

DJP3B - EDUCATIONAL PSYCHOLOGY

UNIT I: INTRODUCTION

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REFERENCE BOOKS:

1. Mangal, S. K. (2011). Advanced Educational Psychology, 2nd ed. PHI Learning, New Delhi.
2. Santrock, J. W. (2006). Educational Psychology. 2nd ed. Tata McGraw-Hill, New Delhi.
3. Tuckman, B. W., & Monetti, D. M. (2011). Educational Psychology. Wadsworth Cengage Learning.

EDUCATIONAL PSYCHOLOGY

UNIT I: INTRODUCTION

Definition – Nature, Characteristics and Scope – Methods of Educational Psychology – Educational Psychology and the role of the teacher – Characteristics of an effective teacher – Teacher as Researcher

Definitions:

The word “Psychology” is derives its meaning from the two Greek words ‘Psyche’ which means ‘soul’ and “Logos” which means ‘science’ or ‘knowledge’. Thus ‘Psychology’ literally means 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 psychologist 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 which this definition gives abstract meaning.

Commenting on this aspect, Woodworth (1948) says: First psychology lost its soul, then its mind and then it lost its consciousness. It still has behaviour of a sort.

William McDugall (1905) defined psychology as the “Science of Behaviour”.

W. B. Pillsburt (1911) and J.B. Watson (1912) also defined psychology as the “Science of Behaviour”. Behaviour generally means overt activities which can be observed and measured scientifically. But one’s behavior is always influenced by his experiences. So when we study ones’s behavoiur, we must also study his experiences.

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 settings and an attempt to apply the knowledge of psychology in the field of education. In other words, educational psychology may be defined as that branch of psychology which studies the behaviour of the learner in relation to his educational needs and his environment.

B. F. Skinner (1958) defined educational psychology as a “The branch of psychology which deals with the behaviour of human beings in educational settings”. Thus educational psychology is a behavioral science with two main references i.e. human behaviour and education. Education in its applied form is centred on the process of teaching and learning and it is this which helps the teacher in better teaching and the learner in better learning.

Crow and Crow (1973) defined “Educational psychology describes and explains the learning experiences of an individual from birth through old age”. It was described that educational psychology is the subject area of the curriculum through which one can study the development of an individual in terms of his learning achievement during his own life-span. It deals with how a learner goes on learning as a result of interaction with his environment and how he can learn effectively.

E. A. Peel (1956) defined “Educational psychology is the science of Education”. Educational psychology by all means is an attempt to mould and shape the behaviour of the learners. It aims to produce desirable changes in the learners for the all-around development of his personality. The essential knowledge and skill to do this job satisfactorily is supplied by educational psychology.

In other words of E.A. Peel, “Educational psychology helps the teacher to understand the development of the learners, the range and limits of their capacities, the processes by which they learn and their social relationships”. Teachers as educational psychologists supplies all the information, principles and techniques essential for understanding the behaviour of the learner in response to educational environment and desired modification of his behaviour 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'. Thus, educational psychology is concerned primarily with understanding the processes of teaching and learning that take place within formal environments and developing ways of improving the methods of teaching and learning. It covers important topics like learning theories; teaching methods; motivation; cognitive, emotional and moral development; and parent-child relationships etc. It is also concerned for solving the practical problems related to the field of education, especially the process of teaching and learning.

Nature and Characteristics of Educational Psychology

Eminent psychologists and thinkers from their definitions of psychology stated the reality of the nature of psychology in terms of the scientific study and science of behaviour. The nature of educational psychology is scientific as it has been accepted as 'Science of Education'. The nature of educational psychology could be summarized in the following ways

i. 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 aims at understanding, predicting and controlling human behaviour

ii. 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 biologists

iii. Educational Psychology is a Social Science

Like the sociologists, anthropologists, economist or political scientist, the educational psychologist studies human beings and their sociability hence it may be inferred that educational psychology is a social science

iv. *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

v. *Educational Psychology is an Applied Science*

Educational psychology 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 learners. As a branch of psychology, it is parallel to any other applied psychology. For example, educational psychology draws facts from such areas as developmental psychology, clinical psychology, abnormal psychology and social psychology

vi. *Educational Psychology is a developing or growing science*

The new researches drawn out from educational psychology gives the educational psychologists a better insight into the child's nature and behaviour. 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 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 and
- To 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 behaviour of the individuals in various spheres, educational psychology studies the behaviour of the individual in educational sphere only.

Scope of Educational Psychology

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

- *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 the learner is essential. The topics include are 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 growth and development and each stage beginning from childhood to adulthood.

- ii. *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. It deals with the knowledge and principles of psychology facilitating the selection of desirable learning experiences of the learners.

- iii. *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

- iv. *Learning Situation and Environment*

Educational psychology deals with the environmental factors and learning situations which comes 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 counseling etc. for the smooth functioning of the teaching-learning process.

- v. *The Teacher*

The teacher is a potent force in any scheme of teaching and learning process. Educational psychology 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. It throws light on the essential personality traits, interests, aptitudes, the characteristics of effective teaching etc., so as to inspire for becoming a successful teacher.

- vi. Educational Psychology studies the behaviour of human 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
- vii. Educational Psychology studies the growth and development of the child. It deals with the various stages of growth and the characteristics of each stage of a child involved in learning
- viii. The salient feature of the scope of educational psychology deals interrogates 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
- ix. Educational psychology deals with the nature 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 where personality development implies a well-adjusted personality
- x. Educational psychology studies individual differences. 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
- xi. It studies the nature of intelligence and its measurement. This is of utmost importance for a teacher
- xii. It provides guidance and counseling. 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 is concerned with the behaviour of the learner in an educational setting.

Hence, it could be concluded 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 is concerned with the behaviour of the learner in

educational settings. Being a science of education, educational psychology has to supply the necessary knowledge and skills for carrying out all the tasks of education. Educational psychology has to work hard to keep evolve new concepts, principles and techniques according to the changing and growing needs, circumstances, emerging problems of the society and the nation.

Methods of Educational Psychology

The behaviour of the learner could be studied scientifically in relation to his environment through various methods and approaches depending on the condition of the subject, data to be recorded, the procedures adopted and tools used. The simple technique that gives rise to those methods or approaches is ‘observation’. The technique observation enables us to study the behaviour of the learner through the following methods

- Introspection method
- Observation method
- Experimental method
- Differential method
- Case study method
- Clinical method
- Genetic method

INTROPECTION METHOD

In this oldest known method of psychology, the word “introspection” has been derived from two Latin words, “intro” meaning “within” or “inward” and “spiere” meaning to “look”. Therefore ‘introspection’ implies “self observation” or in other words, to experience one’s own mental state i.e., to observe, analyze and report one’s own feelings and in fact, everything that takes place in one’s mind during the course of a mental act. For example, when in a state of anxiety, fear or anger one may be asked to determine by one’s own observation what one sensed, thought or felt at the time of experiencing that particular emotion.

According to Williams James, “Introspection observation is what we have to rely on first and foremost and always. The word intro-spection needs hardly to be defined, it means, of course, looking into our own minds and recording what we there discover. Everyone agrees that through

this method one can discover one's own state of consciousness. So far as I know, the existence of such states has never been doubted by any critic, however skeptical in other respects he may have been".

According to Stout, "In introspection we are concerned with the nature of experience itself and with the laws of mental process. The observer in introspection directed towards the answering of questions of theoretical importance for the advancement of our systematic knowledge of the laws and conditions of mental process". Introspection examines inner behaviour of an individual and an individual knows about his own feelings or thoughts in a particular situation.

Merits

- Introspection is the easiest of all the methods of educational psychology
- It does not need any tool or laboratory as the subject and the investigator is the same
- It is the most economical method and one which enables us to know about the mental state of an individual, i.e. his emotions and feelings
- Introspection method has generated a lot of research and provides adequate knowledge of the inner knowledge and experiences of an individual for revealing their behaviour through their thoughts and feelings.

Demerits

- Introspection means looking into one's own emotions and feelings, so when one attempts to study one's mental state, it disappears and therefore it is difficult to introspect the changing psychological experiences
- As the subject and investigator are same, the introspection becomes subjective and biased and therefore the data may not be reliable and valid
- The introspection method cannot be done by abnormal individuals and children
- A person should be highly trained and skilled to introspect properly
- According to Kant, it is not possible to accept conscious experience as the subject matter of psychology and then consider introspection as its proper method.

OBSERVATION METHOD

Observation method has replaced the method of introspection of self-observation and it is the one of the oldest and most popular methods of educational psychology. The observation method is

also called 'objective observation'. According to John Dollard, "The primary research instrument would seem to be the observing human intelligence trying to make sense out of human experience". Observation is one of the basic methods which mean that an individual's behaviour (i.e. a person's bodily gestures, facial expression and other bodily actions) is observed.

It is accepted by psychologists that an individual's overt behaviour is the result of his internal mental conditions. The observer makes systematic observation through recording in a natural situation. Observation can be both natural and participant. In natural observation, the experimenter observes and records the behaviour of the subjects in the natural setting as he has mentioned above; here the subjects are not conscious about their behaviour being observed, In participant observation, the observer becomes a member of the group, gains the confidence of the other group members by building rapport with them, and observes their behaviour. Here, the subjects are not conscious that their behaviour is being observed.

The principles that should be followed in the observation method are

- Observation should be made not only of the individual's behaviour but the whole situation
- Proper planning of the observation process should be made; objectives should be clear and the proper tools for recording must be kept properly
- Observer must select the appropriate number of subjects to be observed since it will be difficult if the number exceeds the limit
- The time of observation must be fixed. Too long time may take the observer distracted and tired and if it is too short it will not yield the proper information
- As observation is a systematic process, the observer must have the proper skills and aptitude and the ability to report accurately so that the data could be reliable.

Merits

- It is observation of behaviour in natural setting
- It is objective and therefore more reliable
- It is applicable for all age groups
- Observation can be done through simple tools as well as sophisticated ones like camera, tape recorder, video recorder etc.

- Observation can be made in any situation of our day to day life.

Demerits

- Data can be collected only about observable behaviour or overt behaviour. Therefore, it can be unreliable at times as the subject's mental behaviour can be different
- Personal prejudices or in other words, subjectivity on the part of the observer can be a big drawback of this method. The observer's own interests, values may affect the interpretation of the data to a great extent
- The behaviour of the subjects may be affected by the time and place. Their behaviour may be different at different times under the same circumstances
- Sometimes the observation method lacks precision, as different observers tend to interpret the data in different ways. Therefore, if the data collected are expressed in quantitative measures then they can be interpreted by statistical methods.
- The observation method fails to establish a cause-effect relationship between the subjects "behaviour and their surroundings". For example, delinquency may not always be caused by poverty; sometimes sound economic position of the subject can cause delinquent behaviour. Therefore, it becomes difficult to draw conclusions that a particular situation can induce certain kind of behaviour in an individual.

EXPERIMENTAL METHOD

It is one of the most important and an objective method of psychology, as it is very scientific. It is precise, planned, and systematic or in other words, it is observation under controlled conditions. According to J. W. Best, "Experimental research is the description and analysis of what will be, or what will occur, under carefully controlled conditions". In experiments, there is always the attempt to establish certain cause and effect relationships through carefully planned and controlled observation of the subject's behaviour. The experimental method's has certain characteristics. They are

- In the experimental method the conditions are always controlled
- It essentially requires at least two persons, the experimenter and the subject
- Usually the experimental method is applied on persons in a random order

- In experimental method two types of variables are used a) Independent variable like intelligence and b) dependent variable like home or school environment, other socioeconomic conditions etc.,

Merits

- It is the most systematic method and the conditions can be completely controlled
- The data collected can be analysed in an objective manner and so it is reliable
- A cause-effect relationship of individual's behaviour can be established
- Hypothesis can be formulated and the result of the experiment can be tested keeping this in consideration
- It discards subjective viewpoints
- It increases the scope for further research as the result of the experimental method can be precisely recorded.

Demerits

- As human behaviour is changeable, identical behaviour of the same individual may not occur even under identical conditions at different times
- Most experiments have been conducted on animals like cats, dogs and rats and the principles arrived at on the basis of such tests may not explain human beings
- It is often difficult to conduct experiments in social sciences unlike physical sciences
- The experimental method is costly and time consuming
- The experimenter must have specialized skills to conduct experiments. The tools used in experiments may not be satisfactory and therefore the obtained data may not be reliable.
- The experimental method can produce results of probability and not certainly.

DIFFERENTIAL METHOD

The differential method is based on individual differences. Therefore, all the measures applied to the calculation of individual differences are included in this method. The differential method is also named as the normative survey method or the field survey method as the investigator has to go to the field to make his investigations. It is sometimes called as the statistical method for the reason that statistical techniques become the major devices for the study of the individual differences.

It may be felt that the difference between the experimental and differential methods is only arbitrary and artificial, since the procedure of finding the effects on dependent variables by the application of the independent variables is the same. This however is not true as T. G. Andrews (1958) comments: Differentiation between experiments and differential methods may appear quite artificial, and it is true that all psychologists will not agree to such an apparently artificial classification scheme. Nevertheless it should always be made clear that the independent variables resulting from individual differences are never under the investigator's control to the same degree that experimental variables are.

Thus, differential methods differ from the experimental approach in that the investigator cannot intentionally manipulate the variables and each of these is studied as an independent variable. For instance, in studying the relationship of achievement with intelligence, it is not possible to manipulate intelligence. Therefore, we have to take each individual and study his achievement in relation to his intelligence. After that, we can try to achieve at certain conclusions with the help of statistical techniques. The key concept in using the differential methods is their technique of studying differences within the same individual or between individual groups. Usually for this purpose four types of main approaches or designs are used.

1. Correlation Approach
2. Field Survey Approach
3. Longitudinal Approach
4. Cross – Sectional Approach

In the Correlation Approach, the psychologists takes people as they are and studies what they usually do, without changing the conditions under which they respond to the tests or perform the desired tasks. For example, in the above case of finding the relationship of achievement with intelligence, the intelligence as well as the achievement, say academic achievement of each individual can be found with the help of intelligence as well as achievement tests. The subjects will naturally differ from one another and by using the statistical technique of correlation; the desired relationship can be ascertained.

In the Field Survey Approach, the differences with regard to a particular trait pattern or characteristics among the individual among the individuals are discovered by conducting the field survey and taking adequate samples from the studied population. For example, in studying

the individual differences with regard to adjustment patterns or job satisfaction among high school teachers working in government and non- government schools, the use of the differential method would require (a) taking of adequate samples of both categories of teachers (b) finding out the adjustment or job satisfaction scores of the teachers included in these groups and (c) analyzing the differences, if any, in the pattern of adjustment or job satisfaction.

In the Longitudinal Approach, the differences in an individual or group of some individuals are studied over a long span of time. For example, by learning the pattern of growth and development with regard to physical, mental, emotional, social or moral dimensions of personality, we can study a particular infant or a number of infants as they normally grow and develop through successive ages. However, this type of study would require quite a long span as the researcher has to wait for the normal course of development to occur.

The Cross- Sectional Approach is the alternative for studying or discovering the normal trend where instead of studying one or more infants at their successive ages we can take different infants of varying ages for studying them simultaneously to determine the pattern of growth and development at different ages.

In all the above approaches meant to discover differences, the researcher is required to take the help of statistical methods for analyzing his data and interpreting his research findings with regard to the differences among individuals, groups and methods of treatment.

CASE STUDY METHOD

The “Case Study” method deals with the emotional and mental state of an individual. This method is applied to study special behavioural problems of an individual by specially trained teachers, psychologists and psychiatrists. Through this method, total information of family background, schooling and also social conditions of the individuals is obtained; hence, it can be called as ‘cumulative record’ which is of great help in understanding the source of an individual’s fears, anxiety, worry or any kind of maladjustment. The main objective of this method is to help the individual adjust better with the environment and gain self confidence to attain higher levels of achievement. The following different steps may be used in the case study method.

