COURSE TITLE: EDUCATIONAL PSYCHOLOGY AND EARLY CHILDHOOD EDUCATION

COURSE CODE: HDFS 321

CREDIT HOURS: 3(2+1)

S.No.	Theory	Cr/Hr
1.	Educational psychology- Meaning, nature, scope and importance of educational psychology	2
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4.	Concept of learning definition, essential features, types of learning, laws of learning, principles of learning, learning environment	2
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6.	Reinforcement definition, types of reinforcements, schedules of reinforcement, importance of negative and positive reinforcement in learning,	2
7.	Punishment- meaning, functions, types, essentials of good punishment/effect of punishment on learning	2
8.	Motivation- definition, types, modes of motivation (contingency contract, token economy relationship of motivation with learning and performance	2
9.	Discipline meaning, need, functions and essentials in discipline, technique of discipline, factors influencing choice of disciplinary techniques	2
10.	Theories for classroom teaching and its applicability(Jerome Bruner, RobertGagne, Jean Piaget)	2
11.	Theories of learning Erik Erikson, Lev Vygotsky, Kohlberg(Educational Implications)	2
12.	Early Childhood Education. Meaning and significance	2
13.	Different types of Preschool programmes Montessori, Kindergarten, Nursery, Pre-Basic, Balwadi	2
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15.	Activities to promote all round development of preschool children-cognitive, language, socio-emotional and motor development	2
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Topic 1

Educational Psychology: Meaning, Nature Scope and importance of Educational Psychology

1. **Meaning of Educational Psychology**
2. **Definitions of Educational Psychology**
3. **Nature**
4. **Objectives**
5. **Scope**
6. **Methods.**

What is Psychology?

The word, 'Psychology' is derived from two Greek words, 'Psyche' and 'Logos'. Psyche means 'soul' and 'Logos' means 'science'. Thus psychology was first defined as the 'science of soul".According to earlier psychologists, the function of psychology was to study the nature, origin and destiny of the human soul. But soul is something metaphysical. It cannot be seen, observed and touched and we cannot make scientific experiments on soul.

In the 18th century, psychology was understood as the 'Science of Mind'. William James (1892) defined psychology as the science of mental processes. But the word 'mind ' is also quite ambiguous as there was confusion regarding the nature and functions of mind.Modern psychologists defined psychology as the "Science of Consciousness". James Sully (1884) defined psychology as the "Science of the Inner World". Wilhelm Wundt (1892) defined psychology as the science which studies the "internal experiences'. But there are three levels of consciousness – conscious, subconscious and the unconscious and so this definition also was not accepted by some.

Thus, psychology first lost its soul, then its mind and then its consciousness. At present only its behaviour exists. William McDugall (1905) defined psychology as the "Science of Behaviour", W.B. Pillsbury (1911) and J.B. Watson (1912) also defined psychology as the science of behavior.Behaviour generally means overt activities which can observed and measured scientifically. But one's behaviour is always influenced by his experiences. So when we study one's behaviour we must also study his experiences.Psychology should, therefore, be defined as a "science of behaviour and experiences on human beings" (B.F. Skinner)According to Crow and Crow, "Psychology is the study of human behaviour and human relationship'".

The term education is comes from the following Latin words.

(i) *Educare* which means "bring up" or "rise up"

(ii) *Educere which means "lead out" or "draw out"*

(iii) *E &Duco where "E" means "out of" and "Duco" means "to draw out"*

(iv) *Educatum which means "Act of Teaching/Training"*

Similarly, the term psychology is comes from two Greek words "Psyche" meaning soul and "logos" meaning study.

What is Educational Psychology?

Educational psychology is that branch of psychology in which the findings of psychology are applied in the field of education. It is the scientific study of human behaviour in educational setting.

According to Charles. E. Skinner, "Educational psychology deals with the behaviour of human beings in educational situations".Thus educational psychology is a behavioural science with two main references– human behaviour and education.In the words of E.A. Peel, "Educational Psychology is the science of Education".Education by all means is an attempt to mould and shape the behaviour of the pupil. It aims to produce desirable changes in him for the all-round development of his personality.

The essential knowledge and skill to do this job satisfactorily is supplied by Educational Psychology. In the words of E.A. Peel, "Educational psychology helps the teacher to understand the development of his pupils, the range and limits of their capacities, the processes by which they learn and their social relationships."In this way, the work of the Educational Psychologists resembles with that of an Engineer, who is a technical expert. The Engineer supplies all the knowledge and skill essential for the accomplishment of the job satisfactorily… for example, construction of a bridge.

In the same way Educational Psychologists, who is a technical expert in the field of Education, supplies all the information, principles and techniques essential for understanding the behavior of the pupil in response to educational environment and desired modification of his behavior to bring an all-round development of his personality.In this way, it is quite reasonable to call Educational Psychology as a science and technology of Education.

A branch of psychology that specializesin understanding teaching andlearning in educational settings. William James-said when we look at education we have to look at teaching in terms of the classroom, how can we observe teaching and improve it.-Start lessons just beyond the child's level of knowledge and understandingJohn Dewey-Stated children are not passive learners, they are active. We have to view the child as anactive learner who can participate in their learning process.-Emphasized the child's adaptation to the environment-Pushed competent education for all learners-Importance: Foundation of educational psychological development based on science-Comes along saying we need a lab for educational psych we need to learn and observe based on scientific method Thorndike-He agrees with the past two, but how do we access, how do we measure the students' progress or lack of progress-He pushed for measurement to be a central component , which is why grades are created.

Thus, Educational Psychology concerned primarily with understanding the processes of teaching and learning that take place within formal environments and developing ways of improving those methods. It covers important topics like learning theories; teaching methods; motivation; cognitive, emotional, and moral development; and parent-child relationships etc. In short, it is the scientific discipline that addresses the questions: "Why do some students learn more than others?" and "What can be done to improve that learning?"

Meaning of Educational Psychology:

Educational psychology is one of the branches of psychology to study the behaviour of the learner in relation to his education. As specialized branch of psychology concerns itself with suggesting ways and means of improving the process and products of education, enabling the teacher to teach effectively and the learners to learn effectively with the minimum effort.

It is thus designated as the service of education. It has simplified the tasks and improved the efficiency of the teacher or all those connected in the process and products of education by supplying them with the essential knowledge and skills in much need the same way as science and technology has helped in making possible maximum output through minimum input in terms of time and labour in our day-to-day activities.

Definitions of Educational Psychology:

According to Skinner, "Educational Psychology is that branch of psychology which deals with teaching and learning."

Crow and Crow defined it as, "Educational psychology describes and explains the learning experiences of an individual from birth through old age."

Peel:"Educational psychology is the science of education".

NATURE OF EDUCATIONAL PSYCHOLOGY

Its nature is scientific as it has been accepted that it is a Science of Education. We can summarize the nature of Educational Psychology in the following ways:

1. **Educational Psychology is a science**. (Science is a branch of study concerned with observation of facts and establishment of verifiable general laws. Science employs certain objective methods for the collection of data. It has its objectives of understanding, explaining, predicting and control of facts.) Like any other science, educational psychology has also developed objective methods of collection of data. It also aims at understanding, predicting and controlling human behaviour.

2. **Educational Psychology is a natural science.** An educational psychologist conducts his investigations, gathers his data and reaches his conclusions in exactly the same manner as physicist or the biologist.

3. **Educational psychology is a social science.** Like the sociologist, anthropologist, economist or political scientist, the educational psychologist studies human beings and their sociability.

4. **Educational psychology is a positive science.** Normative science like Logic or Ethics deals with facts as they ought to be. A positive science deals with facts as they are or as they operate. Educational psychology studies the child's behaviour as it is, not, as it ought to be. So it is a positive science.

5. **Educational psychology is an applied science.** It is the application of psychological principles in the field of education. By applying the principles and techniques of psychology, it tries to study the behaviour and experiences of the pupils. As a branch of psychology it is parallel to any other applied psychology. For example, educational psychology draws heavily facts from such areas as developmental psychology, clinical psychology, abnormal psychology and social psychology.

6. **Educational psychology is a developing or growing science.** It is concerned with new and ever new researches. As research findings accumulate, educational psychologists get better insight into the child's nature and behavior.

W.A. Kelly (1941) listed the nature of Educational Psychology as follows:

- To give a knowledge of the nature of the child
- To give understanding of the nature, aims and purposes of education
- To give understanding of the scientific methods and procedures which have been used in arriving at the facts and principles of educational psychology
- To present the principles and techniques of learning and teaching
- To give training in methods of measuring abilities and achievement in school subjects
- To give a knowledge of the growth and development of children
- To assist in the better adjustment of children and to help them to prevent maladjustment
- To study the educational significance and control of emotions andto give an understanding of the principles and techniques of correct training.

Thus, educational psychology is an applied, positive, social, specific and practical science. While general science deals with behavior of the individuals in various spheres, educational psychology studies the behavior of the individual in educational sphere only.

SCOPE OF EDUCATIONAL PSYCHOLOGY

The scope of educational psychology is ever-growing due to constantly researches in this field. The following factors will indicate the scope of educational psychology:

1. **The Learner.** The subject-matter of educational psychology is knitted around the learner. Therefore, the need of knowing the learner and the techniques of knowing him well. The topics include – the innate abilities and capacities of the individuals, individual differences and their measurements, the overt, covert, conscious as well as unconscious behaviour of the learner, the characteristics of his growth and development and each stage beginning from childhood to adulthood.

2. **The Learning Experiences.** Educational Psychology helps in deciding what learning experiences are desirable, at what stage of the growth and development of the learner, so that these experiences can be acquired with a greater ease and satisfaction.
3. **Learning process:** After knowing the learner and deciding what learning experiences are to be provided, Educational Psychology moves on to the laws, principles and theories of learning. Other items in the learning process are remembering and forgetting, perceiving, concept formation, thinking and reasoning, problem solving, transfer of learning, ways and means of effective learning etc.
4. **Learning Situation or Environment.** Here we deal with the environmental factors and learning situations which come midway between the learner and the teacher. Topics like classroom climate and group dynamics, techniques and aids that facilitate learning and evaluation, techniques and practices, guidance and counselling etc. For the smooth functioning of the teaching-learning process.
5. **The Teacher:** The teacher is a potent force is any scheme of teaching and learning process. It discusses the role of the teacher. It emphasizes the need of **'knowing thyself'** for a teacher to play his role properly in the process of education. His conflicts, motivation. Anxiety, adjustment, level of aspiration etc. It throws light on the essential personality traits, interests, aptitudes, the characteristics of effective teaching etc so as to inspire him for becoming a successful teacher.

Though the entire scope of Educational Psychology is included in the above mentioned five key-factors, it may be further expanded by adding the following.

6. It studies **Human Behaviour** in educational situations. Psychology is the study of behaviour, and education deals with the modification of behaviour; hence, educational psychology pervades the whole field of education.
7. It studies the **Growth and Development** of the child. How a child passes through the various stages of growth and what are the characteristics of each stage are included in the study of educational psychology.
8. To what extent **Heredity and Environment** contribute towards the growth of the individual, and how this knowledge can be made use of for bringing about the optimum development of the child; form a salient feature of the scope of educational psychology.

9. Educational psychology deals with the N**ature and Development of the Personality** of an individual. In fact, education has been defined as the all-round development of the personality of an individual; personality development also implies a well-adjusted personality.
10. It studies **Individual Difference**: Every individual differs from every other individual. It is one of the fundamental facts of human nature which have been brought to light by educational psychology. This one fact has revolutionalised the concept and process of education.
11. It studies the nature **Intelligence and its Measurement.** This is of utmost importance for a teacher.
12. It Provides **Guidance and Counselling**: Education is nothing but providing guidance to the growing child.

We can conclude by saying that Educational Psychology is narrower in scope than general psychology. While general psychology deals with the behaviour of the individual in a general way, educational psychology in concerned with the behaviour of the learner in an educational setting.

Objectives of Educational Psychology:

The general objectives of educational psychology are:

1. To provide a body of facts and methods which can be used in solving teaching problems.
2. To develop a scientific and problem-solving attitude.
3. To train in thinking psychologically about educational problems.

Teaching Objectives of Educational Psychology:

1. To develop an understanding and appreciation of the dietary and environmental factors which underline learning ability.
2. To provide base for understanding the nature and principles of learning and to supply the techniques for its improvement.
3. To understand and appreciated factors influencing individual ability to learn.
4. To provide understanding of the external factors like training aids, libraries, classrooms which are largely within the control of the teacher and the institution.
5. To evaluate teaching efficiency.

6. To develop an appreciation of the individual and importance of the individual with their individual differences.

Methods of Educational Psychology:

Educational psychology is the scientific or systematic study of the behaviour of the learner in relation to his educational environment. This behaviour can be studied by a simple approach called observation. However, this observation method has to be adjusted depending upon the conditions in which observations have to be made, the procedure and tools adopted.

The following are the various methods of observation under different situations:

1. Introspection method:

This method which is the oldest method of studying behaviour where the learner should make a self-observation, i.e. looking inwards. For example, when a person is angry he may be asked to determine how he felt during that period of anger by his own observation.

This method is simple, direct, cheap and reveals one's behaviour. But this method lacks reliability and can be used only for adult normal human beings. This method requires the support of other methods which are more reliable.

2. Observation method:

In this method the learner's behaviour is observed under natural conditions by other individuals. Such observation will be interpreted according to the perception of the observer. This helps to find out behaviour by observing a person's external behaviour.

For example, if a person frowns we can say that he is angry. But when we are studying behaviour in natural conditions we have to wait for the event to take place. This method is helpful in studying the behaviour of the children. However, this method will explain only observed behaviour, subjectivity of the investigation may affect the results.

3. Experimental method:

In this method, behaviour is observed and recorded under controlled conditions. This is done in psychological laboratory or in classrooms or outside the classrooms in certain physical or social environment. Accordingly the cause and effect relationships are established.

Theories of behaviour can be developed. These experiments require the creation of artificial environment. Therefore, the scope is limited. Human behaviour is very dynamic and unpredictable. This method is also costly and time consuming.

4. Case history method:

This method is one of the steps used in the clinical method of studying behaviour. This method is used for those who are suffering from physical or mental disorders. For this the case history has to be made of the earlier experiences of the individual which may be responsible for the present behaviour. Information is also collected from his parents, family, relatives, guardians, neighbours, friends, teachers, and from reports about the individual's past.

This information will enable the clinical psychologists to diagnose and suggest treatment if there is any problem. However, this method will be successful only if the clinical researcher is technically efficient. The findings are limited to the individuals observed and the findings cannot be generalized.

Educational psychology is that school which studies the interrelations between psychology and education. It is a branch of applied psychology. As we know that our mental state is very much important in the process of learning. That is why educational psychology emerges. It consists of the application of psychological principles and techniques to human behavior in educational environment. Educational psychology is the study of behavior of students during teaching- learning process. In educational psychology the teacher look for any unusual or disturbed state of mind in students so as to provide remedy to them.

So it is the psychology of teaching and learning. In addition, it helps the teacher to understand the development of his pupils., the range and limits of their capacities, the processes by which they learn, and their social relationships. It is the principle and techniques essential for-

1. Understanding the behavior of the pupil in response to educational environment.
2. Desired modification of his behavior to bring an all round development of his personality.

Therefore, educational psychology may imply study of soul while teaching or while they were bringing up.

Importance:

Educational psychology is a key component in the teaching learning process. It is important from various perspectives. Such as:

1. **To know the student:** It enables a teacher to know his learner and identify his/her potentialities, capabilities, strength and weaknesses.
2. **Needed for selecting and organizing the subject matter or learning experiences:** When a teacher knows his students the it become easy for him to select and organise learning experiences and also selects or develops learning materials.
3. **It suggests the tools and techniques of teaching and learning:** Educational psychology suggests different tools and techniques which the use to make his class more attractive, so that he can involve students in the teaching learning process.
4. **To arrange learning situations or environments:** Educational psychology helps the teacher to create or arrange appropriate learning situations for students. For example the knowledge of group dynamics or group behavior gives the necessary art for teaching or learning in the group.
5. **Rendering guidance services:** The knowledge of educational psychology helps the teacher in rendering guidance services to the students. He can better diagnose his students the abilities , interests, and aptitudes of his pupils.
6. **Solving classroom problems:** There are innumerable problem like backwardness, truancy, bullying, cheating situations which a teacher has to face in the classroom. Educational helps the teacher in this field also.
7. **Knowing about himself:** Knowledge of educational psychology helps the teacher to know about himself. As a result he can know about his own behavior pattern, personality characteristics, likes and dislikes, motivation, anxiety, conflicts, adjustment etc.

Methods of Educational Psychology:

Educational psychology is the study of human behavior in educational environment. It employs different methods in different situations to study the behavior of learners. Accordingly, these methods are classified as under:

1. **Experimental method:** In this method behavior of a person is objectively observed under a pre-arranged or controlled environment. The environment is controlled so that the person could not escape from the observation. From such type observation some conclusion may be drawn.
2. **Differential method:** It is based on individual differences. Here the investigator goes to the field to investigate and collect information. In this method the investigator should study each person separately.

3. **Clinical method:** This method is applied for diagnosis and treatment of a person with a problem or mental difficulty. It is extensively used in educational psychology and abnormal cases of psychology.

   Psychological problems are now a day's very common. Major section of our society suffers from wide range psychological problems such as, depression, tension, insecurity complex etc. So study of educational psychology becomes very much necessary so that we can curb majority of the problem in a Child's initial years.

Topic 2

History of its evolution, abroad and in India

Educational psychology

Educational psychology is the branch of psychology concerned with the scientific study of human learning. The study of learning processes, from both cognitive and behavioral perspectives, allows researchers to understand individual differences in intelligence, cognitive development, affect, motivation, self-regulation, and self-concept, as well as their role in learning. The field of educational psychology relies heavily on quantitative methods, including testing and measurement, to enhance educational activities related to instructional design, classroom management, and assessment, which serve to facilitate learning processes in various educational settings across the lifespan

Educational psychology can in part be understood through its relationship with other disciplines. It is informed primarily by psychology, bearing a relationship to that discipline analogous to the relationship between medicine and biology. It is also informed by neuroscience. Educational psychology in turn informs a wide range of specialties within educational studies, including instructional design, educational technology, curriculum development, organizational learning, special education, classroom management, and student motivation. Educational psychology both draws from and contributes to cognitive science and the learning sciences. In universities, departments of educational psychology are usually housed within faculties of education, possibly accounting for the lack of representation of educational psychology content in introductory psychology textbooks.

The field of educational psychology involves the study of memory, conceptual processes, and individual differences (via cognitive psychology) in conceptualizing new strategies for learning processes in humans. Educational psychology has been built upon theories of operant conditioning, functionalism, structuralism, constructivism, humanistic psychology, Gestalt psychology, and information processing.[1]

Educational psychology has seen rapid growth and development as a profession in the last twenty years.[3] School psychology began with the concept of intelligence testing leading to provisions for special education students, who could not follow the regular classroom curriculum in the early part of the 20th century.[3] Another main focus of school psychology was to help

close the gap for children of color, as the fight against racial inequality and segregation was still very prominent, during the early to mid 1900's. However, "school psychology" itself has built a fairly new profession based upon the practices and theories of several psychologists among many different fields. Educational psychologists are working side by side with psychiatrists, social workers, teachers, speech and language therapists, and counselors in an attempt to understand the questions being raised when combining behavioral, cognitive, and social psychology in the classroom setting.

History

As a field of study, educational psychology is fairly new and was not considered a specific practice until the 20th century. Reflections on everyday teaching and learning allowed some individuals throughout history to elaborate on developmental differences in cognition, the nature of instruction, and the transfer of knowledge and learning. These topics are important to education and, as a result, they are important in understanding human cognition, learning, and social perception.

Educational psychologists study learners and learning contexts — both within and beyond traditional classrooms — and evaluate ways in which factors such as age, culture, gender, and physical and social environments influence human learning. They leverage educational theory and practice based on the latest research related to human development to understand the emotional, cognitive, and social aspects of human learning.

Early years

Educational psychology is a fairly new and growing field of study. Although it can date back as early as the days of Plato and Aristotle, educational psychology was not considered a specific practice. It was unknown that everyday teaching and learning in which individuals had to think about individual differences, assessment, development, the nature of a subject being taught, problem solving, and transfer of learning was the beginning to the field of educational psychology.

Plato and Aristotle

Educational psychology dates back to the time of Aristotle and Plato. Plato and Aristotle researched individual differences in the field of education, training of the body and the cultivation of psycho-motor skills, the formation of good character, the possibilities and limits of moral education. Some other educational topics they spoke about were the effects of music, poetry, and the other arts on the development of individual, role of teacher, and the relations between teacher and student. Plato saw knowledge acquisition as an innate ability, which evolves through experience and understanding of the world. Aristotle observed the phenomenon of "association." His four laws of association included succession, contiguity, similarity, and contrast. His studies examined recall and facilitated learning processes.

Some of the ideas and issues pertaining to educational psychology date back to the time of Plato and Aristotle. Philosophers as well as sophists discussed the purpose of education, training of the body and the cultivation of psycho-motor skills, the formation of good character, the possibilities and limits of moral education. Some other educational topics they spoke about were the effects of music, poetry, and the other arts on the development of individual, role of teacher, and the relations between teacher and student.[4] Plato saw knowledge acquisition as an innate ability, which evolves through experience and understanding of the world. This conception of human cognition has evolved into a continuing argument of nature vs. nurture in understanding conditioning and learning today. Aristotle, on the other hand, ascribed to the idea of knowledge by association or schema. His four laws of association included succession, contiguity, similarity, and contrast. His studies examined recall and facilitated learning processes.

During Roman times, **Quintilian (35-100 A.D.)** argued in favor of public rather than private education to preserve democratic ideals a battle still being fought today.He condemned physical force as a method of discipline, commenting that good teaching and an attractive curriculum take care of most behavior problems – advice that is as appropriate today as it was 2,000 years ago. He urged that teachers take into account individual differences, suggesting that they take time to study the unique characteristics of their students.

Comenius (1592-1671), a humanist writing at the beginning of the modern era, also influenced both educational and psychoeducational thought (1657; Broudy, 1963). He wrote texts that were based on a developmental theory and in them inaugurated the use of visual aids in instruction.

Media and instructional research, a vibrant part of contemporary educational psychology, has its origins in the writing and textbook design of Comenius.

Early Modern era

At the mid-19th century philosopher and psychologist, Johann Friedrich Herbart. He not only may be considered the first voice of the modern era of psychoeducational thought, but his disciples, the Herbartians, played a crucial role in preparing the way for the scientific study of education. They wrote about what we now call schema theory, advocating a cognitive psychology featuring the role of past experience and schemata in learning and retention. Herbartians promoted teaching by means of a logical progression of learning, a revolutionary idea at the end of the 19th century

John Locke is considered one of the most influential philosophers in post-renaissance Europe, a time period that began around the mid-1600s. Locke is considered the "Father of English Psychology". One of Locke's most important works was written in 1690, named *An Essay Concerning Human Understanding*. In this essay, he introduced the term "tabula rasa" meaning "blank slate." Locke explained that learning was attained through experience only and that we are all born without knowledge.[6]

He followed by contrasting Plato's theory of innate learning processes. Locke believed the mind was formed by experiences, not innate ideas. Locke introduced this idea as "empiricism," or the understanding that knowledge is only built on knowledge and experience.[*citation needed*]

In the late 1600s, John Locke advanced the hypothesis that people learn primarily from external forces. He believed that the mind was like a blank tablet (tabula rasa), and that successions of simple impressions give rise to complex ideas through association and reflection. Locke is credited with establishing "empiricism" as a criterion for testing the validity of knowledge, thus providing a conceptual framework for later development of experimental methodology in the natural and social sciences.[7]

In the 18th century the philosopher **Jean-Jacques Rousseau** espoused a set of theories which would become highly influential in the field of education, particularly through his philosophical novel *Emile, or On Education*. Despite stating that the book should not be used as a practical guide to nurturing children, the pedagogical approach outlined in it was lauded by Enlightment contemporaries including Immanuel Kant and Johann Wolfgang von Goethe.

Rousseau advocated a child-centred approach to education, and that the age of the child should be accounted for in choosing what and how to teach them. In particular he insisted on the primacy of experiential education, in order to develop the child's ability to reason autonomously. Rousseau's philosophy influenced educational reformers including Johann Bernhard Basedow, whose practice in his model school the Philanthropinum drew upon his ideas, as well as Johann **Heinrich Pestalozzi**. More generally Rousseau's thinking had significant direct and indirect influence on the development of pedagogy in Germany, Switzerland and the Netherlands. In addition, Jean Piaget's stage-based approach to child development has been observed to have parallels to Rousseau's theories.[8]

Before 1890[edit]

Philosophers of education such as Juan Vives, Johann Pestalozzi, Friedrich Fröbel, and Johann Herbart had examined, classified and judged the methods of education centuries before the beginnings of psychology in the late 1800s.

Juan Vives

Juan Vives (1493–1540) proposed induction as the method of study and believed in the direct observation and investigation of the study of nature. His studies focused on humanistic learning, which opposed scholasticism and was influenced by a variety of sources including philosophy, psychology, politics, religion, and history.[9] He was one of the first prominent thinkers to emphasize that the location of a school is important to learning.[10] He suggested that a school should be located away from disturbing noises; the air quality should be good and there should be plenty of food for the students and teachers.[10] Vives emphasized the importance of understanding individual differences of the students and suggested practice as an important tool for learning.[10]

Vives introduced his educational ideas in his writing, "De anima et vita" in 1538. In this publication, Vives explores moral philosophy as a setting for his educational ideals; with this, he explains that the different parts of the soul (similar to that of Aristotle's ideas) are each responsible for different operations, which function distinctively. The first book covers the different "souls": "The Vegetative Soul;" this is the soul of nutrition, growth, and reproduction, "The Sensitive Soul," which involves the five external senses; "The Cogitative soul," which includes internal senses and cognitive facilities. The second book involves functions of the

rational soul: mind, will, and memory. Lastly, the third book explains the analysis of emotions.[11]

Johann Pestalozzi

Johann Pestalozzi (1746–1827), a Swiss educational reformer, emphasized the child rather than the content of the school.[12] Pestalozzi fostered an educational reform backed by the idea that early education was crucial for children, and could be manageable for mothers. Eventually, this experience with early education would lead to a "wholesome person characterized by morality."[13] Pestalozzi has been acknowledged for opening institutions for education, writing books for mother's teaching home education, and elementary books for students, mostly focusing on the kindergarten level. In his later years, he published teaching manuals and methods of teaching.[13]

During the time of The Enlightenment, Pestalozzi's ideals introduced "educationalization". This created the bridge between social issues and education by introducing the idea of social issues to be solved through education. Horlacher describes the most prominent example of this during The Enlightenment to be "improving agricultural production methods."[13]

Johann Herbart

Johann Herbart (1776–1841) is considered the father of educational psychology.[14] He believed that learning was influenced by interest in the subject and the teacher.[14] He thought that teachers should consider the students' existing mental sets—what they already know—when presenting new information or material.[14] Herbart came up with what are now known as the formal steps. The 5 steps that teachers should use are:

1. Review material that has already been learned by the student[14]
2. Prepare the student for new material by giving them an overview of what they are learning next[14]
3. Present the new material.[14]
4. Relate the new material to the old material that has already been learned.[14]
5. Show how the student can apply the new material and show the material they will learn next.[14]

1890–1920

There were three major figures in educational psychology in this period: William James, G. Stanley Hall, and John Dewey. These three men distinguished themselves in general psychology and educational psychology, which overlapped significantly at the end of the 19th century.[4]

William James (1842-1910) can be considered the central figure in the establishment of psychology in America.

The period of 1890–1920 is considered the golden era of educational psychology when aspirations of the new discipline rested on the application of the scientific methods of observation and experimentation to educational problems. From 1840 to 1920 37 million people immigrated to the United States.[9] This created an expansion of elementary schools and secondary schools. The increase in immigration also provided educational psychologists the opportunity to use intelligence testing to screen immigrants at Ellis Island.[9] Darwinism influenced the beliefs of the prominent educational psychologists.[9] Even in the earliest years of the discipline, educational psychologists recognized the limitations of this new approach. The pioneering American psychologist William James commented that: Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. An intermediate inventive mind must make that application, by using its originality".[15]

James is the father of psychology in America but he also made contributions to educational psychology. In his famous series of lectures *Talks to Teachers on Psychology*, published in 1899, James defines education as "the organization of acquired habits of conduct and tendencies to behavior".[15] He states that teachers should "train the pupil to behavior"[15] so that he fits into the social and physical world. Teachers should also realize the importance of habit and instinct. They should present information that is clear and interesting and relate this new information and material to things the student already knows about.[15] He also addresses important issues such as attention, memory, and association of ideas.

- James was said to have had "the courage to be incomplete"
- James's views of experimental psychology were cognitive and teleological conceptions of individuals, beliefs the nascent behaviorists chose ultimately to ignore.
- , he probably would have found nothing wrong with a scientific and strongly behavioral psychology if it helped the field make progress.

- Despite his private comments about the pedestrian minds of teachers, he put faith in the classroom teacher to guide the young to acquire proper habits.

G. Stanley Hall (1844-1924), founder of the child-study movement that James worried about, was a promoter of psychology in ways that James must have found distasteful. Hall was APA's organizer and its first president. He was as much an educational psychologist as anything else we might label him, and that came to him naturally (see Ross, 1972).

Alfred Binet and the Simon-Binet

Alfred Binet published *Mental Fatigue* in 1898, in which he attempted to apply the experimental method to educational psychology.[9] In this experimental method he advocated for two types of experiments, experiments done in the lab and experiments done in the classroom. In 1904 he was appointed the Minister of Public Education.[9] This is when he began to look for a way to distinguish children with developmental disabilities.[9] Binet strongly supported special education programs because he believed that "abnormality" could be cured.[9] The Binet-Simon test was the first intelligence test and was the first to distinguish between "normal children" and those with developmental disabilities.[9] Binet believed that it was important to study individual differences between age groups and children of the same age.[9] He also believed that it was important for teachers to take into account individual students' strengths and also the needs of the classroom as a whole when teaching and creating a good learning environment.[9] He also believed that it was important to train teachers in observation so that they would be able to see individual differences among children and adjust the curriculum to the students.[9] Binet also emphasized that practice of material was important. In 1916 Lewis Terman revised the Binet-Simon so that the average score was always 100.[14] The test became known as the Stanford-Binet and was one of the most widely used tests of intelligence. Terman, unlike Binet, was interested in using intelligence test to identify gifted children who had high intelligence.[9] In his longitudinal study of gifted children, who became known as the Termites, Terman found that gifted children become gifted adults.[14]

Binet and colleague Theodore Simon developed a series of tests designed to assess mental abilities. Rather than focus on learned information such as math and reading, Binet instead concentrated on other mental abilities such as attention and memory. The scale they developed became known as the Binet-Simon Intelligence Scale.The test was later revised by psychologist Lewis Terman and became known as the Stanford-Binet.

Edward Thorndike

Edward Thorndike (1874–1949) supported the scientific movement in education. He based teaching practices on empirical evidence and measurement.[9] Thorndike developed the theory of instrumental conditioning or the law of effect. The law of effect states that associations are strengthened when it is followed by something pleasing and associations are weakened when followed by something not pleasing. He also found that learning is done a little at a time or in increments, learning is an automatic process and its principles apply to all mammals. Thorndike's research with Robert Woodworth on the theory of transfer found that learning one subject will only influence your ability to learn another subject if the subjects are similar.[9] This discovery led to less emphasis on learning the classics because they found that studying the classics does not contribute to overall general intelligence.[9] Thorndike was one of the first to say that individual differences in cognitive tasks were due to how many stimulus-response patterns a person had rather than general intellectual ability.[9] He contributed word dictionaries that were scientifically based to determine the words and definitions used.[9] The dictionaries were the first to take into consideration the users' maturity level.[9] He also integrated pictures and easier pronunciation guide into each of the definitions.[9] Thorndike contributed arithmetic books based on learning theory. He made all the problems more realistic and relevant to what was being studied, not just to improve the general intelligence.[9] He developed tests that were standardized to measure performance in school-related subjects.[9] His biggest contribution to testing was the CAVD intelligence test which used a multidimensional approach to intelligence and was the first to use a ratio scale.[9] His later work was on programmed instruction, mastery learning, and computer-based learning:

If, by a miracle of mechanical ingenuity, a book could be so arranged that only to him who had done what was directed on page one would page two become visible, and so on, much that now requires personal instruction could be managed by print.

- Thorndike believed that only empirical work should guide education. His faith in experimental psychological science and statistics was unshakable. In his Introduction to Teaching (E. Thorndike, 1906), he wrote that psychological science is to teaching as botany is to farming, mechanics is to architecture, and physiology and pathology are to the physician.
- We all know of the success Thorndike had in banishing mental discipline with his transfer studies and of the success of his Educational Psychology textbooks, his texts on mental and social measurement, and those on general psychology. He also wrote influential books on the psychology of school subjects, such as arithmetic and reading.

John Dewey

John Dewey (1859–1952) had a major influence on the development of progressive education in the United States. He believed that the classroom should prepare children to be good citizens and facilitate creative intelligence.[9] He pushed for the creation of practical classes that could be applied outside of a school setting.[9] He also thought that education should be student-oriented, not subject-oriented. For Dewey, education was a social experience that helped bring together generations of people. He stated that students learn by doing. He believed in an active mind that was able to be educated through observation, problem-solving, and enquiry. In his 1910 book *How We Think*, he emphasizes that material should be provided in a way that is stimulating and interesting to the student since it encourages original thought and problem-solving.[17] He also stated that material should be relative to the student's own experience.[17]

"The material furnished by way of information should be relevant to a question that is vital in the students own experience"

The contributions of American giant, John Dewey (1859-1952), were, like James's, in three intertwined fields of study: philosophy, psychology, and pedagogy.

- His first major article in psychology came out in 1896. It was on the relations between stimuli and responses.
- Dewey argued that what held together stimuli and their responses were the interpretations given to both, thus putting consciousness, attribution, and constructivist views squarely before the emerging stimulus response (S-R) psychologists of that time.

- He stated the four cardinal rules for efficient instruction: "The child must be regular [in attendance] and punctual [in assignments], silent and industrious. .. It is this which 'builds character' " .
- Obedience to authority was considered necessary for developing the child's personal sense of responsibility and duty (Monroe, 1952).

Jean Piaget's Cognitive Development

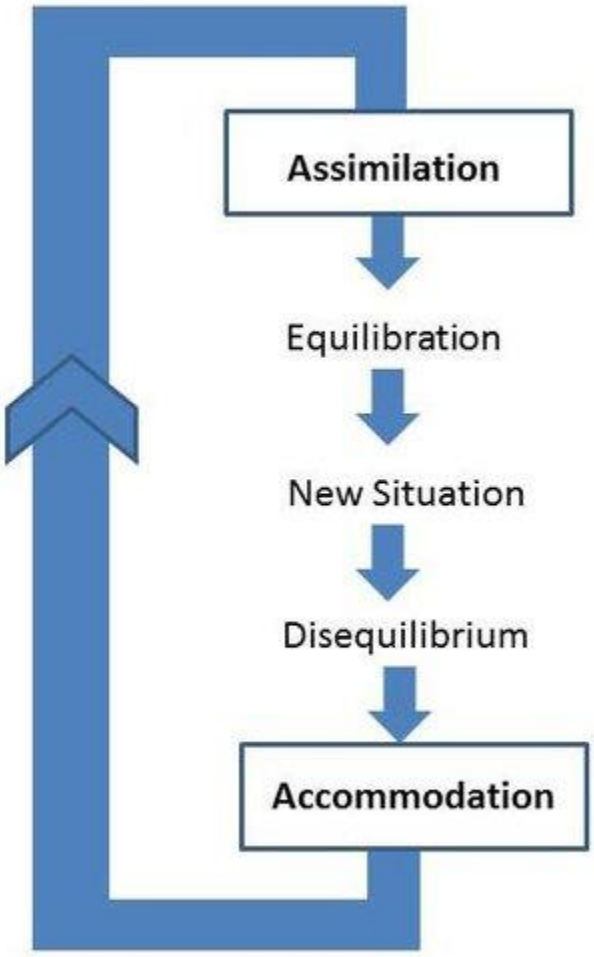
Jean Piaget (1896–1980) was one of the most powerful researchers in the area of developmental psychology during the 20th century. He developed the theory of cognitive development.[9] The theory stated that intelligence developed in four different stages. The stages are the sensorimotor stage from birth to 2 years old, the preoperational state from 2 to 7 years old, the concrete operational stage from 7 to 10 years old, and the formal operational stage from 12 years old and up.[9] He also believed that learning was constrained to the child's cognitive development. Piaget influenced educational psychology because he was the first to believe that cognitive development was important and something that should be paid attention to in education.[9] Most of the research on Piagetian theory was carried out by American educational psychologists.

