42).
288. This annex gives some additional details regarding non-formal education programme characteristics. A thorough treatment of measurements of non-formal programmes for international statistical purposes would imply further developments of the concept of nonformal programmes through, for example, an operational manual. A few examples of international data collection experiences exist and can be consulted for giving specific advice.
289. ISCED 2011 paragraph 40 stipulates that depending on the national context, non-formal education and training can cover programmes:
- 1) Contributing to adult and youth literacy and education for out-of-school children (alternative programmes to initial education);
 - 2) As well as programmes on life skills, work skills, and social or cultural development. These latter can:
 - a) Include training in a workplace for improving or adapting existing qualifications and skills, and training for unemployed or economically inactive persons.
 - b) It can also include learning activities pursued for self development (during a person's private (leisure) time).
290. The heterogeneity of non-formal education programmes means that it is difficult to provide general guidelines for their application in statistical instruments given the purpose of international comparability. ISCED 2011 recommends using the criteria of equivalency of content for the classification of non-formal education programmes. The equivalency of content relates non-formal programmes to formal programmes with similar content within ISCED. This would in principle allow for a classification of non-formal programmes by level. For example, where a programme of adult education satisfies the content-based criteria of ISCED level 1, it could be classified at ISCED level 1.
291. The qualification awarded upon successful completion of a non-formal educational programme can often support the classification of the educational programme. For example, non-formal vocational training might be classified based on the equivalence of the level and type of qualification (if any) that is awarded upon its successful completion compared to a formal educational programme. To establish content equivalencies between programmes and qualifications in the same educational system, national and regional qualification frameworks, where they exist, can provide guidance. ISCED 2011 recommends a transparent identification of respectively formal and non-formal programmes.
292. Non-formal education can be provided by a wide range of bodies; including educational establishments, private enterprises, non-governmental organisations, and public institutions. In some cases, those same institutions that provide formal education may also provide nonformal education and training. However, as with

formal educational programmes, the type of the provider should not be used as a main criterion for differentiating non-formal education and training, nor should it be used as a main criteria for distinguishing formal and non-formal education.

293. The duration of a non-formal programme may be very short. In particular, job-and leisure time training activities may cater for specific practical purposes related to the specific job- or private life context. A non-formal programme may therefore often be described as a (training) course.
294. Non-formal programmes are frequently directed to acquiring practical knowledge, skills or competencies in a concrete context and are therefore often focussed less on theoretical learning. For example, a formal programme could teach computer science (e.g. for acquiring a recognized qualification as an IT-engineer) whereas a non-formal programme may teach specific IT programmes for practical computer use in job contexts.
295. Alternative programmes exist mainly in countries where the formal education system is less developed or restricted in scope and are not recognized as formal by educational authorities; they are normally covering ISCED levels 0-3 and may be provided by private organizations including non-governmental organisations (NGOs).
296. While non-formal education is a recognized part of ISCED it is likely that international data collection exercises (mappings, surveys and censuses etc.) will restrict their coverage to formal programmes for the sake of international comparability and feasibility. The boundary between formal and non-formal programmes is therefore important and should be given specific attention. However, at this stage, ISCED 2011 does not give specific advice on the development of mappings for non-formal programmes or any related non-formal qualifications.

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