- Basic preliminary information about the subject's name, age, sex, parent's age, education, occupation as well as social status are gathered
- Proper physical check-up of the individual is done to ascertain whether his/her behavioural problem is due to any disease. Only in the absence of any physical ailment can psychological treatment start
- The subject should be very comfortable with the investigator while the latter takes the information
- The investigator (teacher or psychologist) should be friendly and the language of collecting data must be simple so that free and frank responses can be available. The investigator should give regular rest to the subject. The method cannot be applied hastily – it may go for several weeks or months
- The behaviour of the individual should be observed in natural setting and working conditions so that correct data which ultimately leads to proper understanding of the root cause of the person's problems could be provided
- Special care must be taken in the post treatment period so that there is no recurrence of the problem. The parents and the family members and the other associates must take care so that the subject can modify his behaviour and prevent maladjustment.

Method of Treatment:

The diagnosing of the behavioural problem, the subject should be followed by suitable treatment so that to bring about a change in the behaviour of the subject by adjusting with himself and the environment to restore his normal mental health. Treatment methods of maladjusted individuals include the following

- Efforts must be made to modify the environmental factors so that the individual can adapt better
- If the existing environment cannot be modified then the individual should be physically placed in a different environment which is more congenial for his development
- Proper guidance and counseling should be provided to the individual
- Different types of therapies should be applied like play therapy, group therapy, psychotherapy etc., by experts

- Case study method provides details about the individual's behaviour, an in-depth study about the root cause of the behavioural problems and help to provide guidance to modify the behaviour of the subject.

Merits

- The data collected by this method are adequate enough to through diagnose the problem since it is collected through various sources
- The data collected are valid and reliable
- Continuous procedures and follow-up actions are done
- The study could be kept confidential

Demerits

- The investigator should be technically proficient to handle a case. In most cases, the investigators are not found to be experts in the field
- Sometimes the information may become highly subjective.
- Chances for the data to become not reliable and valid in case certain facts are hidden by the parents or others related to the subject
- Possibility of the investigator to become involved with the problem of the individual making the treatment not effective
- Possibility of errors in understanding the problems as well as treatment is high. Hence, utmost care must be taken to minimize the errors.

CLINICAL METHOD

This method is primarily used to collect detailed information on the behaviour problems of maladjusted and deviant cases. The main objective of this method is to study individual case or cases of group to detect and diagnose their specific problems and to suggest therapeutic measures to rehabilitate them in their environment. It involves the following steps

- *Interview*
- *Information gathering*
- *A hypothesis formulation*
- *Diagnosis*

- *Planned treatment programme*

GENETIC METHOD

The above mentioned methods provide psychology with its data. But the supply of data is not enough and the explanation is also necessary. The genetic method is an explanatory method of psychology bringing out the genesis and development of a mental process. So it may be also called as developmental method. Mental processes are the results of a long course of evolution. So the question of vital interest is what are the development stages of the mind from its earliest to the present stage? The genetic method seeks to answer this question. The genetic method bears a close relation to the analytical method, for it aims at studying the gradual development of the adult mind by its analysis. The method is applicable to child psychology. It investigates the development and the growth of the child mind. This method throws light on the dynamic nature of the mind. It treats mind from the evolutionary point of view. Therefore, it is modern in its scientific outlook.

Educational Psychology and the Role of a Teacher

The knowledge of the educational psychology and its applications is vital in making the teaching-learning process progress. It was Pestalozzi who wanted to psychologise education, not only about the various stages of development and behaviour of students but also about the teacher himself, his skills and practices in the teaching-learning process.

G. M. Blair (1947) has outlines the task of educational psychology as “Modern teacher, if he is to succeed with his work, he should be a specialist who understands children, how they grow, develop, learn and adjust. He should be diagnostician who can discover special difficulties of children and at the same time possesses the requisite skill for carrying forward the necessary remedial work. He should also be performing important educational and vocational guidance functions. No person untrained in the methods of psychology can possibly fulfill the obligations and tasks which are the responsibilities of the teacher”.

The knowledge of educational psychology would enable a teacher to gain the following requisite knowledge and behavior to achieve optimum results.

i. *Catering to individual differences*

The knowledge of individual differences helps the teachers to identify the learners with different level of intelligence, aptitude, potentials etc. Gifted, talented, backward, talented and children with special needs could be handled accordingly to their educational needs.

ii. *Understanding the learner*

Teachers need to be expertise in their own subject. Though acquisition of knowledge is significant in the process of teaching and learning, it is important for the teachers to understand the mentality of the learners to bring about modification in the behavior of the learners so that apply the acquired knowledge in the real life situations.

iii. *Understanding group dynamics*

Learners pass through different stages of development like infancy, childhood and adolescence etc which has its own characteristics. The teacher has to be acquainted with the characteristics of each stage to impart instruction and to mould the behavior of the learners.

iv. *Understanding the nature of classroom learning*

The knowledge of science of behavior related to the instructional strategy that could be practiced in the classroom is known to the teachers by understanding not only about the subject matter to be taught but also about the causes that hurdles to attain the aims of education. Educational psychology helps the teacher to adapt and adjust the various instructional strategies according to the level of the learners.

v. *Understanding effective methods of teaching*

Educational psychology has discovered several new approaches, principles and techniques of teaching and eliminated many traditional practices of teaching which have become obsolete in the present context. Recent researches have given valuable suggestions regarding better methods of teaching for developing desirable behavior modifications of the learners.

vi. *Curriculum construction*

Psychological principles are used in formulating curriculum for different stages. Attempts are made to provide subjects and activities in the curriculum which are in conformity to the needs of the students, their developmental characteristics, learning patterns and the needs of the society.

vii. *Measurement of learning outcomes*

Educational psychology has produced many reliable tests and instruments of mental measurement which are helpful in the field of education. It enables us to measure the mental capacities, intelligence, temperamental attitudes and special inclination of the learners. The teachers can know the I.Q level of the learners by using these tests and guide them to explore the professional fields they could flourish.

viii. *Understanding the learning process*

Teaching and learning are like two sides of the same coin. Teaching learning process depends upon the process of stimulation and response. All education depends upon the learning of new responses and the capacity of a learner to learn new responses. Educational psychology discusses the nature of learning theories and types of learning for different age levels and situations of the learners.

ix. *Knowledge of mental health*

The study of educational psychology helps a teacher to know the various factors that influences the mental health and mal adjustment of the learners. Thus it enables a teacher to adjust and eliminate the factors to bring about healthy mental environment as mental health of the teacher and the learners are important for effective learning.

x. *Developing scientific attitude*

Teachers with knowledge of educational psychology could be more scientific in the educational practices and could become more methodical, objective and rational in their work.

xi. *Educational psychology and the nervous system*

The brain and the nervous system play a very important role in the learning process. It is essential for a teacher to study the nervous system which controls the human behavior. The teacher must have the knowledge of sensory organs which are the gateways of knowledge.

xii. *Understanding the significance of research*

The factors influencing the performances and the behaviors of the teacher and the learner could be predicted by developing tools and devices through research in the field of education. Researches in education enables the teachers to understand the developmental stages of the

learners, implementation of various instructional strategies according to the needs of the learners, measurement of learning outcomes etc.,

xiii. Use of innovation and projects

Innovative ideas are being used for the improvement of the teaching-learning process. Teachers could understand and adapt innovative practices like microteaching, programmed instructions, team teaching etc.

xiv. Use of audio-visual aids and new instructional technology

It has been experimentally proved that the use of audio- visual aids holds the attention of the learners for a long period and makes difficult concepts more clear. Teachers could make use of new instructional technologies to make the teaching-learning process more interesting for the learners to learn.

xv. Production of suitable textbooks

Textbooks should focus on the intellectual development, needs and interest based on the levels of the learner. Provision of sufficient illustrations in textbooks should be emphasized.

xvi. Democratic administration and management

Educational psychology helps a teacher to understand the democratic practices involved in functioning of the institution as well as teacher- student related areas. It clarifies the teacher ‘whom’, ‘who is’, ‘How’, ‘What’ & ‘When’ to teach. The abilities, aptitudes and interests of the students should be considered by the teacher according to their individual differences. The teacher needs to understand himself thoroughly and should have a stable personality. The subject – matter, experiences and activities should be organized according the various stages of the development of the student. The knowledge of psychology enables a teacher to understand the significance of various approaches, methods and techniques of teaching. Motivation is the internal force which accelerates behaviour; hence the mind of the child has to be prepared for the lessons which indicate the mood of the students in the teaching-learning process.

Characteristics of an Effective Teacher

Desired teacher behavior is an important aspect that makes a teacher effective not only to implement a rigorous training before starting teaching career but also to further improve their

professional activity, knowing that the focus is on continuous training of the teacher. The personality traits of effective teachers are as follows

i. Professionalism

Effective teachers should possess both declarative as well as procedural knowledge to function effectively in their classrooms. Declarative knowledge refers to knowledge about content area they are teaching whereas procedural knowledge refers to the ability to do things in the classroom. Shulman (1986) has identified seven types of knowledge that highly effective teachers must have as follows

- The content they are teaching
- The curriculum, materials and programs
- The principles and strategies that constitute classroom management and organization
- Educational aims and values and
- Pedagogical content knowledge

To sustain a sound professional knowledge, teachers must recognize the importance of professional development and keep up-to-date with technology.

ii. Instructional Effectiveness

Effective teaching combines the essence of good classroom management, organization, effective planning. The effective teacher facilitates the classroom presentation of the material to the students and provision of experiences for the students to make authentic connections to the material in a planned way. The effective teacher should be capable of achieving the supportive, challenging and nurturing instructional goals in a classroom environment. Effective teachers make a significant and lasting learning gain while less effective teachers plays a constant game of academic catch up.

iii. Personality

The kind of attitude that the teacher brings toward teaching is important in the teaching-learning process. It is almost self-evident that one cannot do what he does not like well. It is important, therefore, for the teacher to love his job and the children or adolescents who he teaches. This is

one way in which he can get the learners to believe in what he is doing and to have regard for him. Such regard translates into general love for the school and what it stands for. The teacher should show warmth, understanding, affection, and unconditional acceptance to all the children in his class. The teacher is expected to remain close to those that he teaches. He should be interested in understanding their problems, in and out of the classroom. Where possible, he can contribute towards solving the student problems by viable approaches that could be adopted. In relation to this aspect, he should be familiar with the way of life of the area in which his school is located. Also, the teacher must get acquainted to the customs, the morals and total culture of the people. Knowledge of all these is a sure way for the teacher to make himself as a part of the community in which he serves.

iv. *Good Communication Skills*

Highly effective teachers must be good communicators as they are required to articulate ideas, talk about issues and express their beliefs and values about teaching. They communicate clearly about course objectives, content and testing, making sure to provide a rationale for learning particular material and adapt instruction to their student's level of knowledge and skill. Effective teachers can take something that is complex and present it in a way that can be easily absorbed by the students through verbal and non – verbal. They need to practice honest two-way communication between teacher and administrators and with the families of student. As teachers take on numerous roles in their classroom and in the work place, they must be skilled in conflict resolution as well. Also, sociability and humorous sense could be considered.

v. *Commitment to Lifelong Learning*

Lifelong learning is recognized as one of the most important competencies by educators, governing bodies, accreditation organizations, employers and the general public. Effective teachers are concerned with their self and professional development and regularly reflect on what they do in their classroom. They should engage in strategic career planning which would assume a leadership position.

vi. *Classroom management and organization:*

Effective teachers should manage and organize the classroom according to the student's needs and expectations of student's behavior. Conducive classroom environment was found to be one

of the most important factors that affect students' achievement. It is the responsibility and skill of a teacher to create safe classroom environment and practice an optimal relationship with the students so that they can achieve their potential and confident to attempt new tasks and participate in the learning process. While classroom management focus on instructions which influences the students in terms of psychological behavior to learn, classroom organization influences the students' motivation to learn created from the physical learning environment. Effective teachers organize the classroom to promote learning and interaction and have to create an optimal learning environment where students feel comfortable and relax in terms of furniture arrangements, accessibility and mobility.

Teacher as Researcher:

Recent literature on educational reform encourages teachers to be collaborators in revising curriculum, improving their work environment, professionalizing teaching, and developing policies which emphasizes the concept 'teacher as researcher'. The focus of teacher research is to expand the teacher's role as inquirer about teaching and learning through systematic classroom research. Hence, the need of research by the teacher on self practice becomes evident for developing knowledge, improving curriculum, teaching and learning and classroom climate. This includes formal and informal researches investigation policy impacts and teaching methods comprising solutions to specific issues in the context.

The role of teachers as the receiver of knowledge and practitioner of teaching has been now challenged by empowerment of teachers through researching their own practice, becoming more aware of the complexities of the teaching environment and teacher research involving one's own professional practice. The research skills of the teacher not only enable the teachers to share and critique their professional practice within their teaching community but also develop their careers in action research or classroom enquiry skills which make them find solutions to their problems they face in practicing their profession. Collaborative research is found to be the key factor that triggers effective teacher participation in researching their own practice in order to bring about improvement in – service teacher training.

'Teacher – Researcher' is considered as a critical factor in linking effective teaching practice and continuous professional growth to the process of inquiry and reflection. When teachers do classroom research, they begin to perceive themselves as learners, their classrooms as places

where they are learning and the data collected as data to be understood according to the problems they selected. Teachers who engage in research are considered to have an increased understanding of the complexities of the 'teaching-learning' process and the learning environment. It also promotes a self awareness with the potential to enhance effective teaching through a deeper understanding of their professional knowledge and allows them to make a better use of the insights gained from their pedagogical and curricular experiences throughout their careers.

The growing expectation for the professional role of teachers to incorporate the role of reflective practitioner as well as a researcher cannot be easily accommodated by all practicing teachers. It not only demands intellectual inquiry but also prompts serious and difficult questions about classroom practices and learning outcomes. The complexity of the institution, management and the classroom environment can act as a barrier to opportunities for teachers to play both the role of teacher and researcher. Adding to the barriers, time constraints, relationship within their teaching communities, accountability, system pressure, lack of confidence and experience in the area of research are the challenges faced by the teachers to play the role of a researcher.

Teacher as researchers not only progress the teaching learning environment by implementing more effective ways and enhance it by seeking and discovering solutions to problems related to teaching and learning, but also getting empowered to make a positive difference in terms of classroom practice and providing relevant information about teaching and learning in actual classroom environment.

UNIT II: GROWTH & DEVELOPMENT THEORIES

**Cognitive Development : Piaget's Four Stages of Development - Vygotsky's Theory;
Language Development – Meaning of Growth and Development – Stages of Growth and
Development – Factors influencing Growth and Development – Erickson's Theory of
Psycho – Social Development – Kohlberg's Theory of Moral Development – Emotional
Development**

COGNITIVE DEVELOPMENT

Cognitive development refers to how a person perceives, thinks and gains understanding of his or her world through the interaction of genetic and learned factors. The areas of cognitive development cover information processing, intelligence, reasoning, language development and memory. Cognitive development is the construction of thought processes including remembering, problem solving and decision making from childhood through adolescence to adulthood.

Researches in cognitive development emphasized that infants lacked the ability to think or form complex ideas and remained without cognition until they learned language. It is now known that babies are aware of their surroundings and interested in exploration from the time they are born. From birth, babies begin to actively learn. They gather, sort and process information from around them, using the data to develop perception and thinking skills. Though the cognitive development of children has been studied in variety of ways, the oldest is through intelligence (IQ) test, such as the widely used Stanford Binet Intelligence Quotient (IQ) test first adopted by psychologists Lewis Terman in 1916 from a French model pioneered in 1905. IQ scoring is based on the concept of “mental age” according to which the scores of a child of average intelligence match his or her age, while a gifted child's performance is comparable to that of an older child, and a slow learner's scores are similar to those of a younger child. Though IQ tests are widely used, they have come under increasing criticism for defining intelligence too narrowly and for being biased with regard to race and gender.