1920–present[edit]

The number of people receiving a high school and college education increased dramatically from 1920 to 1960.[9] Because very few jobs were available to teens coming out of eighth grade, there was an increase in high school attendance in the 1930s.[9] The progressive movement in the United States took off at this time and led to the idea of progressive education. John Flanagan, an educational psychologist, developed tests for combat trainees and instructions in combat training.[9] In 1954 the work of Kenneth Clark and his wife on the effects of segregation on black and white children was influential in the Supreme Court case Brown v. Board of Education.[14] From the 1960s to present day, educational psychology has switched from a behaviorist perspective to a more cognitive-based perspective because of the influence and development of cognitive psychology at this time.[9]

Jean Piaget was interested in how an organism adapts to its environment. Piaget hypothesized that infants are born with a schema operating at birth that he called "reflexes". Piaget identified four stages in cognitive development. The four stages are sensorimotor stage, pre-operational stage, concrete operational stage, and formal operational stage.[46]

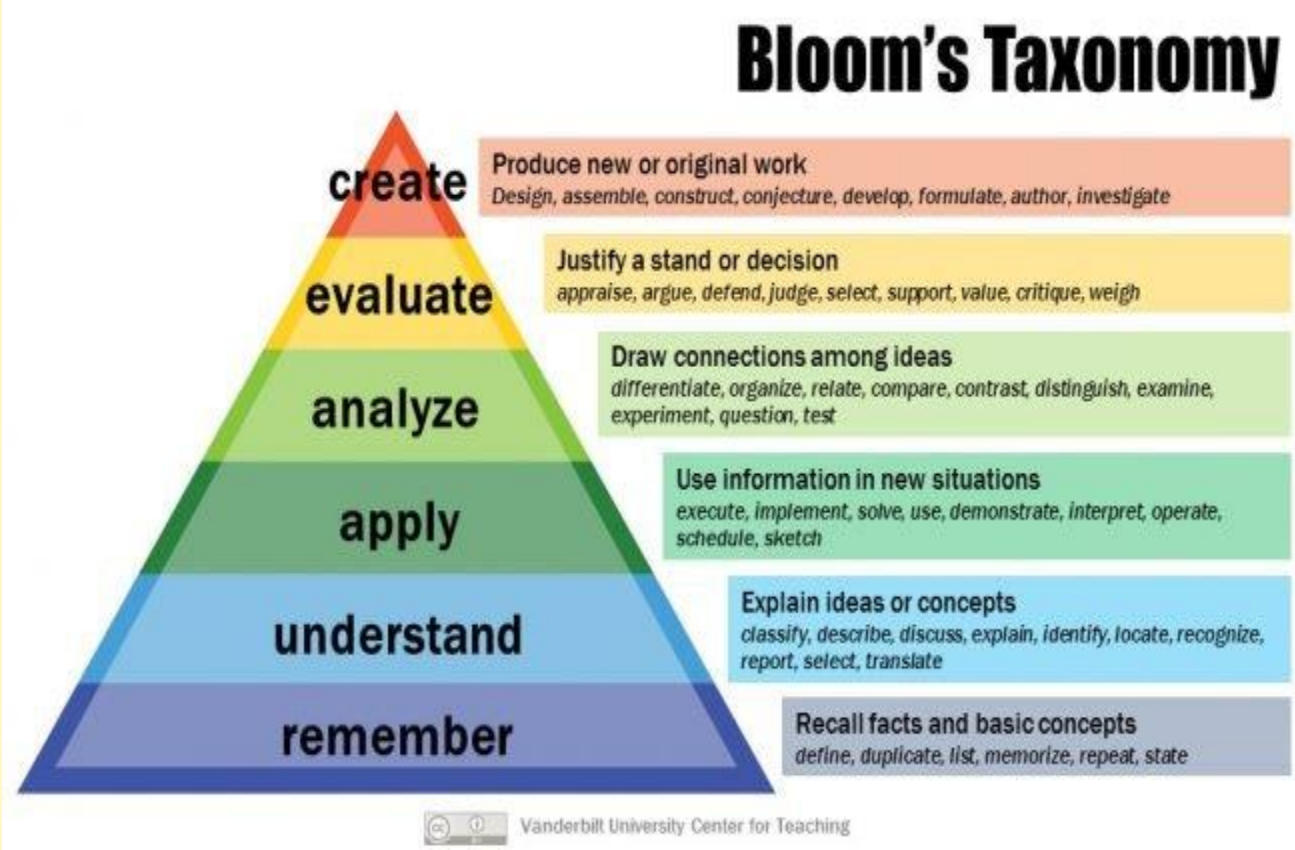
Piaget provided support for the idea that children think differently than adults and his research identified several important milestones in the mental development of children. His work also generated interest in cognitive and developmental psychology. Piaget's theories are widely studied today by students of both psychology and education.



1920 to 1960

Bloom's Taxonomy:

Bloom's Taxonomy was created by Benjamin Bloom during the 1950s and is a way to categorize the levels of reasoning skills required in classroom situations. There are six levels in the taxonomy, each requiring a higher level of abstraction from the students. As a teacher, you should attempt to move students up the taxonomy as they progress in their knowledge. Tests that are written solely to assess knowledge are unfortunately very common. However, to create thinkers as opposed to students who simply recall information, we must incorporate the higher levels into lesson plans and tests.



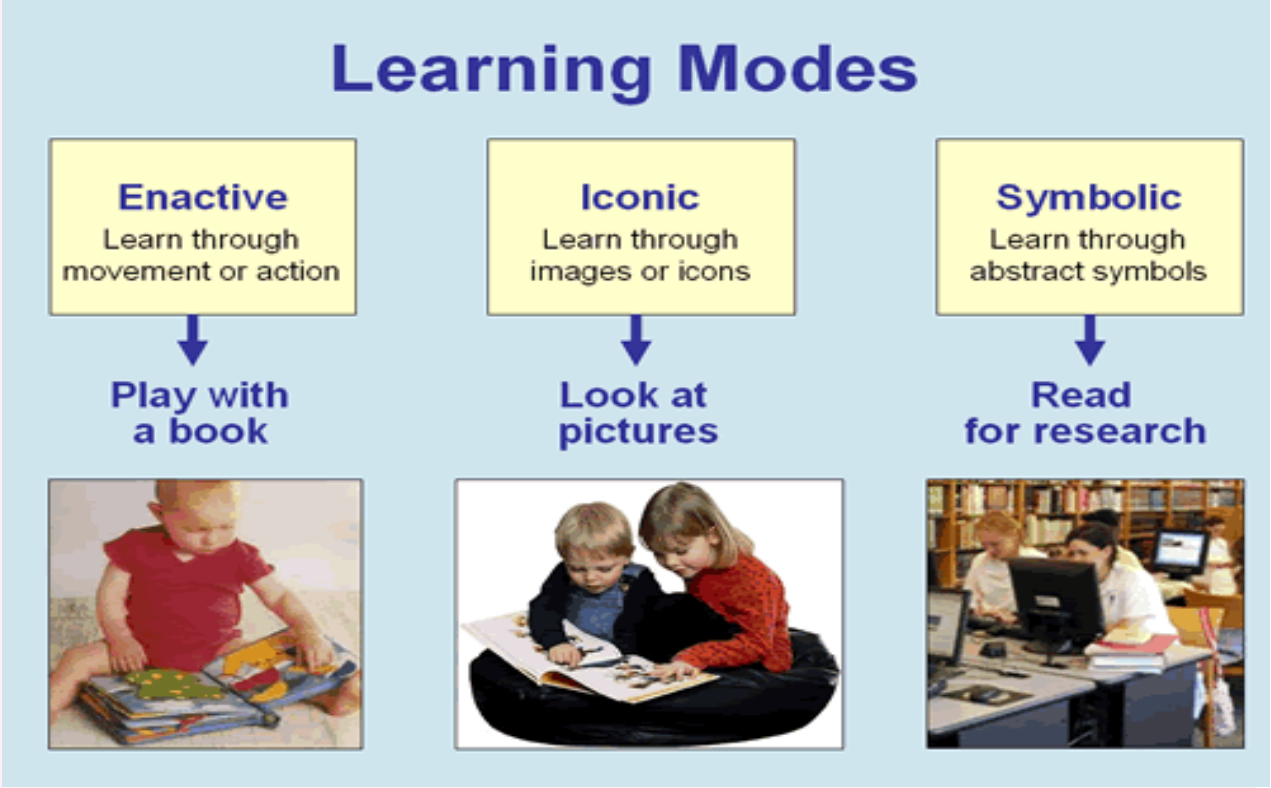
Jerome Bruner

The Process of Education (1960: 11-16)

The educational practice we see around us today does not seem to reflect this epistemological change yet, Bruner is not the only one who thinks this shift important. The success and failure of schooling is still measured primarily by the acquisition of prescribed content.

The teaching and learning of structure, rather than simply the mastery of facts and techniques, is at the center of the classic problem of transfer… If earlier learning is to render later learning easier, it must do so by providing a general picture in terms of which the relations between things encountered earlier and later are made as clear as possible'.

Readiness for learning. Here the argument is that schools have wasted a great deal of people's time by postponing the teaching of important areas because they are deemed 'too difficult'.



Nathaniel Gage

Nathaniel Gage (1917-2008) is an important figure in educational psychology as his research focused on improving teaching and understanding the processes involved in teaching.[9] He

edited the book *Handbook of Research on Teaching* (1963), which helped develop early research in teaching and educational psychology.[9] Gage founded the Stanford Center for Research and Development in Teaching, which contributed research on teaching as well as influencing the education of important educational psychologists.[9]

Lev Vygotsky's "Zone of Proximal Development"

A dominant influence on the social constructivist paradigm is **Lev Vygotsky's** work on sociocultural learning, describing how interactions with adults, more capable peers, and cognitive tools are internalized to form mental constructs. "Zone of Proximal Development" (ZPD) is a term Vygotsky used to characterize an individual's mental development. He believed the task individuals can do on their own do not give a complete understanding of their mental development. He originally defined the ZPD as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers."[43] He cited a famous example to make his case. Two children in school who originally can solve problems at an eight-year-old developmental level (that is, typical for children who were age 8), might be at different developmental levels. If each child received assistance from an adult, one was able to perform at a nine-year-old level and one was able to perform at a twelve-year-old level. He said "This difference between twelve and eight, or between nine and eight, is what we call *the zone of proximal development.*"[43] He further said that the ZPD "defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state."[43] The zone is bracketed by the learner's current ability and the ability they can achieve with the aid of an instructor of some capacity.

Vygotsky viewed the ZPD as a better way to explain the relation between children's learning and cognitive development. Prior to the ZPD, the relation between learning and development could be boiled down to the following three major positions: 1) Development always precedes learning (e.g., constructivism): children first need to meet a particular maturation level before learning can occur; 2) Learning and development cannot be separated, but instead occur simultaneously (e.g., behaviorism): essentially, learning is development; and 3) learning and development are separate, but interactive processes (e.g., gestaltism): one process always prepares the other process, and vice versa. Vygotsky rejected these three major theories because he believed that

learning should always precede development in the ZPD. According to Vygotsky, through the assistance of a more knowledgeable other, a child is able to learn skills or aspects of a skill that go beyond the child's actual developmental or maturational level. The lower limit of ZPD is the level of skill reached by the child working independently (also referred to as the child's developmental level). The upper limit is the level of potential skill that the child is able to reach with the assistance of a more capable instructor. In this sense, the ZPD provides a prospective view of cognitive development, as opposed to a retrospective view that characterizes development in terms of a child's independent capabilities. The advancement through and attainment of the upper limit of the ZPD is limited by the instructional and scaffolding-related capabilities of the more knowledgeable other (MKO). The MKO is typically assumed to be an older, more experienced teacher or parent, but often can be a learner's peer or someone their junior. The MKO need not even be a person, it can be a machine or book, or other source of visual and/or audio input.

Skinner - Operant Conditioning

Operant conditioning is a method of learning that occurs through rewards and punishments for behavior. Through operant conditioning, an individual makes an association between a particular behavior and a consequence (Skinner, 1938).According to this principle, behavior that is followed by pleasant consequences is likely to be repeated, and behavior followed by unpleasant consequences is less likely to be repeated.

Major Perspectives in Educational Psychology

The behavioral perspective suggests that all behaviors are learned through conditioning. Psychologists who take this perspective rely firmly on the principles of operant conditioning to explain how learning happens. For example, teachers might give out tokens that can be exchanged for desirable items such as candy and toys to reward good behavior. While such methods can be useful in some cases, the behavioral approach has been criticized for failing to account for such things as attitudes, cognitions, and intrinsic motivations for learning.

The developmental perspective focuses on how children acquire new skills and knowledge as they develop. Jean Piaget's famous stages of cognitive development are one example of an important developmental theory looking at how children grow intellectually. By understanding how children think at different stages of development, educational psychologists can better

understand what children are capable of at each point of their growth. This can help educators create instructional methods and materials best aimed at certain age groups.

The constructivist approach is one of the most recent learning theories that focus on how children actively construct their knowledge of the world. Constructivism tends to account more for the social and cultural influences that impact how children learn. This perspective is heavily influenced by the work of psychologist Lev Vygotsky, who proposed ideas such as the zone of proximal development and instructional scaffolding.

The cognitive perspective has become much more widespread in recent decades, mainly because it accounts for how things such as memories, beliefs, emotions, and motivations contribute to the learning process. Cognitive psychology focuses on understanding how people think, learn, remember, and process information. Educational psychologists who take a cognitive perspective are interested in understanding how kids become motivated to learn, how they remember the things that they learn, and how they solve problems, among other things.

Topic 3

Recent trends and Challenges in Educational psychology

"Trends and Developments in Educational Psychology in the United States," by RochelGelman and Meredith Gattis Lee, emphasizes recent interest in the **constructivist nature of learning**, a view that is currently in favor**.**

Human Behaviour as a common subject for both Education and Psychology.

· Psychologist suggest use of different methods in teaching learning process to achieve better result

· Psychologist emphasis on motivation and readiness in class room

· Psychology introduce new theories of learning in education

· Psychology emphasis on activity base teaching learning process

· Use of audio-visual aid in teaching learning process

· Psychology is the study of human behaviour while Education is the process of modifying human behaviour so both deal with human behaviour in different ways.

Educational psychology deals with educational problems

· General psychology deals with different problems other than education Psychology as 'Science of Behaviour'J. B. Watson, the father of behaviouristic school of psychology, termed psychology as the science of behaviour. The meaning of education is modification of behaviour for one's adjustment. When we study the behaviour of the child and teacher in the educational

situations, for solving educational problems, we take the help of educational psychology. The role of school is to help in harmonious development of the personality of the child. So it becomes the duty and task of the teacher to guide child according to psychological norms. Therefore, for every teacher study of psychology is an essential item. So we can say that educational psychology is application of psychology and its principles in educational situations. There is an inner link between education and psychology.

· According to B.F. Skinner, "Educational psychology covers to entire range of behaviour and personality as related to education."· According to Aristotle, "Education is the creation of a sound round in a sound body."

· According to Pestalozzi, "Education is the natural, harmonious and progressive development of man's innate powers."

How far educational psychology are related to each other?

· Education is concerned with aims, ideals and standards of life and psychology determines whether these aims are attainable or not. Education demands the teacher to know the child as well as the subject matter of instruction, where the psychology helps to know about the child.

· Psychology also helps the teacher to teach effectively undertaking effective and appropriate teaching techniques.

· **Educational Psychology and Aims of Education:** Psychology helps the educator in the realization of educational aims by helping him to bring out improvement in the quality of instruction by providing him ability and insight into the child's attitudes, ideas, aptitudes, interests and emotions etc.

· **Educational Psychology and Teacher**: Psychology helps the teacher to understand the learner, learning process and the learning situations. Psychology states that teacher should have sympathetic and affectionate attitude towards the learner.

· **Educational Psychology and Curriculum:** Psychology suggests that the curriculum should be integrated, flexible, co-related and child-centred. There should be different cocurricular activities in the school. Co-curricular activities are important media for sublimation of instincts and for the development of personality.

· **Educational Psychology and Methods of Teaching:** Various methods of teaching like Project method, Heuristic method, Montessori Method, Play-way method are based on sound psychological principles.

· **Psychology and Text Books:** Psychology tells the teachers and the students that text books should be attractive, well illustrated and according to the mental level of the pupils.

· **Educational Psychology and Innovations**: Psychology has made significant contribution by introducing innovative ideas for improving the process of teaching and learning such as - Activity-centred teaching, Micro-teaching (Dwight W. Allen), Programmed instruction (B.F. Skinner), Interaction analysis (Ned A. Flanders).

· **Educational Psychology and Audio-visual Aids**: Psychology states that to develop interest among students, teacher should properly use audio-visual aids. Use of audio-visual aids makes the learning easy, interesting and effective.

· **Educational Psychology and Time Table:** Time table is prepared according to the psychological principles. While preparing it, the teacher should keep in mind the relative importance of different subjects and their toughness and the fatigue of students.

· **Educational Psychology and School Administration:** Psychology helps in solving problems of administration by mutual discussion among various agencies of school. It provides a scientific basis for the supervision of instruction.

· **Educational Psychology and Discipline**: Psychology tells us the ways of dealing with problems of delinquent, backward, handicapped and gifted children and helps in maintaining discipline.

· **Educational Psychology and Evaluation:**Psychological tools help the teacher to evaluate the achievement of the pupils and suggests improvements in examination.

Grand challenges in educational psychology

Educational Psychology has a long tradition as a specialty within the field of psychology, formally recognized as a discipline in 1910, when the Journal of Educational Psychology (JEP) began publication. Early psychologists, such as William James and Wilhelm Wundt (e.g., Wundt, 1874; James, 1900) both focused on issues central to educational psychology today (e.g., cognitive processes, memory, and effective teaching).

Indeed, our progress within our discipline has the potential to improve the life of almost every individual, in almost every country, throughout the lifespan. Aside from the classroom, educational psychology can have an impact from the workplace to the military proving ground and the athletic arenas, in home and family life, and beyond. Indeed, some believe that literacy and education can improve both the length and quality of life (e.g., Cleland, 1990). In Latin America, for example, average life expectancy increased from 40 to 70 years at the same time literacy rates increased from 30 to 85% among adults (Thorp, 1998, p. 2). Similarly impressive changes in other countries have been summarized by numerous scholars (e.g., Crafts, 2000, p. 9). By many measures, the efforts of our field have improved the lives of much of the world's population.

Yet after all these years of scholarship and scientific study, significant challenges remain. We live in an era of unprecedented promise and unprecedented disparity. The gap between the wealthy and poor has increased to obscene proportions around the world. Access to high-quality education remains difficult for too many, even in the wealthiest countries. Some children carry

laptops to school and live in constant connection with the resources of the internet, while in some areas students risk physical danger just to go to school. Further, while literacy rates have improved around the world, many students within the US and elsewhere choose not to complete their secondary school education, a decision that has a profound impact on the trajectory of these students' lives. Sadly, many of these students report dropping out of secondary school due to factors such as boredom (Archambault et al., 2009) rather than an inability to succeed in school.

Violence, bullying, and sexual harassment are issues we need to address in the 21st century. In some areas we are also seeing a disturbing trend toward exclusion (or segregation) of girls from formal education. In many countries we rely upon high-stakes tests to make important decisions about students, while at the same time arguing that it is the "21st century skills" of creativity, problem-solving, and information literacy that we care most about. Thus, while employers report a lack of work ethic, writing ability, and critical-thinking skills in recent graduates (Borja, 2006) the educational system continues to prioritize assessment of basic cognitive abilities rather than these "21st century skills." Educational psychologists can, and should, have something to say about these issues.

Would the earliest educational psychologists imagine that over 80 years after the unprecedented Winnetka experiment (Corcoran, 1927) that mastery learning (and other scientifically supported educational practices) is scarce in modern classrooms? What would they make of our dropout rates, and the racial/ethnic disparities therein (Greene and Winters, 2002)? And what would they make of our spending priorities in light of the crowded classes we often see and the embarrassingly poor compensation teachers receive for their crucial work? What would they make of the fact that up to half of the eager young teachers in the USA leave the profession within 5 years (Ingersoll and Kralik, 2004)?

As we move into the 21st century, we as educational psychologists and scientists have emerging tools to measure and explore human biology, development, cognition, emotion, behavior, memory, and learning in ways previous generations could only dream of. We have statistical tools to allow us to model processes and systems in highly sophisticated ways through the impressive computing power available in even the most inexpensive computers today. Yet we also work in a world where intellectual relativism seems increasingly common – where "opinion and hypothesis" reign, as the original editors of the JEP noted 100 years ago. Policymakers and practitioners seem increasingly disdainful of scientific findings at the same time that we live in a

world of unimaginable scientific breakthroughs. What would James and Wundt and Aristotle and Plato think of school boards in the USA removing discussion of the "theory" of evolution from the curriculum while scientists are decoding our DNA and creating self-replicating synthetic life (Henderson, 2010)? What would they think of girls in certain countries being denied education while at the same time women scientists are leading groundbreaking research throughout the sciences?

Many of us are impatient for the field to utilize best practices in research methods. For example, Robert Slavin, argued that at the "*dawn of the 21st century, educational research is finally entering the 20th century.*" (Slavin, 2002, p. 15). We in the social sciences are guilty of often failing to utilize the most rigorous scientific tools available. In a recent 2-year period, the JEP contained only 14.6% true experimental designs, down from 60.0% in 1969 (Osborne, 2008). Furthermore, almost one-quarter of the studies published in this same 2-year period used college undergraduates as the sole study participants. Would our forebears recognize research published in top Educational Psychology journals today as the type that they envisioned a century ago – research that speaks to educators yearning to identify best practices? And where is the funding for this challenging, yet important research? Within the US there is renewed effort to fund high quality educational research, but this comes after decades of neglect and reductions in funding.

Our challenge, a century from the founding of our discipline, is to be vigorously relevant, using the best tools and methods available. As the editors of JEP noted a century ago, we need to engage policymakers and practitioners and to show them the value of funding rigorous research in our discipline. Our challenge today, as it was 100 years ago, is to identify *best practices* in education and equip current and future teachers with this knowledge to create rigorous, productive, engaging classroom environments. In the original JEP editorial, the editors identified *that* time as being "ripe for the study of schoolroom problems in the schoolroom itself by the use of the experimental method." This remains true today.

It can be our legacy to make the 21st century the moment when we shrug off the shackles of outdated practices, eschew new ideas that are unproven or ineffective, focus on practices that provide the best cost/benefit ratio, and promote demonstrably best practices in whatever aspect of educational psychology we find ourselves working in. As our understanding of the human brain, biology, chemistry, and social psychology increase, we can leverage this new knowledge in ways previous generations of researchers could never have imagined. With the potential of the

internet to communicate research worldwide (especially through open-access scientific publishing!) we, as educational psychologists have unprecedented ability to fulfill the original vision of the field as laid out in that original editorial a century ago – to reach out to practitioners, policymakers, and other researchers to disseminate important findings. We can collaborate easily with individuals in other locations, and work toward a body of knowledge that helps educators identify what works best for whom, and under what conditions.

One example of this sort of work is impressive body of research by Finn and colleagues (e.g., Finn and Achilles, 1999; Finn et al., 2003) that has shown the efficacy of class size reduction in the primary grades on a host of important student outcomes, particularly for those students from traditionally disadvantaged groups (e.g., in the US, students of color; Achilles et al., 1998).

Instructional technology has been the coming panacea since the time of B. F. Skinner (e.g., Skinner, 1960, 1961), and also seems to have the potential for erasing educational disparities. For example, a meta-analysis of 10 years of writing research shows some positive effects on collaboration, effort, and quality in student writing (Goldberg et al., 2003), but other studies find negative effects of instructional technology (e.g., Papanastasiou et al., 2003). Still other research suggests that the most beneficial technologies for student achievement appear least likely to be used in the classroom (Lei and Zhao, 2007).

Still other scholars have shown that returning to basics such as active learning and guided inquiry can make a powerful difference in academic outcomes, again particularly for students at risk (Blanchard et al., 2010). The adoption of manipulatives in early grades mathematics classrooms is a testament to the power of educational psychology to change the landscape of the classroom (e.g., Moyer, 2001).

The list of victories is long, and our space is short. While there have been many victories in the last century, substantial challenges remain. Our hope for this journal is that scholars will use this open-access forum to disseminate the most rigorous science to scholars and practitioners around the world. Our lofty goals remain the same today as those enumerated by the JEP editorial board 100 years ago – to do no less than make the world a better place for as many as possible as quickly as possible. We invite you to join us in this endeavor!

Topic 4

Concept of learning- definition, essential features, types of learning, laws of learning, principles of learning, learning environment

Laws of Learning

Learning is a complex process. All the same, it can be understood by making abroad application of some laws. Generally speaking, some laws have been discovered and explained by Thorndike. His laws, namely Law of Exercise, Law of Readiness and Law of Effect, have been accepted by all. We may discuss here some of common major laws propounded by Thorndike and other psychologists.

Law of Exercise, Primary Laws of Learning: This law is also called 'Law of Use and Disuse'.

(i) Law of Use: When a modifiable connection is made between a situation and a response, that connection's strength is other things being equal, increased'.

(ii) Law of Disuse: When a modifiable connection is not made between a situation and a response over a length of time, that connection's strength, other things being equal, decrease.

In brief, we may say that repetition and drill helps learning, and its absence causes forgetfulness. We also believe in the common proverb, practice makes a man perfect'. Drill is based on the principle that repetition fixes the facts to be learnt. That is the reason why the pupils have to repeat arithmetical tables, formulae, spelling lists and definitions in order to establish these. In all skill lessons, say handwriting, dance, music, craft and drawing repetition is necessary. Lack of practice or exercise causes the memory of the learned material to weaken. Lack of practice causes forgetfulness. We forget because subsequent experiences tend to rule out what has been learnt.

Educational Implication of Law of Exercise:

(i) We should devote much of our learning time to acquiring all these facts, abilities, arts and skills, which we shall find useful.

(ii) We should have constant practice in what has once been learnt.

(iii) Much time should not elapse between one practice and the subsequent one. Delayed use or long disuse may cause forgetfulness.

(iv) Law of exercise cannot be applied quantitatively, because other factors also come in. So learning is not directly proportional to the amount of exercise. Interest and purpose coupled with repetition make repetition more effective. Thorndike himself revised his views on 'Law of Disuse'. He finds that disuse may play an important part as dissatisfaction with a particular job. It is interest and satisfaction that comes in the success and repetition of successful response which help in the selection of desired response.

Law of Effect: Thorndike defines it as follows: "When a modifiable connection between a situation and response is made and is accompanied or followed by a satisfying state of affairs that connection's strength is increased, but when made and accompanied by an annoying state of affairs its strength is decreased".

In simpler words, it means that a response which gives achievement of the goal and thus provides satisfaction, will be stamped in, while those which are accompanied by dissatisfaction will be stamped out. In short, the feeling or the emotional state affects learning. For instance, when the child solve, questions correctly he feels encouraged to do more. But if he fails repeatedly, he does not make subsequent attempt. Some students fail one or two times in the Matriculation Examination. The stagnate and do not succeed at all. It is commonly said, 'nothing succeeds like success'. The boy who stands for school council election and succeeds, gets motivated to stand again and again. Another pupil failing in the elections twice may not stand again. This success and failure condition the learner to a large degree.

Educational Implication:

(i) As a failure is accompanied by a discouraging emotional state, it should be avoided. The evaluation system should be so modified that nobody is called 'a failure'. A student may pass in 4 subjects out of 7. He should be given a certificate to that effect, and encouraged to appear again in the other three subjects.

(ii) Reward and recognition play a great role in encouraging the pupil. Due recognition should be given to good achievement, so that the pupil is cheered up to march forward.

(iii) Educational guidance should be provided to all the pupils, so that no pupil becomes a misfit in any subject or educational course. It is desirable to enable everyone to

experience success by guiding him to pursue the course suits him. It should be possible to adjust the pupils and their work so that they will experience an optimum of amount of success.

(iv) Punishments should be avoided as far as possible. Punishment produces a negative effect, and it causes discouragement and it eliminates the response in due course. The most effective and healthful way of establishing desirable behavior is to reinforce it with a feeling of satisfaction and encouragement.

(v) Interest is directly connected, with law of effect. Pupils get satisfaction in things which interest them. Interest causes satisfaction, satisfaction promotes learning, better learning gives higher satisfaction and thus the cycle goes on. Pupils prefer that which is pleasant and interesting to them, while selecting books, subjects, activities, mates, games, food and clothing. Thus the behavior is controlled by interest and satisfaction.

(vi) Memory is also directly related to this law. Pleasant things are remembered better than unpleasant things. What interests most, which is vital for us, what gives us great satisfaction, is remembered the most. The pupil forgets the home-task because it is unpleasant job for him.

Limitations of the Law:

In certain cases the law fails. We sometimes remember the most unpleasant incidents of our life most vividly. We are not able to avoid the remembrance, because of the unpleasant nature. Sometimes the punishment given causes better learning. We can stimulate a child to learn the good spellings, but how to curb his bad spellings? If we say that rebuke or punishment will discourage him to learn, then he might not learn the right spellings at all.

Law of Readiness:

"When a person feels ready to act or to learn, he acts or learns more effectively and with greater satisfaction than when not ready'. Before actual learning, one must be mentally prepared; one's mind must be mentally-set.

Educational Implications:

(i) Readiness means desire to do a job. In the absence of desire learning cannot be effective. Hence the teacher must arouse the interest or readiness of the pupils. In teaching any topic, he must tap their previous knowledge, arouse interest for the new

topic through suitable questions and then announce the aim of the new lesson. So 'motivation' is one of the important step in lesson-planning.

(ii) Curiosity is essential for learning. Hence the teacher should arouse curiosity for learning, so that the pupils feel ready to imbibe the new experiences. Some teachers do not prepare their pupils psychologically for their lessons. They dole out the knowledge they possess in a mechanical way. The teacher should, before taking up the new lesson arouse interest and curiosity by making the problems real and concrete. Abstract elements not connected with real- life situations should be avoided.

Secondary or Subordinate Laws of Learning: Thorndike gave the following Secondary laws also:

Law of Primacy	Law of Set Attitude
Law of Regency	Law of Analogy and Assimilation.
Law of Intensity of Stimulus	. Law of Associative Shifting.
Law of Multiple Responses.	Law of Partial Activity

1. Law of Primacy:

'Learning that takes place in the beginning is the best and lasting'. Usually we say, first impression is the best. Hence the pupils should make the right start, and be most serious even from the first day. The learning on the first day is most vivid and strong. The teacher also should be most serious on the first day of teaching. He must impress his students on the very first day.

2. Law of Regency:

'Recent acts are lasting'. We remember those things better which are recent. Hence a pupil should revise his entire course just before the examination. Without revision, he is apt to forget even the best assimilated matter. The revision just before the examination helps him.

3. Law of Intensity of stimulus:

'If a stimulus is strong, the response will be strong, and vice-versa.' The student who has the dash or the enthusiasm makes a greater progress and achievement. The weak-willed student achieves less. The more serious a student, the greater his achievement. From this point of view, examinations bear a positive effect on learning, in so far as they present an intense

stimulus to study. The justification of internal assessment throughout the session is the same. Hence, the pupils must have a stimulus to learn throughout the academic session.

4. Law of Multiple Response:

Confronted with a new situation the organism responds in a variety of ways arriving at the correct response.

5. Law of Set Attitude:

The learner performs the task well if he has his attitude set in the task.

6. Law of Analogy and assimilation:

The organism makes responses by comparison or analogy and assimilation. When learner finds the similarities and dissimilarities in the lesson with daily experiences he earns better. Hence teaching must be correlated with life experiences.

7. Law of Associative Shifting:

According to this law we can get any response, from the learner of which he is capable, associated with any situation to which he is sensitive.

8. Law of Partial activity:

This law states that teaching should be done in parts. It is truer in the case of children's education.

The Psychology of Learning Environments Ken A. Graetz Winona State University: He merged into the strangest-looking classroom he had ever seen. In fact, it didn't look like a classroom at all, more like a cross between someone's attic and an old-fashioned tea shop. At least twenty small, circular tables were crammed inside it, all surrounded by chintz armchairs and fat little poufs. Everything was lit with a dim, crimson light; the curtains at the windows were all closed, and the many lamps were draped with red scarves. It was stiflingly warm, and the fire that was burning under the crowded mantelpiece was giving off a heavy, sickly sort of perfume as it heated a large copper kettle. The shelves running around the circular walls were crammed with dusty-looking feathers, stubs of candles, many packs of tattered playing cards, countless silvery crystal balls, and a huge array of teacups.

The Environmental Psychology of Teaching and Learning This enchanting description of a classroom at the fictitious Hogwarts School of Witchcraft and Wizardry captures three fundamental ideas from the environmental psychology of teaching and learning. First, all learning takes place in a physical environment with quantifiable and perceptible physical

characteristics. Whether sitting in a large lecture hall, underneath a tree, or in front of a computer screen, students are engulfed by environmental information. Specific targets within the environment draw the students' attention, such as armchairs, scarves, and teacups, and they continuously monitor the ambient properties such as the light of the lamps, the smell of the kettle, and the warmth of the fire. In any learning environment students are awash in environmental information, only a small fraction of which constitutes the sights and sounds of instruction.

Second, students do not touch, see, or hear passively; they feel, look, and listen actively. Students cannot attend to all the environmental information bombarding them at any given time; their ability to gather and understand incoming information is limited. Through automatic and controlled processes, students select information for consideration. They try to understand what they are sensing by piecing bits of information together from the bottom up and by applying existing thoughts and preconceptions from the top down. A classroom with circular tables and comfortable armchairs may look strange because it deviates from expectations formed through prior experience. Students may direct their attention to particular targets in the learning environment that they find more interesting, important, or unfamiliar than others. For some, it might be the instructor engaging chemistry demonstration. For others, it may be the silvery crystal ball on the shelf. In any learning environment, students manage their limited cognitive resources by actively selecting environmental information for further consideration and by using existing knowledge structures to interpret this information in ways that have worked previously.

Third, the physical characteristics of learning environments can affect learners emotionally, with important cognitive and behavioral consequences. Although emotional reactions to environmental stimuli have been shown to vary widely across individuals and activities, most students would probably find learning difficult in a classroom that is stiflingly warm. Conversely, environments that elicit positive emotional responses may lead not only to enhanced learning but also to a powerful, emotional attachment to that space. It may become a place where students love to learn, a place they seek out when they wish to learn, and a place they remember fondly when they reflect on their learning experiences. In higher education, we hope to provide such places for our students to learn, even as we build yet another large lecture hall and attempt to squeeze our students into crowded, noisy, and uncomfortable spaces. Clearly, some learning environments are more comfortable and offer fewer distractions than others. In any learning

environment, physical characteristics that cause discomfort can be expected to interfere with learning; environments that produce positive emotional states can be expected to facilitate learning and the development of place attachment. The areas of psychology that relate most directly to classroom design and learning environments are environmental, educational, human factors (engineering), and social psychology. Previous research on the effects of such environmental variables as light, temperature, and noise on learning has yielded some predictable results that are addressed through traditional classroom design. Learning appears to be affected adversely by inadequate light, extreme temperatures, and loud noises—variables maintained within acceptable ranges in most college classrooms. Other results, however, reflect the often complex, subtle, and surprising interplay between the learner and the learning environment. Years of research on the impact of environmental variables on human thoughts, feelings, and behaviors indicate that other variables often moderate the effects of environmental variables. In a summary of the research on educational environments, **Weinstein2** concluded that environmental variables can impact learners indirectly and that the effects of different physical settings often depend on the nature of the task and the learner. For example, distracting noises appear to slow reaction time and degrade performance to a greater degree in older versus younger adults and for introverts to a greater degree than extraverts.

Research on the impact of information technology on learning environments is not as voluminous. The presence and application of technology changes the learning environment, both directly and indirectly. This chapter focuses on the psychological underpinnings of three such changes with major implications for the design of college learning environments: the increased presence of personal, networked devices (for example, wireless laptops and cellular phones) in the classroom, the migration of course content to the Web and the subsequent transition in classroom activity from information delivery to collaboration, and the increasing importance of virtual learning environments. Devices and Distraction in College Classrooms Laptops and other mobile devices have great potential to enhance and transform instruction and are being used effectively in many colleges. Today students use their devices in class to take notes, access materials and applications, and find relevant information. When all students in a classroom can access networked tools simultaneously, many collaborative learning and just-in-time teaching opportunities emerge. There is a dark side to the presence of personal, networked devices in class, however when students use them to engage in activities unrelated to coursework. Students

have always found ways, other than listening to the instructor, to pass the time during class. Crossword puzzles, doodling, and daydreams have occupied students' minds during more classes than we care to admit. At first glance, it appears that the wireless laptop, PDA, iPod, and cellular phone are simply the crossword puzzles of today's college classrooms. As suggested by the comments below, however, the issue is more complex. Yesterday's students did not have online access to all of the content presented during a typical lecture-based class, did not find the crossword puzzle being tackled by the student sitting next to them particularly distracting, and were not themselves as tempted by a crossword puzzle as by instant messaging or an immersive online game. In addition, a handful of students in a large lecture hall working on crossword puzzles did not change the physical environment for instructors. When a teacher is up there reading his slides and I can go home and look at them later, Solitaire can be a temptation—let alone my email messages that checking. It kind of a blunt truth, but sitting in the back of the classroom, it not just me. You look around and all you see is Solitaire, e-mail. The computers interfere with making eye contact. You've got this picket fence between you and the students. In addition to the sensory richness of Web sites and online games, today's mobile devices convey social information, one of the most powerful targets of attention. We seem particularly attuned to this information, whether studying people faces and body movements or listening to people talk. In addition, the software applications used to mediate communication are designed to grab the user attention. Microsoft MSN Messenger, a popular instant messaging client, provides a visible and audible signal when a member of your buddy list starts the application and when a message is received. It has a feature that presents a distinctive sound and animation when you want to attract the attention of a buddy, shaking the messaging window back and forth on the buddy&screen. It has a feature that allows you to send animations to a buddy, such as the large set of knuckles illustrated in Figure 1 that appear to rap on the inside of your buddy screen. Even if students make every effort to pay attention to the instructor, instant messaging applications are designed to capture their attention, and the social information conveyed is probably too alluring for most students to ignore. To better understand the potential of today's mobile devices to distract students, it may be helpful to review some of the basic principles of attention. Attention is perhaps best represented not as a single process but as an organized set of procedures through which we select specific environmental stimuli or inputs for cognitive processing. It is commonly held that only one input is processed consciously. This

could be called the attended input. All other environmental stimuli (for example, background noise, the temperature of the room) are processed unconsciously. These are the unattended inputs. Unconscious monitoring detects changes in inputs to which we are not attending consciously, but that might be important. What constitutes an important change is probably determined by another process, referred to here as the attention controller, which may push the information into conscious awareness. This might result in the selection of a new attended input, a shift in attention perceived as either controlled and selective or unexpected and distracting. We have all experienced the sudden conscious awareness of an unattended input. The so-called cocktail party effect occurs when you hear your name mentioned somewhere in a crowded room as you engage in a discussion with someone else. Even as you attend to the discussion, presumably you monitor other sounds in the room unconsciously. Your attention controller detects an important stimulus—your name—which causes you to shift your conscious attention away from your discussion.

Using these basic concepts, the distracting nature of mobile devices in the classroom can be recast. Given two potential inputs, the instructor or a laptop screen displaying a game of Solitaire, some students select the instructor as the attended input and the laptop as the unattended input. Those who are trying to listen to their instructor and find their attention captured by their own or another students laptop screen are distracted by that device. This can be problematic in a classroom environment, as it interferes with students' ability to process course- related information and prevents them from obtaining an outcome (specifically, learning) they desire and expect to receive, a common cause of frustration, anger, and aggression. This emotional response is probably more pronounced when students are distracted by others' devices over which they have no control. As much as we hope that all students select their instructors as the primary target of their attention during class, we know that some choose the game of Solitaire, relegating the instructor to the status of unattended input. This is often described erroneously as distraction. In fact, these students are not distracted by their devices; they have selected them for attention. If anything, these students may find themselves distracted by the instructor. This is probably what passes as multitasking for many students. They attend to e-mail, instant messages, and other unrelated, device-based information during class, while monitoring the instructional stream unconsciously. Their attention controllers are set to respond to important signals, such as the phrase. In the classroom version of the cocktail party effect,

studentsattention then snaps to the instructor. Although the challenge in this case is one of student motivation, not distraction, the are closely related. As more students decide to instant message or play online games during class, the volume and variety of potentially distracting environmental information increases, making it more difficult for motivated learners to attend to the instructor. What impact does this have on classroom design? First and foremost, instructors must be able to engage students in the learning process during class time, and classrooms must be designed to facilitate that engagement. It is difficult for students to attend to other activities when they are talking to an instructor, working on a group activity, or using their devices for academic purposes. Instead of banning instant messaging in class, instructors might be supported in their use of this and other social technologies to facilitate class-related discussion and collaborative work.

Attempting to prohibit the use of devices in class through edict or infrastructure (for example, installing an Internet kill switch) is costly and does little to address the underlying problem. It is preferable to design classrooms and classroom computing policies that allow instructors to exercise greater social control. In the case of laptops in the classroom, screens should be easily visible to instructors as they walk around the room, and instructors should be able to display any student laptop screen to a public screen at a moment's notice. In large classes, software that allows instructors to view thumbnail images of each student's screen (for example, DyKnow Monitor or SMART SynchronEyes) may also be useful. Although most instructors are probably not interested in spending time on what feels like student surveillance, the mere presence of these methods combined with clear classroom policies offers a good classroom management solution that lets students continue using their devices for academic purposes.

Through their behavior, some students are telling us that they feel neither the need nor the desire to pay close attention to the instructor during some classes. Generally speaking, this is nothing new. However, those responsible for designing learning spaces should be aware that today's incarnation of this problem requires additional study. Today's devices are colliding with yesterday's methods. What takes place in a college classroom is changing, due in large part to the very information technology that gives some instructors and administrators cause for concern. The classroom is no longer a place where information is delivered to passive students. A growing number of students get that information elsewhere and do not expect to hear it repeated verbatim in class. Instead, the classroom is ecoming an

interactive, collaborative environment where knowledge is created actively by students, many of whom have devices that are as much a part of them as their own skin and that can be a very important part of this process.

Collaboration in the Classroom

Although planning for data projection and network access is an important part of today's classroom design process, information technology is likely to have an even greater indirect effect on how fixed-site classrooms are used in the future. The migration to the Web of the content traditionally delivered by instructors in lecture format is helping shift the function served by brick-and-mortar classrooms from information delivery to collaboration and discussion. Collaborative learning refers to a wide variety of "educational activities in which human relationships are the key to welfare, achievement, and mastery," wherein faculty "help students learn by working together on substantive issues." 13 Surveys indicate that lecture is still the most common instructional method used by college educators in the United States. 14 Nonetheless, the transition from lecture to collaboration is well under way. What impact does this have on classroom design? This fundamental change will challenge designers to create environments that facilitate collaborative activities. Instead of theaters where students watch instructors perform, classrooms must be flexible meeting places.Bruffee 15 described the ideal classroom for collaborative learning: A level floor, movable seats, chalkboards on three or four walls, controlledacoustics (acoustical-tiled ceilings and carpeted floors), and no central seminartable (or one that can be pushed well out of the way without threatening an attackof lumbago). An alternative is six to ten movable four- or five-sided tablesofroughly card-table size.

This description implies a maximum class size of 50 students. The question ofclassroom density is an important one: Researchers have explored thepsychological and educational effects of classroom density, both spatial (the size ofthe room) and social (the number of students). In their meta-analysis of different studies on this issue, Glass and Smith 16 concluded that higher social density results in lower student achievement. When designing collaborativeclassrooms, a good social density benchmark is three to five groups of 6 to 12students each. Spatial density should be such that both students and instructorshave enough room to move easily from group to group (specifically, 4 to 7 feetbetween groups). Designers should also pay careful attention to the degree towhich students feel crowded in a classroom. The experience of crowding ineducational

settings appears related to personal space violation. Researchsuggests that groups of students can be expected to work together most effectivelyat personal distances of 2 to 4 feet without feeling crowded.Although class size is a limiting factor when implementing certain collaborativelearning activities comfortably, small group collaboration and discussion are easier to manage in large classes than many instructors realize. Informal small grouptechniques like think-pair-share, wherein students think briefly about a questionposed by the instructor, discuss their thoughts with a student sitting next to them,and then share their joint thoughts with the class, are feasible in large classes 19 andcan be facilitated by technology. More formal activities such as jigsaw groupsandstructured controversy can also engage students in large classes. Classroom response systemsare used by a growing number ofinstructors to gather student feedback and stimulate in-class discussion. In classesthat allow group network access, a wide variety of groupware tools can supportcollaboration in groups of all sizes. DyKnow Vision allows students to view andannotate instructor whiteboard activity in real time. Instructors can then invitestudents to the virtual whiteboard, displaying their work to the entire class.GroupSystems is a suite of tools for supporting idea generation, organization, andevaluation in face-to-face and distributed groups.

Virtual Learning Environments

Todaysstudents spend an increasing amount of their time peering at computerscreens. These virtual environments have physical characteristics that are just asreal as those of a dormitory room or a brick-and-mortar classroom, and studentscan become just as attached to them. On one end of the continuum are virtualworlds that emulate a natural, multidimensional environment. Many studentssubscribe to massive multiplayer online games such as World of Warcraft, whereinthey develop personas or "avatars," travel from town to town, acquire property,meet other people, and solve problems. On the other end of the spectrum are theonline work spaces that students use every day, such as course managementsystems and campus portals. Somewhere in between are applications such asFacebook and MySpace, or persistent, customizable, social spaces that lack theimmersive qualities of virtual worlds but are more open, recreational, and socialthan campus work spaces.Although many administrators and instructors are familiar with coursemanagement systems and campus portals, fewer have experience with virtualworlds and may question their academic relevance. A good example of a virtualworld used as a classroom is Second Life, an online environment designed tosupport creativity,

collaboration, commerce, and entertainment. Although memberscan play games in this world, the environment itself is not a game in the traditionalsense. Instead, it is an open environment (what some call synthetic reality) wheremembers can interact with each other and build things (for example, buildings,games, clothing, furniture) for use within the virtual world. A growing communityofeducators uses Second Life for instructional purposes. In fall 2005, the School of Architecture at The University of Texas at Austin used Second Life in the courseDesigning Digital Communities, and Southern New Hampshire University used itin Introduction to International Business. Figure 2 shows a snapshot of my SecondLife avatar, Hoptoad Flan, enjoying a relaxing moment.

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A popular model of usability identifies five criteria for defining a usable system:

 Learnability refers to the speed and ease with which a novice user canachieve proficiency with the system.

 Efficiency refers to the degree to which the system supports the performanceof an experienced user in the shortest amount of time and with the feweststeps.

 Memorability refers to the degree to which a user, particularly anintermittent or casual user, can remember how to accomplish a task using thesystem, the steps of which were learned previously.

 Errors refer to the number of mistakes and missteps made by users.

 Satisfaction refers to the users' overall emotional experience when using thesystem.

 Careful, objective usability analyses of common digital environments shouldbe conducted and problems should be addressed using similar decision-making processes and with the same sense of urgency that campuses applywhen addressing poor conditions in brick-and-mortar classrooms.

Types of Learning:

1. Motor learning:

Most of our activities in our day-to-days life refer to motor activities. The individual has to learn them in order to maintain his regular life, for example walking, running, skating, driving, climbing, etc. All these activities involve the muscular coordination.

2. Verbal learning:

This type of learning involves the language we speak, the communication devices we use. Signs, pictures, symbols, words, figures, sounds, etc, are the tools used in such activities. We use words for communication.

3. Concept learning:
It is the form of learning which requires higher order mental processes like thinking, reasoning, intelligence, etc. we learn different concepts from childhood. For example, when we see a dog and attach the term 'dog', we learn that the word dog refers to a particular animal. Concept learning involves two processes, viz. abstraction and generalisation. This learning is very useful in recognising, identifying things.

4. Discrimination learning:
Learning to differentiate between stimuli and showing an appropriate response to these stimuli is called discrimination learning. Example, sound horns of different vehicles like bus, car, ambulance, etc.

5. Learning of principles:
Individuals learn certain principles related to science, mathematics, grammar, etc. in order to manage their work effectively. These principles always show the relationship between two or more concepts. Example: formulae, laws, associations, correlations, etc.

6. Problem solving:
This is a higher order learning process. This learning requires the use of cognitive abilities-such as thinking, reasoning, observation, imagination, generalization, etc. This is very useful to overcome difficult problems encountered by the people.

7. Attitude learning:
Attitude is a predisposition which determines and directs our behaviour. We develop different attitudes from our childhood about the people, objects and everything we know. Our behaviour may be positive or negative depending upon our attitudes. Example: attitudes of nurse towards her profession, patients, etc.

What Are the Different Learning Types?

There are now **eight official learning types** and **different ways you can learn as a student**. There are no longer just seven learning styles! Here's the updated list of learners:

- Visual
- Aural
- Verbal
- Physical
- Logical
- Social
- Solitary
- Naturalistic
- Rote

1. Visual (spatial)

As the name suggests, visual learners are those that learn best when they have images to help them process the information. This learning style requires the learners to first see what they're expected to know. They may also need to map out their thoughts in order to process them better.

These are some of the most common characteristics of visual learners:

- Have good spatial awareness and sense of direction
- Can easily visualize objects, plans, and outcomes
- Like coloring, drawing, and doodling
- Have good color balance
- Are good at using maps and rarely get lost

For example, a visual learner in a writing class may process the information better by seeing a movie clip of how a film adapts the literature it was based on, instead of listening to the book being read aloud.

2. Aural (auditory-musical)

Aural learning is used to classify those who respond primarily to sound and speech. Unsurprisingly, many musicians are aural learners. Auditory learners generally remember what their teacher says and readily participate in class. These are also individuals who respond best to things such as binaural beats.

Aural learners:

- Find that certain music invokes strong emotions
- Enjoy listening to music in the background while learning
- Have a good sense of pitch or rhythm
- Skilled at oral reports and class presentations
- Able to work through complex problems by talking out loud

For example, a song that helps you remember the alphabetical order of all the states is a way to tap into aural learning styles.

3. Verbal (linguistic)

Verbal learners learn best through the words they hear. Typically, they love both written and spoken word, excelling in both. These learners often go into public speaking, writing, journalism, and debating.

Verbal learners:

- Tend to flourish in reading and writing activities
- Ask questions and have an excellent verbal expression
- Often gifted at learning new languages
- Have a large vocabulary and enjoys learning new words
- Dislike silence and enjoy participating in study groups

For example, reading definitions of a word aloud or writing them down a few times, are ways for verbal learners to process information.

4. Physical (kinesthetic)

If you are someone who likes getting their hands dirty, then you are likely a physical learner. Physical learners are animated and they learn best by going through the motions of what they are learning.

Physical learners:

- Have high levels of energy
- Notice and appreciate the physical world around them, such as textures
- Enjoy sports and exercise along with outdoor activities and working with their hands
- Have excellent motor memory (can duplicate something after doing it once)
- Perform well in art and drama

For example, if something is bothering you or you are trying to wrap your head around a concept, you would rather go for a run or walk than sit down and figure it out.

5. Logical (mathematical)

Most logical thinkers end up being engineers, mathematicians, or pursuing the sciences. They are the individuals who want to understand the reasons behind them and tend to enjoy games like chess and doing brainteasers.

Logical learners:

- Classify and group information together to better understand it
- Perform complex calculations
- Create procedures for future use, after coming up with a solution to a problem
- Plan agendas and itineraries and even rank and number them
- Find a statistical study more appealing than analyzing literature or keeping a journal

For example, those who prefer making neat and organized lists while studying and extracting key points from the material are typically logical learners.

6. Social (interpersonal)

As the name suggests, social learners are true people persons. They often prefer direct involvement with others in group projects. They are stimulated by dialog and may seek out feedback from instructors. However, they may not be comfortable or perform best when required to work alone or on self-paced projects.

Social learners:

- Prefer to socialize after work or class, may want to join or form a study group outside of the classroom
- Enjoy playing group sports or participating in activities, such as speech, drama, and debate teams
- Bounce ideas off of others and work through issues in a group
- Listen well and are good at resolving conflicts
- Are often trusted by others for their advice

For example, when teachers assign group projects, it is often a way to appeal to social learners.

7. Solitary (intrapersonal)

Solitary learners are individuals who prefer to learn on their own. They are self-motivated and highly independent. They favor a quiet environment both in their personal and academic lives.

Solitary learners:

- Spend time on self-analysis
- Struggle in large crowds and noisy rooms
- Excellent self-management skills
- Journal, write, and record personal thoughts and events as a way to improve
- Like to set goals and make plans

For example, someone who reads self-help books to develop a deeper understanding of themselves is often a solitary learner.

8. Naturalistic

In many ways like kinesthetic learners, a naturalistic learner is the most recent addition to Gardner's theory. These individuals are more in tune with nature. They use elements and patterns in the natural world to create products and solve problems.

Naturalistic learners:

- Categorize and catalog information easily
- Enjoy exploring outdoors
- Dislike learning unfamiliar topics with no connection to nature
- Are interested in subjects, such as biology, botany, and zoology
- Notice even subtle changes in their environments

For example, someone who prefers reading in a hammock or on a swing to a stuffy classroom and loves digging in the dirt is most probably a naturalistic learner.

9. Rote learning - Rote learning meaning refers to the act of **learning things by repetition**. The idea behind rote learning is that the more one repeats something, the better it'll be able to recall it. Anytime you've crammed or 'mugged up' for an exam, or learnt something by heart, you've learned things by rote.

10. Incidental learning is **learning that occurs unintentionally**, from activities where learning is not a conscious goal for the learner. For example, when someone plays a sport just for fun, but ends up improving their skills over time, they're engaging in incidental learning.

11. Deliberate learning requires **feedback, conscious thought, and interaction with others to become learning**. The results need to be reflected in actions and changes in behaviors. Deliberate reflection, fun, and results lead to enduring learning.

12. **Rational** learning is intellectual in nature and involves the process of abstraction by which concepts are formed. in speed and precision of performance. The outcome sought in this type of learning is the acquisition and retention of facts and information.

Topic 5

Sensation, perception, imagination, attention and Memory, remembering and forgetting, reasoning and thinking, problem solving, information processing

Sensation

Sensations are the physiological processes that underlie the transformation of chemical, mechanical, light and sound energy in the world into electrical activity in the brain.[1] **Perception** is the selection, organization and interpretation of sensations. Psychologists divide human senses into two categories. **Chemical senses** include seeing (*vision*), hearing (*audition*), taste (*gustation*) and smell (*olfaction*). **Somatosenses** include skin senses, kinaesthetic senses and vestibular senses.

Sensation is the process that allows our brains to take in information via our five senses- vision, hearing, taste, smell and touch.

- **Vision** -visual system □transfers light energy□neural meassages(thru eyes)- visuoreception.
- **Hearing-** auditory system □sound waves□ enter□reach middle ear□wavelenghts converted to vibrations
- **Touch-** Our sense of touch is also facilitated by mechanoreception.
- **Interpreting Sensory Information –**
- Perception can be defined as our recognition and interpretation of sensory information. Perception also includes how we respond to the information. Perception is also necessary for us to survive in our environment.
- **Imagination** is the ability to produce and simulate novel objects, peoples and ideas in the mind without any immediate input of the senses. It is a cognitive process used in mental functioning. Imagination can also be expressed through stories. Children often use such narratives and pretend play in order to exercise their imaginations.

A mental process (such as seeing, hearing, or smelling) resulting from the immediate external stimulation of a sense organ often as distinguished from

1. conscious awareness of the sensory process— compare PERCEPTION
2. awareness (as of heat or pain) due to stimulation of a sense organ
3. a state of consciousness due to internal bodily changes (a *sensation* of hunger)
4. an indefinite bodily feeling (a *sensation* of buoyancy)

Something (such as a physical stimulus, sense-datum, or afterimage) that causes or is the object of sensation

1. A state of excited interest or feeling (their elopement caused a *sensation)*
2. A cause of such excitement (the show was the musical *sensation* of the season*e)*
3. *specially* **:** one (such as a person) in some respect exceptional or outstanding (the rookie hitting *sensation* of the American League)

A sensation is a type of feeling, picked up by one of the five senses. Peppercorns will give you the sensation of a million tiny pinpricks on your tongue. A physical feeling or perception from something that comes into contact with the body; something sensed. A widespread reaction of interest or excitement. For example, upon walking into a kitchen and smelling the scent of baking cinnamon rolls, the sensation is the scent receptors detecting the odor of cinnamon, but the perception may be "Mmm, this smells like the bread Grandma used to bake when the family gathered for holidays."

General sensations which include **touch, pain, temperature, proprioception, and pressure**. Special Senses: Vision, hearing, taste, and smell which convey sensations to the brain through cranial nerves.

A sensation is something from your senses. If you lose sensation in your feet, they are numb and it's time for you to get up and move around to restore blood flow. You can call something a sensation if it is wonderful and astonishing. Your parents will tell you that you were a sensation in the school play. Everyone will want to go see the special-effects movie that critics are calling a worldwide sensation. Sensation is **the process that allows our brains to take in information via our five senses, which can then be experienced and interpreted by the brain**. Sensation occurs thanks to our five sensory systems: vision, hearing, taste, smell and touch.

The Types of Transduction Accomplished by the Sense Organs		
Location of Sense Organ	Environmental Stimuli	Energy Transduced
Eye	Light	Radiant energy
Ear	Sound	Mechanical energy
Vestibular system	Tilt and rotation of head	Mechanical energy
Tongue	Taste	Recognition of molecular shape
Nose	Odor	Recognition of molecular shape
Skin, Internal organs	Touch	Mechanical energy
	Temperature	Thermal energy
	Vibration	Mechanical energy
Muscle	Pain	Chemical reaction
	Stretch	Mechanical energy

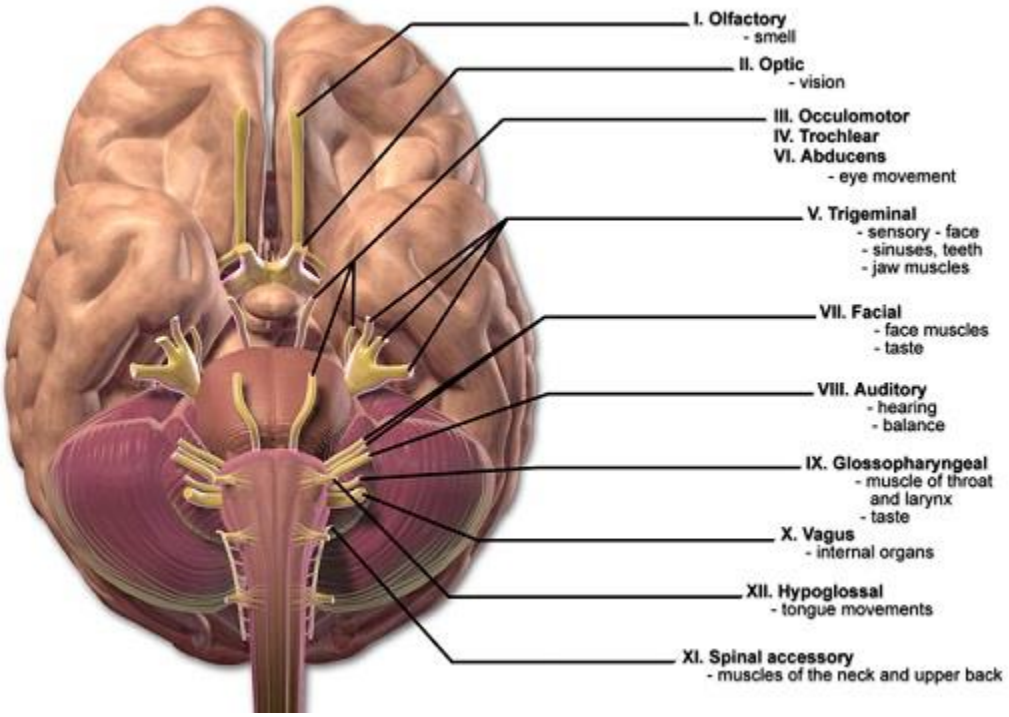
An important concept to understand when studying sensation is Johannes Muller's Doctrine of Specific Nerve Energies (1835):[1]

1. All sensory receptors are uniquely sensitive to particular types of energy.
2. The sensory quality experienced, such as sound, touch or light, depends on which nerve is stimulated, not how it is stimulated.
3. It is not the form of physical energy that determines the nature of the sensation but rather specificity of neurons, receptors and nerves activated by stimulus.
4. The brain has no access to physical stimuli itself.
5. Every sensory domain has an adequate stimulus (type of physical energy to which a sensory receptor is especially tuned).

Transduction is the process whereby sense organs convert energy from environmental events into neural activity through action potentials.[1] As is known from Muller's doctrine, each sense organ responds to a particular form of energy and translates that energy into neural firing to which the brain can respond.

Because the brain has no direct information about the energy stimulating a given sense organ, it uses **anatomical** or **neural coding** to interpret the location and type of sensory stimulus. This is either interpreted through a **temporal code** (coding of information in terms of time on a particular cell eg. rate) or a **pattern/population code** (coding of information by the pattern over a whole population of cells).[1] For example, interpreting an odor would use a population code but

interpreting the actual intensity of smell would use a temporal code.



To study the nature of experience, one must be able to measure it. Weber came up with the concept of **just-noticeable-difference (JND)** which is the smallest change in magnitude of a stimulus that a person can detect.[1] The JND is directly related to the magnitude of that stimulus. Across all sensory domains, JND for a stimulus increases as its intensity increases in different ratios known as **Weber fractions**. These ratios are different for every sense. The JND is also known as the **difference threshold**. Psychological methods also rely heavily on the concepts of **threshold** (the point at which a stimulus, or change in value of a stimulus and be detected in general and the **absolute threshold** (the minimum values of a stimulus that can be detected).[1]

This is a diagram of the cranial nerves. All chemical sensory information travels along these nerves to get in and out of the brain.[2]

Perception

As introduced in, perception is the organization, identification, and interpretation of sensory information in order to represent and understand the presented information, or the environment. All perception involves signals that go through the nervous system, which in turn result from physical or chemical stimulation of the sensory system. For example, vision involves light striking the retina of the eye, smell is mediated by odor molecules, and hearing involves pressure

waves. Perception is not only the passive receipt of these signals, but it's also shaped by the recipient's learning, memory, expectation, and attention. Generally, perception can be split into two processes: • processing the sensory input, which transforms these low-level information to higherlevel information (e.g., extracts shapes for object recognition);

Cognitive Development in Children.

Cognitive Ability Detailed Description Perception Recognition and interpretation of sensory stimuli (smell, touch, hearing, etc.)

Attention Ability to sustain concentration on a particular object, action, or thought, and ability to manage competing demands in our environment.

Memory Short-term/working memory (limited storage), and Long-term memory (unlimited storage).

Motor Skills Ability to mobilize our muscles and bodies, and ability to manipulate objects.Language Skills allowing us to translate sounds into words and generate verbal output.

Visual and Spatial Processing Ability to process incoming visual stimuli, to understand spatial relationship between objects, and to visualize images and scenarios.

Executive Functions Abilities that enable goal-oriented behavior, such as the ability to plan, and execute a goal. These include: •

Flexibility: the capacity for quickly switching to the appropriate mental mode.

Theory of mind: insight into other people's inner world, their plans, their likes and dislikes.

Anticipation: prediction based on pattern recognition.

Problem-solving: defining the problem in the right way to then generate solutions and pick the right one.

Decision making: the ability to make decisions based on problem-solving, on incomplete information and on emotions (ours and others').

Emotional self-regulation: the ability to identify and manage one's own emotions for good performance.

Sequencing: the ability to break down complex actions into manageable units and prioritize them in the right order.

Inhibition: the ability to withstand distraction, and internal urges.

processing which is connected with a person's concepts and expectations (or knowledge), restorative and selective mechanisms (such as attention) that influence perception. Perception

depends on complex functions of the nervous system, but subjectively seems mostly effortless because this processing happens outside conscious awareness. The perceptual systems of the brain enable individuals to see the world around them as stable, even though the sensory information is typically incomplete and rapidly varying. Human and animal brains are structured in a modular way, with different areas processing different kinds of sensory information. Some of these modules take the form of sensory maps, mapping some aspect of the world across part of the brain's surface. These different modules are interconnected and influence each other. For instance, taste is strongly influenced by smell. Human perception abilities are heavily dependent on the brain as well as the surrounding sensory systems as introduced in [17]. The readers are suggested to refer to [17], especially the Section 3, when reading the following contents. 2.1 Detailed Process of Perception According to [9], the process of perception begins with an object in the real world, termed the distal stimulus or distal object. By means of light, sound or another physical process, the object stimulates the body's sensory organs. These sensory organs transform the input energy into neural activity-a process called transduction. This raw pattern of neural activity is called the proximal stimulus. These neural signals are transmitted to the brain and processed. The resulting mental re-creation of the distal stimulus is the percept. An example would be a shoe. The shoe itself is the distal stimulus. When light from the shoe enters a person's eye and stimulates the retina, that stimulation is the proximal stimulus. The image of the shoe reconstructed by the brain of the person is the percept. Another example would be a telephone ringing. The ringing of the telephone is the distal stimulus. The sound stimulating a person's auditory receptors is the proximal stimulus, and the brain's interpretation of this as the ringing of a telephone is the percept. The different kinds of sensation such as warmth, sound, and taste are called sensory modalities. Psychologist Jerome Bruner has developed a model of perception. According to him, people go through the following process to form opinions: • When we encounter an unfamiliar target, we are open to different informational cues and want to learn more about the target. • In the second step, we try to collect more information about the target. Gradually, we encounter some familiar cues which help us categorize the target. • At this stage, the cues become less open and selective. We try to search for more cues that confirm the categorization of the target. We also actively ignore and even distort cues that violate our initial perceptions. Our perception becomes more selective and we finally paint a consistent picture of the target. According to Alan Saks and Gary Johns, there are three components to perception. •

The Perceiver, the person who becomes aware about something and comes to a final understanding. There are 3 factors that can influence his or her perceptions: experience, motivational state and finally emotional state. In different motivational or emotional states, the perceiver will react to or perceive something in different ways. Also in different situations he or she might employ a "perceptual defence" where they tend to "see what they want to see". • The Target. This is the person who is being perceived or judged. "Ambiguity or lack of information about a target leads to a greater need for interpretation and addition."

The Situation also greatly influences perceptions because different situations may call for additional information about the target. Stimuli are not necessarily translated into a percept and rarely does a single stimulus translate into a percept. An ambiguous stimulus may be translated into multiple percepts, experienced randomly, one at a time, in what is called multistable perception. And the same stimuli, or absence of them, may result in different percepts depending on subject's culture and previous experiences. Ambiguous figures demonstrate that a single stimulus can result in more than one percent; for example the Rubin vase which can be interpreted either as a vase or as two faces. The percept can bind sensations from multiple senses into a whole. A picture of a talking person on a television screen, for example, is bound to the sound of speech from speakers to form a percept of a talking person.

Attention

Attention is a process, which does not only involve focusing or concentrating on one thing, but it is equally concerned about ignoring less relevant information. It improves our concentration or consciousness on a selective object only. Also influenced by emotions, attitude, interest and memory.

- Types of Attention: By Ross
- **Non-Volitional (Involuntary Attention):** aroused either by instincts and hence called enforced attention. E.g- Mother's attention on crying child
- **Volitional (Voluntary Attention):** demands our conscious effort. E.g- solving maths problem
- **Classification on the basis of needs or circumstances:**
- **Sustained Attention:** ability to pay attention to only one task. E.g- classroom lecture, reading a book.

- **Selective Attention:** to pay attention to only a specific stimulus. depends essentially on the attentive capabilities of an observer.
- **Divided Attention:** pays attention to two or more tasks at the same time and is also sometimes regarded as Multi-tasking. Eg- texting while in a meeting.
- **Alternating Attention:** attention is shifted from one task to another or is done alternately.
- **Visual Attention:** use of the sensory organ eyes. E.g- advertising, reading
- **Auditory Attention:** sense of hearing. E.g- Paying attention to an important announcement

Determinants of Attention : Attention can be influenced by both external and internal factors.

As introduced in , attention is the behavioral and cognitive process of selectively concentrating on a discrete aspect of information, whether deemed subjective or objective, while ignoring other perceivable information. It is a state of arousal. It is the taking possession by the mind in clear and vivid form of one out of what seem several simultaneous objects or trains of thought. Focalization, the concentration of consciousness, is of its essence. Attention has also been described as the allocation of limited cognitive processing resources. Attention remains a major area of investigation within education, psychology, neuroscience, cognitive neuroscience, and neuropsychology. Areas of active investigation involve determining the source of the sensory cues and signals that generate attention, the effects of these sensory cues and signals on the tuning properties of sensory neurons, and the relationship between attention and other behavioral and cognitive processes like working memory and psychological vigilance. A relatively new body of research, which expands upon earlier research within psychopathology, is investigating the diagnostic symptoms associated with traumatic brain injury and its effects on attention. Attention also varies across cultures. The relationships between attention and consciousness are complex enough that they have warranted perennial philosophical exploration. Such exploration is both ancient and continually relevant, as it can have effects in fields ranging from mental health and the study of disorders of consciousness to artificial intelligence and its domains of research and development. Visual Attention According to in cognitive psychology there are at least two models which describe how visual attention operates. These models may be considered loosely as metaphors which are used to describe internal processes and to generate hypotheses that are falsifiable. Generally speaking, visual attention is thought to operate as a two-stage

process. In the first stage, attention is distributed uniformly over the external visual scene and processing of information is performed in parallel. In the second stage, attention is concentrated to a specific area of the visual scene (i.e., it is focused), and processing is performed in a serial fashion.

The first of these models to appear in the literature is the spotlight model. The term "spotlight" was inspired by the work of William James, who described attention as having a focus, a margin, and a fringe. The focus is an area that extracts information from the visual scene with a high-resolution, the geometric center of which being where visual attention is directed. Surrounding the focus is the fringe of attention, which extracts information in a much more crude fashion (i.e., low-resolution). This fringe extends out to a specified area, and the cut-off is called the margin.

The second model is called the zoom-lens model and was first introduced in 1986. This model inherits all properties of the spotlight model (i.e., the focus, the fringe, and the margin), but it has the added property of changing in size. This size-change mechanism was inspired by the zoom lens one might find on a camera, and any change in size can be described by a trade-off in the efficiency of processing. The zoom-lens of attention can be described in terms of an inverse trade-off between the size of focus and the efficiency of processing: because attentional resources are assumed to be fixed, then it follows that the larger the focus is, the slower processing will be of that region of the visual scene, since this fixed resource will be distributed over a larger area. It is thought that the focus of attention can subtend a minimum of 1◦ of visual angle, however the maximum size has not yet been determined.

A significant debate emerged in the last decade of the 20th century in which Treisman's 1993 Feature Integration Theory (FIT) was compared to Duncan and Humphrey's 1989 attentional engagement theory (AET). FIT posits that "objects are retrieved from scenes by means of selective spatial attention that picks out objects' features, forms feature maps, and integrates those features that are found at the same location into forming objects." Duncan and Humphrey's AET understanding of attention maintained that "there is an initial preattentive parallel phase of perceptual segmentation and analysis that encompasses all of the visual items present in a scene. At this phase, descriptions of the objects in a visual scene are generated into structural units; the outcome of this parallel phase is a multiplespatial-scale structured representation. Selective attention intervenes after this stage to select information that will be entered into visual short-

term memory." The contrast of the two theories placed a new emphasis on the separation of visual attention tasks alone and those mediated by supplementary cognitive processes. As Rastophopoulos summarizes the debate: "Against Treisman's FIT, which posits spatial attention as a necessary condition for detection of objects, Humphreys argues that visual elements are encoded and bound together in an initial parallel phase without focal attention, and that attention serves to select among the objects that result from this initial grouping."

Memory

According to [14], memory is our ability to encode, store, retain and subsequently recall information and past experiences in the human brain. It can be thought of in general terms as the use of past experience to affect or influence current behavior. Memory is the sum total of what we remember, and gives us the capability to learn and adapt from previous experiences as well as to build relationships. It is the ability to remember past experiences, and the power or process of recalling to mind previously learned facts, experiences, impressions, skills and habits. It is the store of things learned and retained from our activity or experience, as evidenced by modification of structure or behavior, or by recall and recognition.

In more physiological or neurological terms, memory is, at its simplest, a set of encoded neural connections in the brain. It is the re-creation or reconstruction of past experiences by the synchronous firing of neurons that were involved in the original experience. As we will see, though, because of the way in which memory is encoded, it is perhaps better thought of as a kind of collage or jigsaw puzzle, rather than in the traditional manner as a collection of recordings or pictures or video clips, stored as discrete wholes. Our memories are not stored in our brains like books on library shelves, but are actually on-the-fly reconstructions from elements scattered throughout various areas of our brains.