PIAGET 'S FOUR STAGES OF DEVELOPMENT

The most influential exponent of cognitivism was Swiss child psychologist Jean Piaget. Piaget rejected the idea that learning was the passive assimilation of given knowledge. Instead, he

proposed that learning is a dynamic process comprising successive stages of adoption to reality during which learners actively construct knowledge by creating and testing their own theories of the world.

Piaget's theory has two major parts: an "ages and stages" component that predicts what children can and cannot understand at different ages and a theory of development that describes how children develop cognitive abilities. It is the theory of development that will be the focus here because it is the major foundation for cognitive constructivist approaches to teaching and learning.

Piaget's theory of cognitive development proposes that humans cannot be "given" information which they immediately understand and use. Instead, humans must "construct" their own knowledge. They build their knowledge through experience. Experiences enable them to create "Schemas"-mental models in their heads. The schemas are the representation in the mind of a set of perceptions, ideas and actions which go together. These schemas are changed, enlarged and made more sophisticated through two complimentary processes given below

- i. Assimilation - The process by which a person takes material into their mind from the environment, which may mean changing the evidence of their senses to make it fit.
- ii. Accommodation –The difference made to one's mind or concepts by the process of assimilation.

The basic principle underlying Piaget's theory is the principle of equilibration:

All cognitive development including both intellectual and affective development progresses towards increasingly complex and stable levels of organization. Equilibration takes place through a process of adoption, that is, assimilation of new information to existing cognitive structures and the accommodation of that information through the formation of new cognitive structures.

For example, learners who already have the cognitive structures necessary to solve percentage problems in mathematics will have some of the structures necessary to solve-time-rate-distance problems, but they will need to modify their existing structures to accommodate the newly acquired information to solve the new type of problem. Thus, learners adapt and develop

by assimilating and accommodating new information into existing cognitive structures. It should be noted that assimilation accommodation goes together.

Piaget suggested that there are four main stages in the cognitive development of children as follows,

- i. The Sensory motor stage (0 – 2 yrs)
- ii. The Preoperational stage (2 to 7 yrs)
- iii. The Concrete Operational stage (7 to 12 yrs)
- iv. The Formal Operational stage (12 yrs and above)

i. The Sensory motor stage (0-2yrs)

In the first two years, children pass through a sensory motor stage during which they progress from cognitive structures dominated by instinctual drives and undifferentiated emotions to more organized systems of concrete concepts, differentiated emotions, and their first external affective fixations. At this stage, children's outlook is essentially egocentric in the sense that they are unable to take into account other's point of view.

ii. The Preoperational stage (2 to 7 yrs)

The second stage of development lasts until around seven years of age. Children begin to use language to make sense of reality. They learn to classify objects using different criteria and to manipulate numbers. Children's increasing linguistic skills open the way for greater socialization of action and communication with others.

iii. The Concrete Operational stage (7 to 12yrs)

Children at this point of development begin to think more logically, but their thinking can also be very rigid. They tend to struggle with abstract and hypothetical concepts. At this point, children also become less egocentric and begin to think about how other people might think and feel. They begin to understand that their thoughts are unique to them and that not everyone else necessarily shares their thoughts, feelings and opinions.

iv. The Formal Operational stage (12 yrs and above)

From the age of twelve to adolescent, the final stage of Piaget's theory involves an increase in logic, the ability to use deductive reasoning and an understanding of abstract ideas. At this point, people become capable of seeing multiple potential solutions to problems and think more scientifically about the world around them.

Educational Implications

- Focus on the process of children's thinking ,not just its products
- Recognition of the crucial role of children's self-initiated, active involvement in learning activities
- Emphasis on practices aimed at making children adult like in their thinking
- Acceptance of individual differences in developmental progress

VYGOTSKY'S LANGUAGE DEVELOPMENT THEORY

The psychologist, Lev Vygotsky shared many of Piaget's views about child development, but he was more interested in the social aspects of learning. Vygotsky differs from discovery learning, which is also based on Piaget's ideas, in that the teacher and older children play important roles in learning. He argued that all cognitive functions originate in, and must therefore be explained as products of social interactions and that learning was not simply the assimilation and accommodation of new knowledge by learners; it was the process by which learners were integrated into a knowledge community.

The teacher is typically active and involved. The classroom should provide variety of learning materials (including electronic) and experiences and the classroom culture provides the child with cognitive tools such as language, cultural history and social context.

The Zone of Proximal Development (ZPD) is a concept for which Vygotsky is well-known. It refers to the observation that children, when learning a particular task or body of information, start out by not being able to do the task. Then they can do it with the assistance of an adult or older child mentor, and finally they can do it without assistance. The ZPD is the stage

where they can do it assisted, but not alone. Thus the teacher often serves to guide a child or group of children as they encounter different learning challenges.

Vygotsky's observations led him to propose a complete relationship between language and thought. He observed egocentric speech and child monologues such as Piaget wrote about, as well as internal speech. He proposed that speech (external language) and thought have different origins within the human individual. He described thought as non-verbal, and speech as having a pre-intellectual stage, in which words are not symbols for the objects they denote, but are properties of the objects. Up to about age two, they are independent. After that thought and speech become connected. At this point, speech and thought become interdependent, and thought becomes verbal. Thus, children's monologues become internalized as internal dialog.

Vygotsky differed from Piaget in that he considered development after age 2 as at least partially determined by language. He believed that egocentric speech serves the function of self-guidance, and eventually becomes internalized. It is only spoken aloud because the child has not yet learned how to internalize it. He found that egocentric speech decreased when the child's feeling of being understood diminished, as when there was no listener or the listener was occupied with other matters. These ideas, while intriguing, have never been adequately researched, so it is difficult to evaluate their significance.

Classroom Implications

- i. Learning and development is a social, collaborative activity
- ii. The Zone of Proximal Development can serve as a guide for curricular and lesson planning.
- iii. Classroom activity should be reality-based and applicable to the real world.
- iv. Learning extends to the home and other out-of-school environments and activities and all learning situations should be related.

MEANING OF GROWTH AND DEVELOPMENT

The life of human being starts with the conception in the mother's womb as a result of the process of fertilization of the ovum of the mother by the sperm cell of the father. The mother's womb then becomes the place for the growth and development of the new life. The organs of the

child grow and mature due to learning and training, improvement or development takes place in the functioning of the individual and his behaviour.

The term 'Growth' is used in physical sense which refers to increase in size, length, height and weight. Changes in the quantitative aspects which could be objectively observed and measured includes in the domain of growth. Growth is one of the components of the development process. In a sense, development in its quantitative aspect is termed as 'Growth'.

The general principles of growth are

- Growth is quantitative i.e. it indicates enlargement and augmentation
- It could be objectively observed and measured
- It does not continue throughout the life-span
- It is one aspect of development
- It occurs in different part of the organism
- It is not directional
- Rate of growth is not uniform in all parts of the organism
- Individual differences exists in growth among children

The term 'Development' refers to the qualitative aspect of high intelligence and low intelligence. Development cites progressive change results in quality, character and composition and comprehension. Growth and Development are intertwined. It is better to explain that growth indicates increase, enlarged and augmental changes; development resulting in improved quality, character and composition and comprehension. Development implies overall changes in shape, form or structure resulting improved working or functioning. It indicates the change in the quality or character rather than in quantitative aspects. Development is the result of growth, maturation and learning.

The general principles of development are

- Development is both a product of heredity and environment
- Development is a continuous process
- Development proceeds from general to specific
- Development follows a pattern

- Development takes place at different rates in different parts of the body
- Development is cumulative
- Development can be predicted

STAGES OF GROWTH AND DEVELOPMENT

In human life, the specific titles of infant, childhood, adolescent, adult or old person are specifically related to distinct stages of growth and development into which the human life span is hypothetically divided. Each of these stages is said to extend over a somewhat definite period in years. The table below gives an idea of the age- linked developmental stages.

Age Span for the Human Developmental Stage

<i>S.No</i>	<i>Period or stages of development</i>	<i>Approximate age</i>
1.	Infancy	From birth to 2 years
2.	Childhood	From 3 rd year to 12 years
	a) Pre-childhood	From 3 rd year to 6 years
	b) Later childhood	From 7 th year to 12 years or in a strict sense up to the onset of puberty
3.	Adolescence	From 13 th year to 19 years or in a strict sense from onset of puberty till the attainment of maturity
4.	Adulthood	From 20 th year to 60 years or in a strict sense from attaining maturity to the age one ceases to produce one's own kind
5.	Old age	From 61 years or in a strict sense from the end of the reproduction capabilities till death

During all these developmental stages, human beings exhibit typical behavioural characteristics in all dimensions of behaviour and personality make-up which are specific to each stage. However, individual variations and no one is similar to others in all aspects of behaviour and dimensions of personality. A Study of the pattern of growth and development exhibited by

individuals while passing through the above mentioned stages provides very useful data for parents and teachers to plan the development and education of children.

FACTORS INFLUENCING GROWTH AND DEVELOPMENT

There are several factors which directly or indirectly influence the growth and development of an organism. They are

1. **Heredity:** Heredity is a biological process through which the transmission of physical and social characteristics takes place from parents to off- springs. It greatly influences the different aspects of growth and development. i.e. height, weight and structure of the body, colour of hair and eye, intelligence, aptitude and instincts.
2. **Environment:** Environment plays an important role in human life. Psychologically a person's environment consists of the sum total of the stimulations which an individual receives from his conception. There are different types of environment such as physical, environment, social environment and psychological environment. Physical environment consists of all outer physical surroundings both in-animate and animate which have to be manipulated in order to provide food, clothing and shelter. Geographical conditions i.e. weather and climates are physical environment which has considered impact on individual child. Social environment is constituted by the society like individuals and institutions, social laws, customs by which human behaviour is regulated. A psychological environment is rooted in individual's reaction with an object. One's love, affection and fellow feeling attitude will strengthen human bond with one another. Hence growth and development are regulated by the environment of an individual where he lives.
3. **Sex:** Sex acts as an important factor of growth and development. There is difference in growth and development of boys and girls. The boys in general taller, courageous than the girls but girls show rapid growth in adolescence and excel boys. In general, the body constitution and structural growth of girls are different from boys. The function of boys and girls are also different in nature.

4. **Nutrition:** Growth and development of the child mainly depends on the food habits and nutrition. The malnutrition has adverse effect on the structural and functional developments of the child.
5. **Races:** The racial factor has a great influence on height, weight, colour, features and body constitution. A child of white race will be white & tall even hair and eye colour, facial structure are governed by the same race.
6. **Exercise:** The growth of muscles from the normal functioning of the child is a matter of common knowledge. It is in fact that repeated play and rest build the strength of the muscle. The increase in muscular strengths is mainly due to better circulation and oxygen supply. The brain muscles develop by its own activities provide for these growth and development of various muscles. Deliberately the child does not play or engages himself in various other functions with the knowledge that they will help in growing. This style of functioning of the child is but natural.
7. **Hormones:** There are a number of endocrine glands inside the human body. Endocrine glands are ductless glands. This means there are certain glands situated in some specific parts of the body. These glands make internal secretions locally. These secretions produce one or more hormones which are physiological substances having the power to raise or lower the activity level of the body or certain organs of the body. For example, the gland pancreas secretes pancreatic juice, not into the blood, but into the intestine; Here it acts upon food and plays an important part in digestion of food. This pancreas also discharges into the blood, a substance called insulin. This being carried by the blood to the muscles enables them to use sugar as a fuel to add strength to muscles. If the pancreas fails to produce the secretions, the organism lapses to the unfavorable conditions of growth and development. Similarly adrenal hormones, male and female sex hormones, pituitary gland greatly influences growth and development of an individual.
8. **Learning and Reinforcement:** Learning is the most important and fundamental topic in the whole science of psychology. Development consists of maturation and learning. Without any learning the human organism is a structure of various limbs, all other internal organs with muscles and bones. But, it is not human being with maturation. Learning included much more than school learning. Learning helps the child in his

physical, mental, emotional, intellectual, social and attitudinal developments. All knowledge and skills, habits, acquaintances with people and things, attitudes have to be learned. Reinforcement is a factor which is necessary for learning.

ERICKSON'S THEORY OF PSYCHO-SOCIAL DEVELOPMENT

Erik Erickson proposed a psychoanalytic theory of psychosocial development comprising eight stages from infancy to adulthood. During each stage, the person experiences a psychosocial crisis which could have a positive or negative outcome for personality development. His ideas were greatly influenced by Freud's theory regarding the structure and topography of personality. He emphasized the role of culture and society and the conflicts that can take place within the ego itself, whereas Freud emphasized the conflict between the id and the superego.

According to Erickson, the ego develops as it successfully resolves crises that are distinctly social nature. These involve establishing a sense of trust in others, developing a sense of identity in society and helping the next generation prepare for the future. He extends on Freudian thoughts by focusing on the adaptive and creative characteristics of the ego and expanding the notion of the stages of personality development to include the entire lifespan. He emphasized that personality develops in a predetermined order and builds upon each previous stage. This is called the epigenic principle. The outcome of this 'maturation timetable' is a wide and integrated set in life skills and abilities that function together within the autonomous individual. However, instead of focusing on sexual development like Freud, he was interested in how children socialize and how this affects their sense of self.

Erickson's theory of psychosocial development has eight distinct stages of growth and development throughout one's life and emphasized on adolescent period which was a crucial stage for developing a person's identity. He assumes that a crisis occurs at each stage of development and these crises are of a psychosocial nature because they involve psychological needs of the individual conflicting with the needs of society. According to this theory, successful completion of each stage results in a healthy personality and the acquisition of basic virtues. Basic virtues are characteristics strengths which the ego can use to resolve subsequent crises. Failure to successfully complete a stage can result in a reduced ability to complete further stages and therefore a more unhealthy personality and sense of self.

Erickson's Psychosocial Development Theory Age Span

Stage of Psychosocial development	Specific age or period
Trust vs. Mistrust	Birth to 1 ½ years
Autonomy vs. Shame and Doubt	1 ½ years to 3 years
Initiative vs. Guilt	3 to 6 years
Industry vs. Inferiority	6 to 12 years
Identity vs. Role Confusion	Adolescence (12 to 20 years)
Intimacy vs. Isolation	Early adulthood (20 to 45 years)
Generativity vs. Stagnation	Middle adulthood (45 to 65 years)
Ego integrity vs. Despair	Later adulthood (65 years onwards)

The above table outlines the types of crises that need to be resolved at particular stages or periods of one's life. It also identifies the different stages of psycho-social development, i.e. the personality traits that are likely to develop at a particular stage. For example, one may go on acquiring positive traits like trust, independence, initiative, etc., to develop a meaningful personality, on other hand, one can develop into a troublesome, confused and developing negative traits like mistrust, shame, doubt, guilt feeling etc., It should be considered that these behaviour traits, modes of adjustment or psychological aspects are acquired through one's active interaction with the social environment and the stages of development are referred to as psycho-social development. These psychosocial developments should not be considered to begin suddenly and end abruptly.

Stage 1: The period of Trust vs. Mistrust (Birth to 1½ years). Erickson's first psychological crisis occurs during the first year or so of life like Freud's oral stage of psychosexual development. The crisis is one of trust vs. mistrust. During this stage, the infant is uncertain about the world in which they live. To resolve these feelings of uncertainty, the infant looks towards their primary caregiver for stability and consistency of care. If the care the infant receives is consistent, predictable and reliable they will develop a sense of trust which will carry with them to other relationships and they will be able to feel secure even when threatened.

Success in this stage will lead to the virtue of hope. By developing a sense of trust, the infant can have hope that as new crises arise, there is a real possibility that other people will be there as a source of support. Failing to acquire the virtue of hope will lead to development of fear. For example, if the care has been harsh or inconsistent, unpredictable and unreliable, then the infant will develop a sense of mistrust and will not have confidence in the world around them or in their abilities to influence events. This infant will carry the basic sense of mistrust with them to other relationships. It may result in anxiety, heightened insecurities and an over feeling of mistrust in the world around them.