As introduced in [12], it seems that our memory is located not in one particular place in the brain, but is instead a brain-wide process in which several different areas of the brain act in conjunction with one another (sometimes referred to as distributed processing). For example, the simple act of riding a bike is actively and seamlessly reconstructed by the brain from many different areas: the memory of how to operate the bike comes from one area, the memory of how

to get from here to the end of the block comes from another, the memory of biking safety rules from another, and that nervous feeling when a car veers dangerously close comes from still another. Each element of a memory (sights, sounds, words, emotions)is encoded in the same part of the brain that originally created that fragment (visual cortex, motor cortex, language area, etc), and recall of a memory effectively reactivates the neural patterns generated during the original encoding. Thus, a better image might be that of a complex web, in which the threads symbolize the various elements of a memory, that join at nodes or intersection points to form a whole rounded memory of a person, object or event. This kind of distributed memory ensures that even if part of the brain is damaged, some parts of an experience may still remain. Neurologists are only beginning to understand how the parts are reassembled into a coherent whole. Memory is related to but distinct from learning, which is the process by which we acquire knowledge of the world and modify our subsequent behavior. During learning, neurons that fire together to produce a particular experience are altered so that they have a tendency to fire together again. For example, we learn a new language by studying it, but we then speak it by using our memory to retrieve the words that we have learned.

Thus, memory depends on learning because it lets us store and retrieve learned information. But learning also depends to some extent on memory, in that the knowledge stored in our memory provides the framework to which new knowledge is linked by association and inference. This ability of humans to call on past memories in order to imagine the future and to plan future courses of action is a hugely advantageous attribute in our survival and development as a species. Neither is memory a single unitary process but there are different types of memory. Our short term and long-term memories are encoded and stored in different ways and in different parts of the brain, for reasons that we are only beginning to guess at. Years of case studies of patients suffering from accidents and brain-related diseases and other disorders (especially in elderly persons) have begun to indicate some of the complexities of the memory processes, and great strides have been made in neuroscience and cognitive psychology, but many of the exact mechanisms involved remain elusive.

MEMORY AND REMEMBERING

Memory has a great role to play in our learning and knowledge acquisition.

Components of Memory: four basic components- 1) Learning (2) Retention or storage (3) Recall or retrieval (4) recognition.

1. learning precedes memory - Spaced and Unspaced learning, Whole Vs Part Method of learning, Part Progressive Method, Mixed or Mediating Method, Repetition and recitation, Verbalization.
2. Retention- ability to store information and remember

Psychologists have developed four methods to study the process of remembering:

Recall Method, Relearning method, Recognition method, Reproduction

Types of Memory :

- Short term Memory
- Long Term Memory
- Remote Memory
- Rote memory
- Episodic Memory
- Sensory Memory

Memory Improvement techniques : (By Thomas Robinson) SQ4R- Survey, Question, Read, Reflect, Recite & Recall, Review

FORGETTING

There are two kinds of forgetting 1. Normal forgetting 2. Abnormal forgetting

1) Normal :

- The trace decay theory
- Interference
- Retroactive and Proactive inhibitions
- No meaning
- Inadequate impressions
- Lack of interest
- Mental and physical ill health
- Motivated forgetting

2) Abnormal:

Abnormal forgetting may result from external causes such as a severe injury to the brain due to accident or otherwise retention amnesia.

Causes of forgetting: Inadequate Impression at the Time of Learning, Laps of Time, Interference, Lack of Rest and Sleep, Poor Health and Defective Mental State, Nature of the Material Learned, Methods Used to Learn, Raise in Emotion .

THINKING AND REASONING

Thinking: mental process which produces thoughts.

Reasoning :also a mental process. requires logic. allows us to identify an action and analyze whether it is positive or negative, beneficial or detrimental based on available facts and logic.

- **The effect of constraints: well-structured versus ill-structured problems :**
- A **well-structured problem** provides much of the information needed and can in principle be solved using relatively few clearly understood rules. E.g math problems

An **ill-structured** problem has the converse qualities: the information is not necessarily within the problem, solution procedures are potentially quite numerous, and a multiple solutions are likely**.**

PROBLEM SOLVING

Problem-solving**is t**he analysis and solution of tasks or situations that are complex or ambiguous and that pose difficulties or obstacles of some kind.

• Awareness of the Problem
• Recognition of the problem
• Collection of Data
• Formulation of Hypotheses
• Evaluation or Testing of Hypothesis
• Making of Generalization

Common obstacles to problem solving

- **functional fixedness**: a tendency to regard the *functions of objects and ideas as fixed. Eg: dictionary*

- **response set,** the tendency for a person to frame or think about each problem in a series in the same way as the previous problem, even when doing so is not appropriate to later problems.
- Functional fixedness and the response set are obstacles in **problem representation**, the way that a person understands and organizes information provided in a problem.
- **Strategies to assist problem solving:**
- **problem analysis**—identifying the parts of the problem and working on each part separately.
- **working backward** *from a final solution to the originally stated problem.*

analogical thinking—using knowledge or experiences with similar features or structures to help solve the problem at hand**.**

Teacher's Role

• Moderate Motivation
• Encourage Divergent Thinking
• Problem should be presented as a whole
• Level of Difficulty
• Active Manipulation
• Practice
• Incomplete Solution of Problem

INFORMATION PROCESSING

In order for a memory to go into storage (i.e., long-term memory), it has to pass through three distinct stages: Sensory Memory, Short-Term Memory, and finally, Long-Term Memory.

- **Sensory memory:** This memory is very short (less than 1/2 second for vision; about 3 seconds for hearing).
- **Short-term memory** is also called working memory and relates to what we are thinking about at any given moment in time. It will initially last somewhere around 15 to 20 seconds unless it is repeated (called maintenance rehearsal) at which point it may be available for up to 20 minutes.

- **Long-term memory** is also called preconscious and unconscious memory in Freudian terms. Preconscious means that the information is relatively easily recalled (although it may take several minutes or even hours) while unconscious refers to data that is not available during normal consciousness.

Information is received through the senses and goes to the sensory memory for a very brief amount of time. If not found relevant, information may decay. It goes to the STM and if given attention and is perceived and found to be relevant, it is sent to the LTM. If not properly encoded, forgetting occurs. Different cognitive processes applied to the information will then determine if information can be retrieved when needed later.

Topic 6

Reinforcement- definition, types of Reinforcement

One of the many different ways in which people can learn is through a process known as operant conditioning (also known as instrumental conditioning).[1] This involves learning through reinforcement or punishment. The type of reinforcement used can play an important role in how quickly a behavior is learned and the overall strength of the resulting response.

Understanding Reinforcement

Reinforcement is a term used in operant conditioning to refer to anything that increases the likelihood that a response will occur. Psychologist B.F. Skinner is considered the father of this theory. Note that reinforcement is defined by the effect that it has on behavior—it increases or strengthens the response.

For example, reinforcement might involve presenting praise (the reinforcer) immediately after a child puts away her toys (the response). By reinforcing the desired behavior with praise, the child will be more likely to perform the same actions again in the future.

Reinforcement can include anything that strengthens or increases a behavior, including specific tangible rewards, events, and situations. In a classroom setting, for example, types of reinforcement might include praise, getting out of unwanted work, token rewards, candy, extra playtime, and fun activities.

B.F. Skinner: The Life of Psychology's Radical Behaviorist

Primary and Secondary Reinforcement

Primary Reinforcement

Primary reinforcement is sometimes referred to as unconditional reinforcement. It occurs naturally and doesn't require learning in order to work. Primary reinforcers often have an evolutionary basis in that they aid in the survival of the species.

Examples of primary reinforcers include:

- Air
- Food
- Sleep
- Sex
- Water

Genetics and experience may also play a role in how reinforcing such things works. For example, while one person might find a certain type of food very rewarding, another person may not like that food at all.

Secondary Reinforcement

Secondary reinforcement, also known as conditioned reinforcement, involves stimuli that have become rewarding by being paired with another reinforcing stimulus. For example, when training a dog, praise and treats might be used as primary reinforcers. The sound of a clicker can be associated with the praise and treats until the sound of the clicker itself begins to work as a secondary reinforcer.

Types of Reinforcement

In operant conditioning, there are two different types of reinforcement. Both of these forms of reinforcement influence behavior, but they do so in different ways. The two types include:

- Positive reinforcement: This involves adding something to increase response, such as giving a bit of candy to a child after she cleans up her room.
- Negative reinforcement: This describes removing something in order to increase response, such as canceling a quiz if students turn in all of their homework for the week. By removing the aversive stimulus (the quiz), the teacher hopes to increase the desired behavior (completing all homework).

While these terms involve the words positive and negative, it's important to note that Skinner did not utilize these to mean "good" or "bad." Instead, think of what these terms would mean when used mathematically.

Positive is the equivalent of a plus sign, meaning something is added to or applied to the situation. Negative is the equivalent of a minus sign, meaning something is removed or subtracted from the situation.

Real-World Examples

Here are a few real-world examples of how reinforcement can be utilized to change behavior.

Positive Reinforcement

During practice for your office softball team, the coach yells out, "Great job!" after you throw a pitch. Because of this, you're more likely to pitch the ball the same way again. This is an example of positive reinforcement.

Another example is while at work, you exceed your manager's sales quota for the month and so you receive a bonus as part of your paycheck. This makes it more likely that you will try to exceed the minimum sales quota again next month.

Negative Reinforcement

You go to your doctor to get your yearly flu shot in order to avoid coming down with the flu. In this case, you are engaging in a behavior (getting a shot) to avoid an aversive stimulus (getting sick). This is an example of negative reinforcement.

Another example is if you slather some aloe vera gel on a sunburn to prevent the burn from hurting. Applying the gel on the burn prevents an aversive outcome (pain), so this is an example of negative reinforcement. Because engaging in the behavior minimizes an aversive outcome, you will be more likely to use aloe vera gel again in the future.

Negative reinforcement can also be seen if you took acetaminophen to get rid of a terrible headache. After about 15 or 20 minutes, the pain in your head finally recedes. Because taking the pills allowed you to eliminate an aversive situation, it makes it more likely that you will take the pain pills again in the future to deal with physical pain.

Strength of the Response

How and when reinforcement is delivered can affect the overall strength of response. This strength is measured by the following qualities of the response after reinforcement is halted:

- Accuracy
- Duration
- Frequency
- Persistence

Continuous Reinforcement

In situations when present reinforcement is controlled, such as during training, the timing of when a reinforcer is presented can be manipulated. During the early stages of learning, continuous reinforcement is often used, such as when you first teach your dog a new trick.

Schedules of Reinforcement

How and when a reinforcement is given can change a person's response. Because of this, there are also a variety of schedules of reinforcement that can be used to strengthen a behavior. The word *schedule* refers to the timing of the reinforcement.

This schedule involves reinforcing a response each and every time it occurs.

Partial Reinforcement

Once a behavior has been acquired, it's often a good idea to switch to a partial reinforcement schedule. The four main types of partial reinforcement include:

- Fixed-interval schedules: Reinforcing a behavior after a specific period of time has elapsed.
- Fixed-ratio schedules: Reinforcing a behavior after a specific number of responses have occurred.
- Variable-interval schedules: Reinforcing the behavior after an unpredictable period of time has elapsed.
- Variable-ratio schedules: Reinforcing the behavior after an unpredictable number of responses.

Fixed schedules occur on a regular schedule. Fixed-ratio reinforcing is when a reward is given after a specific number of responses have occurred. For instance, if you are a member of a frequent flyer program, you may receive a reward certificate for free airfare after you earn a certain amount of points.

A fixed-interval schedule occurs when we reinforce a behavior after a specific period of time has elapsed. Employees that get a pay check either weekly or biweekly are being paid on a fixed-interval basis. Knowing that a paycheck will come after working for a period of time strengthens the employee's likelihood of working regularly.

Reinforcement plays a vital role in the operant conditioning process. When used appropriately, reinforcement can be an effective learning tool to encourage desirable behaviors and discourage undesirable ones.

It's important to remember that what constitutes reinforcement can vary from one person to another. In a classroom setting, for example, one child may find a treat reinforcing while another might be indifferent to such a reward. In some instances, what is reinforcing might actually come as a surprise.

If a child only receives attention from his parents when he is being scolded, that attention can actually reinforce the misbehavior. By learning more about how reinforcement works, you can gain a better understanding of how different types of reinforcement contribute to learning and behavior.

Reinforcements are stimuli that can strengthen or weaken specific behaviors. Learn about the many different ways that rewards and punishment are used to change and reinforce people's behaviors, and find out why some are more effective than others.

Positive & Negative Reinforcement

One of the many ways in which people learn is through operant conditioning. Operant conditioning simply means learning by reinforcement. There are a number of factors involved in reinforcing an individual's behaviors, and by applying reinforcements, we can increase and/or decrease behaviors as well.

There are multiple types of reinforcement that can be used in operant conditioning. The two most common forms are known as *positive reinforcement* and *negative reinforcement*. It is important to note that, in this case, the words *positive* and *negative* do not mean good or bad. Instead, they mean you are adding (positive) or removing (negative) something in order to strengthen the desired behavior. Negative reinforcement is often confused with punishment; however, they are not the same.

Positive reinforcement occurs when a token or reward is given to strengthen a desired behavior. For example, if a child cleans her room, she may receive a candy bar or a toy as a reward. The reward will serve to strengthen the behavior because the child will be more likely to continue with this desired behavior in order to receive the reward.

Likewise, negative reinforcement also strengthens a behavior, but it does so by removing something that is unwanted. For instance, when you get into your car and put the key in the ignition, you might hear a loud bell or ringing sound. In order for the bell to stop, you need to put your seatbelt on. This is an example of negative reinforcement. In order for the sound to be removed, you need to fasten your seatbelt.

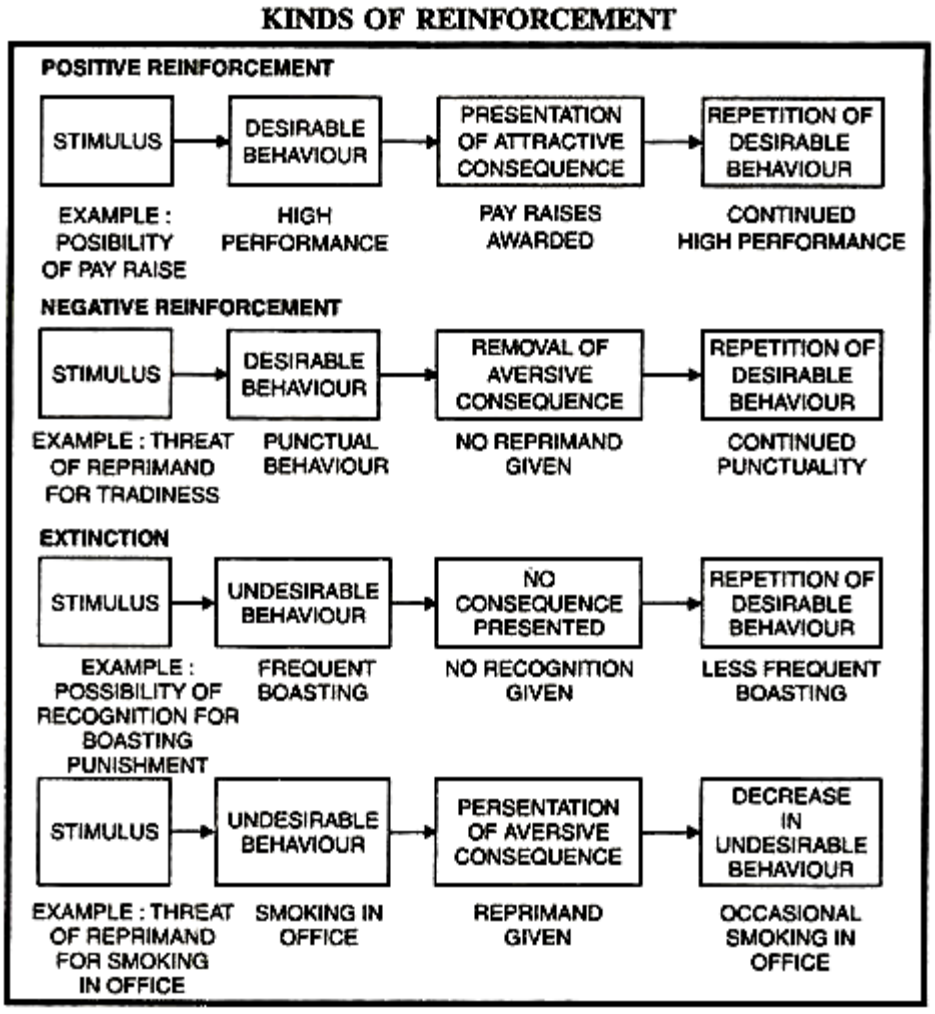
Punishment

Punishment is another form of reinforcement, and it can be both positive and negative, as well. Just as with positive and negative reinforcement, the words positive and negative are not related to good or bad; instead they mean adding or removing a punishment. As opposed to reinforcement, punishment is intended to *decrease* the likelihood of an undesirable behavior.

Positive punishment occurs when we introduce something to stop an unwanted behavior. For example, if a child behaves in a manner that a parent sees as wrong or even dangerous, like running into a busy street with cars driving by, the parent might scold or spank the child. Both of

those serve to decrease the likelihood that the dangerous and unwanted behavior will occur again.

Negative punishment is when we take something away after an undesirable behavior occurs. Again, the goal of punishment is to decrease the behavior. So, if a child is fighting with her brother, a parent may take away her favorite toy or suspend her TV privileges. By doing so, the parent will decrease the likelihood that the unwanted behavior will continue.



TOPIC 7
PUNISHMENT- MEANING, EFFECT OF PUNISHMENT ON LEARNING

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Negative punishment is when we take something away after an undesirable behavior occurs. Again, the goal of punishment is to decrease the behavior. So, if a child is fighting with her brother, a parent may take away her favorite toy or suspend her TV privileges. By doing so, the parent will decrease the likelihood that the unwanted behavior will continue.

Punishment is anything that weakens behaviour and tends to decrease its subsequent frequency. Punishment is the most controversial method of behaviour modification and involves delivering an unpleasant consequence contingent upon the occurrence of an undesirable behaviour. Both punishment and extinction have the effect of decreasing and eliminating the undesirable behaviour, but technically, there is a difference.

Punishment is the historic method of reducing or eliminating undesirable behaviour. But sometimes, punishment frustrates the punished and leads to antagonism towards the punishing agent. As a result the effectiveness of publishing agent reduces over time. For example, if an employee is reprimanded by his manager for taking unauthorized work breaks, the behaviour may stop but only when the manager is around when the manager is not visible the breaks may occur once again. Accordingly, the management usually discourages application of any form of punishment and usually the positive reinforcement techniques are preferred.

However, there are situations where punishment becomes necessary in behaviour modification. Certain undesirable behaviours must be punished otherwise they will have far reaching effects. For example, an employee who sexually harasses a co-worker should not go unpunished. But because of the possible dangers of punishment, it must be administered properly.

Effect of punishment:

(i) Firstly, an old rule of thumb should be followed which is "Praise in public, punish in private," A private reprimand can be constructive, while a reprimand of an employee in front of others could be highly embarrassing and is likely to cause undesirable emotional effects and behaviour.

(ii) Punishment should quickly follow the undesirable behaviour. It is more effective when applied immediately after the undesirable behaviour is produced. Further, punishment should follow every occurrence of the undesirable behaviour.

(iii) Thirdly, the punishment should focus on the behaviour and not on the person. The employee should be informed clearly as to what he did wrong and what was the desired alternative behaviour and the punishment should be fair, proportional, impersonal, consistent over time and impartial.

(iv) Punishment is effective in modifying behaviour if it forces the person to select a desirable behaviour that is reinforced. If this is not done, the undesirable behaviour tends to reappear causing fear and anxiety in the person being punished.

(v) Punishment must be administered carefully so that it does not become a reward for undesirable behaviour.

TOPIC 8

MOTIVATION- DEFINITION, RELATIONSHIP OF MOTIVATION WITH LEARNING AND PERFORMANCE

Motivation, a psychological component related to learning, also has an explanation through neuroscience. Overall, the brain has a disposition towards rewards and outcomes related to pleasure. In fact, it bring out certain chemical and opiates that give a natural high increasing a person's motivation.

The concept of motivation as applied to educational psychology refers to how learning is reinforced and encouraged in an individual learner. Motivation can occur from within the individual, and also be shaped externally by the learning environment in which the student attends.

Motivation is an internal state that activates, guides and sustains behavior. Educational psychology research on motivation is concerned with the volition or will that students bring to a task, their level of interest and intrinsic motivation, the personally held goals that guide their behavior, and their belief about the causes of their success or failure.

A form of attribution theory developed by Bernard Weiner describes how students' beliefs about the causes of academic success or failure affect their emotions and motivations. For example, when students attribute failure to lack of ability, and ability is perceived as uncontrollable, they experience the emotions of shame and embarrassment and consequently decrease effort and show poorer performance. In contrast, when students attribute failure to lack of effort, and effort is perceived as controllable, they experience the emotion of guilt and consequently increase effort and show improved performance.

Motivational theories also explain how learners' goals affect the way that they engage with academic tasks. Those who have mastery goals strive to increase their ability and knowledge. Those who have performance approach goals strive for high grades and seek opportunities to demonstrate their abilities. Those who have performance avoidance goals are driven by fear of failure and avoid situations where their abilities are exposed. Research has found that mastery goals are associated with many positive outcomes such as persistence in the face of failure, preference for challenging tasks, creativity and intrinsic motivation. Performance avoidance goals are associated with negative outcomes such as poor concentration while studying, disorganized studying, less self-regulation, shallow information processing and test anxiety.

Performance approach goals are associated with positive outcomes, and some negative outcomes such as an unwillingness to seek help and shallow information processing.

Motivation is of particular interest to Educational psychologists because of the crucial role it plays in student learning. However, the specific kind of motivation that is studied in the specialized setting of education differs qualitatively from the more general forms of motivation studied by psychologists in other fields.

Motivation in education can have several effects on how students learn and their behavior towards subject matter (Ormrod, 2003). It can:

1. Direct behavior toward particular goals
2. Lead to increased effort and energy
3. Increase initiation of, and persistence in, activities
4. Enhance cognitive processing
5. Determine what consequences are reinforcing
6. Lead to improved performance.

Because students are not always internally motivated, they sometimes need *situated motivation*, which is found in environmental conditions that the teacher creates.

Meaning and Nature of Motivation

A mother finds difficult to make her son sit at his lesson. She tries and applies many methods but can not persuade her son to study. She is surprised one day seeing him busy with his lesson immediately after his return from school. She asks him to get up and take his food. The child replies that he would first do his homework, saying that his teacher gave him “good” at his classwork and that he would get another ‘good tomorrow.

He gladly shows his homework to his mother. This converts the boy from a poor worker to an active student. The teacher’s praise gives the boy pleasure. the feeling of success and satisfaction. What makes the boy behave in this manner? The answer to such a question on the why and how of behavior lies in the keyword ‘motivation’. He behaves as he is motivated to do so.

Inspiration in this way might be viewed as something, which prompts, urges, energies and

actuates a person to act or act in a specific way at a specific time for accomplishing some particular objective or reason.

Definitions

Motivation is supposed to have its origination from the Greek word "Movere' which means to drive forward. So motivation is an aroused state of the organism to act in a specific manner and direction.

In the expressions of H.W.Bernard inspiration alludes to those marvels which are engaged with the reenactment of activity towards specific destinations, where already there was next to zero development towards those objectives.

DO Hebb defines that motivation is an existence of an organized phase of sequence, its direction, and contents, its persistence in a given direction.

Young defines motivation in these words, 'the concept of motivation is exceedingly broad-so broad, in fact, that psychologists have attempted 1o harrow it singling out one aspect or another of the complex process of determination The two most important aspects are the energetic aspect and–regulation and direction—we may- defines the study of motivation.

Maslow's plan shows the following hierarchy of needs.

1. The gratification of bodily needs.

2. Safety against pains, anger, jeopardy of bodily integrity, overwhelming threats.

3. Love-affection warmth, acceptance, and place in the group.

4. Self-esteem-self-respect, self-confidence, feeling of strength and adequacy.

5. Self-actualization-self fulfillment self-expression, potentialities, working out fundamental personality, use of capacities to fulfillment.

There are two kinds of motivation:

- **Intrinsic motivation** occurs when people are internally motivated to do something because it either brings them pleasure, they think it is important, or they feel that what they are learning is morally significant.

Internal motivation refer to interest for certain activities to meet the desired need develops from within the individual automatically. Generally, internal motivation is born with the rise of biological needs. A teacher with the help of certain measures can ensure internal motivation in the pupils.

a. Specifying the aims and objectives

When objectives of a certain activity are made clear to the pupil interest to learn will develop in the knowledge of objectives, aims, benefits and uses arises the desire for progress in the study among the students.

b. Curiosity

Each child wants to know what lies hidden in the box. If curiosity is involved in teaching activity, internal motivation can be ensured the teacher may encourage the students to explore and search for new knowledge through the discovery method.

c. Ego Involvement

In the word of Sheriff and Cartrill "Ego involvement is a condition of total participation of the self as knower, organizer, observer, status seeker and socialized being. The ego is involved where the individual is challenged.

Ego plays an important role in learning. The teacher can involve the ego of the students in certain leaming activates challenge for the first position may push the students to burn the midnight oil.

d. Knowledge of Result

If the students are made aware of their progress from time to time, they will certainly be motivated to learn more, compete and break their previous records. Success and outstanding marks in tests inspire the students internally to improve and maintain performance.

e. Aspiration Level

Aspiration level often determines the rate of involvement in studies. Students having aspiration level work hard. The students who want to become doctor, engineer technologist or bank officers study till late at night whereas pupils having no ambition in life show poor performance in the class. The teacher can effectively utilize the student's capacities by setting high aspiration levels.

f. Rivalry

The rivalry is not considered a good value in society Hence it can be used for motivating purposes. Rivalry among individual students between groups and between male and female pupils gives birth to healthy competition. They may be motivated to take an active part in certain school activities and show their performance.

- **Extrinsic motivation** comes into play when a student is compelled to do something or act a certain way because of factors external to him or her (like money or good grades).External motivation refers to forces in the environment that arouse the individual to act toward the desired goal These are some measures by which external motivation can be ensured.

a. Praise and Blame

There are powerful incentives; praise induces the students to work hard. It even creates an interest in overage and inferior children to study. The teacher remarks like well done, 'good conduct' and very good go a long way in motivating the pupils. Similarly, blame has a positive effect on superior children.

b. Reward and Punishment

Rewards like money, medals, badges, prizes exemptions, shields, and cups give pleasure when coming with success and achievement. Reward may symbolic or material. Care should be taken that rewards do not become an end themselves otherwise unfair means would be used to get rewards. Punishment is a negative incentive but by using it skillfully a teacher may get positive results fear of punishment and humiliation among class fellows urges the students to work till late at night and complete their homework. But sometimes the result of punishment is dangerous.

c. Attractive School Environment

The attractive and educative environment of the school motivates the students to stay and take part in school activities with zeal and vigor.

d- Nice Friends

If the student has a company of nice friends, he will certainly take an interest in the study and other school activities in their association.

e- Curriculum

If the curricular activities teaching methods, teacher's behavior and other facilities provided in the school, suit the students, they will naturally be motivated for learning.

That is why the curriculum is said to be in accordance with leamers' age, experience mental capacities and maturity level.

f. Instructional Technology

Instructional technology used in the class for teaching a certain lesson may urge the students to comprehend and leam effectively Movies TV maps, projectors, pictures, etc attract the students on the path of knowledge.

g. Recognition and Ignorance.

These incentives are verbal or non-material type. When the students are recognized by means of marks, grades promotions for their performance in studies. They are motivated to learn more Similarly ignoring the students due to their inferior performance may warm them to avoid malpractices and mend their learning habits.

Both both types of motivations are fruitful in arousing the students, but it should be noted that internal motivation is superior to external motivation. Proper motivation maximizes the student's involvement and achievement in learning.

TOPIC 9

DISCIPLINE- MEANING, TECHNIQUES OF DISCIPLINE, FACTORS INFLUENCING CHOICE OF DISCIPLINARY TECHNIQUES.

Meaning of Discipline:

The genesis of the word "Discipline" is supposed from the Latin word "Disciplina" which means **management, rule, education, practice, teaching and trained condition.** The derivation of English word "Discipline" is supposed from the Latin word "Discipulum" which means pupil. This is expected from the pupils that he should obey his teachers respectfully and according to him, he should develop necessary and required qualities in himself for successful life.

In this way, the meaning of discipline is to create regularity in conduct. Lot of words is used in Hindi for discipline, for example, control, regulation, self-restraint, courtesy etc. The use of the word "Control" would be appropriate at the place where some-one is to be kept forcibly in possession, where according to some fixed rules, the man is asked to do work and, there "regulation" would be used. Where the child obeys his elders with courtesy and respect, there the word "courtesy" would be proper to use. But, "discipline" is the word which covers all those aspects mentioned above. The use of this word "Discipline" is more sound.

Definition of Discipline:

Discipline is derived from the Latin word "Discipulus" which means to learn. It is the same root from which the word disciple is taken. Literally, discipline is a mode of life in accordance with certain rules and regulations. It is a sort of self-control reflected in public actions. This control is not forced upon the individual. It flows out from within. Hence, discipline is spontaneous and not a mere submission to authority in an obedient manner.

The term 'discipline' refers to a state of orderly conduct of an individual which is gained through training in self-control and in habits of obedience to socially approved standards of thought and action. It implies a good understanding of right conduct. The formation of desirable habits and attitudes and an adherence to such standards are just and necessary. It includes the socialization of behaviour, the manner of working and living in co-operation

and the subordination of individual interests to group interests. True discipline therefore provides for both individual and group welfare in a democratic society.

Modern Concept of Discipline:

According to modern educational thinking the meaning of discipline is taken in wide spread form. Today, where the objective of education has been understood to develop qualities of successful citizenship and sociability in child, at the same place, school discipline is meant internal and external discipline which should develop physical, mental, social and ethical values.

Modern concept of discipline is one in which self-discipline and social disciplines are stressed especially or particularly. The great educationist John Dewey has influenced sufficiently. He says that according to maximum modem thoughts, the meaning of discipline is to prepare children for life in democratic society, to provide help to man in achieving knowledge, strength, habits, interest and ideas which are envisaged for the up-gradation of self, his companies and whole of the society.

Types:

School disciple practices are generally informed by theory from psychologists and educators. There are a number of theories to form a comprehensive discipline strategy for an entire school or a particular class.

- **Reality Therapy** involves teachers making clear connections between student behavior and consequences in order to facilitate students making positive choices. Features include class meetings, clearly communicated rules, and the use of plans and contracts are featured. Researchers (Emmer and Aussiker, Gottfredson, Hyman and Lally) have noted modest improvements as the result of this approach.
- **Discipline with Dignity** supports the idea that good discipline starts by keeping student dignity intact by providing practical strategies for teachers to share responsibility for discipline with students themselves by tailoring discipline to each individual.
- **Positive Approach** is grounded in teachers' respect for students. Instills in students a sense of responsibility by using youth/adult partnerships to develop and share clear rules, provide daily opportunities for success, and administer in-school suspension for noncompliant students. Based on Glasser's Reality Therapy.

- **Teacher Effectiveness Training** differentiates between teacher-owned and student-owned problems and proposes different strategies for dealing with each. Students are taught problem-solving and negotiation techniques. Researchers (e.g., Emmer and Aussiker) find that teachers like the program and that their behavior is influenced by it, but effects on student behavior are unclear (Cotton, 2001).
- **Transactional Analysis** works for students with behavior problems to learn to use terminology and exercises to identify issues and make changes within the context of counseling programs. The notion that each person's psyche includes child, adult and parent components is basic to the TA philosophy. Research has been conducted (e.g., Cobb and Richards) has found the TA counseling approach beneficial (McIntyre, 2005).
- **Assertive Discipline** focuses on the right of the teacher to define and enforce standards for student behavior with clear expectations, rules and a penalty system with increasingly serious sanctions are major features. Research (e.g., Mandlebaum and McCormack) is supportive, but inconclusive about the effectiveness of the AD approach (Emmer and Aussiker, Gottfredson, and Render, Padilla, and Krank) (McIntyre, 2005).
- **Adlerian approaches** is an umbrella term for a variety of methods which emphasize understanding the individual's reasons for maladaptive behavior and helping misbehaving students to alter their behavior, while at the same time finding ways to get their needs met. Named for psychiatrist Alfred Adler. These approaches have shown some positive effects on self-concept, attitudes, and locus of control, but effects on behavior are inconclusive (Emmer and Aussiker) (Cotton, 2001).

Modern Examples of School Discipline

It relies upon the idea of an assertive teacher who is prepared to impose their will upon a class. Positive reinforcement is balanced with immediate and fair punishment for misbehavior and firm; clear boundaries define what is appropriate and inappropriate behaviour. Teachers are expected to respect their students, and sarcasm and attempts to humiliate pupils are seen as falling outside of what constitutes reasonable discipline.

Whilst this is the consensus viewpoint amongst the majority of academics, some teachers and parents advocate a more assertive and confrontational style of discipline. Such individuals claim that many problems with modern schooling stem from the weakness in school discipline and if teachers exercised firm control over the classroom they would be able to teach more efficiently.

This viewpoint is supported by the educational attainment of countries -- in East Asia for instance -- that combine strict discipline with high standards of education.

It's not clear, however that this stereotypical view reflects the reality of East Asian classrooms or that the educational goals in these countries are commensurable with those in Western countries. In Japan, for example, although average attainment on standardized tests may exceed those in Western countries, classroom discipline and behavior is highly problematic. Although, officially, schools have extremely rigid codes of behavior, in practice many teachers find the students unmanageable and do not enforce discipline at all, while others impose brutal standards of discipline, backed up with beatings and whippings.

Where school class sizes are typically 40 to 50 students, maintaining order in the classroom can take divert the teacher from instruction, leaving little opportunity for concentration and focus on what is being taught. In response, teachers may concentrate their attention on motivated students, ignoring attention-seeking and disruptive students. The result of this is that motivated students, facing demanding university entrance examinations, receive disproportionate resources, while the rest of the students are allowed, perhaps expected to, fail. Given the emphasis on attainment of university places, administrators and governors may regard this policy as appropriate.

Consequently, that many students graduate high-school with very unrealistic expectations and little in the way of useful skills, leaving it up to employers or vocational colleges to teach the basic social expectations needed for employment or higher education. Frequent complaints of teachers at the university and college level are that students lack the concept of punctuality, consider that attendance to class is sufficient for a passing grade so use class time to catch up on sleep or email, and lack the self-discipline and motivation needed for effective study. Students frequently refuse to complete homework or classwork, or even bring books and paper to class, on the assumption that high-school standards of behavior will be accepted and that an automatic pass grade will be awarded provided they do not actively disrupt classes. University administrators frequently pressure teachers to issue passing grades despite poor achievement due to constraints imposed by the Ministry of Education in relation to funding.

Corporal punishment

Throughout the history of education the most common means of maintaining discipline in schools was corporal punishment. While a child was in school, a teacher was expected to act as a substitute parent, with many forms of parental discipline or rewards open to them. This often

meant that students were commonly chastised with the birch, cane, paddle, strap or yardstick if they did something wrong.

Corporal punishment in schools has now disappeared from most Western countries, including all European countries. Thirty U.S. states have banned it, the others (mostly in the South) have not. Paddling is still used to a significant (though declining) degree in some public schools in Alabama, Arkansas, Georgia, Louisiana, Mississippi, Oklahoma, Tennessee and Texas.

Private schools in these and most other states may also use it, though many choose not to do so.

Official corporal punishment, often by caning, remains commonplace in schools in some Asian, African and Caribbean countries.

Most mainstream schools in most other countries retain punishment for misbehaviour, but it usually takes non-corporal forms such as detention and suspension.

Detention

Detention is one of the most common punishments in schools in the United States, Britain, Ireland, Singapore, Canada, Australia and some other countries. It requires the pupil to go to a certain area of the school during a specified time on a school day (either break or after school), but also may require a pupil to attend school at a certain time on a non-school day, e.g. "Saturday detention" at some US, UK and Irish schools. Students can do work, stand against the wall or just sit at the desk in a convenient and quiet manner. In the UK, the Education Act 1997 obliges a (state) school to give parents or guardians at least 24 hours' notice of a detention outside school hours so arrangements for transport and/or childcare can be made. This should say why it was given and, more importantly, how long it will last (Detentions usually last from as short as 20 minutes or less to as long as 2 hours or more).[3] Typically, in schools in the UK and Singapore, if one misses a detention, then another one is added or the student gets a more serious punishment. In UK schools, for offences too serious for a normal detention but not serious enough for a detention requiring the pupil to return to school at a certain time on a non-school day, a detention can require a pupil to return to school 1-2 hours after school ends on a school day, e.g. "Friday Night Detention".