Stage II: The Period of Autonomy vs. Shame and Doubt (1½ to 3 years). The child develops physically and becomes more mobile between the months of 18 to 3 years. Children begin to assert their independence by walking away from their mother, picking which toy to play with and making choices about what they like to wear, to eat etc. The child discovers that he or she has many skills and abilities such as putting on clothes and shoes, playing with toys etc. Such skills illustrate the child's growing sense of independence and autonomy. Erikson states it is critical that parents allow their children to explore the limits of their abilities within an encouraging environment which is tolerant of failure. For example, rather than put on a child's clothes a supportive parent should have the patience to allow the child to try until they succeed or ask for assistance.

The parents need to encourage child to become more independent while at the same time protecting the child so that constant failure is avoided. A delicate balance is required from the parents. They must try not to do everything for the child, but if the child fails at a particular task they must not criticize for failures and accidents. The aim has to be "self control without a loss of self-esteem". Success in this stage will lead to the virtue of will. If children in this stage are encouraged and supported in their increased independence, they become more confident and secure in their ability to survive in the world. If children are criticized, overly controlled or not given the opportunity to assert themselves, they begin to feel inadequate in their ability to survive and may then become overly dependent upon others, lack of self-esteem and feel a sense of shame or doubt in their abilities.

Stage III: The Period of Initiative vs. Guilt (3 to 6 years). In this stage, children assert themselves more frequently. These are particularly lively, rapid-developing years in a child's

life. During this period the primary feature involves the child regularly interacting with other children at school. Central to this stage is play, as it provides children with the opportunities to explore their interpersonal skills through initiating activities. Children begin to plan activities, make up games and initiate activities with others and develop a sense of initiative and feel secure in their ability to lead others and make decisions. Conversely, if this tendency is criticized or controlled, children develop a sense of guilt. They may feel like nuisance to others and remain followers lacking in self- initiative.

It is in this stage that the child will begin to ask many questions as his thirst for knowledge grows. If the parents treat the child's questions as trivial, a nuisance or embarrassing or other aspects of their behaviour as threatening then the child may have feelings of guilt for "being a nuisance". Too much guilt can make the child slow to interact with others and may inhibit their creativity. A healthy balance between initiative and guilt is important. Success in this stage will lead to the virtue of purpose.

Stage IV: The Period of Industry (Competence) vs. Inferiority (6 to 12 years). The fourth stage of Erickson's psychosocial development theory is industry vs. inferiority. The stage occurs during childhood between the ages of five and twelve. Children are at the stage where they will be learning to read and write, to do sums, to do things on their own. Teachers begin to take an important role in the child's life as they teach the child specific skills. In this stage, the child's peer group will gain greater significance and will become a major source of the child's self-esteem. The child now feels the need to win approval by demonstrating specific competencies that are valued by the society and begin to develop a sense of pride in their accomplishments.

If children are encouraged and reinforced for their initiatives, they begin to feel industrious and feel confident in their ability to achieve goals. If this initiative is not encouraged, if it is restricted by parents or teachers, then the child begins to feel inferior, doubting his own abilities and therefore may not reach his or her potential. If the child cannot develop the specific skill they feel society is demanding (e.g. being an artist or sportsperson) then they may develop a sense of inferiority. Some failure may be necessary so that the child can develop a sense of inferiority. Some failure may be necessary so that the child can develop some modesty. Again a balance between competence and modesty is necessary. Success in this stage will lead to the virtue of competence.

Stage V: The Period of Identity vs. Role Confusion (12 to 19 years). The fifth stage identity vs. role confusion occurs during adolescence from about 12-18 years. During this stage, adolescents search for a sense of self and personal identity through an intense exploration of personal values, beliefs and goals. The adolescent mind is essentially a mind or moratorium, a psychological stage between childhood and adulthood and between the morality learned by the child and the ethics to be developed by the adult. The sudden changes in their bodies and mental functioning and the altered demands of society compel them to ask questions of themselves like who am I? What have I become? Am I the person I used to be? What am I supposed to be? During this stage children become more independent and begin to look at the future in terms of career, relationships, families, housing, etc. The individual wants to belong to a society and fit in.

This is a major stage of development where the child has to learn the roles he will occupy as an adult. It is during this stage that the adolescent will re-examine his identity and try to find out exactly who he or she is. Erickson suggests that two identities are involved: the sexual and the occupational. He claims that the adolescent may feel uncomfortable about their body for a while until they can adapt and “grow into” the changes. Success in this stage will lead to the virtue of fidelity. Fidelity involves being able to commit one’s self to others on the basis of accepting others even when there may be ideological differences. During this period, they explore possibilities and begin to form their own identity based upon the outcome of their explorations. Failure to establish a sense of identity within society can lead to role confusion.

Role confusions involve the individual not being sure about themselves or their place in society. In response to role confusion or identity crisis an adolescent may begin to experiment with different lifestyles (e.g. work, education or political activities). Also pressuring someone into an identity can result in rebellion in the form of establishing a negative identity and in addition to this feeling of unhappiness. If the psycho-social development of the adolescent results in his achieving a sense of identity, it will result in the individual of the adolescent results in his achieving a sense of identity, it will result in the individual developing the required confidence in his ability and will place him in harmony with his environment.

Stage VI: The Period of Intimacy vs. Isolation (20 to 45 years). This stage occurs in young adulthood from age 18 to 40 years when we begin to share ourselves more intimately with others. During this stage the individual tends to develop a sense of intimacy or commitment to a close relationship with another person. In this period, individual seeks to form close attachments

by merging his identity with that of another person. The relationships develops into such a close involvement that he tends to risk even the loss of his ego or image as is evidenced in the harmonious relationships between husband and wife and intimate friends and in the ideal relationship between a teacher and his pupil. Successful completion of this stage can result in happy relationships and a sense of commitment, safety and care within a relationship. Avoiding intimacy, fearing commitment and relationships can lead to isolation, loneliness and sometimes depression. Successful in this stage will lead to the virtue of love.

Stage VII: The Period of Creativity vs. Stagnation (middle adulthood -45 to 65 years). An individual's life up to this stage is taken up with trying to establish him in a professional career. Now he needs to satisfy his need for generativity, a concern to establish and guide the next generation. This is realized through the nurturing of his own children, guiding and directing other young people and by engaging in some kind of creative, productive or fruitful activity that may prove beneficial to society. Instead of caring only for himself or for those in his family or friends who are close to him, he participates in the welfare of the future generation as represented by his own children, pupils, subordinates and young people in general, as an effort at extension of one's self and its merger with self or others in society.

On the other hand there is a tendency on the part of the individual to become egoistic and selfish. This leads to stagnation and personal impoverishments. A balanced adjustment between the extremes of the need for generativity and the need for inactivity is thus required so that in the time of inactivity one may become more energetic and be able to put renewed efforts into rendering service to society and future generations. Success in his stage will lead to the virtue of care.

Stage VIII: The Period of Ego-Integrity vs. Despair (Old age, about 65 onwards). This stage of psychosocial development is associated with later adulthood or old age. During this last stage of Erickson's psychosocial development one is confronted with the final crisis of one's life span, termed ego-integrity vs. despair. Ego – integrity refers to the integration or culmination of the successful resolution to all the seven previous crises in the course of one's life. The successful resolution of the previous crises provides a sense of fulfillment and satisfaction to one's ego. When one reflects on one's past and feels satisfied over what has been done, one is sure to develop a positive outlook about oneself and the world around. It is during this stage, that we

contemplate our accomplishments and can develop integrity if we see ourselves as leading a successful life.

Erickson believed if we see our lives as unproductive, feel guilt about our past or feel that we did not accomplish our life goals, we become dissatisfied with life and develop despair, often leading to depression and hopelessness. Success in this stage will lead to the virtue of wisdom. Wisdom enables a person to look back on their life with a sense of closure and completeness and also accept death without fear. It is therefore, essential to strike a balance between the conflicting needs of ego-integrity and despair and to successfully resolve the final crises of one's life resulting in a well- balanced optimistic outlook for oneself and the outside world in order to live the remaining days of one's life as gracefully and productively as possible.

KOHLBERG'S THEORY OF MORAL DEVELOPMENT

Lawrence Kohlberg, psychologist of Harvard University put forward the theory of moral development of individual based on his findings of his studies conducted on hundreds of children from different cultures. He expanded on the earlier work of cognitive theorist Jean Piaget to explain the moral development of children. He relates the moral development of an individual to his cognitive development which follows a series of stages. He differs from the views that children imbibe the sense and methods of moral judgment from their parents and elders by way of learning. He clarified that the cognitive process like thinking and reasoning also play a major role in one's moral development and explained that the way children make moral judgment depends on their level of intellectual development as well as on their upbringing and learning experiences.

Kohlberg defined moral development in human beings as “the development of an individual's sense of justice”. He used the idea of moral dilemmas i.e. stories that present conflicting ideas about two moral values and to teach 10 to 16 year-old boys about morality and values. The best known dilemma created by Kohlberg is the “Heinz” dilemma, which discusses the idea of obeying the law versus saving a life. After presenting people with various moral dilemmas, Kohlberg reviewed people's responses and placed them in different stages of moral reasoning. According to him, an individual progress from the capacity for pre-conventional morality (before age 9) to the capacity of conventional morality (early adolescence) and then attain post-conventional morality.

Kohlberg concluded that like Piaget's stages of cognitive development, there also exist universal stages in the development of moral values and the movement from one stage to another depends on cognitive abilities rather than the simple acquisition of moral values of one's parent, elders and peers. He identified three levels of moral development each containing two stages as shown in the table below.

Kohlberg's Stages Of Moral Development

<i>Level</i>	<i>Stages of Motivation</i>
Preconventional (4 to 10 years)	Stage 1: Obedience and Punishment Orientation Stage 2: Instrumental Orientation
Conventional Morality (10 to 13 years)	Stage 3: Good Boy, Nice Girl Orientation Stage 4: Law and Order Orientation
Post conventional (Adulthood)	Stage 5: Social – Contract Orientation Stage 6: Universal - Ethical - Principle Orientation

LEVEL 1: Preconventional (4 to 10 years)

Throughout the preconventional level, a child's sense of morality is externally controlled. Children accept and believe the rules of authority persons like parents and teachers. A child with pre-conventional morality has not yet adopted or internalized society's conventions regarding what is right or wrong, but instead focuses largely on external consequences that certain actions may bring. Development of morality at this level usually follows the two stages.

Stage 1: Obedience and Punishment Orientation. In the beginning, the child's morality is controlled by the fear of punishment. This stage focuses on the child's desire to obey rules and avoid being punished. For example, an action is perceived as morally wrong because the perpetrator is punished; the worse the punishment for the act is, the more "bad" the act is perceived to be.

Stage 2: Instrumental Orientation. In this second stage, children's moral judgment is based on self-interest and considerations of what others can do for them in return. In this stage,

reasoning shows a limited interest in the needs of others only to the point where it might further the individual's own interest. As a result, concern for others is not based on loyalty or intrinsic respect but rather doing the same to others which has been received from others. An example would be when a child is asked by his parents to do a chore, the child would do it after receiving some incentive. They obey the rules and orders of their parents and elders because it serves their interest of getting the incentive they wish or want to get.

LEVEL 2: Conventional Morality (10 to 13 years)

At this stage, children's moral judgment is controlled by the likes and dislikes of others and the law and order system maintained by the society. It could be considered that a child's sense of morality is tied to personal and societal relationships. Children continue to accept the rules of authority figures, but it is now due to their belief that this is necessary to ensure positive relationship and societal order. Adherence to rules and conventions is somewhat rigid during these stages. In this way, the conventional level of morality may be regarded as the level where the child identifies with authority. It is characterized by the following two stages.

Stage 3: Good Boy, Nice Girl Orientation. In stage 3, Children want the approval of others in way to avoid disapproval and avoid being disliked by being declared a good boy or a good girl. Emphasis is placed on good behaviour and people being "nice" to others. For this purpose, the child begins to judge the intentions and likes or dislikes of others and acts accordingly.

Stage 4: Law and Order Orientation. In this stage, the child blindly accepts the rules and conventions because of their importance in maintain a functioning society. The standards of others are now so established that it becomes a convention to follow them. Moral reasoning in stage four is beyond the need for individual approval exhibited in stage three. Most active members of society remain at stage four, where morality is still predominantly dictated by an outside force.

LEVEL 3: Post conventional (Adulthood)

Throughout the post conventional level, a person's sense of morality is defined in terms of more abstract principles and values. This marks the highest level of attainment of true morality as the controlling force for making moral judgments now rest with the individual himself. People now believe that some laws are unjust and should be changed or eliminated. This level is marked by a growing realization that individuals are separate entities from society and that individuals should abide by the rules and consistent with their own principles. Post- conventional moralists hold

their own ethical principles which include basic human rights as life, liberty and justice and begin to think rational. They elevate their own moral evaluation of a situation over social conventions, their behaviour and could be confused with that of those at the pre-conventional level. Some theorists have speculated that many people may never reach this level of abstract moral reasoning. The two stages included here are

Stage 5: Social – Contract Orientation. In this stage, the world is viewed as holding different opinions, rights and values. Such perspectives should be mutually respected as unique to each person or community. Laws are regarded as social contracts rather than rigid edicts. Those that do not promote the general welfare should be changed when necessary to meet the greatest good for the greatest number of people. This is achieved through majority decisions and inevitable compromise. For example, at this stage in defense to the rights of the human being, the decision about mercy-killing may be left to the individual who is suffering and if so, the concerned laws may be amended for the welfare of society at large.

Stage 6: Universal - Ethical - Principle Orientation. In this stage, moral reasoning is based on abstract reasoning using universal ethical principles. Generally, the chosen principles are abstract rather than concrete and focus on ideas such as equality, dignity or respect. Laws are valid as they are grounded in justice and a commitment to justice carries with an obligation to disobey unjust laws. People choose the ethical principles they want to follow and if they violate those principles, they feel guilty. In this way, the individual acts because it is morally right to do based on their interest, expectations and legally approved to do so. Although Kohlberg insisted that stage six exists, he found it difficult to identify individuals who consistently operated at that level.

From the above explanations of the stage of moral development, it is evident that children begin to think about the morality in terms of justice or right and wrong at a very early age, yet they have to wait till they reach adolescence or adulthood for the dawning of the stage of true morality. He also asserts that many of us are not able to cross the second level of moral development. Therein lies the varying individual perception in terms of the quality and level of morality depending upon cognitive development as well as on upbringing and social experiences.

EMOTIONAL DEVELOPMENT

Emotions play an important role in providing a particular direction to our behaviour, shaping our personality according to their development. It influences the personal and social development of an individual. Emotional stability leads to happy, peaceful and healthy life. Emotions are social signals that allow us voluntarily or involuntarily respond to our environment. Emotions are associated with cognitive components and could be felt physiologically and behaviourally.

Emotions influence all the aspects of an individual's personality as they are the prime factors of thoughts and conduct. Etymologically the word 'Emotions' has been derived from the Latin word "Emovere" which means 'to move' or 'to stir up' or 'to excite'.

Woodworth (1945) defined emotions as "Emotions is a moved or stirred up state of an organism. It is a stirred up state of feeling that is the way it appears to the individual himself. It is a disturbed muscular and glandular activity – that is the way it appears to an external observer".

Crow and Crow (1973) defined an emotion "is an effective experience that accompanies generalized inner adjustment and mental and psychological stirred up states in the individual and shows itself in his own behaviour".

William Dougall (1949) states "An instinct in an inherited or innate psycho-physical disposition which determines its possessor to perceive and to pay attention to objects of a certain class, to experience an impulse to such an action".

Mc Dougall discovered 14 basic instincts and pointed out that each and every emotion, whatever may be is the product of some instinctive behaviour. The instincts associated with their emotions are listed below:

<i>S.No</i>	<i>Instinct</i>	<i>Emotion Accompanying it</i>
1.	Acquisition	Feeling of Ownership
2.	Appeal	Distress
3.	Construction	Feeling of creativeness
4.	Curiosity	Wonder
5.	Flight or Escape	Fear
6.	Food seeking	Appetite
7.	Gregariousness	Feeling of Loneliness
8.	Laughter	Amusement

9.	Parental	Tenderness, Love
10.	Pugnacity or Combat	Anger
11.	Repulsion	Disgust
12.	Self-assertion	Positive Feeling
13.	Sex, Mating	Lust
14.	Submission	Negative Feeling

From the definitions and the explanations given by various psychologists, it could be concluded that emotions are some sort of feelings or affective experiences which are characterized by some physiological changes that generally lead them to perform some or other types of behavioural acts.