Suspension

Suspension or **temporary exclusion** is mandatory leave assigned to a student as a form of punishment that can last anywhere from one day to several weeks, during which time the student is not allowed to attend regular lessons. In some US and Canadian schools there are two types of

suspension: In-School Suspension (ISS) and Out-of-School Suspension (OSS). In-school suspension requires the student to report to school as usual but sit in a special room all day. Out-of-school suspension bars the student from being on school grounds. The student's parents/guardians are notified of the reason for and duration of the out-of-school suspension, and usually also for in-school suspensions. Sometimes students have to complete work during their suspensions, for which they receive no credit.(OSS only). In some UK schools, there is Reverse Suspension as well as normal suspension. A pupil suspended is sent home for a period of time set. A pupil reverse suspended is required to be at school during the holidays. Some pupils often have to complete work while reverse suspended.

Expulsion

Expulsion, exclusion, withdrawing or permanent exclusion is the removal of a student permanently from the school. This is the ultimate last resort, when all other methods of discipline have failed. However, in extreme situations, it may also be used for a single offense. Some education authorities have a nominated school in which all excluded students are collected; this typically has a much higher staffing level than mainstream schools. In some US public schools, expulsions and exclusions are so serious that they require an appearance before the Board of Education. In the UK, head teachers may make the decision to exclude, but the student's parents have the right of appeal to the local education authority. This has proved controversial in cases where the head teacher's decision has been overturned (and his or her authority thereby undermined), and there are proposals to abolish the right of appeal.

Expulsion from a private school is a more straightforward matter, since the school can merely terminate its contract with the parents if the pupil does not have siblings in the same school.

Problems

Methods of maintaining discipline in schools are not always successful. The misbehaviour of children is common in all schools, although most schools managed to keep this within tolerable limits. Occasionally, however, poor disciplinary management within school can cause a more general breakdown in order.

In modern years this has been popularly characterised by violence against teachers and other children. This is, of course, not a new problem. The public schools of eighteenth and nineteenth century England, for instance, were subject to a number of violent armed uprisings and violence

against teachers was a common phenomenon throughout the nineteenth century. Even low levels of indiscipline at school can result in a detrimental working environment for children and good teaching will often depend on good school discipline.

Effective discipline requires the consent, either explicit or tacit, of parents and pupils. Whilst few children will enjoy punishment, most will submit to it providing it is perceived as being equitable.

Moreover, to be effective, punishment should never appear arbitrary. School hierarchies award teachers great power over their students and the perceived abuse of this power to punish children in arbitrary ways can be the source of much resentment and hostility.

Problems with school discipline have also led to a reduction in the number of people willing to become teachers, especially in high schools or schools regarded as being difficult. Student misbehaviour and rudeness is the leading cause of teacher resignations. In some areas and countries, this has led to a severe teacher shortage, with classes either not taught, or taught by an unqualified person. In some schools, a senior class, for example, may have up to a dozen different teachers in a single year, as the replacements decide to leave rather than deal with student behaviour. Many countries are now trying to offer incentives to new teachers to remain in such schools, but with very limited success.

The effects of classroom discipline can be compared to emotional abuse, the teacher in the role of abuser and students in the role of unwanted victimization. Merely a game of power and domination.

Importance of Discipline:

Discipline is very much important in life. In absence of it man cannot utilize powers properly given by nature (God). Through discipline only man can attain power and by this power he becomes capable of developing of his natural tendencies with personal view point. Along with it, discipline is also very much important from social view point. The great philosopher, Aristotle said, “A nation is not built by mountains and trees, for withstanding it is built by character of its citizens”.

This statement is completely true. When the citizens of some country would be disciplined they would be capable of taking their country on the path of progress. A disciplined person is of good character, and pious by mind, words and actions. In this way, it is clear that for nation or entire society discipline is very important. This fact can be made clear with the help of history also.

The history is witnessed to the time, when some country becomes prey of indiscipline; it had to accept slavery of external powers. Through discipline, a man and entire society or nation get alert. In want of it, this power perishes which results severe consequences. In this way, what a man, what a nation and what a society, personality of all is made by the great by discipline.

Discipline in Educational Institution:

Discipline in schools generally means, "Orders and system in doing things, regularity and obedience to commands." But discipline is not synonymous with class order. It should be identified with orderly behaviour in the classroom and other forms of school activities. Outward show of order can also be maintained by force of fear. That is not real discipline. Real discipline implies persuasion while order implies compulsion.

It is therefore important that school discipline or discipline in the educational institution should be there for a gradual building up of habits, self-control and co-operation and carried out pupils, not because it is imposed from above, but because of the recognition by its necessity and value. So, **discipline in educational institution or school should imply the cultivation of certain desirable attitudes, habits and values in pupils.**

Components of Discipline:

Some of the most important components of discipline which are used in educational institutions are as follows:

The foundation of discipline is deeply rooted in the total school programme and classroom situation.

It has a set of components, these are as follows:

(i) Head of the Institution:

The success or failure of any educational institution depends upon the personality of the head of that educational institution. He must possess some philosophy of discipline. He must have some well grounded fundamental principles which guide him to his treat the teachers and students.

(ii) The Teacher:

The teacher is the fountain head of discipline and character formation. With good teachers, half the problem of school discipline disappears. Besides, his cleverness and originality, every teacher should be a good disciplinarian himself. This will depend on his keen insight, patience, sympathy, love, justice and impartiality.

(iii) Co-curricular Activities:

Sports, Scouting, N.C.C., Social Service and community activities of the type, develop in students a sense of self-control and self-confidence, which is the cornerstone of discipline. Such activities give our students practical lessons on the basis of their will. Social co-operation, respect for authority and leadership training can pave the right way of instructing them in the fundamentals of true discipline.

(iv) Building up Traditions:

It is already known to every-body that the higher and nobler the traditions built-up by a school, the greater the efforts on the part of students and teachers to maintain those traditions. Traditions are transmitted from one generation of students to the other and as such, if properly guided, students would never try to lower the noble traditions built by those who have gone before them.

(v) Teaching Methods:

If appropriate methods of teaching are employed, the chances of students getting in-disciplined or going astray, will be few and far between. Classroom methods should be directed towards producing well-adjusted and self-disciplined individuals and towards the building up of a high morale.

(vi) Self-Government in Schools:

In every secondary school, students should be properly associated with the administration of discipline as well as with the health, sports, dramatics and other school activities. Such an association will make them obedient to rules and regulations far more real, meaningful and willing than when the same is imposed from above.

(vii) A Good School Environment:

Every educational institution or school should prepare its calendar in the beginning of new educational session, giving a clear idea of the aims, the courses of study, administrative rules and regulations, as well as the plans of curricular and co-curricular activities of the institution,

(viii) Judicious use of Rewards and Punishments:

Meritorious and successful efforts on the part of students must be recognized and rewarded. But rewards must not encourage unhealthy competition among students. These should be very few and administered, in a manner that may appeal to the higher motive of students.

(ix) Effective Team-Workers:

A sense of unity, co-operation and fellow feeling, prevailing among the school staff is sure to reflect upon the pupils. The young pupils in schools watch very minutely the activities of their

teachers and try to imitate them for good or bad, as the case may be. It is therefore necessary that in order to promote discipline among pupils, it must first be established and maintained among the members of school-staff.

Principles for Maintaining Discipline:

(1) The base of discipline should be love, trust and goodwill as fear or doubt based discipline is quite temporary or momentary. For maintaining true discipline, there should be love for each other among school authorities like principal, teachers and students. Love originates trust and sets the foundation of discipline.

(2) Good discipline should be based on co-operation. It is most essential to keep and maintain co-operation between principal and teachers, teachers and lady teachers, teachers and pupils, teachers and guardians and students and students. If there would be no co-operation it would be very difficult to maintain good discipline. For this we have to establish rapport among all necessarily.

(3) For maintaining discipline, punishment should not be used. If someone does not leave his bad habits in any way only then its use would be necessary. If punishment is used again and again, it may create various kinds of complexes in the mind of pupils. Due to this their personality might be imbalanced. Hence, punishment should not be used as far as possible.

(4) The entire climate of school should be made beautiful and coordinating. This responsibility should not be borne by teachers and authorities alone. Rather for creating this type of atmosphere the students, guardians and whole of the society will have to take responsibility.

(5) Various creative activities should be given place in the school or educational institution, so that, children may derive mental and emotional satisfaction by doing the various activities according to their interests. For this there will be no possibility of creating problems of indiscipline.

(6) The children should be imparted knowledge about the importance of discipline. For this, only discourses are not enough through the examples of the various great persons. Rather the knowledge regarding this should be imparted to the children and the principal himself and teachers should produce their examples before them.

(7) Sufficient liberty and facilities should be given to the students and teachers for doing their duties in the educational institution or in the school.

(8) The guardians should be encouraged for making family life beautiful and comfortable as the child passes most of his time in home. If the family life is not appropriate rather it is contaminated, there would be possibility of failure of good efforts of school. Thus, through various means, the guardians should be motivated for making their family life healthy and adaptable.

Topic 10

Theories of classroom teaching and its applicability (Jerome Bruner, Robert Gagne, Jean Piaget)

Jerome Bruner.

Bruner's Spiral Curriculum (1960).

Cognitive learning theorist, Jerome Bruner based the spiral curriculum on his idea that "We begin with the hypothesis that any subject can be taught in some intellectually honest form to any child at any stage of development".

In other words, he meant that even very complex topics can be taught to young children if structured and presented in the right way. The spiral curriculum is based on three key ideas.

1. Students revisit the same topic multiple times throughout their school career. This reinforces the learning each time they return to the subject.
2. The complexity of the topic increases each time a student revisits it. This allows progression through the subject matter as the child's cognitive ability develops with age.
3. When a student returns to a topic, new ideas are linked with ones they have previously learned. The student's familiarity with the keywords and ideas enables them to grasp the more difficult elements of the topic in a stronger way.

Bruner's 3 Modes of Representation (1966).

Following the idea of the spiral curriculum, Bruner presented the idea of three modes of representation. These modes of representation refer to the way knowledge is stored in memory. Unlike Piaget's age-related stages, Bruner's modes are loosely sequential.

1. **Enactive (age 0-1 years).**Representation of knowledge through physical actions.
2. **Iconic (age 1-6 years**). Visual representation of knowledge stored via visual images.
3. **Symbolic (age 7+ years**). The use of words and symbols to describe experiences.

Gagné's Conditions of Learning.

Robert Mills Gagné was an American educational psychologist who, in 1965 published his book "The Conditions of Learning". In it, he discusses the analysis of learning objectives and how the different classes of objective require specific teaching methods. He called these his 5 conditions of learning, all of which fall under the cognitive, affective and psycho-motor domains discussed earlier.

Gagné's 5 Conditions of Learning.

- Verbal information (Cognitive domain)
- Intellectual skills (Cognitive domain)
- Cognitive strategies (Cognitive domain)
- Motor skills (Psycho-Motor domain)
- Attitudes (Affective domain)

Gagné's 9 Levels of Learning.

To achieve to his five conditions of learning, Gagné believed that learning would take place when students progress through nine levels of learning and that any teaching session should include a sequence of events through all nine levels. The idea was that the nine levels of learning activate the five conditions of learning and thus, learning will be achieved.

1. Gain attention.
2. Inform students of the objective.
3. Stimulate recall of prior learning.
4. Present the content.
5. Provide learning guidance.
6. Elicit performance (practice).
7. Provide feedback.
8. Assess performance.
9. Enhance retention and transfer to the job.

Benefits of Gagné's Theory. Used in conjunction with Bloom's taxonomy, Gagné's nine levels of learning provide a framework that teachers can use to plan lessons and topics. Bloom provides the ability to set objectives that are differentiated and Gagné gives a scaffold to build your lesson on.

Piaget's Theory of Cognitive Development.

Piaget is an interesting character in Psychology. His theory of learning differs from many others in some important ways: First, he focuses exclusively on children; Second, he talks about development (not learning per se) and Third, it's a stage theory, not a linear progression theory. OK, so what's he on about? Well, there are some basic ideas to get your head around and some stages to understand too.

The basic ideas are:

● Schemas: The building blocks of knowledge.

● Adaptation processes: These allow the transition from one stage to another. He called these: Equilibrium, Assimilation and Accommodation.

● Stages of Cognitive development: Sensorimotor; Preoperational; Concrete Operational; Formal Operational.

So here's how it goes. Children develop Schemas of knowledge about the world. These are clusters of connected ideas about things in the real world that allow the child to respond accordingly. Visit teacherofsci.com for more super helpful education articles and teaching tips. When the child has developed a working Schema that can explain what they perceive in the world, that Schema is in a state of Equilibrium. When the child uses the schema to deal with a new thing or situation, that Schema is in Assimilation and Accommodation happens when the existing Schema isn't up to the job of explaining what's going on and needs to be changed.

Once it's changed, it returns to Equilibrium and life goes on. Learning is therefore a constant cycle of Assimilation; Accommodation; Equilibrium; Assimilation and so on… All that goes through the 4 Stages which are defined by Age:

Piaget's Stages of Cognitive Development.

The Sensorimotor Stage runs from birth to 2 years and the child spends their time learning basic Schemas and Object Permanence (the idea that something still exists when you can't see it).

The Preoperational Stage runs from 2 years to 7 years and the child develops more Schemas and the ability to think Symbolically (the idea that one thing can stand for another; words for example, or objects). At this point, children still struggle with Theory of Mind (Empathy) and can't really get their head around the viewpoints of others.

The Concrete Operational Stage runs from 7 years to 11 years and this is the Stage when children start to work things out in their head rather than physically in the real world. They also develop

the ability to Conserve (understand that something stays the same quantity even if it looks different).

The Formal Operational Stage runs from 11 years into adulthood and this is where abstract thought develops, as does logic and cool stuff like hypothesis testing.

According to Piaget, the whole process is active and requires the rediscovery and reconstructing of knowledge across the entire process of Stages. Understanding the Stage a child is in informs what they should be presented with based on what they can and cannot do at the Stage they're in.

TOPIC 11

THEORIES OF LEARNING- ERIK ERIKSON, LEV VYGOTSKY, KOHLBERG

Erikson's 8 Stages of Psychological Development

Erik Erikson was a stage theorist who developed Freud's "Psychosexual Theory" and adapted it into a psychosocial (having both psychological and social aspects) theory encompassing eight stages. According to Erikson, we experience eight stages of development during our life span. Within each stage, there is a dilemma that we must resolve in order to feel a sense of competence and will allow us to develop as a well-adjusted adult.

Erikson's 8 Stages

1. Trust Vs. Mistrust (Age 0 - 1.5). In this first stage, infants must learn that adults can be trusted. If treated poorly children may grow up feeling mistrust towards people.

2. Autonomy Vs. Shame (Age 1.5 - 3). The "me do it' stage, children start to make decisions and show preferences of elements in their environment such as what clothes to wear or what toy they prefer. If children are not allowed to explore these preferences they may develop low self-esteem and shame.

3. Initiative Vs. Guilt (Age 3 - 5). This stage involves children learning to plan and achieve goals involving others. If parents or teachers allow children to explore this and support their choices they will develop a sense of purpose and strong self-confidence.

4. Industry Vs. Inferiority (Age 5 - 12). In this stage, children start comparing themselves with their peers. Success at this will result in a sense of accomplishment in their school work, social and family activities and sports.

5. Identity Vs. Role Confusion (Age 12 - 18). Students in this stage are asking themselves "Who am I" and "What do I want to do in my life". They will try out multiple roles during this time to find what one "fits" best. A strong sense of identity and an ability to defend their core beliefs in the face of other opinions would be considered success at this stage.

6. Intimacy Vs. Isolation (Age 18 - 40). As students progress into early adulthood their focus shifts to making and maintaining strong, intimate relationships with others.

7. GenerativityVs. Stagnation (Age 40 - 65). In middle adulthood, people are concerned with contributing to society either through their work or parenthood. Continued self-improvement for the benefit of other people figures strongly here.

8. Ego Integrity Vs. Despair (Age 65+). Those in late adulthood reflect on their lives, feeling a sense of satisfaction or failure. Those who feel failure will often obsess with ideas of what they "should have" or "could have" done. Visit teacherofsci.com for more super helpful education articles and teaching tips.

Educational Implications of Erikson's Theory of Psychosocial Development. Within an educational frame, Erikson's work gives us as teachers a framework to base our teaching on. Knowing what questions our students are asking of themselves and the world around them allows us to plan effectively. Problems arise when our class has children at different stages in it, in this case, we must carefully differentiate our pedagogy to allow supportive learning for all students.

Vygotsky's Theory of Learning.

Vygotsky takes a different approach to Piaget's idea that development precedes learning. Instead, he reckons that social learning is an integral part of cognitive development and it is culture, not developmental Stage that underlie cognitive development. Because of that, he argues that learning varies across cultures rather than being a universal process driven by the kind of structures and processes put forward by Paiget.

Zone of Proximal Development.

He makes a big deal of the idea of the Zone of Proximal Development in which children and those they are learning from co-construct knowledge. Therefore, the social environment in which children learn has a massive impact on how they think and what they think about. They also differ on how they view language. For Piaget, thought drives language but for Vygotsky, language and thought become intertwined at about 3 years and become a sort of internal dialogue for understanding the world.

And where do they get that from? Their social environment of course, which contains all the cognitive/linguistic skills and tools to understand the world.

Vygotsky talks about Elementary Mental Functions, by which he means the basic cognitive processes of Attention, Sensation, Perception and Memory.

By using those basic tools in interactions with their sociocultural environment, children sort of improve them using whatever their culture provides to do so. In the case of Memory, for example, Western cultures tend towards note-taking, mind-maps or mnemonics whereas other cultures may use different Memory tools like storytelling. In this way, cultural variation of learning can be described quite nicely.

What are crucial in this learning theory are the ideas of Scaffolding, the Zone of Proximal Development (ZPD) and the More Knowledgeable Other (MKO). Here's how all that works:

More Knowledgeable Other.

The MKO can be (but doesn't have to be) a person who literally knows more than the child. Working collaboratively, the child and the MKO operate in the ZPD, which is the bit of learning that the child can't do on their own.

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As the child develops, the ZPD gets bigger because they can do more on their own and the process of enlarging the ZPD is called Scaffolding.

Vygotsky Scaffolding.

Knowing where that scaffold should be set is massively important and it's the MKO's job to do that so that the child can work independently AND learn collaboratively.

For Vygotsky, language is at the heart of all this because a) it's the primary means by which the MKO and the child communicate ideas and b) internalising it is enormously powerful in cementing understanding about the world. That internalisation of speech becomes Private Speech (the child's "inner voice") and is distinct from Social Speech, which occurs between people.

Over time, Social Speech becomes Private Speech and Hey Presto! That's Learning because the child is now collaborating with themselves! The bottom line here is that the richer the sociocultural environment, the more tools will be available to the child in the ZPD and the more Social Speech they will internalise as Private Speech. It doesn't take a genius to work out, therefore, that the learning environment and interactions are everything.

Kohlberg's Theory of Moral Development and Education

Lawrence Kohlberg (1969) modified and elaborated Piaget's work, and laid the groundwork for

the current debate within psychology on moral development. Consistent with Piaget, he proposed that children form ways of thinking through their experiences which include understandings of moral concepts such as justice, rights, equality and human welfare. Kohlberg followed the development of moral judgment beyond the ages studied by Piaget, and determined that the process of attaining moral maturity took longer and was more gradual than Piaget had proposed.

On the basis of his research, Kohlberg identified six stages of moral reasoning grouped into three major levels. Each level represented a fundamental shift in the social-moral perspective of the individual.

At the first level, the preconventional level, a person's moral judgments are characterized by a concrete, individual perspective. Within this level, a Stage 1 heteronomous orientation focuses on avoiding breaking rules that are backed by punishment, obedience for its own sake and avoiding the physical consequences of an action to persons and property.

As in Piaget's framework, the reasoning of Stage 1 is characterized by ego-centrism and the inability to consider the perspectives of others. At Stage 2 there is the early emergence of moral reciprocity.

The Stage 2 orientation focuses on the instrumental, pragmatic value of an action. Reciprocity is of the form, "you scratch my back and I'll scratch yours." The Golden Rule becomes, "If someone hits you, you hit them back." At Stage 2 one follows the rules only when it is to someone's immediate interests. What is right is what's fair in the sense of an equal exchange, a deal, an agreement. At Stage 2 there is an understanding that everybody has his(her) own interest to pursue and these conflict, so that right is relative (in the concrete individualist sense).Individuals at the conventional level of reasoning, however, have a basic understanding of conventional morality, and reason with an understanding that norms and conventions are necessary to uphold society. They tend to be self-identified with these rules, and uphold them consistently, viewing morality as acting in accordance with what society defines as right.

Within this level, individuals at Stage 3 are aware of shared feelings, agreements, and expectations which take primacy over individual interests. Persons at Stage 3 define what is right in terms of what is expected by people close to one's self, and in terms of the stereotypic roles that define being good - e.g., a good brother, mother, teacher. Being good means keeping mutualrelationships, such as trust, loyalty, respect, and gratitude. The perspective is that of the local

community or family. There is not as yet a consideration of the generalized social system. Stage 4 marks the shift from defining what is right in terms of local norms and role expectations to defining right in terms of the laws and norms established by the larger social system. This is the "member of society" perspective in which one is moral by fulfilling the actual duties defining one's social responsibilities. One must obey the law except in extreme cases in which the law comes into conflict with other prescribed social duties. Obeying the law is seen as necessary in order to maintain the system of laws which protect everyone.

Finally, the post conventional level is characterized by reasoning based on principles, using a "prior to society" perspective. These individuals reason based on the principles which underlie rules and norms, but reject a uniform application of a rule or norm. While two stages have been presented within the theory, only one, Stage 5, has received substantial empirical support. Stage 6 remains as a theoretical endpoint which rationally follows from the preceding 5 stages. In essence this last level of moral judgment entails reasoning rooted in the ethical fairness principles from which moral laws would be devised. Laws are evaluated in terms of their coherence with basic principles of fairness rather than upheld simply on the basis of their place within an existing social order. Thus, there is an understanding that elements of morality such as regard for life and human welfare transcend particular cultures and societies and are to be upheld irrespective of other conventions or normative obligations. These stages (1-5) have been empirically supported by findings from longitudinal and cross-cultural research (Power et al., 1989).

The Good Son is the culminating third volume of Michael Gurian's best-selling series (The Wonder of Boys, A Fine Young Man) about raising young males to become responsible men.

Like many recent scholars, such as Gad Cudner (Small Criminal Among Us), Gurian offers ethical explanations of youth violence: his "good son parenting plan" revolves around morality and discipline. Synthesizing Jean Piaget's cognitive and Lawrence Kohlberg's moral stages of development, he gives detailed guidelines for instilling "good virtues" during each of three stages of moral development: obedience (birth to six), convention (seven to 12), and moral intuition (13 to 18).

On the other hand, and in contrast to Donald Black (Bad Boys, Mad Men: Confronting Antisocial Personality Disorder, LJ 3/1/99), who emphasizes genetic attribution Gurian thinks

that the best explanation for boys' misbehavior is the interplay of biological drives and "character" development. He claims that boys are born with malleable "innate temperaments" that can be transformed into positive "male characteristics" such as self-control, courage, honesty, and sportsmanship. In short, boys can become leaders without resorting to violence. Gurian uses anecdotes to show that raising good sons need not be difficult, and this book is timely, offering an insightful addition to the current debate on youth violence and schoolshootings.

TOPIC 12

EARLY CHILDHOOD EDUCATION: MEANING, NEED AND IMPORTANCE

Introduction

Early Childhood Care and Education has globally been recognized as critical for human resource development. The first 8 years of a child's life are the most crucial years because during this period of early childhood the pace of development is extremely rapid, determining the cognitive and physical growth and laying the foundation for shaping the social and personal habits and values. There is a growing body of research evidence to prove that the synoptic connections in the brain that are critical for the full development of the brain's potential take place during the early phase of childhood.

Early Childhood Development includes two main aspects, i.e., care and education. Care is a comprehensive term that includes proper nutrition, medical attention particularly in regard to immunization, security and safety and emotional support. The 'education' component includes pre-school education programmes aimed at 3-6 year olds and extends to Class I and II to cover children upto the age of 8 under the Early Childhood Care and Education (ECCE). However it is to be clearly understood that ECCE is an integrated programme that takes into account the synergistic and interdependent relationship between health, nutrition, intellectual, social and emotional development and education, addressing the imperative of holistic and all round development of the child.

Terminology ofearly childhood care and education

Nursery school is a programme for the education of 2½ to 5 years old operated as a service by public schools, usually designed to provide for active learning in a play setting.

Preschool generally means by educational programme for children prior to their entrance into kindergarten.

Pre-kindergarten refers to a programme for four year olds attending a programme prior to kindergarten.

Preprimary refers to programmes for children prior to their entering first grade; primary means grades first, second and third. In many of the private schools pre-primary consists of two or even three years variously known as LKG, UKG, Pre-nursery, Nursery, preparatory and so on.

Need ofearly childhood care and education

- Early years of the child are plastic and impressionable. It is during these years that the bases for later development are laid.
- The recent findings in the area of cognitive development have lent an educational justification to what Evans has called 'early intervention'. Early environmental stimulation helps in the cognitive development of the children.
- Fifty percent of the total intellectual development of the child is completed by the time a child is four years old. If the cognitive development of the children is normal, it means that they will acquire better knowledge, develop their thinking skills and utilize them in problem solving.
- The children provided early formalized experiences through play will be enhanced creative ability.
- By providing experience through pre-school activities his creativity level and problem solving capacity can be developed considerably.
- Young children need to acquire physical skills which demand muscular control and the development of fine and coordinated movement. Therefore, need adequate indoor and out-of-door space for an over all development.
- Early intervention is also needed in cases of children who are from 'imperfect homes'.
- Early childhood education helps the children in the formation of health of personal and social value system.

Importance of ECCE

- The rate of development of child at the preschool age (3-6 years) is so rapid that the child can be given more and more experiences. These experiences can understandably be provided by the ECCE programs in the form of enriched environment full of activities.

- Child who gets early childhood care and education is likely to fare better in primary school because of his early training. His transition from the pre-school to primary school will be made easier. He will adjust better and, therefore, the chances of his repeating grades or leaving the school will be minimized considerably.
- The provision of early childhood care and education is also a social and economic necessity in view of the fact than in case of mothers going for work, there is no one to take care of the small children at home. With joint family system on decline, there are no older members at home to take care of young ones.
- The parents living in small apartments, or in single rooms, there is no space for the child to move about and participate in play and other out-door activities. ECCE programs with adequate provision of play and other facilities can take care of the child's need for play and make him participate in other exploratory activities.
- Many mothers being themselves uneducated are not aware of the sound practices of bringing up of their children. The ECCE programs can provide guidance to the parents to bring their children in a better way.
- The children need the company of other children. In a ECCE programs, the child not only gets the opportunity of playing with other children but also develops other social skills such as fellow-feeling, cooperation, healthy competition, identification and qualities of leadership.

Objectives of early childhood education

The aim of Early Childhood Care and Education is to facilitate optimum development of the child's full potential and lay the foundation for all round development and lifelong learning. This aim is to be achieved through enabling the child to:

- Develop a positive self-concept.
- Establish a sound foundation for a good physique, adequate muscular coordination and basic motor skills.
- Imbibe good health habits and basic life skills/ self-help skills necessary for personal social adjustment.

- Enhance verbal and non- verbal communication skills which would facilitate expression of thoughts and feelings in fluent, correct, clear speech.
- Develop the five senses and cognitive skills and concepts which are foundation for higher order thinking and reasoning.
- Develop emotional maturity by guiding the child to express, understand, accept and control feelings and emotions.
- Imbibe values, social attitudes and manners important in his/her socio cultural context and to become sensitive to rights and privileges of others.
- Develop independence, aesthetic appreciation and creativity by providing child with sufficient opportunities for self-expression and active exploration, investigation and experimentation.
- Make a smooth transition from preschool to primary through development of emergent literacy and school readiness.

CONTRIBUTION OF WESTERN EDUCATORS IN ECCE

Martin Luther (1483-1546)

He was a Protestant Reformist. The primary impact of Protestant Reformation was religious, but it also had other secular effects like universal education and Literacy.

The Europe, in sixteenth century, which was a time of great social, religious and economic change, Martin Luther contribution were of great importance in the following ways:-

Great emphasis was placed on formal schooling to teach children how to read and what to teach. Luther emphasized the necessity of establishing school to teach children to read. Luther also emphasized the need for learn to read the Bible in their own language/native language. This marked the beginning of teaching and learning in their native language or vernacular. Luther translated the Bible into German.

- Protestant Reformation encouraged and supported universal education.

- Luther believed that the family is the most important institution in education of children. He encouraged parents to provide their children with religious instruction and vocational education in the home.
- Luther advocated a system of compulsory education supported by the public support to education through his letter to Mayors and Aldermen of All cities of Germany in behalf of Christian schools (1524). He said it will be the duty of the mayors and council to exercise the greatest care over the young.
- Luther supported establishment of schools to provide literacy and religious knowledge. Education and schooling were considered not only socializing forces but also means of religious and moral instructions. Many religious organization churches operate early childhood programme.

John Amos Comenius (1592-1670)

John Amos Comenius was born in Moravia, a former province of the Czech Republic. He spent his life serving as a bishop, teaching schools and writing textbooks. The Great Didactic and Orbis Pictus (The World in Pictures) received the most attention and was considered the first picture book for children.

- Religious beliefs formed the basis of his educational ideas.
- Comenius believed that human are born in the image of God. Therefore, each individual has an obligation and duty to be educated to the fullest extent of his abilities to fulfill this God like image.
- Because so much depends on education, so it should begin in the early years of life and continued through adulthood.
- Comenius believed that education should follow the order of nature which means time table for growth and learning and early childhood professionals must observe this pattern to avoid forced learning before children are ready (readiness)
- He also believed that learning is best achieved when senses are involved and that sensory education forms the basis for all learning. Golden rule of teaching should be to place everything before the senses. He said that children should not be taught names of the

objects apart from the object themselves or picture of the object. OrbisPictus helped children learn the names of the things and concepts.

- Comenius's emphasis on the concrete and sensory is a Pedagogical principle.
- Broad view of Comenius total concept of education is evident in some of his principles of teaching:

  Following in the footsteps of nature, process of education will be easy.

  i) If it begins early, before the mind is corrupted

  ii) If the mind is duly prepared to receive it

  iii) If it proceeds from the general to the particular

  iv) And from easy to difficult

  v) If the pupil be not overburdened by too many subjects

  vi) And if process be slow in every case

  vii) If the intellect be forced to nothing to which its natural bent does not incline it, in accordance with the age and with right method.

  viii) If everything be taught through medium of senses

  ix) And if the use of everything taught be continually kept in view

  x) If everything be taught according to one and the same method

Jean-Jacques Rousseau (1712-1778)

Rousseau is best remembered for his book Emile, in which he raises a hypothetical child from birth to adolescence. Rousseau's educational view expressed in Emile is: "God makes all things good; man meddles with them and they become evil."

Rousseau advocated a return to nature and an approach to educating children called naturalism. Naturalism meant abandoning society's artificiality and pretentiousness. A naturalistic education permits growth without undue interference or restriction. Rousseau argued against such modern practices as dress codes, compulsory attendance, minimum basic skills, frequent and standardized testing, and ability grouping, on the grounds that they are "unnatural".

According to Rousseau, natural education promotes and encourages qualities such as happiness, spontaneity and inquisitiveness associated with childhood. In his method, parents and teachers allow children to develop according to their natural abilities, do not interfere with development by forcing education and tend not to over protect them from the corrupting influences of society.

Rousseau felt that education of Emile occurred through three sources:

1. Nature
2. Human beings
3. Things

The internal development of our faculties and organs is education of nature. The children should learn to meet the challenges of fortune/future

According to Rousseau parents and others have control over education that comes from social and sensory experiences, they have no control over natural growth. This is the idea of unfolding, in which the nature of children- what they are to be - unfolds as a result of maturation according to their inner timetables. We should observe the child's growth and provide experiences at appropriate time. According to some education this is called Laissez-faire or "let alone" approach.

His concept or natural unfolding appears in current program that stress promoting children's readiness as a factor in learning.

His concept is used by Neill in his book Summerhill which emphasize freedom and self-regulation and to make the school fit the child instead of making the child fit the school.

Allow children freedom to be themselves. For this, give up all discipline, all direction and all suggestions, all moral trainings and all religious instructions.

Johann Heinrich Pestalozzi (1746-1827)

Pestalozzi was influenced by Rousseau and his Emile. In 1774, he started a school called Neuhof. He developed his idea of the integration of home life, vocational education and education for reading and writing.

He believed that education should follow the child's nature. His methods of education were based on harmonizing nature and educational practices. This method means follow the path of nature which leads the child slowly and by his own efforts from sense-impressions to abstract ideas. It does not exalt the master.

From his experiment with his son he refined his own pedagogical ideas.

- Early childhood professional cannot rely solely on children's own initiative and expect them to learn all they need to know.
- Parents and others should create the climate and conditions for beginning the reading process.
- He believed that all education should be based on sensory experiences to achieve their natural potential. This belief is called "object lessons".
- Pestalozzi though is best way to learn many concepts was through manipulative, such as counting, measuring, feeling and touching.
- He believed that the best teachers were those who taught children, not subjects.
- He also believed in multiage grouping.
- He believed mothers could best teach their children and wrote two books, "How Gertrude Teaches Her children" and "Book for Mothers".

Robert Owen (1771-1858)

Owen was an environmentalist; that is, he believed that in environment in which the child is reared is the main factor contributing to their beliefs, behaviour and achievement.

- He believed that society and person acting in the best interest of society can shape children's individual characters.
- He was also a utopian, believing that by controlling the circumstances and consequent outcome of child rearing, it was possible to build a new and more perfect society.
- He believed that good traits are instilled at an early age and the children's behaviour was influenced by environment: this shows the influence of both Locke's blank tablet and Rousseau's idea of innate goodness.

- Owen opened an infant school in 1816. This lead to opening of first infant school in London in 1818.Owen motivation for opening an infant school was to get the children away from uneducated parents and to provide education to his workers and transform them to “rational beings”. He opened a night school for workers also.
- He also had utopian idea regarding communal living and practice. In 1824 in village of New Harmony, Indiana he started an experiment in communal living.

Owen efforts and accomplishments have several notes worthy aspects:-

- His infant school preceded Froebel’s Kindergarten
- Owen’s idea and practices influenced educators as to the importance of early education and relationship between education and societal improvements.
- Early childhood professionals and other professionals today seek through education to reform society and provide a better world for humankind.

Friedrich Wilhelm Froebel (1782-1852)

He developed a system for educating young children. Pestalozzi advocated a system for teaching, whereas, Froebel developed a curriculum and educational methodology. For this he was called the “Father of Kindergarten”

Froebel’s primary contributions to educational thoughts and practice are in the area of learning, curriculum, methodology and teachers training.

His concept of children and how they learn is based on the idea of unfolding. The educator’s role (parents and teachers) is to observe the natural unfolding and provide activities to enable children to learn what they are ready to learn. The teacher’s role is to help children develop their inherent qualities for learning.

Froebel believed that: (Principles)

1 Education in instruction and training should be (a) passive (b) following (only guarding and protecting) (c) not prescriptive, categorical and interfering.

2 His idea of unfolding was consistent with the process of flower blooming from bud. He linked the role of educator to that of gardener. In his kindergarten (garden of children) he

visualized children being educated in close harmony with their own nature and the nature of the universe. Children unfold their uniqueness in play.

3 Unfolding and learning through play is one of his greatest contribution to early childhood education. Play at this time is not insignificant it has deep significance as follow:-

- Cultivate and foster it, protect and guard it, spontaneous play.
- Discloses the future inner life of the man.

Froebel said that unstructured play is a potential danger. Without guidance and direction and a prepared environment, little or wrong kind of learning would occur.

4 Teacher is responsible for guidance and direction so that children can become creative, contributing member of the society.

Froebel developed a systematic, planned curriculum for education of young children which had bases namely- Gifts, occupations, songs and educational games.

a) **Gifts** were objects for children to handle and use in accordance with teachers instructions so they could learn shape, size, color and concepts involved in counting, measuring, contrasting and comparison. The first gift was of six balls of yarn, each a different color, with six lengths of yarn the same color as the balls to teach color recognition. The second gift consists of cube, a cylinder and a sphere.

b) **Occupations** were material designed for developing various skills, primarily psychomotor, through activities such as sewing with sewing board, drawing picture by following the dots, modeling with clay, cutting string beads, weaving, drawing, pasting and folding paper.

c) **Songs and educational games** in this system of education intend to exercise the child's sense, limbs and muscles to make him familiar with the common objects around him. The teacher determines the selection of song in accordance with development of the child. There are three parts in each songs:

1. A motion for the guidance of mother or the teacher.
2. A verse with the accompanying music.
3 A picture illustrating the song.

She is to give the idea of the concept presented to the children as she demonstrates the thing. For example, Cube Song (when she presentsa cube, she sings a cube song)

Eight corners and twelve edges see;

And faces six, belong to me;

One face behind, and one before,

One top, one bottom that makes four.

One at the right, at left side one,

And that counts six, if rightly done.

Frobel is called the "Father of Kindergarten "because he developed both a program for young children and a system of training for kindergarten teachers. Other feature of Froebel's kindergarten are the play circle, where children sit in a circle for learning and singing songs to reinforce concepts taught with 'gifts' and 'occupations'

He was the first educator to develop a planned, systematic program for educating children. He was also the first to encourage young, unmarried women to become teacher.

Maria Montessori (1870-1952)

The Montessori method helped create and renew interest in early childhood education beginning about 1965. The Montessori method is popular for number of reasons

1 It has always been identified as a quality program for young children.

2 Parents who observe a good Montessori program like what they see: orderliness, independent children, self-directed learning, a calm environment and children at the center of the learning process.

3 Montessori's philosophy is based on the premise that education begins at birth and the idea of early learning has been and remains popular with parents.

Principles of the Montessori Method

1. Respect for the child

Because each child is unique, education should be individualized. Child is not miniature adult and should not be treated as such. She said that child's life must be recognized as separate

and distinct from that of the adult. We should restrict the education of young children to adult who impose their ideas and dreams on children and fail to distinguish between children's lives and their own.

Educators and parents should respect children and this can be done in many ways

a) Helping children to do things and learn for themselves e.g. encourages and promotes independence.

b) Demonstrate a basic respect for their needs as individuals to be independent and self-regulating.

c) When children have choices, they are able to develop the skills and abilities necessary for effective learning, autonomy, and positive self-esteem.

2. The absorbent mind

Montessori believed that children are not educated by others. One must educate oneself: "It may be said that we acquire knowledge by using our mind; but the child absorbs the knowledge directly into his psychic life. Simply by continuing to live, the child learns to speak his native language". This is the concept of absorbent mind.

There are unconscious and conscious stages in the development of the absorbent mind. Unconscious absorbent mind develops from birth to three years, developing the senses used for seeing, hearing, tasting, smelling and touching. The child literally absorbs everything.

From three to six years, the conscious absorbent mind selects sensory impressions from environment and further develops the senses. In this phase children are selective in that they refine what they know. For example, children in the unconscious stage merely see and absorb the array of color without distinguishing among them; however, from three on, they develop ability to distinguish, match and grade colors.

Simply by living, children learn from their environment. Bruner expressed this idea as "learning is involuntary" what they learn depends greatly on the people in their environment, what those people say and do and how they react.

3. Sensitive periods

There are some sensitive periods when children are more susceptible to certain behaviours and can learn specific skills more easily. Using sensitive period in teaching is to recognize them when they occur. All children experience the same sensitive period in their life, the sequence and timing vary for each child. It becomes the role of the teacher and parents to detect times of sensitivity and provide the setting for optimum fulfillment. This can be done by observations as the information is more accurate by this method than the tests.

The sensitive period for many learning occurs early in life, during the time of rapid physical, language and cognitive growth. For optimum development experiences should be provided. Once the sensibility of learning a particular skill occurs, it does not arise again with same intensity.

Teachers must do three things:

a) recognize that there are sensitive periods

b) learn to detect them and

c) capitalize on them by providing the optimum setting to foster their development

The early childhood professionals also refer readiness for the term sensitive period.

4. The prepared environment

Montessori believed children learn best in a prepared environment, which means a setting- classroom, a room at home, nursery or play ground. The purpose of prepared environment is to make children independent of adults. It is a place in which children can do things for themselves. The ideal classroom offer child-centered education and active learning.

After the introduction to the prepared environment, children can come and go according to their desire and needs, deciding for themselves which materials to work with. In Montessori classroom much of the child's work is done on floor, no need for teacher's desk, as she should be involved with children where they are working. Room should have child-sized furniture, lower chalkboard and outside areas for gardening and outdoor activities. Classroom is a place where children could do things for themselves, play with material placed there for specific purposes and educate themselves.

Freedom is the essential characteristic of the prepared environment. Children must know how to use material correctly before they are free to choose them. Children are free to pick up within the frame work of choices provided by the teacher. Choice, however, is a product of discipline and self-control that children learn in prepared environment.

5. Self- or autoeducation

It means children are capable of educating themselves as auto education. Children, who are actively involved in prepared environment and exercise freedom of choice, literally educate themselves. The role freedom play in self-education is crucial (e.g. while passing, hits the chair, walks properly, learns to command his movements)

The role of the teacher

The Montessori teacher should demonstrate certain behaviour in order to implement the principles of child-centered approach.

- *Make children the centre of learning*- Montessori said, "The teacher's task is not to talk, but to prepare and arrange a series of activity in a special environment made for the child".
- *Encourage childrento learn* by providing freedom for them in prepared environment.
- *Observe children* so as to prepare the best possible environment, recognize sensitive periods and diverting inappropriate behaviour to meaningful tasks.

Montessori believed "It is necessary for teacher to guide the child without letting him feel her presence too much, so that she may be always ready to supply the desired help, but may never be obstacle between the child and his experience"

Montessori Method in practice

In a prepared environment, materials and activities provide three basic areas of child involvement.

1. **Practical life**: The prepared environment emphasizes basic, everyday motor activities, such as walking from place to place in an orderly manner, carrying objects such as trays and chairs, greeting a visitor, learning self-care skills and other practical activities. For

example, the “dressing frames” are designed to perfect the motor skills involved in buttoning, zipping, lacing, buckling and tying. The philosophy is to make children independent of the adult and develop concentration. Water activities play a large role in Montessori methods, and children are taught to scrub, wash and pour as a means of developing coordination. Practical life exercises also include polishing mirrors, shoes and plant leaves; sweeping the floor; dusting furniture and peeling vegetables. These activities develop concentration. Children become absorbed in activities and gradually lengthen their concentration span; as they follow a regular sequence of actions, they learn to pay attention to details. Verbal instructions are minimal; the emphasis in the instructional process is on showing how-modeling and practice. The child finds the activity intrinsically rewarding and pleasurable.

Practical life activities are taught through four different types of exercises.

a. Care of the person involves activities such as using the dressing frames, polishing shoes and washing hands.

b. Care of the environment includes dusting, polishing a table, and raking leaves.

c. Social relations include lessons in grace and courtesy.

d. The fourth type of exercise involves analysis and control of movement and includes locomotor activities such as walking and balancing.

2. Sensory materials

The following materials are among those found in a typical Montessori classroom (the learning purpose appears in parentheses)

- Pink tower (*visual discrimination of dimension*) - ten wood cubes of the same shape and texture, all pink, the largest of which is ten centimeters cubed. Each succeeding block is one centimeter smaller. Children build a tower beginning with the largest block
- Brown stairs (*visual discrimination of width and height*) - ten blocks of wood, all brown, differing in height and width. Children arrange the blocks next to each other from thickest to thinnest so the blocks resemble a staircase.

- Red rods (visual *discrimination of length*) - ten rod-shaped pieces of wood, all red, of identical size but differing in lengths from ten centimeters to one meter. The child arranges the rods next to each other from largest to smallest.
- Cylinder blocks (*visual discrimination of size*)- four individual wood blocks that have holes of various sizes; one block deals with height, one with diameter, and two with the relationship of both variables. Children remove the cylinders in random order, and then match each cylinder to the correct hole.
- Smelling jars (*olfactory discrimination*) - two identical sets of white, opaque glass jars with removable tops through which the child cannot see but through which odors can pass. The teacher places various substances, such as herbs, in the jars and the child matches the jars according to the smells.
- Baric tablets (*discrimination of weight*) - sets of rectangular pieces of wood that vary according to weight. There are three sets-light, medium and heavy- which children match according to the weight of the tablets.
- Color tablets (*discrimination of color and education of the chromatic sense*) - two identical sets of small, rectangular pieces of wood used for matching color or shading.
- Sound boxes (*auditory discrimination*)-two identical sets of cylinders filled with various materials, such as salt and rice. Children match the cylinders according to the sound the fillings make.
- Tonal bells (*sound and pitch*) - two sets of eight bells, alike in shape and size but different in color; one set is white, the other brown. The child matches the bells by tone
- Cloth swatches (*sense of touch*) - two identical swatches of cloth. Children identify them according to touch, first without a blindfold but later using a blindfold
- Temperature jugs or thermic bottles (*thermic sense and ability to distinguish between temperatures*) small metal jugs filled with water of varying temperatures. Children match jugs of the same temperature.

Materials for training and developing the senses have these characteristics

- *Control of error*. Materials are designed so that children can see if they make a mistake; for example, if a child does not build the blocks of the pink tower in their proper order, she does not achieve a tower effect.
- *Isolation of a single quality*. Materials are designed so that other variables are held constant except for the isolated quality or qualities. Therefore, all blocks of the pink tower are pink because size, not color, is the isolated quality.
- *Active involvement*. Materials encourage active involvement rather than the more passive process of looking.
- *Attractiveness.* Materials are attractive, with colors and proportions that appeal to children.

Basic purposes of sensory materials

One purpose of Montessori sensory materials are to train children's senses to focus on some obvious, particular quality; for example, with the red rods, the quality is length; with pink tower cubes, size and with bells, musical pitch. The sensory materials help make children more aware of the capacity of their bodies to receive, interpret, and make use of stimuli. The Montessori sensory materials are labeled didactic designed to instruct.

Second, Montessori thought that perception and the ability to observe details were crucial to reading. The sensory materials help sharpen children's power of observation and visual discrimination as readiness for learning to read.

A third purpose of the sensory materials is to increase children's ability to think, a process that depends on the ability to distinguish, classify, and organize. Children constantly face decisions about sensory materials; which block comes next, which color matches the other, which shape goes where. These are not decisions the teacher makes, nor are they decisions children arrive at by guessing; rather they are decisions made by the intellectual process of observation and selection based on knowledge gathered through the senses.

Finally, all the sensory activities are not ends in themselves. Their purpose is to prepare children for the occurrence of the sensitive periods for writing and reading. In this sense, all activities are preliminary steps in the writing – reading process.

4. Academic materials for writing, reading and mathematics

The third area of Montessori materials is academic; specifically, items for writing, reading and mathematics. Exercises are presented in a sequence that encourages writing before reading. Reading is therefore an outgrowth of writing. Both processes, however, are introduced so gradually that children are never aware they are learning to write and read until one day they realize they are writing and reading. Montessori anticipated contemporary practices such as the whole language approach in integrating writing and reading and in maintaining that through writing children learn to read.

Montessori believed many children were ready for writing at four years of age. Following are the examples of Montessori materials that lay the foundation for and promote writing and reading:

- *Ten geometric forms and colored pencils*. These introduce children to the coordination necessary for writing. After selecting a geometric inset, children trace it on paper and fill in the outline with a colored pencil of their choosing.
- *Sandpaper letters.* Each letter of the alphabet is outlined in sandpaper on a card, with vowels in blue and consonants in red. Children see the shape, feel the shape, and hear the sound of the letter, which the teacher repeats when introducing it.
- *Movable alphabet, with individual letters*. Children learn to put together familiar words.
- *Command cards*. These are a set of red cards with a single action word printed on each card. Children read the word on the card and do what the word tells them to do(e.g. run, jump)

The following are examples of materials for mathematics

- *Number rods.* A set of red and blue rods varying in length from ten centimeters to one meter, representing the quantities one through ten. With the help of the teacher, children are introduced to counting.
- *Sandpaper numerals.* Each number from one to nine is outlines in sandpaper on a card. Children see, touch and hear the numbers. They eventually match number rods and

sandpaper numerals. Children also have the opportunity to discover mathematical facts through the use of these numerals.

- *Golden beads.* A concrete material for the decimal system. The single bead represents one unit. A bar made up of ten units in a row represents a ten; ten of the ten bars form a square representing one hundred; and ten hundred squares form the cube representing one thousand.

Additional features

Other features of the Montessori system are mixed-age grouping and self-pacing. A Montessori classroom always contains children of different ages, usually from two-and-a half to six years. Advantage of mixed age group is that children learn from, and help each other; older children become role models and collaborators for young children.

In Montessori classroom children are free to learn at their own rate and level of achievement. Children decide which activity to participate in and work at their own pace. However, children are not allowed to dally at a task.

Jean Piaget (1896-1980)

Jean Piaget developed the cognitive theory approach to learning. Piaget defined intelligence as the cognitive or mental process by which children acquire knowledge; hence, intelligence is "to know".

Basis of Piaget's cognitive theory is

i) The active involvement of children through direct experiences with physical world.

ii) Intelligence develops overtime.

iii) Children are intrinsically motivated to develop intelligence.

Piaget considered intelligence having a biological basis; that is, all organism, adapt to their environments. Piaget applied the concept of adaptation to the mental level and used it to explain intellectual development. Humans mentally adapt to environmental experience as a result of encounter with people, places, and things; the result is the cognitive development. Piaget's theory is constructivist view of development. Children construct their knowledge of the world and their level of cognitive functioning.

Piaget used the term schema to refer to any adaptive pattern of thought or action that an individual develops as a means of understanding the world. A newborn builds scheme based on reflexive actions such as sucking and grasping. Reflexive actions help the child construct a mental scheme of what can and cannot be sucked or grasped. In infancy, the child uses these sensory schemes to know the world and gain competence in acting on the environment. Schemes vary according to the environment in which the child is reared and quality of experiences.

The process of adaptation

Adaptation process is composed of two interrelated processes, assimilation and accommodation, which occur in equilibrium. Active learning is the key process by which children acquire their adaptive abilities.

Assimilation is the taking of sensory data through experiences and impressions and incorporating them knowledge of people and objects.

Accommodation is the process by which individuals change their way of thinking, behaving and believing to come into accord with reality.

The twin processes of assimilation and accommodation constitute adaptation. **Equilibrium** is a balance between assimilation and accommodation.

Active Learning: Physical activity leads to mental activity. Settings should provide for active learning by enabling children to explore and interact with people and objects. Active learning also means children will be mentally active and will engage in activities to promote thinking, problem solving and decision making. Play to Piaget is a powerful process of intellectual development.

The high/scope educational approach: A Piaget-Based Program

The program identifies three fundamental principles

i) Active participation of children in choosing, organizing and evaluating learning activities.

ii) Regular daily planning by teaching staff in accord with a developmentally based curriculum and child's observations.

iii) Developmentally sequenced goals and materials for children.

Objectives

- Develop in children a broad range of skills, including problem solving, interpersonal and communication skills that are essential for successful living.
- Curriculum encourages student initiative by providing children with materials, equipments and time to pursue activities they choose.
- It provides teachers with a framework for guiding children's independent activities towards sequenced learning goals.

The five elements of the high/scope approach

I. **Active learning:** The idea that children are the mainspring of their own learning, the teacher supports children's active learning by stocking the classroom with a variety of materials making plans and reviewing activities with children, interacting with and carefully observing children and leading small and large group active learning activities.

II. **Classroom arrangement:** Classroom arrangement invites children to engage in personal, meaningful, educational experiences. The classroom contains five or more interest areas that encourage choice. The organization of materials and equipment in the classroom supports the daily routine-children know where to find materials they can use to encourage self-direction and independence. Flexibility and versatility contribute to learning function. The teacher selects the centers and activities to use in the classroom based on several considerations.

a. Interests of the children (e.g. Kindergarten children are interested in blocks, arts and housekeeping.

b. Opportunities for facilitating active involvement in serration, number, time, relations, classification, spatial relations and language development.

c. Opportunities for reinforcing needed skills and concepts and functional use of those skills and concepts.

III. **Daily schedule:** The schedule considers the developmental levels of children, incorporates a sixty to seventy-minute plan-do-review process, is consistent throughout the day.

IV. Content: The High/Scope key experiences are lists of observable learning behaviours.

V. Assessment: Teachers keep notes about significant behaviours, changes, statements and things that help them better understand a child's way of thinking and learning.

Role of teacher

1. Teachers study their experiences with children and with classroom activities to achieve new insight into each child's unique skills and interests.
2. Interaction with the child is another aspect. Listen closely to what children plan and then actively questions and works with them to extend their activities to challenging levels. The questioning style permits free conversation and this approach permits the child and teacher to interact as partners, as mutual doers and thinkers.
3. Due to freedom in choice of activities, the adults in High/Scope do not make the children pay attention, wait, perform tasks of little interest, act on someone else's decisions. Rather they develop and equip a stimulating environment, maintain a consistent daily routine, introduce ideas and activities as appropriate to extend child-developed plans or enable skill development and interact naturally with children.

A daily routine to support active learning

A consistent daily classroom routine is maintained that varies only when children have fair knowledge in advance. This adherence to routine gives children the consistency they need to develop a sense of responsibility and at the same time enjoy opportunities for independence. The High/Scope curriculum's daily routine is made up of a plan-do-review sequence and several additional elements.

1. **Planning time:** Planning time gives children a structured, consistent chance to express their ideas to adults and to see themselves as individuals who can act on decision. They experience the power of independence and joy of working to be conscious of their intentions which supports the development of purpose and confidence. Teacher talks with children about their plans, thus helps to clarify the ideas and think about how to proceed. This gives opportunity for teachers to encourage and respond to child's idea, suggest way to strengthen the plan and understand each child's level of development and thinking style.

2. **Key experiences:** Teacher must also encourage and support children's interests and involvement in activities. Plan key experiences to broaden and strengthen children's emerging abilities .e.g. experience to support learning in areas of speaking, listening, writing and reading.

3. **Work time:** This part of plan-do-review sequence is longest single time period in daily routine. Adults do not lead work-time activities -children execute their own plan of work-but neither do they just sit back nor watch. Adult's role is to observe children to see how they gather information, interact with peer, and solve problems and encourage children to extend and set up problem-solving situations.

4. **Cleanup time:** Cleanup time is integrated into plan-do-review sequence. Children return materials to labeled places. This provides order to classroom and provides opportunities for children to learn and use many basic cognitive skills.

5. **Recall time:** The final phase of plan-do-review sequence is the time to represent their work time experience in a variety of developmentally appropriate ways. Recall strategies include drawing pictures, making models, physically demonstrating how a plan was carried out or verbally recalling the work time. This help them to reflect what they have done, how it was done, brings them close to planning and work time, express what they experience. Putting ideas and experiences into words facilitates language development.

Small-group time: The teacher presents a short activity in which children participate in any field trip, music experience, seasons of the year or art etc. Children follow no prescribed sequence, but are as per children's need, abilities, interest and cognitive goals and children work in their own way and at their own rate involvement of all children is important. An active small group time gives children the chance to make choices to explore materials and objects and to talk and work with adults and children.

Large-group time: The whole group meets together with an adult to play games, sing songs, do finger plays and perform basic movement activities, play musical instrument or reenact a special event. This provides each child a sense of community, to share and demonstrate ideas, and to take part in group problem-solving.

Parent involvement: The key to effective parent involvement is the two way flow of information.

Curriculum themes:

1. Children's thinking is different from that of adults and adults must not try to impose their thinking on children. Adults should provide a setting in which children can think their own ideas and construct their own model of the world. Appropriate teacher behaviours include tolerance, support, acceptance of wrong answers and encouragement to make hypotheses.
2. Children must be actively involved in learning. Passive child does not have the proper opportunity to develop intelligence to the fullest.
3. Learning should involve concrete objects and experiences with many children and adults.
4. The fourth theme pertains to the quality and relatedness of experiences.

INDIAN EDUCATORS

M.K. Gandhi (1869-1948)

We have many types of pre-schools in India such as MontessoriSchools, Kindergartens and Nursery Schools they are not the educational systems that were developed for our children or experimented with our children. These systems are the contributions of people from the West, with a different outlook, standard of living and culture. Though we have accepted these systems with some modifications and changes to suit Indian children, we can not say that these are the best methods for our young children in the villagers of India. After careful study and observation and practice of these systems in India Mahatma Gandhi gave us a new system of education to experiment with Indian children in the Indian soil itself and develop a new national system of education best suited for our children, which is called the Basic Education orNai-Talim or the Wardha Scheme of Education.

Education of the pre-school child, according to Gandhiji can be divided into two periods.

1. The first period in the educational programme is, therefore, adult education, that is, the education of the community as a whole and of every individual member for a happy, healthy, clean and self-reliant life.

2. The second period is called Pre-Basic Education or the education of children under seven. As soon as the child becomes independent of mother, is ready to go away from her, the education programme extends from home to school. Pre-basic education in the fullest sense is "the education of children under seven for a development of all their faculties, conducted by the school teachers in co-operation with the parents and the community in schools, in the home and in the village."

Philosophy and aims of Pre-basic education

(i) The teacher and parents should co-operate in carrying out the education of young children.

(ii) The home where the child is born and lives influences his and that becomes the first centre of his education and learning.

(iii) Pre-school education must not be expensive so that it can reach the millions in the villages.

(iv) A child has to be active, creative and playful. He has to learn to do something through the medium of play.

(v) Though the child in pre-school period cannot be self-sufficient or self-supporting an attempt should be made to develop this quality, Self-sufficiency according to Gandhiji, is an attitude of mind.

Based on Gandhiji's above mentioned ideas of pre-school education, the first experiment in pre-basic education was started in 1945 in the village of Sevagram (Wardha, MaharashraState) under the guidance of ShrimatiShantaNarulakar. The programme of instruction in a pre-basic school is geared to the needs of the following four groups of children:

Stage 1: Conception of birth

Stage 2: Birth to 2½ years

Stage 3: 2½ years to 4 years

Stage 4: 4 years to 7 years

In the first two stages education involves both the mother and the child. Opportunities are provided to the mothers to learn more about new trends and scientific methods of child rearing, health and hygiene and mother craft. Children are given custodial care and medical attention.

The children between 2½ years and 4 years are provided play or group activities. They are left free so that an atmosphere is created which might motivate them to do something. They get full freedom of act, to move about and to choose their own activities. The teacher should see to it that the child handles the material correctly and uses it effectively through repetition.

The child after his fourth birth day participates in some definite purposeful activities such as cleaning the classroom, washing the small vessels, watering the plants, measuring and weighing things, ginning cotton with a small iron rod and wooden plank, bringing water, drawing, printing and similar other activities. The teacher must be in a position to understand child's likes and dislikes.

Gandhiji was also concerned with the character of education. He was particularly concerned with the defects of elementary education. "*In particular, the emphasis on memorization, the divorce of contents from the environment, the overwhelming costs and the general impracticability of the curriculum of the primary school has come under criticism."*

Gandhiji's views on other aspects of early childhood education

(i) Concept of education: Good education, according to Gandhiji, is "that which draws out and stimulates the spiritual, intellectual and physical facilities of the children". His educational philosophy is "naturalistic in setting, idealistic in aims and pragmatic in method".

(ii) Curriculum: The curriculum is to be craft and activity-centred. The time-table was carefully worked out by Gandhijihimself.The scheduling of different subjects was as follows:

Craft:	3 hours-20 minutes a day
Music, Drawing,	
Mathematics:	40 minutes
Social Studies and Natural Science:	20 minutes
Physical Training:	10 minutes

At the pre-school level, the emphasis can be laid on constructive activities. Teaching is done through "concrete life situations in order that what is taught can be assimilated into life. The craft becomes the source out of which experiences and activities are born". The key note of Gandhiji's thought, "is creativity in education. He wanted education to deal more with the concrete and so made manual work and crafts an integral part of the school system. He believed that a child up to 14 to 15 has a natural capacity to grasp the concrete". The craft is to be taught not merely for productive work but for developing the intellectual capacities of the children. This is one of the important principles of Piagetian methods.

(iii) Methods and approaches: Correlation is an important method of Basic Education. It is this technique which binds education with child's life. Correlation is the technique to bind education to the child's life and beyond. It is an attempt to combine hand-culture with mind-culture... Basic education through correlation was directed towards the integration of the student and the integration of curricula.

(iv) Books: In primary education, we should use very few books. Most of the teaching should be done orally. The first year in primary school should be completely without books. The teacher, by using oral methods, has to save the child from a 'tyranny of words'.

(v)Role of teachers: Teacher's role has to be that of a mother. Gandhiji said," One who cannot take the place of a mother cannot be a teacher." Therefore, the teacher has a mother's role in primary education. The teacher has to nurture the student, live with him and bring him to the level of greater maturity. The teacher is particularly relevant for the education of the heart which could only be done through the loving touch of the teacher.

(vi) Religious education: The Wardha Scheme left out religion as a separate academic subject, because religious teaching as it is done today might lead to conflict, rather than unity. He emphasized classical principles of ethics and morality in general rather than religious teaching

(vii)Politics and education: Through Gandhiji's great drive was toward political independence. He was having both an idealist and pragmatic approach to education.

RabindraNath Tagore (1861-1941)

Tagore was born at Calcutta in 1861. He was born at a time when nationalism was fused with religion. Tagore wanted freedom for India but freedom from poverty, the growing Muslim-

Hindu conflict, the caste system, and other social and religious as well as political restraints. Tagore started a small Bengali school at Bolpur which his father called Shantiniketan (Abode of Peace). It was at this school that Tagore gave theoretical and practical shape to his educational ideas.

Tagore's Educational philosophy:

Tagore's naturalism: Tagore was a naturalist to the core. He finds a fundamental unity between man and nature. So he wants that 'the child's education must be organized in natural surroundings. Thus the child can develop power of communication with the world. Tagore was convinced that in early years the child should arrive at truth through natural process spontaneously by coming into contact with things and persons. This would pave the way for the widest possible development of child's interests. Learning for the child is essentially explorative, active and full of joy.

Tagore's humanism: To Tagore man is the measure of everything. All values and virtues are to be realized through man; truth, good and beauty are felt as such by man.

Tagore's internationalism: He wanted that East should its best to the west and in turn it should assimilate the best that the west has to offer.

Tagore's idealism: Tagore believed in the ancient Indian Educational ideals and practices. To him education is not information nor does it consist in passing exams. He regards education for a living in the world with a view to seek communication with the Divine power.

Tagore's ideas for the education of young children are described below:

(i)Aim of education: Education for Tagore was gradual and progressive growth of an organism. A child grows as an organism grows. Education in his school begins with training of instincts and emotions and in self-reliance and communal cooperation; then art, music and play were introduced; only with this foundation was an attempt made toward intellectual understandings; the social and economic patterns of national and international culture was introduced last of all.

(ii) Curriculum: The curriculum was not subject-centred, but activity-centred. Education in play and activity preceded all else, all this was followed by training through activity and play in order to develop a hardy youth. Art for Tagore is the bridge between man and the world, since the cardinal principle in his educational theory is the freedom for creative self-expression. He

stressed the creative and artistic aspects of learning, crafts, work and play. Literature was the true vehicle of education, which carried it beyond schools and colleges. He encouraged the reading and knowledge of the folk literature for its cultural significance and in order to grasp the psychology of the people.

(iii) Methods of teaching: Tagore emphasized the following three methods:

(a) Peripatetic method: Tagore was concerned with the association between body and mind in order to establish a total rhythm and harmony in life. The children should be taught drama and histrionic arts as compulsory subjects from the beginning because the children need the opportunity to give expression to their feelings through their bodily movements. Tagore believed that the children must express themselves with their whole bodies and that education of the body must be in contact with air, water, earth and light. The body should sway with inner movement of the thought. Employing the whole body, movement must accompany thoughts and emotions."

(b) Activity method: Tagore emphasized activity method. For example to get the children master the idea of 'tearing', the children to understand the meaning of the verb "to tear"

(c) Environmental approach: Tagore emphasized the approach to teaching through environment. To younger children teaching should be done when they are having "nature walks" or are "on trek".

"So with children in school, let them recite while out walking, let them do their thinking aloud. If possible recommend children to carry their note books and to go on writing while they are on trek. First these notes would be about the things they see around them, facts and observation of natural history, aspects of the country side, experiences on the road, of market day, of topics of conversation, of their special interests. All the pictures give details of the life around them they should sketch or record."

(iv) Discipline in schools: Tagore was against rigid discipline. He would give a break of five minutes between two class periods. He would change the place of class. He would move his class from the shade of one tree to the shade of another. Childhood is a time of freedom, freedom specialization and other social restrictions. Too many restrictions, according to him, would make the education joyless. The child can give expression to his joy through play. He can invent things with the help of material at hand.

(v) Student-teacher relationships: The most important medium of human development for Tagore is student-teacher relationship. The primary function of the teacher is to produce an atmosphere of creative activity within the ashram school.

ZakirHussain (1897-1969)

Dr. ZakirHussain was an educationist. His most important contribution to education was his association with Pre-basic and Basic education as President of Hindustani TalimiSangh from 1938 to 1950. He gave the first workable pattern of Basic Education to Gandhiji which was later implemented in 24 per cent of the Indian schools at the primary and middle levels.

He gave his views on early childhood education years as President of the All India Child Education Conference held at Indore in 1955.

Views of Dr. ZakirHussain on education

1. Education at no stage should be only a preparation for life that is to follow; it should be life itself, anything (education) which is only preparation is a kind of violence to the child.
2. The activities at the schools and home should be integrated. As the majority of Indian homes have to labour under overwhelming handicaps of ignorance and poverty, the children's schools should attempt to be a better home by combining affection and competence
3. Standardization of material is useful upto a point. Things which can be used in all schools at all places may be standardized with advantage. But this should never take away from the teacher the responsibility of devising her own material in consonance with the immediate environment of the children.
4. The teacher should retain her active spontaneity. It should be used without hesitation.
5. The aim of education according to Dr. ZakirHussain was emotional integration.
6. Education instead of being bookish should become an integral part of the personality.
7. The teacher should not merely be a source of knowledge rather he should be a source of love and affection.
8. The school should function as a society.

9. In curriculum, in addition to the study of mother tongue, English should be taught as a literary and international language. For acquiring knowledge, nature study, observation and activity should be planned.

JidduKrishnamurti (1894-1991)

JidduKrishnamuriti was born on May 11, 1894 in the small hill town of Madanapalle which is about 225 kms. north of Madras. Krishnamurti's concern with education is of long standing. He founded two schools in India: one at Rajghat in Banaras and the other at RishiValley in the Chitoor District of Andhra Pradesh. He also opened a school in England at BrockwoodPark in Hampshire for boys and girls between the age of 13 and 18. In the United States of America he also started school for young children in the OjaiValley in California. Krishnamurti visited his schools annually and held discussions with parents and teachers of the children.

Krishnamuriti'sbasic educational philosophy

1. Self knowledge is the best education. The basic theme of his educational philosophy is that children are not to be fed on others ideas, dogmas, sayings, beliefs, slogans and quotes.

2. Freedom rather than conformity is the essence of true knowledge.

Krishnamurti's views on various aspects of education

(i) Current system of education: The existing system of education, according to Krishnamurti, has some inherent drawback. It does not awaken the integrated intelligence of the child. It is preventing the child to understand himself. It is encouraging him to conform to a rigid system. It is blocking his thinking. It is based upon conformity which leads to the development of mediocrity in the child. The child is trained to conform to the societal norms. The change for him will be risky. The present system of education prepares the child for different jobs through special training without which they will not feel secure. Training for different callings of life is no education. Though technical training makes the learners proficient, yet it does not bring completeness in life. Technical knowledge emphasizes secondary values. It does not resolve the inner psychological pressures and conflicts of the students. Intellectually the child is prepared for various jobs, yet little attention is paid to the 'promptings of heart' Therefore, something has to

be done for the emotional development of the child which is only possible through right type of education.

(ii) Aims and objectives of education: The purpose of education is not to acquire knowledge and correlate it with other aspects of life. Education should prepare the child for life as a whole. Education should bring about an integrated individual who is capable of dealing with the total life. Education should awaken the capacity to be self-aware. The right kind of education, in addition to preparation for life, should help a person to experience the integrated process of life. It should encourage thoughtfulness and concern for others.

Ideals, preachings and sermons have no place in the education system of Krishnamurti. They prevent comprehension of the present. They fixate the individuals on the past. We like ideals because they provide convenient escape from the present. The teacher who follows them is incapable of understanding his students and dealing with them intelligently. When we train a child according to some idealistic pattern or in a particular fashion, we prevent him from growing into an integrated person. The idealist, is not concerned with the whole but only with the part.

Another objective of education is to create new values. To implant the existing values in the mind of the child is to make him obedient and conforming to fixed patterns. It is to condition him without developing his intelligence. It is only with the individual freedom and love that good men can develop. Only right kind of education can provide this freedom. Conformity and obedience have no place in the right kind of education.

The purpose of education is to cultivate right type of relationship not only among the individuals but also between them and the society. The right kind of education should not be based upon fear. Because anything done out of fear is not right. A school with a touch of mutuality can provide proper education.

(iii)Approach to curriculum: Education is not merely for the mental development of the child. It should not merely provide for technical efficiency. The young children are easily influenced by the environmental pressures. They are purposely influenced by the religious people, political leaders and others to mould their thinking in a particular way. Right kind of education should help them to be beware of their influence so that they do not repeat their slogans or sermons. Their authority should not influence their ‘minds’ and hearts’.

(iv) Upbringing of children by parents: The bringing up of a child requires careful observation and care on the part of parents. Parents love has no substitute. But most parents corrupt their love for children by foisting their own fears and ambition on their children. They try to condition them to a particular way of living and distort their outlook for life. Both parents and teachers need to be re-educated in this regard.

(v) Methods of educating the children: Nothing should be imposed from above. The teachers should not exercise their authority and block the thinking of children. They should not project upon him their prejudices, hopes and fears. They should not mould him to fit the pattern of their own desires.

1. Any method which classifies children according to temperament and aptitude merely emphasizes their difference; it breeds antagonism encourages divisions in society and does not help to develop integrated human beings.

2. We should try to understand a child and then develop him according to his capacities rather than imposing upon him an ideal of what we think he should be. To encourage him to conform is to produce in him a constant conflict. "Ideals are an actual hindrance to our understanding of the child and to the child's understanding of himself".

3. A teacher will not depend upon a single method. He will study each individual child and then base his method accordingly. Mass methods of instruction are not suitable. Teachers should use case study approach for understanding the difficulties, tendencies and capacities of each child.

(vi)Concept of discipline: One drawback of external discipline is that the system assumes more importance than the human beings who are included in it. Discipline takes the place of love. It is because our hearts are empty that we cling to discipline. Freedom can never come through discipline and through resistance for change.

"Reward and punishment for any action merely strengthens self-centeredness, action for sake of another, in the name of country of God, leads to fear and fear can not be the basis of right action."

(vii) On teachers and type of schools: We should have schools with a limited number of students. Right type of teachers should be engaged. Small schools with limited financial

resources are suggested. Right kind of education is concerned with the children not with the number of children it has on its rolls. Teachers, in such schools, will have vital interest in the children. Schools of small size will be supported by some parents.

Only right type of teachers opposed to ideologies can provided a lasting solution to our problems. A right type of teacher is inwardly rich. He does not make any demands, nor is he ambitious and power hungry. He does not use teaching as means of acquiring position or authority. He is also free from the compulsion of society and the control of government departments. He does not merely transmit information. He is the one who points out towards wisdom and truth.

The teachers are not afraid of the headmaster nor does the headmaster feel intimidated by the older teachers. On the other hand, if the headmaster is dominating, spirit of cooperation and freedom does not prevail. Rest of the staff becomes a non-entity. Equal distribution of work gives leisure to all teachers. They resolve their differences by discussion. Students and teachers meet freely and regularly. The students manage their own affairs through self Government. Cooperation between teachers and students is not possible, if there is no mutual affection and respect between them. There should be cooperation between the school and home.

"If the teacher takes a real interest in the child, as an individual, the parents will have confidence in him. In this process, the teacher is educating the parents as well as himself, while learning from them in return."

TarabaiModak (1892-1973)

PadambhushanShrimatiTarabaiModak, a pioneer of pre-school education in India, was born in 1892. She devoted nearly half a century for the cause of pre-school education.

This college started in 1925, incidentally proved to be the first training college of its kind in India. Later on they founded a society for the propagation of pre-school education, brought out a monthly journal and published instructional material for teachers, parents and teachers.

In 1931, the movement of pre-school education was extended by Tarabai to Maharashtra. The pre-school movement was criticized in Gujarat on the ground that, it serves only the children of the rich and a poor country like India cannot afford to adopt. Tarabai took up this as a challenge and conducted successfully a Balwadi in a Harijanwada at Amaravati in Maharashtra.