Characteristics and Nature of Emotions

- The emotional experiences are associated with some instincts or biological drives
- Emotions, in general are the product of perception.
- The core of the emotion is feeling which is essentially linked with some sort of urge or impulsive act to do.
- Every emotional experience involves several physical and psychological changes in the organism.
- Emotions are frequent and are observed in relation to the concrete objects or situations.
- Emotions are temporary which are intense in early childhood irrespective of the intensity of the stimulus.
- Emotions are present in all stages of development and differ from person to person.
- One emotion may give rise to a number of likewise emotions which rise abruptly and die slowly.

Kinds of Emotions

The emotions of new born infants are termed as 'Primary emotions'. According to Watson rage, fear and love are the three primary emotions. Generally, emotions of an individual could be classified into two categorized into two - positive and negative emotions based on the experiences by an individual. The impact of emotion for the well- being of an individual, whether it would help him or harm him depends upon the following factors:

- the frequency and intensity of emotional experiences

- ii. the situation, occasion and the nature of stimulus which arouses the emotion
- iii. the kind of emotional experiences

Emotions like affection (love), amusement, curiosity, happiness and joy which are very helpful and essential to the normal behaviour are termed as positive emotions. Unpleasant emotions like anger, fear and jealousy which are harmful to the individual's development are termed as negative emotions. Emotions with too much of intensity and frequency whether positive or negative bring harmful effects. The emotion of fear prepares an individual the danger ahead. The child who has no emotion of fear is sure to get affected because it has not learnt to save itself against a possible danger.

Signs of Emotions

Emotions may be external or physiological and internal or psychological. Important signs of emotions in an individual are: increase in heart rate, rise in blood pressure, occurrence of changes in blood composition, increase in respiration, hair standing on end, dilation of eye-pupil, increase in muscle tension, increase in perspiration etc.,

Factors Influencing Emotional Development

The factors that influence emotional development of an individual are

1. **Family Atmosphere:** A cordial atmosphere at home develops positive emotions in children whereas conflicts, fights and tensions in the family give rise to negative emotions. The treatment given to the children by the parents and the members of the family influences their emotional development. The sizes of the family, the order of birth, socio-economic status of the family, parental attitude are the factors in the emotional make up of the child.
2. **School Atmosphere and Teachers:** The attitude of the teacher towards their students, the physical facilities provided in the school, the methods of teaching, organization of co-curricular activities are the factors that influence the emotional development in children.
3. **Health and Physical Development:** Any deficiency in physical health creates emotional problem. Weak children, suffering from constant illness are more emotionally upset than other healthy children. The normal functioning of the gland is very important for the balanced emotional development.
4. **Intelligence:** E. B. Hurlock has observed, "There is less emotional control, on the average, among those of the lower intellectual level than among children of the same group who are

bright”. An intelligent person, with his thinking and reasoning power is in a better position to exercise control over his emotions.

5. **Community:** Social agencies like the community and society of which an individual is a member, exerts significant influence over the emotional set up of the child. Many good or bad things related to the emotional behaviour of an individual can be acquired through the impact of neighbourhood and society.

It can be said that personal like family, school exert major influence in shaping the emotional development of children.

Role of Education in the Emotional Development

The aim of education is to modify and direct the behaviour of the child so that he becomes a useful member of the society. In this task, instincts and their potential allies i.e. the emotions have to be refined by training and education. There are some emotions often based on temporary or imaginary dangers which are constantly stirring up the child like worry and fear. Every emotion is taxing and tiresome for the child as it produces tension both mental and physical and wastes energy. If this tension continuous for a long time, it damages the child seriously. Therefore, it is our duty to see that children are not harbouring these dangerous emotions.

Anger is another furious emotion which is dangerous to the health of the child and so to the peace of the society. We should redirect it to useful channels. Hatred is also a devilish trend and needs sublimation. Character formation of children is one of the main responsibilities of a teacher in school. We can succeed in this aim only if we harness various emotions and synthesize them into sentiments and master sentiment. Strong will power also depends upon the synthesis of emotions.

UNIT III: INDIVIDUAL VARIATIONS

Meaning and Definition of Individual differences – Types – Distribution – Determinants – Role of Heredity and Environment

Meaning and Definition of Individual differences

Every one of us is a typical human being in oneself. No one among us is just as same as another. A person differing from others is understandable, but how and why a person differs is less clear and is therefore a subject of the study of individual differences. Individual differences are the differences among individuals, in regards to a single characteristic or number of characteristics, which in their totality distinguish one individual from another and make oneself a unique individual. The differences among individuals that distinguish or separate them from one another and make one as a unique individual in oneself may be termed as individual differences. Individuals follow different paths as they progress toward expert understanding because they learn differently based on their gender, ethnicity, learning styles, previous knowledge and experience with content, strategies and technology. The psychology of individual differences is concerned with the systematic study of intelligence and abilities associated with personality of learner, learning styles and needs and interest of learner. Learning is most effective when differences in learner's language, cultural, and social behaviour are taken into account. A teacher should be sensitive to individual differences.

Many of learner's personal characteristics can affect how he or she learns. Individual differences are explanations for differences in learning and performance among learners. The study of individual differences among learners can help educators design instruction that better meets the needs of each learner. Individual differences refer to the extent and type of distinctions among individuals on some of the significant psychological traits, personal characteristics, cognitive and emotional components.

Osborne stated that "Individual differences as dissimilarity between persons that distinguish them from one another".

Carter B. Good (1959) defines "The variation or deviations among individuals in regard to single characteristics or a number of characteristics".

Also Carter stated individual differences as, “those differences which in their totality distinguish one individual from another”.

The Dictionary of clinical psychology defined individual difference as “the deviation of individuals from the group average or from each other”.

Types of Individual differences

Individual differences that exist among human beings could be classified under two categories namely a) Physical or Physiological differences b) Psychological differences. These two broad categories could be divided into specific sub categories as given below

1. *Physical differences*

Shortness or tallness of stature, darkness or fairness of complexion, fatness, thinness, or weakness is various physical individual differences

2. *Differences in intelligences*

There are differences in intelligence level among different individuals. We can classify the individuals from super-normal (above 120 I.Q) to idiots (from 0 to 50 I.Q) on the basis of their intelligence level

3. *Differences in attitudes, beliefs and opinions*

Individuals are found to possess varying attitudes towards different people, objects, ideas, groups, institutions and authority

4. *Differences in achievement*

It has been found through achievement tests that individuals differ in their achievement abilities. These differences are very much visible in reading, writing and in learning mathematics. These differences are on account of the differences in the various factors of intelligence and the differences in the various experiences, interests and educational background

5. *Differences in motor ability*

There are differences in motor ability. These differences are visible at different ages some people can perform mechanical tasks easily, while others, even though they are at the same level feel much difficulty in performing these tasks

6. *Differences' based on Gender*

McNamara and Terman discovered the following differences between men and women on the basis of some studies:

- Women have greater skill in memory while men have greater motor ability
- Handwritten of women is superior while men excel in mathematics and logic
- Women show greater skill in making sensory distinctions of taste, touch and smell etc., while men show greater reaction and conscious of size-weight illusion
- Women are superior to men in languages, while men are superior in physics and chemistry
- Women are better than men in mirror drawing. Faults of speech etc. In men were found to be three times of such faults in women
- Women are more susceptible to suggestion while there are three times as many colour blind men as there are women
- Young girls take interest in stories of love, fairytales, stories of the school and home and day –dreaming and show various levels in their play. On the other hand boys take interest in stories of bravery science, war, scouting, stories of games and sports, stories and games of occupation and skill.

7. *Racial differences*

There are different kinds of racial differences. Differences of environment are a normal factor in accusing these differences. Larl Brigham has composed a list on the basis of differences in levels of intelligence among people who have migrated to unite States from other countries. On the basis of these average differences between the races, the mental age of a particular individual cannot be calculated since this difference is based on environment.

8. *Differences due to nationality*

Individuals of different nations differ in respect of physical and mental differences, interests and personality etc. “Russians are tall and stout”, ‘Ceylonese are short and slim’, ‘Germans have no sense of humour’, ‘Yellow races are cruel and revengeful’, ‘Americans are hearty and frank’, ‘Indians are timid and peace-loving’ and the like observations enter into our common talk

9. *Difference due to economic status*

Differences in children's interest, tendencies and character are caused by economic differences.

10. *Differences in interest*

Factors such as sex, family background level of development, differences of race and nationality etc. causes difference in interests

11. *Emotional Differences*

Individuals differ in their emotional reactions to a particular situation. Some are irritable and aggressive and they get angry very soon. There are others who are of peaceful nature and do not get angry easily. At a particular thing, an individual may be so much enraged that he may be prepared for the worst crime like murder, while another person may only laugh at it

12. *Personality differences*

There are differences in respect of personality. On the basis of differences in personality, individuals have been classified into many groups. Spranger has classified personalities into six types as theoretical, economic, aesthetic, social, political and religious. Jung has classified people into three groups as introverts, extroverts and ambiverts. Trotter divided individuals into stable minded and unstable minded. Likewise many psychologists have differentiated personalities of human under various categories based on their observations and studies.

It is an admitted fact that some people are honest, others are dishonest, some are aggressive, others are humble, some are social, others like to be alone, some are critical and others are sympathetic. Thus we see that the differences in personality are dependent on personality traits. Teacher should keep in mind these differences while imparting education to the students.

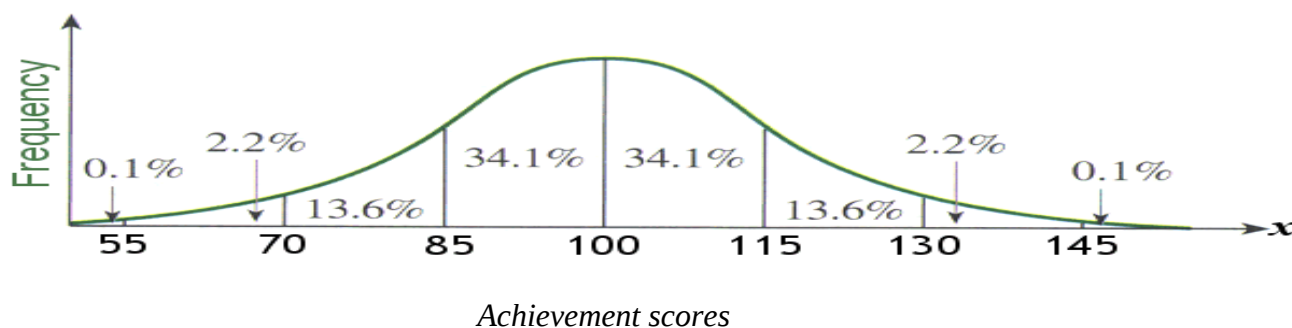
Distribution of Individual Differences

The study of individual differences has been an area of research relatively separate from experimental psychology. While experimental psychology has focused on the processes that determine performance in specific experimental situations, the field of individual differences has studied the stable differences among people, particularly those that generalize across diverse situations. The behavioural differences that have received the most attention in this regard have been personality traits and cognitive abilities. The distribution of variations or differences

between human beings like height, weight, wealth, intelligence and other attributes of our personalities are distributed in our population in a normal way by the pattern of a normal curve. Let us know what this normal distribution means in accordance with intelligence. Most of us have normal intelligence ranging between 90 to 100 IQs. Persons having IQs more than 140 to 150 (Genius) as well as possessing IQs less than 60 to 40 (Idiots) are rarely found.

In this way, it can be easily concluded that a majority among us consists of average or normal IQ in terms of possession of all the attributes of our personality. How many of us are above or below average in a given population can be understood with the help of a distribution pattern shown by normal curve. Let us draw such a normal curve on the basis of a hypothetical data related with the distribution of achievement scores over a given population of examinees.

Let us take a large sample of population of examinees from the record of a past XII class annual examination of a school in Haryana. Out of the huge data, we can randomly select for our study the total scores of 10,000 students of our study. Now calculate the average score or mean value of the sample. For this purpose, we will add individual total marks of these 10,000 students and then divide it by 10,000 to get the mean or average score for the sample. If we try to analyze the total marks earned by this population of 10,000, we will find that majority of them have either earned the mean average score or lie quite nearest to this value. There are a very few who have got distinction marks or very low marks. In case we try to plot the total scores earned by these 10,000 students on a sheet of graph paper by taking scores on x-axis and number of students on y-axis, we will have a bell-shaped curve like shown in the figure below.



The distribution of achievement scores in a population of examinees.

Let us analyse the pattern of distribution of achievement scores in the population of examinees.

1. As revealed by this curve, we can find the majority (34.1% + 34.1% i.e. 68.2%) of students have either got marks equal to the mean average value or lying quite nearer to this value. This sub-population of 6,820 out of 10,000 thus can be declared as normal, i.e. the students who possess normal or average academic achievement abilities.
2. The curve shows that 13.6% of the students have earned more marks than the average. This 13.6% sub-population of the students, i.e. 1,360 out of 10,000 is named as above average in terms of their academic achievements. Similar percentages, i.e. 13.6% of the students lie on the other side of the mean value. It shows that there are 13.6% of the students, i.e. 1,360 out of 10,000 who have got less than marks than the average value. These students are named as below average or subnormal in respect of their academic achievement in class XII examination.
3. The normal curve shows the pattern of distribution of an attribute in a given population. Here, it has demonstrated that out of 10,000, the majority of 68.20%, i.e. 6,820 out of 10,000 consists of averages. There are only 13.6%, i.e. 1,360 out of 10,000, who are below average and a similar percentage 13.6%, i.e. 1,360 out of 10,000, who are labelled as above average.

Thus we can conclude that individual difference among us always follows a pattern of a normal curve. It is true that we differ from each other and no one is like another. However, majority of us that is, 68.2%, are quite average, i.e. possess average typical value in terms of possession of personality attributes. A very few of us deviate from this average value and classified as quite above or below average or normal in terms of other personality attributes.

Determinants of Individual Differences

Each individual has a different pattern of behaviours and personality. This difference is seen due to the influence of heredity and environment. Heredity and environment plays an important role in the development of the personality and other qualities in an individual. No person can be born without heredity and genes cannot develop without proper environment. An individual's heredity is present since the moment of conception, and some environmental conditions also start influencing the individual from this very stage. Each trait and response of an individual depends on his heredity and environment.

Heredity

Every human being is born as a result of conception which takes place due to certain biological factors and process. When two germ cells meet together an organism's life starts. In the ovary of the female an ovum or an egg cell is present. Ovum is a kind of female's egg cell. In the ovum 23 pairs of chromosomes are present in different shapes and sizes. In the male's sperm there are also present numerous germ cells. In a germ cell there are 23 pairs of chromosomes as is the case with female's ovum. When a chromosome of female meets the chromosomes of male, fertilization takes place and the life begins to take place. It is this cell or chromosomes which in the process of heredity an individual gets from his parents. The child carries with himself several physiological and psychological peculiarities that are present in the parents. In fact, it is the heredity that determines structure, complexion, and structure of hair, height, and facial features, nasal index etc of the child. Thus different types of genes help in the formation of a body.

According to geneticists, sex is also inherited. They say that there are two big chromosomes. They have named these chromosomes as 'X' and 'Y'. In the germ cells of the male there is one big 'X' chromosome and a small 'Y' chromosome. If the germ cell engaged in the formation of a creature an 'X' chromosome of the father enters, then the child will be a female, and contrary to this, if in the germ cell an 'X' and a 'Y' chromosome enter, the child will be a male. A study of chromosomes has revealed that genes of the 'X' chromosome are comparatively stronger than the genes of the 'Y' chromosome. An individual's heredity depends on the genes of his parents, that is, whatever one gives to his children is through genes.