In 1936, she started ShishuVihar Kendra at Bombay which served as a centre of pre-school educational training. This centre functioned in a well-to-do locality. In the year 1945, she moved to Bordi and founded the Gram BalShiksha Kendra there. She worked in Bordi for 12 years and then shifted her entire Institution to the tribal area of Kosbad in 1957 where she tried her methods on the most neglected tribal children. Her contribution lies in the development of Balwadis. A Balwadi, developed by Tarabai, is a type of indigenous nursery school.

She started two type of Balwadis at Bordi-Central Balwadis and AnganBalwadis. The Central Balwadis were run during the regular school hours. AnganBalwadis were started at the convenience of the children in their own localities. Modak (1955) herself gave the distinction between the two.

There is a great difference between these two types of Balwadis. Firstly, the Central Balwadi is conducted for 5 hours, while the 'AnganBalwadi' is conducted for an hour and half. Secondly, the Central Balwadi is fully equipped while the 'AnganBalwadi' is almost without any material except a mirror, combs, buckets, scissors, napkins etc. Thirdly, the children are brought from their homes to the Central Balwadi while the 'Angan-Balwadis' are conducted just near their huts under the eyes of the parents and elders.

Programmes of the Angan-Balwadis included personal and general cleanliness, decoration, crafts and hand work, oral language, physical education, rhythmic movements and social activities.

The Angan-Balwadi concept was further developed by ShrimatiModak with a set of ideas to the teachers. The teachers should make their own indigenous materials out of locally available raw materials. Those things which could not be made by the teacher were got made by the local artisans. The idea of AnganBalwadis is a unique contribution which went a long way in making the nursery education truly indigenous in content and form.

Tarabai's education method is a significant contribution to pre-school education in India. Her method brought in a 'silent revolution' in the tribal community of Kosbad.

ShrimatiTarabaiModak, alongwithShrimatiSarla Devi Sarabhai (another pre-school education worker), were rightly called one of the "two Montessori mothers". To both these workers goes the credit of popularizing the "Montessori Method" and thereby Indianisation of Montessori education.

GijubhaiBadeka

GijubhaiBadeka started working in the field of Pre-School Education in 1920 at Bhavnagar in Gujarat. He was later joined by ShrimatiTarabaiModak. Both of them prepared the necessary literature for pupil teachers and started a training college in 1925 for pre-school teachers on Montessori lines. Later on he founded a society for pre-school education and published literature in this rather neglected area of education. Writing about Gijubhai's contribution in the development of 'The Systems of Pre-school Education in India', RanjitBhai says,

The name of GijuBhai should be written in golden letters in the history of National Movement, particularly for the Montessori Movement in India because he started his institution in 1920 (long before Madame Montessori came to India) and organized his first training centre at Bhavnagar in 1924.

Other early pre-school workers

There are other workers who made equally significant efforts for the cause of pre-school education in India. Prominent among the early workers were ShriGijubhaiBadeka, ShrimatiTarabaiModak, ShriS.N.Namle, Dr. G.S. Arundale, ShrimatiRukmaniArundale, ShrimatiShaliniMoge, (Late) RajalakshmiMuralidharan and many others. According to Mina Swaminathan*, "(they) contributed to the building of a rich tradition in the pre-school education in India which received further impetus with the stay in India of Madame Maria Montessori".*

Topic 13

EARLY CHILDHOOD PROGRAMMES IN INDIA

In this section major types of pre-school programmes are described. These include the following :

(i) The Kindergarten type,

(ii) The Montessori type,

(iii) The Nursery type,

(iv) The Open-type,

(v) The Pre-Basic type,

(vi) The Balwadi type, and

(vii) The Day Care type.

THE KINDERGARTEN TYPE

Frederick Froebel (1782-1852) opened his Kindergarten in Blankenburg(Germany) in 1837. This was based upon his philosophy of education which is given in "The Education of Man". He formulated his philosophy around the spontaneous and self-sustaining nature of children. Play and development of children's spiritual feelings were considered paramount. The unfamiliar educational materials, such as geometric blocks (used to teach form and number concepts), musical activities, and games systematized through play formed the core of 'Froebal's Kindergarten'. The Child's natural tendency to play and dance in circles was capitalized upon by Froebel to cultivate the child's imagination.

Functions of a Kindergarten

Major objectives of the Kindergarten system are their emphasis on sociability, aesthetics, sensory, motor development and achievement motivation. The functions of the Kindergarten, are to assist the child towards the realization of the following objectives :

(1) Friendliness and helpfulness in relationship with other children,

(2) Greater power to solve problems based on individual activities and group relationships,

(3) Respect for the rights, property, and contributions of other children,

(4) Responsiveness to intellectual challenge,

(5) Achievement of good sensory-motor coordination,

(6) Understanding of concepts necessary for the continued pursuit of learning,

(7) Responsiveness to beauty in all forms, and

(8) Realization of individually and creative properties.

Froebel's Curriculum

Froebel's curriculum includes gifts, occupations, games and songs, nature study, work in language and arithmetic(Discussed under Froebel's Philosophy of Education).

(i) Gifts

(ii) Occupations

(iii) Games and songs

(iv) Nature study

Activities of the Kindergarten : General activities are the same from one school to the other. Some institutions placed more stress upon pre-academic training in order to build academic readiness; other placed stress on creative activities. The distribution of time for these activities is as under :

(i) *Creative Activities :* 40-50 per cent of a typical K.G. day is devoted to specific creative activities (art work, model building and so on).

(ii) *Music* : Singing, listening and rhythmic activities.

(iii) *Language Based Activities* : Story listening and telling, poetry, group discussion such as show and tell, and question-answer.

(iv) *Self-Care Activities* : The remaining time is distributed among self-care, free play and rest periods.

The flexibility of Kindergarten curriculum enables the teacher to ensure participation of children in activities with emphasis on language, mathematics, science and social studies concepts. This also permits the teacher to do the things in his own way. This freedom is both a boon and a hazard to young children. It provides a good foundation for future school learning.

THE MONTESSORI TYPE

Maria Montessori developed her method on slum children in Rome. The Programmes became so successful that they attracted visitors from all over the world. She extended her school and began to develop teacher training programmes for the "directoresses" of Montessori schools. Soon an international movement developed with Montessori schools established throughout the world. Montessori also visited India twice.

Underlying Principles of Montessori Type Programme

(i) Every child has within him the capacity for his own development, which is a process of unfolding from within.

(ii) Environment can modify development either by helping or hindering it, it does not serve as a creative function.

(iii) The child develops through a series of stages. At each stage he requires new types of learning experiences.

(iv) Freedom of action allows each child of seek out situations from which he can learn.

(v) Traditional schooling is adult dominated, thus providing experiences which are not consistent with child's nature.

(vi) If a child is not ready for an experience, the teacher should wait so that the child may recognize his inner life.

(vii) The child must mould himself, rather than be moulded by an adult who is generally a teacher or parent.

(viii) The role of the school is to create an environment where the child has the opportunities of observation. The child has great powers of observation even during infancy. Let him make use of symbolic materials so that he can gain some knowledge for original sensory impressions.

Major thrust of Montessori programme is general development of the child. The areas of concern in this programme include sensory-motor, intellectual, language and moral development.

Montessori Curriculum : The Montessori curriculum includes the following activities :

(i) *Practical Life Activities* : Cleaning and caring for oneself and one's surroundings. Washing hands and face, and brushing teeth as well as cleaning and dusting the classrooms.

(ii) *Sensory Training* : The children are taught visual perception of dimension such as thickness, length, width, and height through the use of materials which manifest these attributes. Form and colour perception are taught with materials that the children must first discriminate among, and then place into a series.

Sound discrimination is taught through boxes, containing different materials, that are shaken and emit different intensities of sound that may be matched or placed in a series. Sets of tone bells are also used. A silence game helps children to feel absence of sound. The children are provided opportunities for touching the smooth and hard surfaces. Thermal sense is trained with bowls filled with water of different temperatures, and the basic sense by touching the wooden tablets of the same dimensions but different weights. Muscular education is given through everyday activities, exercises in practical activities, as well as motor and respiratory gymnastics.

(iii) *Nature Study* : According to Montessori every school should have an outdoor area which should have a garden. Gardening will enable them to understand the cause and effect relationship. The children see the consequences of their work.

(iv) *Intellectual Education* : Observation and manipulation of sensory materials led to the development of such activities as labeling, identification and recall.

(v) *Language Education* : Sensory education was related to both language and the exercises in practical life. Teachers named the materials which were repeated by the children. Emphasis was placed on teachers' correct pronunciation. Teachers' own utterances in the classroom are important. Reading, writing and graphic language are approached sensorily first, with writing preceding reading.

Arithmetic is also included. The child moves from comparing quantities to counting and associating written numbers with quantities. The decimal and basic number operations were also included in the early childhood programmes.

THE NURSERY TYPE

The first nursery school was established in England by two sisters – Rachel and Margaret McMillan in 1911. They were born in New York. But they moved to England just prior to the Civil War. Rachel, the elder of the two, died in 1917. Margaret carried on the work until her death in 1931. She was speaker and writer and the ideas for running a nursery for children

between the ages of 2 to 7 were her own. Margaret had studied music and acting during her formative years. They both opened children's clinic in 1902, which later expanded to Nursery school in 1911 and ultimately a training college to prepare nursery school personnel was established.

Underlying Principles of Nursery

The ideas of the founders of nursery school were influenced by the development of knowledge of human physiology and medicine in the latter part of 19^{th} century.

(i) Adequate nutrition, cleanliness, fresh air, proper exercise and living in a healthy environment were all basic requirements for development and education.

(ii) The ideas was to nurture the children in the same way as plants are nurtured in a nursery. To Margaret McMillan the nursery school became the "human garden that way blossom in the sun". Education could operate in a healthy environment.

(iii) Training of senses was as important as the development of various muscles of the body.

(iv) Training of imagination got high emphasis. Margaret saw expressive activity, play, art and movement as initiative. Imagination is necessary for advancement in all spheres of life. It is equally important for the workers as well as for the scientist and artist.

Aims of Nursery : The two aims of nursery school are :

(i) To help in the physical and mental development of young children.

(ii) The nursery school should provide for the qualities of child, rearing environment available in rich home.

Curriculum : The nursery curriculum had the following six aspects :

(i) *Caring Aspects* : This included eating, sleeping and outdoor activities.

(ii) *Learning Activities* : These were specified and also differed by age levels. The younger children were provided with activities to teach self-caring skills to the children For example, buttoning, lacing, and tying laces were provided. Younger children were given form boards and older with alphabet boards, coloured wooden squares and colour wheels.

(iii) *Perceptual Motor Activities* : Many activities were provided to the children for self-expression. Hand crafts such as clay modeling, building with "bricks", and using other creative materials were very much part of the programme.

(iv) *Garden Activities* : Gardens were planted in the schools with trees, and beds of flowers and vegetables. Herbs were given to provide sensory experiments of taste and smell as well as vision. Animals were kept in the nursery school and children were given responsibility for the care and feeding of these pets.

(v) *Movement Activities* : These included movements to extend their physical ability, and movement as a way of studying music.

(vi) *The Knowledge of 3 Rs.* : As the children grew older they were provided with lessons in the 3 Rs—reading, writing and arithmetic. They were introduced to these aspects in the nursery school by the age of five. Science was taught through nature study. Environmental studies, as is taught in to-days' primary schools, was a broader activity of nature study.

In the above six programmes two viewpoints are reflected. One is the emphasis upon the basic socialization and child's physical health needs. Second is the emphasis on fantasy play to promote sensory motor and emotional development.

School Readiness Programems of an Indian Nursery School : Muralidharan (1970) has described the activities of a laboratory nursery school. The children are promoted to the K.G. class after they have undergone nursery school programme. Having already spent time in nursery class, they are ready for the programme which build in them the school-readiness. School readiness is built by organizing programmes which consist of : (i) Reading readiness, (ii) Writing readiness, and (iii) Readiness to work with numbers.

(i) *Reading Readiness* : Reading readiness programmes start with a great deal of exposure to language experiments. Time is devoted for free-conversation, narration of events, question-answer sessions. Picture book reading followed by discussion is almost a daily activity. Every story read and discussed is then dramatized. Play with words is a popular game in the K.G. class. Stress is also laid on exercise in visual discrimination and auditory discrimination. Auditory discrimination exercises involve identifying the

beginning and ending sounds of words and identifying the 'Matras' used. A number of opportunities are also provided to develop comprehension skills such as concept building, sequential thinking, classification and generalization.

(ii) *Writing Readiness* : This is developed by means of a large number of activities involving with paper and pencil spontaneous drawing, copying, tracing, filling and completing.

(iii) *Readiness to work with Numbers* : This is developed through number games such as determining why certain groups do not match and finding out how can they be made comparable.

(iv) *Activities for Cognitive Development* : This includes creativity development, motor development, personal and social development.

(v) *Activities for Aesthetic Development* : This includes music, dancing, painting, hand work activities, vigorous and quiet games, science experiences and social study.

THE OPEN TYPE

The model of Open-education has its roots in the three curriculum models mentioned above. This includes the Kindergarten, the Montessori and the Nursery type. The programme labeled as "Open Education" includes those of the EnglishInfant School, as well as the programmes presented by Educational development Centre in Borton, Lilian Weber's programmes in the New York CitySchools, and the Open Education Project at the University of Illinois. To greater extent RabindraNagh Tagore's concept of an open school is also a type which can be included in the 'Open Education' system.

Physical Set Up of an Open Classroom

In order to support the activity orientation of the programme and the involvement of the children in the decision-making process, the open education classroom is organized in a somewhat loose fashion. No specific schedule of activities is provided for the classes. Large blocks of time are provided in which many activities go on simultaneously. Children are able to select these activities. They are allowed to move out to start new activities in the corridors of play-ground.

Books and other materials are readily accessible. Teacher is not asked to provide the material. No permission is necessary. Books, structured and unstructured manipulative materials

are provided. As activity changes, room arrangements are also to be changed. Furniture is moved, new material is added and material that had been previously used by children may be taken out of child's environment.

Groups of children are generally heterogeneous in ability and possibly in background as well as age. The class is seen as a social group. Interaction among the children is supported. Much of the activity takes place on individual or group basis, although the teacher may call the children together as a total class for particular purposes. Grouping may be voluntary in nature, but the teacher may group children for particular purposes. Generally these groupings are temporary in nature. In the idea of an open school it is the concept of transaction. Transactions are facilitated through open school. Closed school on the other hand, is developed to play specified roles.

Underlying Philosophy of an OpenSchool

(i) The open school helps the children how to learn and extend their intellectual and emotional resources.

(ii) The child has the right to make important decisions regarding his own educational experience.

(iii) Knowledge is viewed as a personal synthesis of one's own experience. Different children may create different kinds of knowledge as a result of the same school experience.

(iv) Goals may be achieved in different ways by different children who learn in their own style and at their own rate.

(v) Education takes place in an environment that communicates trust, openness and mutual relationships among children and adults.

(vi) A child must be accepted as a person.

(vii) Teachers' role is as a partner and guide in learning.

(viii) All people need success to prosper.

(ix) Education is based on inherent desire to learn.

(x) Educators are required to maintain originality of the learners.

(xi) Children are to work according to their abilities.

(xii) The school is able to establish a context from which the children learn from one another.

(xiii) Development of sense of responsibility is encouraged.

Curriculum of Open School : In the curriculum of open school though there are elements of traditional early childhood education in programmes, yet the following aspects are important:

(i) Play is given special importance with no distinction between work and play.

(ii) The content of the programme is organized in some integrated fashion and topics or projects might be used as integrating vehicles.

(iii) What to teach and how to teach will be decided by the teacher and taught ?

(iv) No concern to cover any specific amount of content, nor is every child necessarily involved in the same curriculum and achieve the same degree of success. This is called individualization of success.

(v) In an open type the first phase is called "messing about" and the second is called making of one's own discoveries in an unstructured environment.

THE BALWADI TYPE

Background

The NutanBalshikshanSangh was founded in 1945 to work for the cause of child education at the pre-school stage. Padma Bhushan late Smt. TarabaiModak was actively associated with it. She worked for the spread of pre-primary education in the rural areas of India. The NutanBalshikshanSangh started its rural centre of pre-school education at Bordi, a village on the west coast in the Thane District of Maharashtra in 1945. It was there that the term "Balwadi" was first coined. Balwadi is defined as "a rural pre-primary school run economically but scientifically and using as many educational aids as possible, prepared from locally available material".

Activities of Balwadis : Activities of Balwadis are described below :

(i) *Health Care Activities :* Baths and washing of clothes and administering cheap yet effective herbal medicines are the first activities the Balwadi workers had to undertake.

As Montessori method gives a special place to activities of daily living and dressing up, it was followed at Bordi also. Alongwith personal cleanliness, dusting, sweeping and mopping activities were also introduced.

(ii) *Outdoor Activities* : The outdoor activities included playing with an outdoor play material and activities like jumping, climbing, rolling, somersaulting on the ground, walking on walking boards, arranging things in the hand or on the head keeping proper balance of the body.

(iii) *Free Activities* : When a new child enters a Balwadi for the first time he is not quite normal. He feels uncomfortable in the company of other adults. He can be doing simple individual activities like block building, stringing beads, arranging mosaic designs with beads or other colourful pieces.

(iv) *Exercise in Practical Life* : The fourth activity in a Balwadi is exercises in practical life so as to facilitate the use of muscles, fingers and hands skillfully. The ultimate aim is to teach the child the correct processes of grinding, cutting vegetables or rolling chapattis. At home he sees his parents and siblings doing these activities. In the Balwadi these activities are purposefully arranged for him and he is allowed to be at these as long as he likes.

(v) *Creative and Artistic Activities* : These are clay-modelling, paper folding, paper cutting, drawing, painting, sewing, music and dancing, use of brush, the pencil, the scissors, the needle, the clay and colour.

(vi) *Sensory Training Activities* : Tarabai and her co-workers had grave doubts whether Montessori's Sensory Material should be given a place in the Balwadi in the backward rural areas. Gandhiji's advice was followed. It was thought proper that the teacher should prepare the material himself which should be indigenous in nature. Whatever the teacher was not able to produce, he should get it done from the local artisans.

(vii) *Language Learning* : Tribal children had their own dialect. Enriching of their vocabulary was done by four means – (i) chit-chatting, i.e. by encouraging informal talks between the worker (Behen) and the children, (ii) story-telling – usually folk tales suited to a

particular age group; (iii) songs and rhymes – mostly from current nursery rhymes and action songs; and (iv) dramatizing.

(viii) *Number-Learning* : Regarding number learning, practical method was found very effective. use of learning materials is recommended.

(ix) *Cultivation of Social Feelings Amongst the Children* : This was done by building good habits and attitudes. Children were required to move stones, wood and work with hands.

(x) *Trips and Excursion* : Visits were paid to work places of tailors, blacksmiths, goldsmiths, carpenters, bamboo workers, potters, watching fisherman catching fish, gardening and agricultural operations. Activities like walking, running, climbing hills with head facing the hot sun, rains, extreme cold and bear the travail of the journey.

AnganBalwadis : In a small village a fully equipped Balwadi is not possible, Besides, even in a bigger village or town children from all the parts of the place do not come to the central Balwadi for several reasons. So a new type of Balwadi called 'AnganBalwadi' was developed. This type can be held in an open space or courtyard or under a tree or in an open verandah of a hut. little equipment is required. In rainy season it can be held on the verandah of a school building, or a temple or the verandah of one of the large houses.

THE PRE-BASIC TYPE

Gandhiji gave his ideas about Pre-basic education in 1944. The problem was as to how the scheme of pre-school be integrated into the concept of 'Nai-Talim'. The two stages of the Pre-Basic type school are described below :

Stage 1 : The first stage in the educational programme was adult education, that is, education of the community as a whole and of every individual member for a happy, healthy, clean and self reliant life.

Stage 2 : This is the real stage of Pre-basic education because it was meant for the "education of the children under 7 for the development of all faculties, conducted by the school teachers in cooperation with the parents and the community, in schools, in the home and in the village."

Based upon this approach the first Pre-basic school was started in 1945 at Wardha by Mrs. ShantaParulkar. Another Pre-basic school was started at Banipur in 1952 in Maharashtra by Charu Sheila Boler for children of rural areas.

The aim of the school programme was "to cultivate good habits, character, cleanliness (personal and communal), discipline, good speech, self-expression, development of body and mind and self adaptation". Children of 2½ to 5 years age group were admitted and kept till they were 6.

THE DAY CARE TYPE

The day care includes four categories : (a) The Play Group, (b) The Child Minding and Day Fostering Centres, (c) The Day Nurseries and Canteens, and (d) The Creches. Most of these institutions are found in industrialized western countries. A brief description of the scope of their functioning is given below :

(a) The Play Group : The play group has come up as an institution of child care in England and Wales. According to Austin (1976), "The greatest growth in pre-school provision has taken place in playgroups, which depend heavily on the use of parent volunteers. The play group movement is the middle class answer to the problem of finding space for their young children when public sector does not or cannot respond to the demand for early childhood education."

(b) Child Minding and Day Fostering Centres : Child minders are those who receive into their homes children who are under the age of five for two hours or more. It is usually arranged privately. In England a good number of "disadvantaged" children are placed with child minders by the government authorities. The government authority gives advice, support and also pays them for the period when the minders have no children under their care.

There are wide varieties of services provided. Some will give a child three meals a day, while others require parents to leave food for the child with them.

(c) Day Nurseries and Canteens : Many educational institutions have a day nursery and a canteen so as to fit in with the working hours of the parents and keep young children away from the temptations and dangers of the streets. Some of these nurseries open at six in the morning and close at nine in the evening. The children have a rest in the morning, take their breakfast and can have both the meals at the canteen attached to the nursery. The time a child spends in the nursery depends on the working hours of the parents.

(d) The Creches : Creches is a public nursery where mothers who work can leave their children during the day. It is a kind of day nursery. Such nurseries are fast coming up in our country near to the areas where mothers are at work.

Sometimes these crèches are organized at the site of work.MeeraMahadevan, a social worker, has given description of mobile crèches which she organized at five constructional sites in Delhi. The constructional workers, mostly women, brought children to the sites. Since both the parents work, these children were left unattended. They were unbathed, unkept and were often without clothes. They had nothing to play with except the rubble lying around the construction site. Mobile crèches activities organized for these children included cleaning, washing, breakfast session, educational activity, lunch and health education.

TOPIC 14

Curriculum models of ECCD

What is the purpose of curriculum in early childhood education?

Curriculum, or the content of what children learn, is central to supporting and strengthening young children's learning and development because it is the "front line" of children's experiences. Curriculum is different from beliefs about children, pedagogy, learning standards, and children's skills.

What are the different types of curriculum models in early childhood education?

Among the best known and most widely used early childhood curriculum models are the Creative Curriculum, the Developmental Interaction Approach (sometimes called the Bank Street approach), the High/Scope Curriculum, and the Montessori method.

How you can make an effective curriculum?

Learning to Build Your Curriculum

1. Describe your vision, focus, objectives, and student needs.
2. Identify resources.
3. Develop experiences that meet your objectives.
4. Collect and devise materials.
5. Lock down the specifics of your task.
6. Develop plans, methods, and processes.
7. Create your students' experience.
8. Go!

What is a good curriculum?

A good curriculum reflects the needs of the individual and the society as a whole. A good curriculum is developed through the efforts of a group of individuals from different sectors in the society who are knowledgeable about the interests, needs and resources of the learner and the society as a whole.

What is a curriculum model?

Broad theoretical frameworks used to design and organize the curriculum according to certain principles and criteria. For example, the product model that emphasizes plans and intentions, and the process model that focuses on activities and effects.

The 8 Types of Curriculum

- Written Curriculum. A written curriculum is what is formally put down in writing and documented for teaching.
- Taught Curriculum.
- Supported Curriculum.
- Assessed Curriculum.
- Recommended Curriculum.
- Hidden Curriculum.
- Excluded Curriculum.
- Learned Curriculum.

What should be included in early childhood education?

Curriculum for young children is physical and relational, and it happens in strong communication with families. A solid early childhood curriculum can really set students up to succeed and feel safe in school.

What is the creative curriculum in early childhood education?

In comes the creative curriculum. The creative curriculum is one of the best teaching strategies for early learning because it focuses on the development of the whole child. It strives to be innovative, responsive, supportive, comprehensive, and developmentally appropriate. Let's break down each aspect of the creative curriculum.

What is the National Early Childhood Care and education policy?

The National Early Childhood Care and Education (ECCE) Curriculum Framework for all children below six years of age is aligned with the Government's vision of ECCE as spelt out in the National Early Childhood Care and Education (ECCE) Policy.

CURRICULUM MODELS

Curriculum Models provide a framework to organize planning experiences for children. In previous chapters, the planning cycle has been introduced and in accordance with best practices, the models identified in this chapter represent a variety of ways to use the planning cycle within these models.

BANK STREET MODEL

Lucy Sprague Mitchell founded Bank Street, an Integrated Approach also referred to as the Developmental-Interactionist Approach.

In this model, the environment is arranged into learning centers and planning is organized by the use of materials within the learning areas (centers).

- Art
- Science
- Sensory/Cooking
- Dramatic Play
- Language/Literacy
- Math/Manipulative/Blocks
- Technology
- Outdoors: Water and Sand Play

The Bank Street Model of curriculum represents the ideology of Freud, Erikson, Dewey, Vygotsky, and Piaget. This model draws upon the relationship between psychology and education. By understanding developmental domains and creating interest centers with materials that promote specific areas of development, children's individual preferences and paces of learning are the focus.

"A teacher's knowledge and understanding of child development is crucial to this approach. Educational goals are set in terms of developmental processes and include the development of competence, a sense of autonomy and individuality, social relatedness and connectedness, creativity and integration of different ways of experiencing the world".[1]

CREATIVE CURRICULUM MODEL (DIANE TRISTER DODGE)

In the Creative Curriculum model, the focus is primarily on children's play and self-selected activities. The Environment is arranged into learning areas and large blocks of time are given for self-selected play. This model focuses on project-based investigations as a means for children to

apply skills and addresses four areas of development: social/emotional, physical, cognitive, and language.

The curriculum is designed to foster development of the whole child through teacher-led, small and large group activities centered around 11 interest areas:

- blocks
- dramatic play
- toys and games
- art
- library
- discovery
- sand and water
- music and movement
- cooking
- computers
- outdoors.

The commercial curriculum provides teachers with details on child development, classroom organization, teaching strategies, and engaging families in the learning process. Child assessments are an important part of the curriculum, but must be purchased separately. Online record-keeping tools assist teachers with the maintenance and organization of child portfolios, individualized planning, and report production.[2]

HIGH SCOPE MODEL (DAVID WEIKERT)

The High Scope Model focuses on developing learning centers similar to the Bank Street Model and emphasizes key experiences for tracking development. The key experiences are assessed using a Child Observation Record for tracking development and include areas of:

- Creative Representation
- Initiative

- Social Relations
- Language and Literacy
- Math (Classification, Seriation, Number, Space, Time)
- Music and Movement

The High Scope Model also includes a "Plan-Do-Review" Sequence in which children begin their day planning for activities they will participate in, followed by participation in the activities and engaging in a review session at the end of the day. Teachers can use this sequence format to help children learn how to organize choices of activities and to reflect upon what they liked or would do different at the end of the day. The High Scope Model reflects the theories of Piaget, Vygotsky and Reggio Emilia by way of emphasis on construction of knowledge through hands-on experiences with reflection techniques.

MONTESSORI APPROACH (DR. MARIA MONTESSORI)

The Montessori Approach refers to children's activity as work (not play); children are given long periods of time to work and a strong emphasis on individual learning and individual pace is valued. Central to Montessori's method of education is the dynamic triad of child, teacher and environment. One of the teacher's roles is to guide the child through what Montessori termed the 'prepared environment, i.e., a classroom and a way of learning that are designed to support the child's intellectual, physical, emotional and social development through active exploration, choice and independent learning.

The educational materials have a self-correcting focus and areas of the curriculum consist of art, music, movement, practical life (example; pouring, dressing, cleaning). In the Montessori method, the goal of education is to allow the child's optimal development (intellectual, physical, emotional and social) to unfold.

A typical Montessori program will have mixed-age grouping. Children are given the freedom to choose what they work on, where they work, with whom they work, and for how long they work on any particular activity, all within the limits of the class rules. No competition is set up between children, and there is no system of extrinsic rewards or punishments.[3]

WALDORF APPROACH (RUDOLF STEINER)

The Waldorf Approach, founded by Rudolf Steiner, features connections to nature, sensory learning, and imagination. The understanding of the child's soul, of his or her development and individual needs, stands at the center of Steiner's educational world view.

The Waldorf approach is child centered.[4] It emerges from a deep understanding of child development and seeks to support the particular developmental tasks (physical, emotional and intellectual) children face at any given stage. Children aged 3–5, for example, are developing a keen interest in the world, supported to a large extent by freedom of movement and must be supported to follow and deepen their curiosity through the encouragement of their sometimes endless asking of questions (Van Alphen & Van Alphen 1997). This approach to supporting children's naturally blossoming curiosity, rather than answering the teachers' questions. At this stage, children's play becomes increasingly complex, with children spontaneously engaging in role plays, as they construct and act upon imaginative situations based on their own experiences and stories they have heard. Thus, in Waldorf schools, ample time is given for free imaginative play as a cornerstone of children's early learning.[5]

The environment should protect children from negative influences and curriculum should include exploring nature through gardening, but also developing in practical skills, such as cooking, sewing, cleaning, etc. Relationships are important so groupings last for several years, by way of looping.

REGGIO EMILIA APPROACH (LORIS MALAGUZZI)

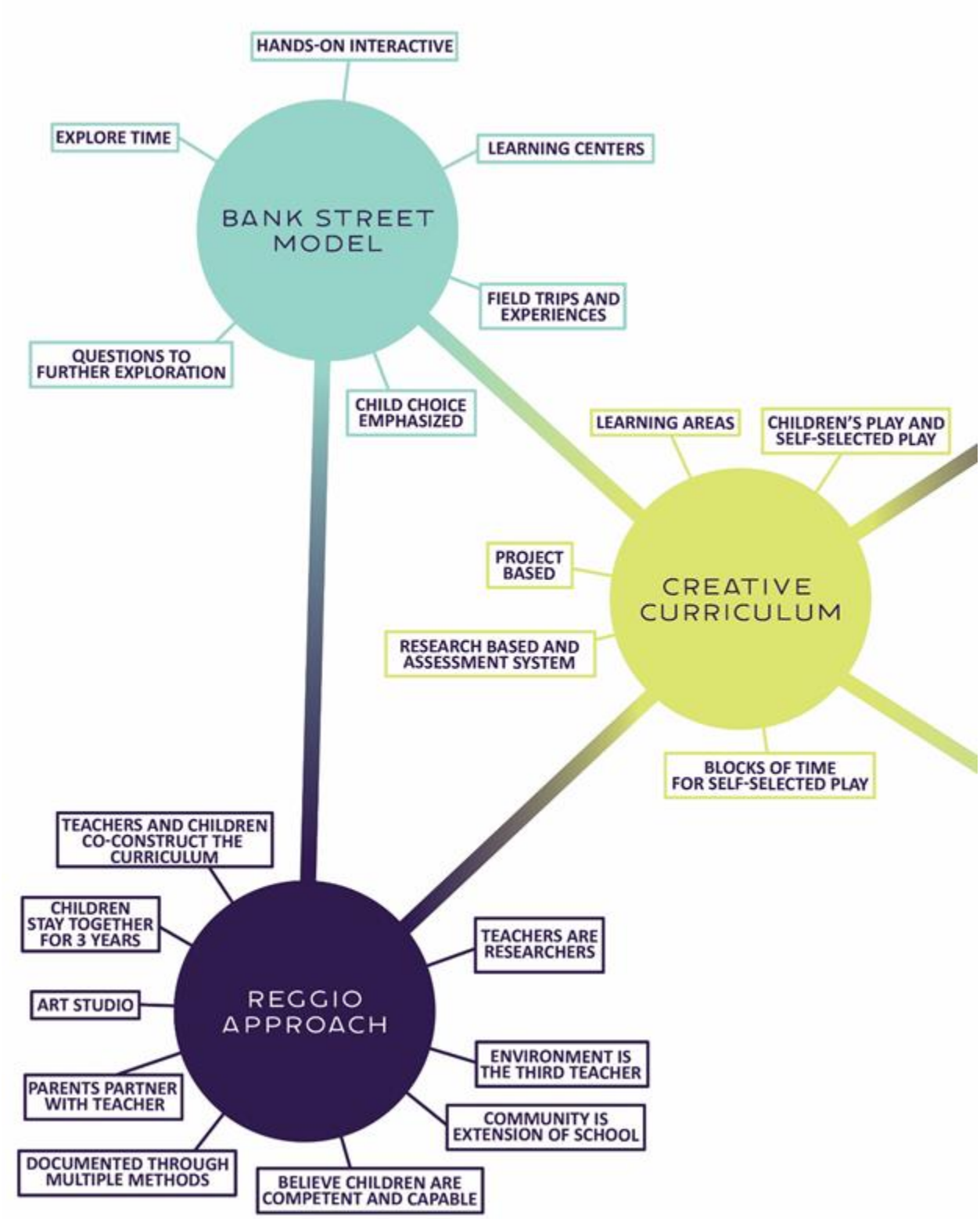
The Reggio Emilia approach to early childhood education is based on over forty years of experience in the Reggio Emilia Municipal Infant/toddler and Preschool Centers in Italy. Central to this approach is the view that children are competent and capable.

It places emphasis on children's symbolic languages in the context of a project-oriented curriculum. Learning is viewed as a journey and education as building relationships with people (both children and adults) and creating connections between ideas and the environment. Through this approach, adults help children understand the meaning of their experience more completely

through documentation of children's work, observations, and continuous teacher-child dialogue. The Reggio approach guides children's ideas with provocations—not predetermined curricula. There is collaboration on many levels: parent participation, teacher discussions, and community.

Within the Reggio Emilia schools, great attention is given to the look and feel of the classroom. Environment is considered the "third teacher." Teachers carefully organize space for small and large group projects and small intimate spaces for one, two, or three children. Documentation of children's work, plants, and collections that children have made from former outings are displayed both at the children's and adult's eye level. Common space available to all children in the school includes dramatic play areas and worktables.