Environment:

Environment is nothing but the sum total of the surroundings in which an individual has to live. Psychologically an individual's environment is related to all those stimuli which he faces from the moment of fertilization till death. Environment is generally divided into two categories- natural and social. Natural environment refers to all those things and forces on and around the earth that influence a person. Social environment, we mean the environment which the person sees around himself on acquiring consciousness in the society, i.e., language, religion, custom, tradition, means of communication, means of luxury, family, school, social groups etc.

By human society, we mean those institutions or organizations which human beings have established for their own protection and security. Psychologists like Freud and Havelock have

accepted the fact that social environment is very much responsible for change in human behaviour and personality.

Role of Heredity and Environment

Heredity refers to the genetic inheritance received by every individual at the time of conception. The origin of every human life can be traced to a single cell called zygote. It is formed by the union of sperm and ovum. The sperm and ovum will contain 23 pairs of chromosomes out of which one will be sex determining chromosome. Female will have 23 pairs of 'XX' chromosomes. Males will have 22 pairs of 'XX' and 2 single represented as 'XY'. 'X' chromosomes from mother and 'Y' chromosomes from father will lead to male offspring, 'XX' from both parents give rise to female. In each chromosome there are innumerable genes.

These genes are the real determinants of heredity characteristics which pass on from one generation to the other. At the time of conception, the genes from chromosomes of both the father and the mother fuse together and determine the traits of the offspring to be born. The physical characteristics such height, weight, colour of the eye and skin, social and intellectual behaviour are determined by heredity. Differences in these characteristics are due to the change in the genes transmitted. Fraternal twins also differ from each other, because they are born out of different genes. However, we find more resemblances in identical twins because they are born out of monozygotic. In simple terms, environment means the society, the fields of society and even the whole world. But there, the word environment is restricted to mean the environment within mother's womb and just born, as well as the environment around the individual.

Like heredity, environment also has been found to play a very important role in determining the behaviour and personality development of an individual. The environmental influences are those which act upon the organism at the earlier stages of development, i.e., before and also after birth. Environment includes all the extrinsic forces, influences and conditions which affect the life, nature, behaviour, the growth, development and maturation of living organism. Hence, we can say that environment means all that is found around the individual. The zygote is surrounded by a jelly like substance known as 'cytoplasm'. The cytoplasm is an intercellular environment which influences the development. Though the life begins with single cell, in the process of cell division several new cells are formed and a new internal environment comes into existence.

As the fetus develops, the endocrine glands are formed. The hormonal secretion by these glands gives rise to another intracellular environment. Hormones are necessary for normal development, but defects in hormone secretion like over or under secretion may lead to congenital deformities. The growing embryo is surrounded by amniotic fluid in the uterus which creates another environment. This fluid will provide the necessary warmth and protection against the dangers due to organisms and other chemical effects on fetus. The fetus is also connected to the mother by the umbilical cord, through which the nourishment is supplied. Sufficient nourishment is necessary from the mother. Otherwise, the child will suffer from malnutrition. The defects in mother like drug or alcohol addiction, smoking, malnutrition, diabetes, endocrinal disturbances, small uterus and such other problems cause many problems in child. The psychological state of mother like over excitement, depression also may cause damaging effect on the child.

After nine months, the child is born and enters a new environment which is entirely different. A new life begins in a new environment. This new environment will have a different culture, ideology, values etc., the home atmosphere, parental love and affection, association with sibling, neighbours, peers, teachers, etc., will create an entirely different and new atmosphere. This is called social environment. All the social factors stated above, shape the personality of the child. There is a controversy regarding the importance of heredity and environment. Supporters of heredity say that the environment cannot change a dog into a goat. On the other hand, the environmentalists are of the opinion that for the development of a plant only seed is not important but also environment like sunlight, manure, water etc.,

Innumerable studies have been conducted on both sides. However, the results indicate that heredity and environment are interdependent forces, whatever the heredity supplies; the favorable environment brings it out. Thus characteristics of individual differences attained by heredity are shaped by environment.

UNIT IV: INTELLIGENCE & PERSONALITY

Intelligence: Definition, Nature and Characteristics – Theories of Intelligence; Personality and Temperament: Definition, Nature and Characteristics – Theories of Personality

DEFINITION, NATURE AND CHARACTERISTICS

The observation of the performance or behaviour of an individual would reveal us whether he/she is very intelligent or average or not intelligent. Some of the attributes such as interest, attitude, the desire for knowledge, communicative skills etc contributes towards the performance or behaviour of an individual. Intelligence as a concept has been put forth in different ways by psychologists giving a wide variety of definitions.

Thorndike (1914): Intelligence may be defined as “the power of good response from the point of view of truth or fact”.

Stoddard (1943) defined intelligence as “The ability to undertake activities that are difficult, complex and abstract and which are adaptive to a goal and are done quickly and which have social value and which lead to the creation of something new and different”.

David Wechsler (1944) stated “Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with his environment”.

Woodworth and Marquis (1948) defined “Intelligence means intellect put to use. It is the use of intellectual abilities for handling a situation or accomplishing any task.”

Jean Piaget (1952) defined “Intelligence is the ability to adapt to one’s surroundings”.

NATURE OF INTELLIGENCE

Intelligence is not acquired after sustained labour. It is a gift from nature. Intelligence is not memory. An intelligent person may have poor memory. Intelligence is not a skill which a worker acquires after planned practice. Intelligence is not a guarantee of a good behaviour of the individual. To understand the nature of intelligence, we need to know the classification of intelligence as given by E. L. Thorndike and Garret as

- *Concrete Intelligence*

The ability of an individual to comprehend actual situations and to react to them adequately is termed as concrete intelligence. The concrete intelligence is evident from various activities

of daily life. This type of intelligence is applicable when the individual is handling concrete objects. Engineers, mechanics and architects have this type of intelligence.

- *Abstract Intelligence*

The ability to respond to words, numbers and symbols is known as abstract intelligence. Abstract intelligence is required in the ordinary academic subjects in the school. This is acquired after an intensive study of books and literature. Good teachers, lawyers, doctors, philosophers etc. have this type of intelligence.

- *Social Intelligence*

It means the ability of an individual to react to social situations of daily life. Adequate adjustment in social situations is the index of social intelligence. Individuals having this type of intelligence know the art of winning friends and influencing them. Leaders, ministers, members of diplomatic source and social workers have it.

Therefore, intelligence is an inborn ability of an individual, the distribution of intelligence is not equal among all human beings. There is wide individual difference that exists among individuals with regard to intelligence.

CHARACTERISTICS OF INTELLIGENCE

The main features of intelligence are the following

- a) Intelligence is an innate endowment of the child
- b) It helps the child in maximum learning in minimum period of time
- c) The child is able to foresee the future and plan accordingly
- d) The child is able to take advantage of his previous experiences
- e) The child faces the future with compliances
- f) The child could discriminate between right and wrong
- g) The development period of intelligence is from birth to adolescence
- h) There is a minor difference in the development of intelligence between boys and girls
- i) There are individual differences with regard to intelligence between boys and girls
- j) Intelligence is mostly determined by heredity but a suitable environment is necessary to improve it.

THEORIES OF INTELLIGENCE

The theories of intelligence propagated by psychologists from time to time have tried to uncover the components of intelligence. These theories can be grouped under two categories namely factor theories and cognitive theories.

Factor theories of Intelligence

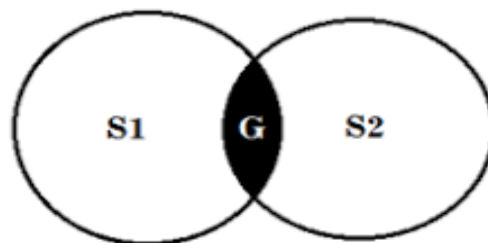
1. *Unitary (or) Monarchic (or) Single Factor Theory*

This theory is the oldest which was proposed by Dr. Johnson, which holds that intelligence, consists of one factor, a fund of intellectual competence, which is universal to all activities of the individual. According to this theory, intelligence is the power or capacity which effects and influences all the activities of the individual. If a man has a fund of intelligence, he can utilize it in any sphere of life and depending on it, be as successful in one sphere as in any other. The ideas propagated by this theory are not born out in real-life situations.

For instance, a child who is good in mathematics may not, despite genuine interest and diligence, be able to do as well in civics while an above average performer in the laboratory may not exhibit comparable competence in learning a language. This shows that intelligence is not just a unitary factor and the unitary factor theory is therefore not acceptable.

2. *Two-Factor (or) Bi-Factor (or) Eclectic Theory*

This theory was proposed by C. Spearman (1923). According to him, each intellectual activity involves two factors i.e., general factor (G) which shares the intellectual activities and a specific factor (S) which belongs to it alone.



Spearman's Bi- Factor Theory

Spearman suggested that there is something general intelligence, a sort of general mental energy, running through all the different tasks. The amount of 'g' in a person depends on the amount of cortical energy present and the maximum quantum of this is fixed. In addition to this general factor there are specific capabilities, which give an individual the ability to deal with specific problem. For example, an individual's performance in any language is partly due to his general intelligence and partly due to some specific aptitude for language which he might possess, i.e. 'g + s1' or in mathematics his performance may due to the result of 'g + s2' ., in drawing, it may be also due to 'g + s3' and so on. The factor 'g' is thus present in all specific activities. The total ability or intelligence 'A' of an individual, thus, will be expressed by the following equation:

$$g + s1 + s2 + s3 + s4 + \dots = A$$

This two-factor theory by Spearman was criticized on various grounds:

- Spearman held that intelligence may be expressed in terms of two factors, but as we have been seen above, there are not only two but several factors (g, s1, s2, s3.....).
- According to Spearman, each job requires some specific ability. This view was untenable as it implied that there is nothing common to different jobs except a general factor and professions such as those of nurses, compounders and doctors could not be put in one group. In fact, the factors s1, s2, s3, s4.....are not mutually exclusive. They overlap and give rise to certain common factors.

This idea of overlapping and grouping resulted in a new theory called the group factor theory.

3. Anarchic (or) Multifactor (or) Group Factor Theory

The factors that are common to certain intellectual activities comprising a group were termed as 'Group factor Theory'. Psychologist Louis L. Thurston (1887-1955) offered a differing theory of intelligence. Instead of viewing intelligence as a single, general ability, Thurston's theory focused on nine different "primary factors". These primary factors are independent of each other. The abilities that he identified are as follows

1. Spatial factor (S) is involved in any task in which the subject manipulates an object imaginatively in space.
2. Verbal factor (V) is concerned with comprehension of verbal relations, words and ideas.

3. Word Fluency factor (W) is involved whenever the subject is asked to think of isolated words at a rapid rate.
4. Numerical Factor (F) is concerned with the ability to do numerical calculations, rapidly and accurately.
5. Memory Factor (M) involves the ability to memorize quickly.
6. Inductive Reasoning (RI) is the ability to draw inferences or conclusions based on specific instances.
7. Deductive Reasoning (RD) is the ability to make use of generalized results.
8. Perceptual Factor (P) is the ability to perceive objects accurately.
9. Problem-solving ability (PS) is the ability to solve problems with independent efforts.

The weakest aspect of the group factor theory was that it discarded the concept of the common factor. It did not take Thurston long to realize his mistake and to reveal a general factor in addition to the group factors.

4. Guilford's Structure of Intellect Theory (S.I Model)

J. P. Guilford (1961) developed the structure of intellect model on the basis of the factor analysis. He suggested every mental process or intellectual activity can be described in terms of three basic dimensions or parameters known as operators – the act of thinking; contents – the terms in which we think (such as words or symbols); and products- the ideas we come up with. Each of these parameters –operations, contents and products may be further sub-divided into some specific factors or elements. He argued that intelligence consisted of 150 different and independent skills. Each of these intellectual abilities or structures is interlinked. Therefore, he thinks $5 \times 5 \times 6 = 150$ intellectual abilities, which are presented below:

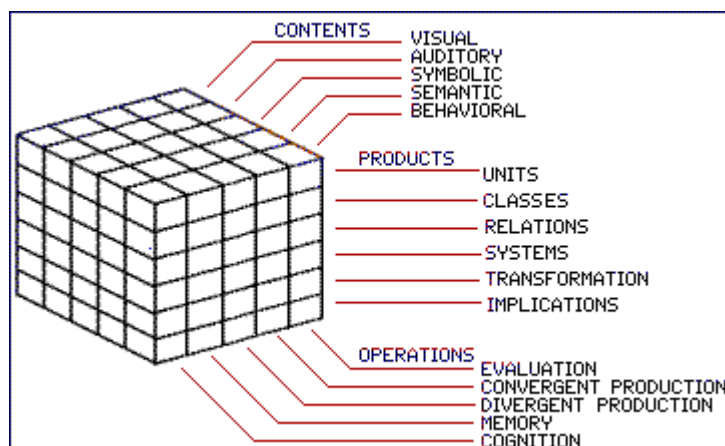


Illustration of Guilford's S.I model of Intelligence

Intellectual abilities are placed under three broad categories

1. Operation

1. **Cognition** – Individual is able to recognize thing like discovery, rediscovery etc.,
2. **Memory** – Ability to recall or retrieve learned information or retention of information and knowledge.
3. **Divergent Production** – We think in different directions searching and seeking for some variety and novelty. It is closely associated with creativity.
4. **Convergent Production** – It is generation of information conventionally accepted and it determines the response.
5. **Evaluation** – It is taking decision about accuracy, goodness or suitability of information.

2. Contents

1. **Visual** - It is a concrete material, which has been perceived through the eyes.
2. **Auditory** – It consists of the matters or information perceived through ears
3. **Symbolic** – It is composed of letters, digits and other conventional signs.
4. **Semantic** – It is the form of clear- cut verbal meaning or ideas for which no examples are necessary.
5. **Behavioural**–Social intelligence which enables one to understand human communications

3. Products

1. **Unit** – To grasp sensory perception into their uniqueness.
2. **Classes** -The ability to categorize ideas.
3. **Relations** –The ability to understand, the relations between or among existing things.
4. **Systems** – The ability group ideas or problems into space or the ability to structure problems for solutions.
5. **Transformation** – The ability to produce the future shape of a certain object situation under a certain circumstances.
6. **Implications** – The ability to understand the implied meanings.

Guilford says that this model is purely theoretical and is subject to change. This S.I model of intelligence is helpful for constructing various types of intelligence test suitable for different age

group and to study individual differences and to discover many mental abilities which were not known before.

5. *Gardner's Theory of Multiple Intelligence*

Howard Gardner of Harvard has identified seven distinct intelligences as 'theory of multiple intelligence' in his book 'Frames of Mind' (1983). This theory has emerged from recent cognitive research and Gardner (1991) states that this theory "documents the extent to which students possess different kinds of minds and therefore learn, remember, perform and understand in different ways". According to this theory, "we are all able to know the world through language, logical-mathematical analysis, spatial representation, musical thinking, the use of the body to solve problems or to make things an understanding of other individuals, and an understanding of ourselves. Where individuals differ is in the strength of these intelligences – so –called profile of intelligences and in the ways in which such intelligences are invoked and combined to carry out different tasks, solve diverse problems and progress in various domains".

Gardner says that these differences "challenge an educational system that assumes that everyone can learn the same materials in the same way and that a uniform, universal measure suffices to test student learning. Indeed, as currently constituted, our educational system is heavily biased toward linguistic modes of instruction and assessment and, to a somewhat lesser degree, toward logical-quantitative modes as well". Gardner argues that "a contrasting set of assumptions is more likely to be educationally effective. Students learn in ways that are identifiably distinctive. The broad spectrum of students and perhaps the society as a whole would be better served if disciplines could be presented in a numbers of ways and learning could be accessed through a variety of means". The different types of intelligence and the relative learning styles accordingly are as follows:

Visual –Spatial Intelligence – This type of intelligence is concerned with our ability to think in terms of physical space, as do architects and sailors and very aware of their environments. The learners of visual – spatial intelligence like to draw, do jigsaw puzzles, read maps, day-dream. They can be taught through drawings, verbal and physical imagery. Tools include models, graphics, charts, photographs, drawings, 3-D modeling, video, video conferencing, television, multimedia, texts with pictures, charts and graphs etc.

Bodily- Kinesthetic Intelligence – This type of intelligence makes us use the body effectively like a dancer or a surgeon and have keen sense of body awareness. The learners of this kind of intelligence like movement, making things by touching etc. They communicate well through body language and could be taught through physical activity, hands-on learning and acting out, role playing. Tools include equipment and real objects.

Musical Intelligence – This type of intelligence enables us to show sensitivity to rhythm and sound. These learners love music, but they are also sensitive to sounds in their environments. They may study better with music in the background. They can be taught by turning lessons into lyrics, speaking rhythmically and tapping out time. Tools include musical instruments, music, radio, stereo, CD-ROM, multimedia etc.

Interpersonal Intelligence – The counterpart of intrapersonal intelligence in one's cognitive structure is interpersonal intelligence which consists of the abilities of understanding and interacting with others. These students learn through interaction. They have many friends, empathy for others, street smarts. They can be taught through group activities, seminars, and dialogues. Tools include the telephone, audio conferencing, time and attention from the instructor, video conferencing, writing, computer conferencing, E-mail etc.

Intrapersonal Intelligence – This type of intelligence consists of an individual's abilities to understand one's own interests, and goals. The learners tend to shy away from others. They're in tune with their inner feelings; they have wisdom, intuition and motivation as well as a strong will confidence and opinions. These learners can be taught through independent study and introspection. Tools include books, creative materials, diaries, privacy and time. They are the most independent of the learners.

Linguistic Intelligence – This kind of intelligence is responsible for all kinds of linguistic competence including using words effectively. These learners have highly developed auditory skills and often think in words. They like reading, playing word games, making up poetry or stories. They can be taught by encouraging them to say and see words, read books together. Tools include computers, games, multimedia, books, tape recorder and lecture.

Logical – Mathematical Intelligence – This type of intelligence is responsible for all types of abilities, reasoning, calculating, think conceptually, abstractly and are able to see and explore patterns and relationships. These learners like to experiment, solve puzzles, and ask cosmic

questions. They can be taught through logic games, investigations, and mysteries. They need to learn and form concepts before they can deal with details.

Thus Gardner's theory of multiple intelligence provides a broad and comprehensive view of human abilities, extending from linguistic and logical-mathematical abilities on the one hand, to interpersonal and intrapersonal abilities on the other. Out of these seven types of intelligence, whereas the linguistic, logical-mathematical and spatial abilities have been accepted widely as the types and components of intelligence, the last four have been the subject of great controversy as to whether they should be categorized as separate types of intelligence or as different talents. However, as far as the broader and global assessment of one's intellectual competencies and abilities is concerned, there is sufficient truth in the assertion of Gardner's theory that knowledge of all the seven types of intelligence is essential for the true assessment of one's level of intellectual functioning.

Personality and Temperament

Personality

The personality implies psychological and social character that an individual acquire by hereditary biological endowment which provides the individual the basis for development and social growth of environment. The term personality is used in various senses. Generally, it is used to indicate the external outlook of an individual. In philosophy it means the internal quality. But in social psychology the term personality indicates neither the external or outward pattern nor does it indicate the internal quality. It means an integrated whole. The term 'persona' was used to indicate the action of an individual. In the modern world and psychology it has come to indicate the sum total of an individual's characteristics and qualities. Various thinkers, social psychologists and others have defined personality in various ways.

According to K. Young, "Personality is a patterned body of habits, traits, attitudes and ideas of an individual's, as these are organized externally into roles and statues and as they relate internally to motivation, goals, and various aspects of selfhood. As G.W. Allport has defined, "Personality is the dynamic organization with the individual of that psycho-physical system that determines his unique adjustment to his environment".

By personality Ogburn means “the integration of the socio- psychological behaviour of the human being, represented by habits of action and feeling, attitudes and opinions.”

According to Lundberg and others, “The term personality refers to the habits, attitudes and other social traits that are characteristic of a given individual’s behaviour”.

“Personality represents those structural and dynamic properties of an individual or individuals as they reflect themselves in characteristic responses to situations”. This is the working definition of personality given by Lawrence A. Pewin.

Personality is a sum of physical, mental and social qualities in integrated manner. On the basis of definitions it may be said that there are two main approaches to the study of personality: (1) the psychological and (2) the sociological. The psychological approach considers personality as a certain style peculiar to the individual. This style is determined by characteristic organization of mental trends, complexes, emotions and sentiments.

The continuing process whereby the child is influenced by others especially the parents is called socialisation. It is a course of learning whereby the child comes to act in accordance with the special demands that membership in a certain society imposes upon him. The sociological approach considers personality in terms of status of the individual on the group, in terms of his own conception of his role in the group of which he is a member. What other think of us plays a large part in the formation of our personality. Thus, personality is the sum of the ideas, attitudes and values of a person which determine his role in society and form an integral part of his character. Personality is acquired by the individual as a result of his participation in group life.

Nature of personality

Individual is born with certain physical and psychological traits or structures. The physiological and psychological traits react to the social and cultural atmosphere which influences the personality of an individual on the basis of various definitions; the nature of personality is founded on certain structures. The structures that contribute to the formation of personality are

- i. Physiological structure of the organism
- ii. Psychic structure of the organism
- iii. Social and cultural structure

i. Physiological structure

Physiological structure of an individual influences the development of personality to a large extent. The foundation of this structure is laid in the mother's womb. The physiological structure is deeply influenced by certain internal as well as external agencies. Heredity as well as social environment influences the development of the physiological structure. Heredity contributes to intelligence and mental traits. These factors do influence the development of personality, because they have a place in the society. Heredity imposes several limitations and restrictions on the personality of an individual. Culture is very much a gift of the heredity. Due to this culture, it is possible for an individual to adjust himself to different situations. Besides biological inheritance, in social heredity there is a transmission of personality characteristics from one generation to another through pattern of relationship. The vehicle of transmission is not germ plasma but a psychogenetic influence of parent on child. Heredity may provide the raw material, out of which experience moulds the personality.

ii. Psychic Structure of the personality

The psychic structure consists of (a) attitudes (b) traits, (c) sentiments (d) feelings and emotions (e) values and ideals. The attitudes influence the psychic structure and latter on, physiological structures. Traits are inherent as well as the acquired qualities of an individual. Sentiments and emotions play a very vital role in the development of the personality. Human behaviour is very much influenced by sentiments and emotions. Emotions are short-lived while sentiments are permanent. Sentiments may be termed as permanent emotions. Feeling and emotion play a vital role in the development of the personality of an individual. Values and ideas also influenced the development of personality to a large extent. Almost all our behaviours are more or less guided by values and ideas.

iii. Social and cultural structure

Every society has cultural of its own and in the atmosphere of that socio cultural background, the personality of individual develops in its own way. The attitudes of an individual are largely influenced by cultural order. We find difference in the behaviour of individuals due to sociocultural environment. Thus culture plays an important role in the formation of personality.

Besides the above structures, experience play in important role in the formation of personality. Man is the child of experience. The experiences are of two types, one that the infant acquires in his group, for example family. The parents being very intimate to the child make a deep impact of him. The child is fashioned in his home after his parents. He picks up their patterns, manners and poise. The learning of social norms forms parents and agents of socialization has significant formative influence on him. Another set of experience he got goes through, is the result of his interaction with other in the context of a social situation. Children brought up in the same family may not have similar experience. The change of social environment in family, variation attitude of parents towards the children, the temper of playmates, school environment create the differing experience.

Characteristics of Personality

The characteristics and traits of personality are as follows:

- a) Personality is something which is unique in each individual:

Personality refers to internal as well as external qualities, some of which are quite general. But it is unique to each individual. It is not possible for any other individual to reproduce or imitate the qualities of the personality of the individual.

- b) Personality refers particularly to persistent qualities of an individual

Every individual has certain feeling as well as other permanent traits and qualities. Personality is mainly composed of the persistent or permanent qualities that exhibit themselves in form of social behavior and attempt to make adjustment with the environment.

- c) Personality represents a dynamic orientation of organism to environment

Personality represents the process of learning. It takes place in reference to the environment. We do not acquire all the traits of personality all at once.

- d) Personality is greatly influenced by social interactions

Personality is not an individual quality. It is a result of social-interaction. In other words, it means that when we come in contact with other members of the society, we acquire certain qualities while we exhibit certain others. All these come to form personality.

- e) Personality represents a unique organization of persistent dynamic and social predisposition

In personality various qualities are not put together. They are integrated into one as a result of organization which may be different from man to man. The behaviour of a person directed to one particular individual may differ from the behaviour of another person.

- f) Personality is a product of heredity and environment

Heredity and personality contributes towards the development of a child's personality. A child is not born with personality but heredity, constitutional make-up, social and cultural influences and experience, training etc., affects one's personality.

- g) The growth and development of personality is influenced by acquisition of experiences and learning

Every personality is the end product of this process of learning, acquisition of knowledge and experiences.

- h) Personality could be distinguished from temperament which can be termed as a system of emotional disposition

The system of emotional disposition represents only the affective side of one's personality and so personality must be taken as being much beyond one's temperament.

- i) Every person's personality has distinguishing features

Adler clearly asserts that a man's personality can be judged through a study and interpretation of the goals which he has set for himself and the approaches he makes to the problems he faces in his life.

Temperament

In Psychology, temperament refers to those aspects of an individual's personality such as introversion or extroversion that are often innate rather than learned. Many classifications for temperament have been developed. The concept of temperament was part of the theory of the four humours, with their corresponding four temperaments. The historical concept played an identifiable part in pre-modern psychology and was explored by philosophers such as Immanuel Kant and Hermann Lotze. David W. Keirsey also drew upon the early models of temperament.

More recently, scientists seeking evidence of a biological basis of personality have further examined the relationship between temperament and character. However, biological correlations have proven hard to confirm.

Temperament is determined through specific behavioural profiles usually focusing on those that are both easily measurable and testable early in the childhood. Commonly tested factors include irritability, activity, frequency of smiling and an approach posture or avoid a posture to unfamiliar events. There is generally a low correlation between description by teachers and behavioural observations by scientists of features used in determining temperament. Temperament is hypothesized to be associated with biological factors, but these have proven difficult to test directly.

In the second century A.D, the physician Golen described four temperaments namely Melancholic, Phlegmatic, Sanguine and Choleric based upon the four humour or bodily fluids. These are known as four classical temperaments. In more recent history, Rudolf Steiner had emphasized the importance of the four classical temperaments in elementary education the time when he believed the influence of temperament on the personality.

Nature of Temperament

Temperament refers to the innate personality features or dispositions. Babies show particular temperaments soon after birth. Temperaments that researchers have studied include reactivity, which refers to a baby's excitability or responsiveness and soothability, which refers to the ease or difficulty of calming an upset baby. It is an individual's characteristic level of emotional excitability or intensity and is typically recognized within the first few weeks after birth. It is often assumed to be an early indication of personality, though personality combines temperament with experiences to shape life-long traits. Researchers have studied children from infancy to adolescence and found that temperaments remain fairly stable over time. However, temperaments can also be modified over time by environmental factors.

Temperament constitutionally based individual differences in emotion, motor, reactivity and self-regulation that demonstrate consistency across situations and over time. It is biologically based. Heredity, neural and hormonal factors affect response to the environment which influences temperament. It can be modulated by environmental factors such as parental response.

Characteristics of Temperament

Psychiatrist Alex Thomas identified that temperament consists of nine characteristics as

- a) Level and extent of motor activity
- b) Rhythmicity or degree of regularity of functions such as eating, elimination and the cycle of sleeping and wakefulness
- c) Response to a new object or person, whether the child accepts the new experience or withdraws from it
- d) Adaptability of behaviour to change in the environment
- e) Sensitivity to stimuli
- f) Intensity or energy level of responses
- g) General mood or “disposition”, whether cheerful or given to crying, pleasant or cranky, friendly or unfriendly
- h) Degree of distractibility from what one is doing
- i) Attention span and persistence in an activity

Theories of Personality

Personality is fundamental to the study of psychology. The major systems evolved by psychiatrists and psychologists since Sigmund Freud to explain human mental and behavioural processes can be considered theories of personality. These theories generally provide ways of describing personal characteristics and behaviour, establish an overall framework for organizing a wide range of information, and address such issues as individual differences, personality development from birth through adulthood and the causes, nature and treatment of psychological disorders. The theories of personality are classified under four categories

1. **Type Theory:** Based upon the physical characteristics, the people are categorized into different types. Hippocrates, Kretschmer, Sheldon and Jung’s Classifications.
2. **Trait Theory:** Trait theory explains personality in terms of peculiar features. Ex: Raymond B. Cattell’s Theory.
3. **Trait – cum - Type Theory:** These theories make use of both the above points. The best known among them is the view of H. J. Eysenck.
4. **Psychoanalytic Theory:** The aim of this theory is to explain the growth and development of personality. Ex: Freud’s theory of Personality.

1. Type Theory of Personality

a) Hippocrates' Classification:

The earliest known theory of personality is that of the Greek physician Hippocrates (c.400B.C) and Galen (140 AD) characterized human behaviour in terms of four temperaments, each associated with a different bodily fluid or 'humors'. The ancient Greek believed that each of the 4 humors was a result of an excess of the one of the 4 bodily fluids. For them, the excess amount of fluids determined a person's character. The 4 humors included Choleric, melancholic, sanguine and phlegmatic. Below is the table showing the character that each humor or fluid represents.

Ancient Greek and Hippocrates Classification of Personality Types

Character	Humor	Fluid	Produced by	Element
<i>Irritable</i>	<i>Choleric</i>	<i>Yellow Bile</i>	<i>Spleen</i>	<i>Fire</i>
<i>Depressed</i>	<i>Melancholic</i>	<i>Black Bile</i>	<i>Gall Bladder</i>	<i>Earth</i>
<i>Optimistic</i>	<i>Sanguine</i>	<i>Blood</i>	<i>Liver</i>	<i>Air</i>
<i>Calm</i>	<i>Phlegmatic</i>	<i>Phlegm</i>	<i>Lungs</i>	<i>Water</i>

b) Kretschmer's Classification

Ernst Kretschmer, the German psychologist has classified individuals on the basis of certain body types and assigned personality characteristics accordingly.

Body Type		Body Characteristics	Personality Characteristics
1.	Pyknic	Fatty types, fat is more than muscles	Social and helping others
2.	Athletic	Healthy, balance between muscles and bone development	Energetic, optimist, can adjust to any situations
3.	Leptosomatic	Thin, lean and tall, no muscle, only bone	Unsociable, shy, pessimist and always alone

c) Sheldon's Classification

A widely popularized modern typology of personality was developed in the 1940 by William Sheldon, an American psychologist. Sheldon classified personality into three categories based on body types.

Body Type		Body Characteristics	Personality Characteristics
1.	Endomorphic	No muscle development, prominent Stomach etc.	Takes everything easy, sociable and affectionate
2.	Mesomorphic	Balance between development of stomach and bones	Likes to work, interested in adventurous activities
3.	Ectomorphic	Weak, tall & thin	Pessimist, unsociable and alone

d) Jung's Classification

Carl Gustav Jung puts forth his theory of personality based on the attitude of an individual. He classified all human being basically into two distinct types namely introvert and extrovert based on their social participation and the interest which they take in social activities. Further he took into consideration of four mental functions such as *thinking, feeling, sensing and intuition* in relation to his introvert and extrovert type. An extrovert deals more with the objective (outside world) whereas an introvert deals more with the subjective (inner world). Later, he further divided this twofold division by giving sub-types.

This classification has been criticized on the ground that in general, the different types or classes as suggested by Jung do not exist. On the basis of typical characteristics prescribed for the extrovert and introvert, most of us belong to both the categories at different times and may be called ambivert. In other words, if the introversion and extroversion are equally balanced, the person is called ambivert. This theory introduces a complication and hence the type approach does not give a clear classification or description of personality.