There is a center for gathering called the atelier (art studio) where children and children from different classrooms can come together. The intent of the atelier in these schools is to provide children with the opportunity to explore and connect with a variety of media and materials. The studios are designed to give children time, information, inspiration, and materials so that they can effectively express their understanding through the "inborn inheritance of our universal language, the language that speaks with the sounds of the lips and of the heart, the children's learning with their actions, their signs, and their eyes: those "hundred languages" that we know to be universal. There is an atelierista (artist) to support this process and instruct children in arts.[6]



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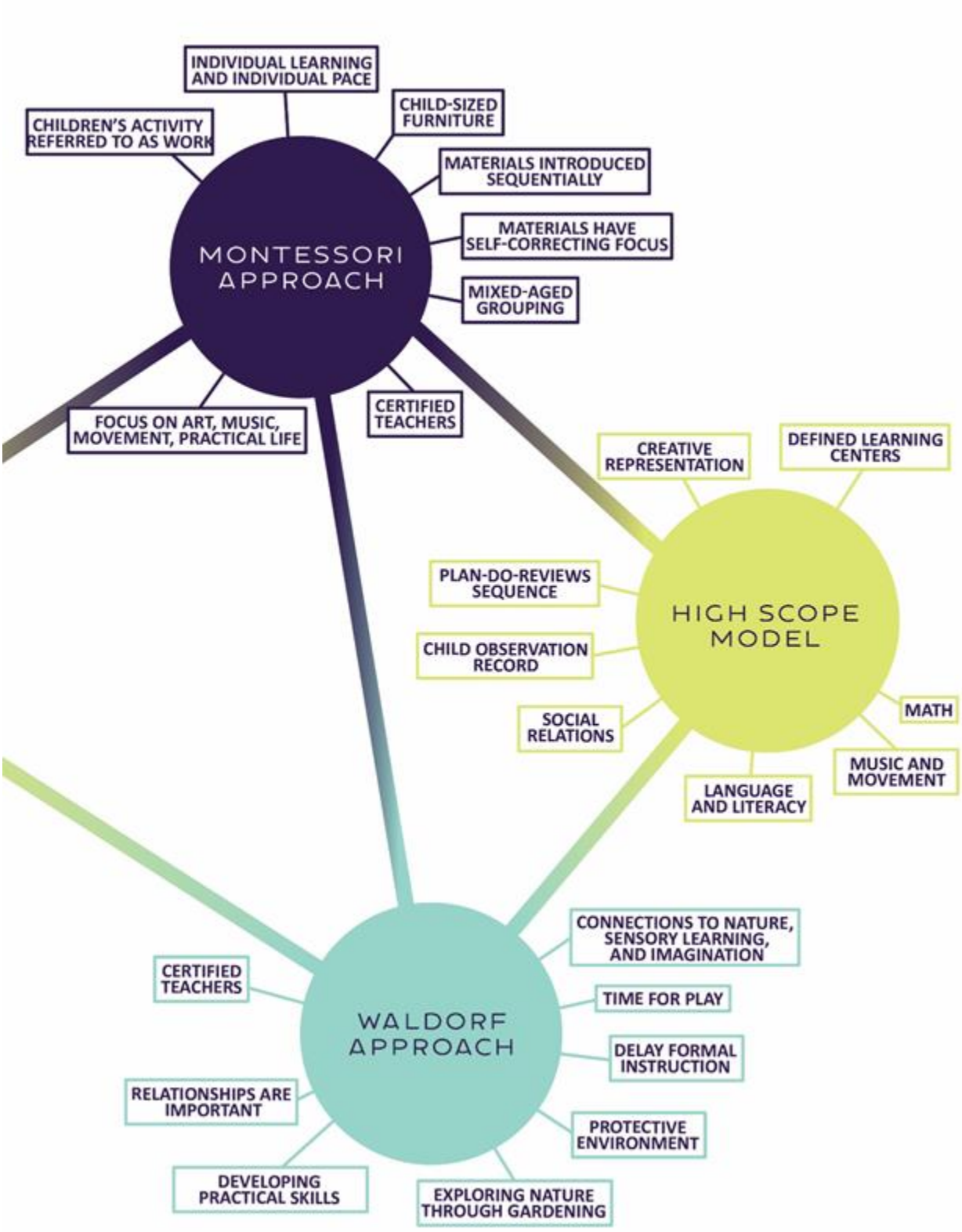

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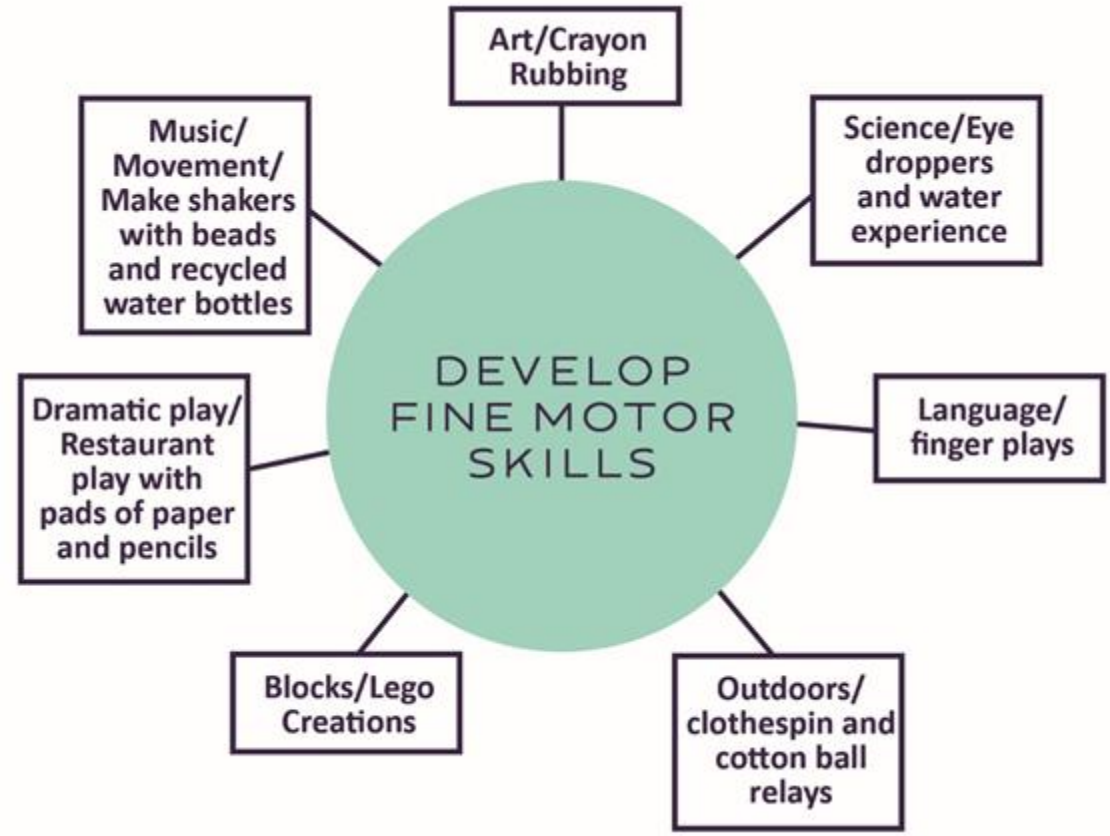
WEBBING

The Reggio Emilia Approach is an emergent curriculum. One method that many Early Childhood Educators use when planning emergent curriculum is curriculum webbing based on observed skills or interests. This method uses brainstorming to create ideas and connections from children's interests to enhance developmental skills. Webbing can look like a "Spider's Web" or it can be organized in list format.



An example of webbings.credit: Image by Ian Joslin is licensed under CC BY 4.0

Webbing can be completed by:

- An individual teacher
- A team of teachers
- Teachers and Children
- Teachers, Children and Families

Webbing provides endless planning opportunities as extensions continue from observing the activities and following the skills and interests exhibited. As example demonstrates a web can begin from a skill to develop, but it can also be used in a Theme/Unit Approach such as transportation; friendships; animals, nature, etc.

PROJECT APPROACH

The project approach is an in-depth exploration of a topic that may be child-or teacher-initiated and involve an individual, a group of children, or the whole class. A project may be short-term or long-term depending on the level of children's interests. What differentiates the project approach from an inquiry one is that within the project approach there is an emphasis on the creation of a specific outcome that might take the form of a spoken report, a multimedia presentation, a poster, a demonstration or a display. The project approach provides opportunities for children to take agency of their own learning and represent this learning through the construction of personally meaningful artefacts. If utilized effectively, possible characteristics may include: active, agentic, collaborative, explicit, learner-focused, responsive, scaffolded, playful, language-rich and dialogic.[7]

In the project approach, adults and children investigate topics of discovery using six steps: Observation, Planning, Research, Exploration, Documentation, Evaluation.

1. Observation: A teacher observes children engaging with each other or with materials and highlights ideas from the observations to further explore.
2. Planning: Teachers talk with children about the observation and brainstorm ideas about the topic and what to explore
3. Research: Teachers find resources related to the topic
4. Explore: Children engage with experiences set around the topic to create hypotheses and make predictions and formulate questions
5. Documentation: Teachers write notes, create charts and children draw observations and fill in charts as they explore topics/questions

6. Evaluate: Teachers and children can reflect on the hypotheses originally developed and compare their experiences to predictions. Evaluation is key in determining skills enhanced and what worked or what didn't work and why.

The benefits of a project approach are that young learners are directly involved in making decisions about the topic focus and research questions, the processes of investigation and in the selection of the culminating activities. When young learners take an active role in decision making, agency and engagement is promoted.

As young learners take ownership of their learning they, 'feel increasingly competent and sense their own potential for learning so they develop feelings of confidence and self-esteem' (Chard, 2001).[8]

CULTURALLY APPROPRIATE APPROACH[9]

The Cultural Appropriate Approach has evolved over the years and the practice of valuing children's culture is imperative for children to feel a sense of belonging in ECE programs. Sensitivity to the variety of cultures within a community can create a welcoming atmosphere and teach children about differences and similarities among their peers. Consider meeting with families prior to starting the program to share about cultural beliefs, languages and or traditions. Classroom areas can reflect the cultures in many ways:

- Library Area: Select books that represent cultures in the classroom
- Dramatic Area: Ask families to donate empty boxes of foods they commonly use, bring costumes or clothes representative of culture
- Language: In writing center include a variety of language dictionaries;
- Science: Encourage families to come and share a traditional meal.

Topic 15

Activities to promote all round development

ACTIVITY PLANNING FOR ALL DEVELOPMENT DOMAINS

1. GROSS AND FINE MOTOR DEVELOPMENT

2. SOCIO-EMOTIONAL DEVELOPMENT

3. COGNITIVE DEVELOPMENT

4. LANGUAGE DEVELOPMENT

5. CREATIVE DEVELOPMENT

GROSS AND FINE MOTOR DEVELOPMENT

1. **JUMPING GAME**

OBJECTIVE

•For their growth

•See how far they can jump PROCEDURE

•Tell kids to jump on the floor, garden, where they can feel comfortable

•Or place something on the ground and encourage them to jump over it.

•Make a target

•Give them a cue to squat down really low, like a frog, wait a second and then jump..

OUTCOME

Children will develop of muscle strength, bone strength, motor planning.

2. POMS IN TRAYS

OBJECTIVE

• This activity enable children to be able to identify color, shape, size orientation, visual discrimination and position.

PROCEDURE

• Poms in trays uses an ice cube tray for the children to recreate the pattern on the card.

SOCIO- EMOTIONAL DEVELOPMENT

3. BALL GAMES

OBJECTIVE

For kids to build relationships.

PROCEDURE

They can play in a larger group and say each other's name before rolling the ball, practicing play verbally.

OUTCOME

• They will end up making new friends .

• They will feel lot of emotions during playing.

EMOTIONAL DEVELOPMENT

4. ROLEPLAY

OBJECTIVE

• TO learn social behavior , rules and expectations.

• By acting they can learn emotions.

PROCEDURE

• They need guiding through the narrative.

After a while though children can develop imaginative scenarios.

OUT COME

• Children will work on their social- emotional skills through role play

COGNITIVE DEVELOPMENT

5. FIND AND FILL THE NUMBER

OBJECTIVE

• The basics of learning of about numbers.

• Use numbers and counting to explore their world.

PROCEDURE

• With these number sticks they have to slow down and think about each number because they can physically feel each bump as they find number for filling on sticks.

OUTCOME

• They will learn the relationship between number in future.

FIND AND FILL THE NUMBER POPSICLE STICK SHAPE PUZZLES

OBJECTIVE

• For brain development , Improving skills like thinking, analyzing and comparing.

PROCEDURE

• Line up 3 popsicle sticks together and draw a large shape using permanent markers

. • Make as many shape puzzle as want like triangle, square,rectangle etc. By using different bright colors.

OUTCOME

• They will build new brain connection. Popsicle stick shape and puzzle

Language development

TELEPHONE PLAY

• Enhance toddlers language skills for during Objective their growth

. • Act as calling to them and phone is ringing , Encourage them to answer the phone .

PROCEDURE

• They will improve their conversaion skills and

OUT PUT

will learn phone eiquetters.

NURSERY RHYMES

OBJECTIVE

• Development of language through repetition.

• Memorizing power will increase.

PROCEDURE

• By watching or listening songs or poems on CD and you tube.

• By singing with them continously any particular poem .

OUTCOME

• They will increase their vocabulary in a entertaining.

CREATIVE DEVELOPMENT

HAND PRINT FLOWER BOUQUET

OBJECTIVE

• To encourage creativeness

PROCEDURE

• Trace the hand of child's hand on to colorful construction paper, then cut down hand print also cut few petals to add to some, not all, of the flowers. • Attach them to straw by wrap the bottom of the hand print around top of straw and staple it. Staple petals to a few of the flowers. Click to add text Click to add text Hand print flower.

TOPIC 16
PROGRAMME PLANNING

Programme planning is deciding what needs to be done and who does what, when and where. The two key elements in programme planning is the programme itself or the interest of and involvement of children, students or parents in the programme. Success of centres or schools depends upon the planning and execution of programmes and ideas. Planning of a programme is a continuing process, involving careful observation, identification of needs and capabilities, provision of resources, assessment and evaluation. Planning usually begins from observations of the children's and parent's interest, strengths, needs, and behaviors.

Planning of a programme should focus on the environment, the settings, particular age group and on group of children or individualized planning may be done in some special programmes. Planning help the adults who work in early childhood education to understand that what young children are learning , how the learning happens, and the role that both adults and other children play in such learning. The activities should be age and developmentally appropriate.Activities fostering all domains of development should be appropriately planned.The attention span of young children is 15-20 minutes; therefore the duration of activities should be 20 minutes, with additional time allotted for winding up and initiation of the next activity. However, the programme should allow space and flexibility for need based variations.There should be a balance between structured and unstructured; active and quiet; outdoor and indoor; self-directed and adult initiated learning opportunities and individual, small group and large group activities.

- The experiences should progress from simple to complex.
- A wide range of individual and group experiences should be planned which are related to the child's environment, are enjoyable and challenging for children.
- Routine fosters a sense of security in children. Therefore some routine should be followed in the daily programme.
- The ECCE programme should never be rigid.

- The duration of the pre-school programmes should be 3 to 4 hours. The programme should provide for some rest period during the day and if it is of longer duration, as a full day programme, then a nap time is to be ensured.
- Learning opportunities should be interconnected, linking learning experiences across developmental domains in a meaningful context, reflecting the real life context of the children.
- The language used should be the mother tongue of the child. Efforts should be made to extend their language sensitively and introduce the school language gradually to facilitate school readiness.
- Curriculum goal and objectives should guide classroom process and assessment of the children. The curriculum should be implemented in a manner that reflects responsiveness to family/ home values, beliefs and experiences.
- The programme should provide opportunities for exploration and experiential learning, promoting active engagement with people and objects in the environment.

Goals

- To fulfil the ultimate aim of any activity.
- To provide stimulating environment and opportunity for overall development of children.
- One should have a clear idea about the goal of ECCE.
- To promote healthy substitute care to children whose parents are not able to provide care to their child.

Objectives

- On the basis of major goals of the programme, objectives are planned for the programmes
- Points which ultimately helps us to achieve the ultimate goals.
- Objectives should be related to the short term planning and goals should be related to long term planning.

Types of Programme Planning

- **Long term planning** – planning which is done to fulfil the goals of the programme or the curriculum called long term planning. For example annual calendar.

- **Short term planning**-short term planning is done to fulfil the objectives so that goal can be attained. It emphasize more on activities rather than time For example Weekly plan and daily plan.

Need and Importance of programme –planning

- To consolidate the learning and lay foundation for the future
- To decide the starting and end point of the session.
- To decide the whole session into parts as done in long term planning..
- To clearly format the objectives of each activity so that all round development of the child can be occurred.
- To fulfil the curriculum goals and objectives, which guides classroom process and assessment of the children.
- It reduces the chances of failures of programme.
- Planning of programmes before hand helps to the programme to be flexible as well as child centred.

Principles of programme planning

- The activities should be age and developmentally appropriate.
- Activities fostering all domains of development should be appropriately planned.
- The duration of the activities should not be more than 20 minutes.
- Programme should allow space and flexibility for need based variations.
- There should be a balanced between structured and unstructured ; active and quiet; outdoor and indoor; self directed and adult initiated learning opportunities and individual, small group and large group activities.
- The experience should progress from simple to complex.
- Wide range of activities should be planned which are related to the child's environment, are enjoyable and challenging for children.
- The ECCE programme should never be rigid.
- The duration of the preschool programme should be 3 to 4 hrs.
- The language used should be the mother tongue of the child.
- Curriculum goal and objectives should guide classroom process and assessment of the children.

Steps in programme planning

1. **Observe** – the process of gathering information
2. **Analyse** – questioning what learning and development is taking place to make meaning of what has been observed
3. **plan** – planning the next steps to continue supporting learning and development
4. **Act**- putting the plan into actions
5. **reflect**- evaluating the effectiveness of the plan.

Observation in programme planning

- It is through the first two stages of the planning cycle, observation and analysis, that educators are able to gain insight into a child's cultural and social background, gifts and strengths, likes and interests. The purpose of recording and analysing what is seen and heard is for educators to reflect and make meaning from what has been observed. This information is used to plan rich learning and development opportunities for children.Through understanding the learning framework and child development theories educators are able to notice the different types of learning that occur. Sometimes it is useful to begin with a more focused approached; when educators have a focus for their observations, such as to understand how a child interacts with others, knowing when to record observations and what to record is more clear. A focus point can be particularly beneficial for educators who are new to the profession.
- Educators may find that multiple observations need to be recorded in order to have a clear understanding of the child's development and disposition. Enough information needs to be gathered so that educators truly understand the learning that is taking place so they can best plan to extend and enhance children's learning. These observations can take many forms such as brief jottings, transcripts of conversations, learning stories, anecdotal or running records.
- Observations of children's learning and development can be recorded within EarlyWorks through observations, daily journals, learning journey comments and child comments.

Curriculum

- The educational programme is where educators document their planning for children's learning and development based on the relevant learning outcomes, child interests and/or the analysis of learning that has occurred through observations.

- Using the information gathered from observations and analysis, educators make a professional judgement on the best course of action that will encourage and support children in their learning and development. Educators may plan for the child to revisit a particular skill, or encourage a child to attempt something new. Educators' planning will also include aspects of the environment as well as routines and transitions.
- Planning is evidenced in EarlyWorks through recording a next experience in an observation or journal entry. EarlyWorks will then transfer this information into a new experience for the program where the educator is able to select intended learning outcomes and areas of the National Quality Standards if relevant.
- EarlyWorks adds a written reference to the observation or journal entry within the planned experience and displays visible links on the program experience list showing the observation and analysis that the experience has come from.
- If the experience is educator initiated, based on family input or community events, educators are able to add to the programme without an observation or journal entry. This is also shown clearly on the program.
- The end result is a documented plan that provides a basis for the next learning experience from which new observations can be made.

Outcomes of Early Childhood Education Curriculum Children who

- Communicate effectively
- Display emergent literacy skills, mathematical skills and scientific temperament
- Express emotions in socially acceptable manner, are socially adaptive and cooperative
- Have physical control, strength and healthy habits.

Evaluation of outcomes

- Evaluation is where educators reflect on what worked, what didn't work, what learning took place, and how to continue to support learning. Evaluation is another form of observation as educators are observing the results of their planning. The purpose of evaluation is to support ongoing professional learning of educators and to continue to inform the programme.
- Evaluations, just like observations, need to be meaningful. The planning cycle is ongoing and ever evolving with the changing needs of the children.

- Within EarlyWorks, educators can choose to record evaluations of planned experiences by entering this in to the evaluation section of the experience or by creating a new evaluation styled observation.
- To utilise an observation as the evaluation of an experience (or range of experiences), educators select evaluation as the observation style and create a link to the experience through the experience observed tab. This tab displays the names of all experiences from the programme and educators select which experiences are being evaluated.
- By creating this link, EarlyWorks includes the evaluation box in the observation list screen to assist educators in seeing a visible planning cycle as it evolves and expands over time.
- The EYLF planning cycle is an incredibly valuable tool in developing early childhood educational programmes. Understanding the purpose behind this cycle gives educators a solid foundation on which to grow as professionals.

Pedagogical Approaches

The curriculum adopts a play and activity based approach. Children are visualised as active beings who construct their own knowledge and the process of teaching –learning is one of co-construction of knowledge, with adults as facilitators.

Various approaches are practised for transacting the Early Childhood Education programme. Some commonly adopted approaches are:

Montessori Method: This method is characterized by an emphasis on independence, freedom within limits, and respect for a child's natural psychological development and is transacted through specialised sensorial material.

RegioEmillia: Based on the work of Loris Mallaguzi, this is a constructivist approach which focuses on creation of a learning environment that enhances and facilitates children's construction of their own thinking through the combination of communicative, expressive and cognitive languages as they engage actively with people, material and environment.

Progressive Method: This is an eclectic approach which draws from the major child development theories. Recognizing the many paths of learning, latest researches and contemporary work lay the foundation of this framework.

Thematic Approach: Integrated themes and projects form the core content of the curriculum. These themes should enable the children to make meaningful connections among the different concepts and develop holistic understanding of the world around them.

The curriculum should be flexible and responsive to the needs of the children in the class. It is to be constructed to suit the diverse social, cultural, linguistic contexts in the country, and initiate integrated learning.

A programme can adopt any of the above mentioned approaches to transact the curriculum. An integrated daily/ weekly/ monthly programme should be prepared with a well-rounded selection of learning experiences that strengthen all domains of development and are age and developmentally appropriate. The activities for different domains and concepts should be planned purposefully to enable a child to actively engage with and experience the concepts. These will help to consolidate the learning and lay the foundations for future.Caution should be observed to not equate the curriculum to just an exercise of organizing activities, rather it should be viewed as a planned and purposeful intervention and adult child and child to child interaction to facilitate the process of knowing, understanding and construction of knowledge by the children. The aim of the curriculum should be to foster development through integrated activities rather than mere completion of worksheets or repetitive exercises and activities.

To address the needs of the large group of children in one class and multi-age setting, the strategy would be to conduct the activities in large group, small group and individual level.

Essential Play and Learning Material

In early childhood stage, a child learns through interacting with immediate environment hence environment should be stimulating and should have a variety of materials to arouse and sustain the child's curiosity, interest and promote his learning.

- Adequate supply of developmentally appropriate play materials to foster all round development
- should be available at the ECCE centre
- The materials should be safe, clean and in good conditions. Sufficient quantity should be
- available to work in small groups and it should be easily accessible to the child.
- The materials should promote gross and fine motor development and help the child to discover and explore including constructing and reconstructing. It should promote

sensory exploration and social interaction along with creative expressions through arts, painting, etc.

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Topic 17

Role, Qualities and responsibilities of an early childhood personnel

The task of early childhood education teachers and preschool teachers is to **support and promote the learning and competence development of children**. This teaching work demands solid knowledge of early childhood education, development, learning and pedagogy.

The education that your child receives in their first few years of life is critically important. Early childhood education imparts several benefits including fewer behavioral problems, greater success in later education, and improved mental health.

Here are a few examples of the things early childhood education teachers do in the classroom to help give your child the best possible foundation for success.

Infants

Early childhood educators soothe and nurture build a sense of confidence in infants by responding quickly and appropriately to their natural cues. For example, they hold, talk, and sing to infants in a quiet reassuring voice and make eye contact with them. Infants imitate sounds they hear and experiment with facial expressions that they see adults making. The rudimentary communication of infants includes pointing, raising hands, and making different movements and sounds. The educator encourages this communication by asking questions connecting to the movement or to the sound.

Infants learn with all their senses, and a good **early childhood** educator offers multiple sensorial experiences with materials such as paint, clay, sand, light and shadows, and much more. In addition, **early childhood** educators prepare various large motor experiences for infants. These take place inside the classroom, around the common areas of the school, and outside. This way, infants challenge themselves physically and develop gross motor skills.

Younger Toddlers

Younger toddlers between 12-24 months are learning how to walk, run, and jump, and good early childhood educators observe a toddler's interaction with the environment, materials, and each other. These observations are used to identify a toddler's interests and what they're most curious about. As a toddler's fine motor skills evolve, their early childhood educators provide multiple opportunities for sensory experiences, painting, scribbling, moving, dancing, discovering nature, and expressing themselves with art.

Empathy, pretend play, and social roles are explored as educators help toddlers navigate their first relationships and begin to create their own identity.

Two-Year-Olds

Two-year-olds are learning to become more independent. They want to do more things for themselves such as eating, washing hands, dressing themselves, and learning to use the toilet. Through various sensorial, fine motor, and gross motor experiences, **early childhood educators** encourage two-year-olds to become self-sufficient in a safe environment.

A good early childhood educator will offer a variety of opportunities for two-year-olds to experiment with art and drawing and begin to give meaning to the shapes and symbols they create, including early forms of letters and numbers.

Early childhood educators create opportunities for conversations to help expand your child's comprehension and literacy skills. Regular reading helps two-year-olds build new vocabulary. Educators connect stories with objects and events in children's lives so that they learn that print and pictures have a meaning. Educators will ask open-ended questions and to encourage children to verbalize their ideas and promote conversations amongst them. These discussions help two-year-olds develop skills such as problem solving, collaboration, understanding cause and effect, sharing and how to be a member of a group.

Three-Year-Olds

Most three-year-olds express themselves in sentences and are able to recite simple rhymes and ask questions. **Early childhood educators** will ask open-ended questions and hold meaningful conversations with three-year-olds to encourage their language skills and learn how to express themselves. Educators will also encourage interactions between children where they can exchange knowledge and build social skills

Three-year-olds use all their senses to learn about their world, and a **good early childhood educator** will expose them to many sensorial materials such as paint and clay. These open-ended materials support the children in developing divergent thinking, problem solving skills, and creativity.

Early childhood educators encourage three-year-olds to begin to tell stories through art, writing, and reading. This helps children understand that print carries a message and the words we speak can be written and read; that stories have a beginning, middle, and an end. They are encouraged to recognize key ideas and details of stories.Three-year-olds are learning how to create letters

and write basic words, and are aware of the uses of writing. Educators support this process encouraging children to explore books, notepads and writing tools, labels, maps, and more.

While a three-year-olds gross motor skills become stronger, early childhood educators encourage activities such as running, throwing and catching a ball, dancing, climbing, jumping, assembling puzzles, painting, and drawing.

Preschoolers

Four-year-olds develop greater self-control, independence, and enjoy trying new experiences. They begin communicating in more complex and compound sentences, and frequently initiate conversations and show interest in two-way discussion. **Early childhood** educators encourage four-year-olds to have discussions, tell stories, and document and record their experiences and thoughts through photographs, discussions, videos, or voice recordings. They also promote social interactions both amongst the children and with other educators.

Four-year-olds are able to recognize many letters, and understand that letters represent the sounds in spoken words and may associate some letters with their sounds. **Early childhood** educators encourage four-year-olds to combine their imaginations with letters and words at this stage, both in writing and in art.

Early childhood educators encourage the development of motor skills in ways such as walking, climbing, jumping, hopping, skipping, marching, throwing, catching, kicking, dancing, holding writing tools, mastering buttons, and tying shoelaces.

Four-year-olds are very curious, and a **good early childhood educator** uses science and engineering practices to help children better understand their communities, economic and ecosystems as well as the physical earth in which they exist.

Role and responsibilities

Early childhood teachers help children develop language and vocabulary as well as elementary numeracy, and improve physical and social skills.

Early childhood teacher’s work with groups of children or one-on-one, depending on the type of lesson and the child's needs. Being able to relate to young children and understand how they learn are key attributes of early childhood teachers.

Work activities

- A typical work day for an early childhood teacher in a NSW public school may involve:

- Planning activities to develop creativity and an interest in learning, physical skills, social skills and self-confidence using a variety of equipment and materials
- Using storytelling, drama, music and discussion to develop language and vocabulary
- Encouraging children to question and explore
- Listening to children, including interpreting words and actions to determine a child's individual needs
- Promoting health and safety concepts
- Assisting children with their toileting and personal hygiene
- Detecting signs of developmental disorders, ill health or emotional disturbance
- Attending to sick children and comforting those who are hurt or distressed
- Promoting awareness and appreciation of multicultural diversity
- Observing, assessing and recording each child's development and learning
- Liaising with parents, other teachers, support staff, health and wellbeing professionals, and early childhood intervention specialists such as speech pathologists and psychologists.

Qualifications

To become an early childhood teacher, you will need to complete at least 4 years of tertiary study, including an accredited teacher education program, at a recognised university or higher education institution, such as:

- a Bachelor of Education (Primary)
- a combined or double degree, for example, a Bachelor of Arts/Bachelor of Education (Primary)
- an undergraduate degree and an accredited graduate entry teaching degree, for example, a Master of Teaching (Primary)
- Bachelor of Teaching (Early Childhood and Primary).

If you are a graduate of an approved early childhood teacher education program, you may be eligible for employment in pre-schools and in primary schools where you can teach children from Kindergarten to Year 6.

If your early childhood teaching qualifications cover all the primary key learning areas for students up to Year 6, and if you have had in-school experience in a Years 3-6 setting, you may be eligible for employment in a primary school teaching from Kindergarten to Year 6.

Role of Caregiver/Teacher

The caregivers/ teachers in an ECCE programme are facilitators who engage children in multiple experiences to foster their all-round development. They play the following roles:

- Observe children to identify their needs and capabilities and move with the pace of the child's development
- Plan developmentally appropriate, holistic and challenging activities
- Focus not only on planning and conducting activities but also on continuous processes for interaction and relating learning to child's environment.
- Create nurturing and positive relationships with children and among children
- Organise supportive learning environment by taking care of aspects such as the arrangement of the physical environment and equipment; the scheduling of activities and events and groupings
- Work in partnership with parents
- Facilitate learning to meet the objectives of the curriculum
- Help in early identification and intervention for children with special needs

To accomplish the above the teachers need to enjoy being with young children, be knowledgeable about children's development and early childhood curriculum and should be skilled at implementing the curriculum.

TOPIC 18

MONITORING AND EVALUATION OF ECCD PROGRAMME

Continuous monitoring and evaluation are highly essential to run quality ECE programmemes. One should regularly evaluate ECE programmemes in the light of programmeme goals, using varied, appropriate, conceptually and technically sound evidence.

Organizing

Organizing is defined as arranging elements and coordinating activities so that all of the interdependent parts contribute effectively to the desired goal. Organizing is the second component

of the managerial process i.e. material, equipment, space, and human energy which must be assembled and integrated to get the programme underway. The end is the goal of providing high quality child care and educational services to families and children.

Organizing classrooms or groups

The number of children the center can place in a single room should be regulated based on the desired standards. They are a group of 8 infants, 12 toddlers, ten 2-3yr olds, eighteen 3-4 year olds, twenty 5 year olds, twenty four 6-8 year olds. In the classroom of 2, 3, 4 years old two additional children in each group can be permitted providing the staff members who are exceptionally qualified. Each of the above groups will have a minimum of two teachers and care givers.

Organizing services

- Office services: Child development centers require a system for record keeping to interact and communicate with the parents and the public. Records must be kept for such matters as regulation compliance, financial matters such as fees, bills, rents, family names with home addresses and vendor's addresses and phone numbers, services the center requires such as health, fire, and social services with names and addresses of contacts and information of various professional organizations with which relationship may be

developed.

- Food services: Regulation must also be met with regard to food services. Adequate attention to kitchen and dining room, sanitation is essential. With the organization of food service it is desirable for economy and efficiency to plan for links with the classroom, thus foods used as part of various learning experiences. These food items may be incorporated into regular menus.
- Maintenance and cleaning services: These services apply to the entire center covering all the classrooms service areas and play areas. Cleanliness and safety are essential.
- Emergency services: Several emergency services must be organized in order for them to be prepared. For ex: medical services, utility services, repairs services. Prior arrangements help a center to receive the right services at reasonable prices. List of phone numbers of persons of all emergencies should be handy. Parents must be alerted to the emergency procedures and make them assured that the center will follow the procedures carefully in major emergency.

Monitoring and controlling

Monitoring: means being alert to and continuously observing for compliance with standards.
Controlling: means

- The standards which are set and expected from each service in the center.
- To measure the performance against the standards.
- To correct deviations from established standards and plans.

Monitoring and controlling is essential for quality and functions that each staff member must be concerned about daily, hourly and from moment to moment.

Evaluation: It is an essential component in monitoring and controlling child development center. The different kinds of evaluation are

Purpose of evaluation

The major purpose of evaluation is to determine

- Whether the center's goals are being met?
- How effective the programme is in meeting the needs of children?
- How efficient it is in terms of cost, time, and energy?
- Are needs met to the satisfaction of the center and of the children?
- Are they partially met or not met at all?
- Even if needs are met, could the same job have been done for less money or by using less time or energy?

Evaluation helps to identify the strengths and weaknesses of the programme and to adapt the plan for the following year appropriately to correct any deficiencies or to respond to newly perceived needs to have a solid basis for future planning.

Evaluation principles

Evaluation plans should be based on certain principles that reduce anxiety and increase coop¬eration among the individuals being evaluated. The evaluation process

1. **Should be open:** that is, the people or groups being evaluated know about the evaluation process in advance and have access to their own evaluation data. Furthermore, the people being evaluated have an opportunity to give input into their own evaluation.
2. **Should relate directly to programme goals and objectives.** Each person being evaluated should know why, when, where, how and by whom the evaluation is to be done.
3. **Should be conducted on an individual basis. However,** for reporting purposes, the results are compiled and data grouped rather than individual data are presented.
4. **Should be confidential.** The individual's evaluation is a confidential matter and is

accessible only to those who need to know such as an employee's supervisor or a child's teacher.

5. **Should build into the programme** so that it occurs on a regular basis.

Evaluation components

An early childhood education evaluation plan involves three components

1. Staff Evaluation
2. Children's Evaluation
3. Total programme evaluation

Staff Evaluation

- Staff evaluation is a natural outgrowth of supervision, which is one of the basic duties of the director.
- Every staff member should be evalu¬ated on a regular basis according to the procedure included in the policies and procedures manually.
- Staff evaluation is conducted to enable the di¬rector and the staff member to analyze whether the staff member is doing well and in what areas growth and change could occur.
- This type of eval¬uation provides information to the funding agency and the board about how employees spend their time.
- It also validates the work of the employees.

Children's Evaluation

- The major goals of an early childhood education center revolve around expectations about the development of children hence the evaluation must focus on children's behavior.
- Since young children develop rapidly, it is im¬portant that the progress they make in

their nor¬mal development is not attributed solely to the center's programme.

- Many other conditions affect the child's development, including parental behavior, cultural background, nutrition, and general health.
- Anyone of these variables or combinations of them can affect the child's development positively or negatively, just as the center's programme may have a positive or negative influence.
- The child's total development is a result of the interaction of many factors, which makes it almost impossible to evaluate the influence of one variable such as a specific child care or nursery school experience.

Techniques

The following are some of the techniques used for children's evaluation

1. **Teacher's Observation**: Throughout the year the teacher may keep anecdotal and running records on each child. These notes recorded on file cards or in a log book are summarized by the teacher at the end of the year. The teacher notes the changes in develop¬mental level and the specific objectives that the child has met. Using this method, the teacher is able to make statements about each child individ¬ually, placing emphasis on what the child's needs were as based on initial observations and how the needs were met.

2. **Checklist:** The director may create a checklist that names the behaviors toward which the center's objectives are aimed. Then the teacher merely checks whether or not the child exhibits the listed behavior.

3. **Rating Scales:** The director may create a rating scale that lists the behaviors' aimed for in the center's objectives. The rating scale alleviates the problem created by a checklist by

providing a way for teachers to quantify their answers. The teacher rates each child at least at the beginning and the end of the school year and perhaps more frequently.

4. **Standardized Tests:** The director should be familiar with standardized tests and their uses and limitations. A few of these tests can be administered by teachers if they have the skills, time and an appropriate place in which to test each child individually. Most preschool children are not yet ready for group tests. Tests must be selected carefully, must be related to the objectives of the center's programme and must be appropriate for the children being tested. Issues such as cultural bias, reliability and validity must be taken into consideration.
5. **Portfolios:** One type of record keeping which can provide complete valuable information about each child is the portfolio. Some teachers use a two¬ part system with one folder in a locked cabinet and a second folder in the classroom readily ac¬cessible to the child. Folder one contains forms and information from families, the teachers writ¬ten observations such as anecdotal records, notes on plans for that child, progress reports, medical reports and reports from previous teachers.
   The second folder provides the child with an opportunity to save products which he created. The teacher may add photoes, videos and audiotapes, although the availability of these records depends on the center's budget and the time available to teachers to prepare these records.

6. **Other Observers:** Sometimes the director evaluates the children through regularly scheduled observation periods or through simple testing procedures, checklists, or rating scales. Occasionally, teachers evaluate each others' children in an attempt to be as objective as possible, or a psychologist or special education consultant may observe and later have a conference with the teacher.

Total programme evaluation

The programme goals of the center, and the programme itself, are designed to meet the particular needs that the center was established to meet. Consequently, at evaluation time, the

needs, the goals, and the programme are evaluated. A widely used center-evaluation tool is the Early Childhood Environment Rating Scale. Seven areas are covered in separate subscales. These are personal care routines, furnishings, and display for children, language-reasoning experiences, fine and gross motor activities, creative activities, social development and adult needs.

- **Summarizing Data:** The director is responsible for summarizing the data that is collected from all aspects 'of the evaluation process showing the progress (or regression) since the last evaluation rather than focusing solely on the present performance level. The summary should provide a clear data picture for the reader and should reflect accurately the facts, ideas, and opinions provided by those who participated.
- **Analyzing and Using the Data:** The director or a designated committee uses the summary to cull out information. Once the data have been analyzed, the director prepares a report for the funding agency, the board and the other people or groups to whom the center is responsible. This type of report is usually prepared annually, although interim reports may be compiled.

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