2. Trait Theory of Personality

In the trait approach, the personality is viewed in terms of various traits. Traits may be defined as relatively permanent and relatively consistent general behaviour patterns that an individual exhibits in most situations. These patterns are said to be the basic units of one's personality that

can be discovered through observing one's behaviour in a variety of situations. If a person behaves honestly in several situations, his behaviour may be generalized and he may be labelled as honest and honesty is then said to be a behavioural trait of his personality. The psychologists who support this approach believe that the personality of an individual is but a combination or sum total of these personality or behavioural traits that can be discovered through the continuous and objective observation of his behaviour. Two personality theories namely, *Allport's theory* and *Cattell's theory* are said to be the best examples of the trait approach.

Allport's Theory: Gordon W. Allport (1897-1967) was the first theorist to reject type theories of personality and adopting trait approach for the description of highly individualized personalities. According to Allport, each of us develops a unique set of organized tendencies termed as traits in the course of our continuous and gradual development. Allport distinguished three types of traits namely **cardinal trait, central trait and secondary traits**.

- **Cardinal traits** are the primary traits so dominant in one's personal disposition that they differentiate every aspect of one's behaviour and attributes. These traits, if found in an individual are limited in number to just one and two. For example, if a person has humorousness as a cardinal trait, he will bring a sense of humor into almost all situations irrespective of all its actual demands.
- **Central traits** represent those few characteristic tendencies which can be ordinarily used to describe a person. Ex: Honesty, Kindness, Submissiveness etc. According to Allport, for knowing an individual's personality we need to know some central traits.
- **Secondary traits** are not as dominant as the cardinal or central traits. They appear in only a relatively small range of situations and are not considered strong enough to be regarded as integral part of one's personality. These traits stand as central or combine with other traits to form the core of personality. Thus the trait theory propounded by Allport, emphasized that an individual differ from others and also possess common traits with others at least within the limits of cultural norms.

In order to find out how many traits are responsible for defining personality, Allport and one of his colleagues, Odbert (1936) analysed about 18,000 terms taken from a dictionary that could be used by people to describe each other and they finally came up with a total of 4541

psychological traits from describing human behaviour. Thus Allport's theory of personality is known not only for its emphasis on traits but also for its stress on concepts like functional autonomy, individualized approach in the study of personality and the discontinuous nature of the development of personality etc.

Cattell's Theory: The most recent advanced personality theory based on trait was developed by Cattell (1973) who defined trait as a structure of the personality inferred from the behaviour in different situations and described the following four traits

- **Common Traits:** The traits found widely distributed in general proportion like honesty, aggression and cooperation etc.,
- **Unique Traits:** The traits which are unique to a person such as temperamental traits, emotional traits etc.,
- **Surface Traits:** These traits can be recognized by manifestations of behaviour like curiosity, dependability, tactfulness etc.,
- **Source Traits:** These are the underlying structures or sources that determine behaviour such as dominance, submission, emotionality etc.,

Cattell has identified 12 independent and 4 secondary traits that describe the complete personality of an individual. According to Cattell, there is a continuum of personality traits. In other words, each person contains all of these 16 traits to a certain degree, but they might be high in some traits and low in others. The theory propagated by Cattell attributes certain specific dimensions to personality so that the human behaviour related to a particular situation can be predicted. He also made use of his 16 factors of basic dimensions in the measurement of personality by devising a personality inventory known as Cattell's sixteen personality factors inventory (16PF) consisting of suitable, multiple choice questions.

The trait theory of Cattell thus tried to describe and predict the behaviour of individuals on the basis of their personality traits, the fundamental building blocks of human personality. Thus his work involves the identification of basic dimensions of personality by applying factor analysis technique to the observable behaviour and then developing instruments to measure these dimensions.

3. *Type cum Trait Theory of Personality*

The famous German Psychologists Hans J. Eysenck, propounded this theory which is a combination of both type and trait approaches of personality. According to him, the four levels of behaviour organization are as

1. At the lowest level are the specific responses. They grow out of particular responses to any single act. Blushing for example is a specific response.
2. Habitual responses from the second level and comprise similar responses of an individual to similar situations.
3. At the third level is the organization of habitual acts into traits. Behaviour acts which have similarities are said to belong to one group and are called traits.
4. The fourth level is the organization of these traits into a general type.

Eysenck classified personality into *introversion, extroversion, neuroticism and psychoticism*. These are the kinds of personality which are derived on the basis of a collection of personality traits. Let us consider a specific response which later develops into a habitual response. These habitual responses will cultivate traits. For example we ask a boy to do a specific task. But he is not able to do the work. He may not wish to see you. This response is the outcome of a specific situation. This is called specific response. This is the first stage. Similarly, we can ask him to do another kind of work on another event. Then we can find that he is not interested in doing that work also. His disobedience becomes a habit in him. Gradually it becomes a habitual response in him. This is the second stage. Because of the inert nature, he fails to join others. He seems always to be aloof and it becomes his nature. This is the third stage. All these traits will make a particular personality of him. This personality type is called as introversion which is the final stage.

The contribution of Eysenck's theory to describe, explain and predict one's behaviour and personality are notable and worthy of praise. He has presented a viable synthesis of the trait and type approaches, given personality a biological-cum –heredity base, accepted the role of environmental influences in shaping and developing personality and exploded many myths and over generalizations of psychoanalytical theory. This theory also contributes to the study of criminology, education, aesthetics, genetics, psychopathology and political ideology.

4. *Psycho-analytic Theory of Personality*

The psychoanalytic approach to personality was first developed by Sigmund Freud (1856-1939) by viewing people as being engaged in a constant struggle to tame their biological urges. He propagated analysis of the mind and used psychoanalysis as a method for understanding behaviour and for treating mental illness. His school of thought is known as the school of psychoanalysis and the approach it adopted for understanding human behaviour and personality is known as the psycho-analytic theory.

According to Freud's psychoanalytic theory of personality development, there are two basic factors which drive an individual and help shaping his personality. The two basic drives are love and aggression which have a direct impact on what an individual does and thinks. He states that an individual's mind has a fixed amount of desire towards sexual activity often called as libido which makes individuals to differ in their desire for sexual activity and the same would vary as per an individual's situation, circumstances at the moment.

Freud's theory of personality divides the human mind as *the conscious, semiconscious, and unconscious mind*. These three types of the human mind are continuously in a state of clash and compromise to give birth to one or the other type of behavioural characteristics resulting in a specific type of personality. He believed that anatomy of our personality is built around the three unified and inter-relating systems namely *id, ego* and *superego*. The outcome of the combination of all the three determinants shapes an adult personality. Freud believed that an individual's personality has three parts and thus is often called as tripartite personality.

Id – refers to irrational needs and demands, something which has nothing to do with the reality of the situation. Freud believed that individuals seek immediate pleasure in order to satisfy their biological and physiological needs without taking into consideration the reality. The id gives immediate pleasure to individuals and is often irrational. It has no values, knows no laws, follows no rules, does not recognize right or wrong and considers only the satisfaction of its needs and appetites to be paramount.

Ego – develops when individuals start interacting with people around. The Ego helps in the fulfillment of id, taking into consideration the reality of the situation. It is the executive unit with the power of veto. It follows the principle of reality and acts with intelligence to control, select and decide according to the way it may be satisfied.

Superego – It is the third stage which includes the moral constraints imposed on an individual by his parents or family. It is the ethical or the moral arm of the personality. It is idealistic and does not care for realities. Perfection rather than pleasure is its goal. It is the decision making entity which decides what is good or bad to the social norms and therefore acceptable or otherwise.

In contrast to the type and the trait theories of personality, the dynamic model proposed by Freud involved an ongoing element of conflict and it was these conflicts that Freud identified as the primary determinant of personality. His psychoanalytic method was designed to help patients resolve their conflicts by exploring unconscious thoughts, motivation and conflicts through the use of free association and other techniques. Another distinctive feature of Freudian psychoanalysis is its emphasis on the importance of childhood experiences in personality formation.

Learning Theories of Personality

Learning theories believes that our personality (individual differences) essentially arose from the moulding of learning experiences we receive in our environment. Our pattern of behaviour is shaped by experience. Learning theories emphasized environmental influences and events which were tangible and could be identified and scientifically studied. The notable psychologists who are known to have developed personality theories are Pavlov, Watson, Guthrie, Thorndike, Skinner, Dollard & Miller, Bandura & Walters, etc. The learning theory of Bandura & Walters could be worthy to be noted.

Bandura & Walters Social Learning Theory

The innovative approach to personality was put forth in the form of social learning theory by Albert Bandura and Richard Walters (1963) in the form of social learning theory. It emphasizes the importance of observing and modeling the behaviours, attitudes and emotional reactions of others. Bandura states, “Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behaviour is learned observationally through modeling, from observing others one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action”. Social learning theory explains human

behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences. The component processes underlying observational learning are

1. Attention, including modeled events (distinctiveness, affective valence, complexity, prevalence, functional value) and observer characteristics (sensory capacities, arousal level, perceptual set, past reinforcement)
2. Retention, including symbolic coding, self- observation, symbolic rehearsal, motor rehearsal
3. Motor Reproduction, including physical capabilities, self- observation of reproduction, accuracy of feedback
4. Motivation including external, vicarious and self reinforcement.

Social learning theory has been applied extensively to the understanding of aggression and psychological disorders, particularly in the context of behaviour modification. It is also the theoretical foundation for the technique of behaviour modeling which is widely used in training programs.

In recent years, Bandura has focused his work on the concept of self-efficacy in a variety of contexts. Because it encompasses attention, memory and motivation, social learning theory spans both cognitive and behavioural frameworks. Bandura's theory improves upon the strictly behavioural frameworks. Bandura's theory improves upon the strictly behavioural interpretation of modeling provided by Miller and Dollard (1941). The work is related to the theories of Vygotsky and Lave which also emphasize the central role of social learning. The most common examples of social learning situations are television commercials. Commercials suggest that drinking a certain beverage or using a particular hair shampoo will make us popular and win the admiration of attractive people. Depending upon the component processes involved such as motivation and attention, we may model the behaviour shown in the commercial and buy the product being advertised. The imitation of the model's behaviour is further reinforced in the viewer's mind by the recognition or reward the model receives as a result of his actions. An individual thus acquires numerous traits and modes of behaviour from many sources, and all these together contribute to the formation and development of his unique, distinctive personality.

UNIT V: LEARNING APPROACHES

Definition, Nature and Characteristics – Behavioural and Social Cognitive Approaches - Information – Processing approach – Transfer of Learning – Dealing with Exceptional Children – Effective Classroom Management

Definition, Nature and Characteristics

“Learning is the process by which behaviour (in the broader sense) is originated or changes through practice or training” – Kingsley and R. Garry (1957)

“Learning is a relatively permanent change in behavioural potentiality that occurs as a result of reinforced practice” – Kimble (1961)

“Learning is the acquisition of new behaviour or the strengthening or weakening of old behaviour as the result of experience” – Henry P. Smith (1962)

“The term learning covers every modification in behaviour to meet environmental requirements” – Garder Murphy (1968)

Learning is defined as “the acquisition of habits, knowledge and attitudes .It involves new ways of doing things ,and it operates in an individuals’ attempts to overcome obstacles or to adjust to new situations .It represents progressive changes in behaviour....It enables him to satisfy interests to attain goals” – Crow and Crow (1973)

Learning is an act of getting experience, knowledge, skills and values by understanding what to do and how to do any task by synthesizing the different types of information perceived by us. Learning brings about changes in the existing behaviour of an individual. Human beings, animals and plants do learning.

A child starts learning even in the womb of the mother and it involves continuous training or practice to produce a permanent change in the behaviour. Learning not only brings about changes in the existing behaviour of an individual but also enable individuals to acquire new behaviour. The changes brought about through experience and training by learning would be stable and enduring. It prepares the individual for adjusting and adapting with the existing environment. Learning is a process which occupies an important role in moulding the structure of our personality and behaviour. It develops socially accepted behaviours and also there is equal chance of building negative side of human behaviour. Learning necessities to meet some

personal need as it is a purposeful and goal oriented. Recognizing and identifying such needs enable us to evaluate whether that learning has been worthwhile and successful.

Learning involves new ways of doing things with no limit to adopt the ways and means to attain the goal. It is a continuous, comprehensive process which involves different methods and covers conative, cognitive and affective domains of human behaviour.

Temporary changes due to maturation or hunger are excluded from learning. Also we should know that responses to tendencies like instincts and reflexes etc. could not be attributed to learning. Ex. We blink our eyes on bright light; we remove our hands immediately when you touch a hot thing or a cold thing. We all know that learning starts right from the birth and continues throughout our life time. We learn something either incidentally or accidentally in common and natural situations of our life. As teachers we should know that ‘learning’ is the core of the educational process. Learning is a process continued through various steps.

The major attributes of learning as a process include it as a permanent change in the behaviour of an individual, but not because of changes due to illness, fatigue and use of intoxicants. The next attribute is that learning is manifested in the behaviour or activities of an individual which could be not directly observable. Learning results in some change of persistent contact with nature. The final attribute is that learning depends on practice and experience in a given situation. Let us illustrate the process of learning with an example. Suppose we find that there are three children from three different countries, like one from America, second from China and another from Japan. When we observe them how they greet their teachers or the language they speak, it would definitely vary from one another. This is the result of their early training and experiences in home. The early training might have brought a permanent change in their behaviour and this type of learning can be termed as learning.

As we know the main objective of learning is to bring desirable changes to our behaviour, it is quite essential for us to get knowledge about how people learn when they come in contact with the learning environment and in the process of interaction with the individuals. It is also very important to know how an individual apply the gained knowledge through learning to the environment and people living around. By knowing the process of learning, we could improve and accelerate learning process in such a way to achieve the desired learning outcomes.

The steps involved in the process of learning could be tagged under a) Preparatory phase and b) Actual learning phase.

a) The preparatory phase. It could be explained in the words of Smith as follows.

i . A motive or a drive: Every individual has their own basic motives and needs in their life to achieve. Motive is a dynamic force which energises and compels an individual to strive for satisfaction in achieving our needs. If we don't feel our present behaviour, knowledge, skill and performance adequate enough to satisfy our needs, we feel to bring about changes in our behaviour to gain knowledge and skills that we need. This motive or drive initiates a learner to learn what is required to fulfil their demands or needs. If the need is strong enough, we are compelled to strive for satisfaction.

ii. A goal: We need to set definite goal for achieving our needs. Learning becomes purposeful only when we set goals and aims. The ways and attempts that we made to achieve our goals makes the process interesting and orientate our potentials towards achieving our goals. Hence a goal is necessary in the process of learning.

iii. A block or barrier to the achievement of the goal: The third step in the process of learning is the block or barrier that keeps us from attaining the goal. It is an essential thing in the learning process. This block or barriers keep us away from attaining the goal. We don't strive to modify or change our behaviour if we don't feel difficulty in attaining the goal. Also it enables us to attempt various ways to bring changes in our behaviour when there happens a need to reach our goals when an unsatisfied motive arrives.

Apart from the above discussed steps suggested by Smith in the learning process, we should ascertain strong desire, essential readiness like mental and physical maturity, previously acquired knowledge and skills and positive attitude towards learning together with the preparatory phase.

b) Actual learning phase: The actual learning phase emphasizes the following steps in the learning process.

i. Learning situation: The learning situations or environment provides learning opportunities to us in the learning process. This learning situation provides quality, speed and effectiveness for a learner to learn. A good and favourable learning situation provides

satisfactory results in achieving the goals of learning while a poor and unfavourable situation fail to reach the goals.

ii. Interaction while learning: Learning is a never ending process. According to the prevailing environment, constant interaction could strive us to learn something we intend to learn. Interaction is a process which enables us to respond to stimulation and get feedback so that we could progress in the path of learning. This step in a learning process enables us to know or decide whether we get desirable changes or modifications in our behaviour and whether we could retain it or not as learning is a continuous and developmental process.

Basic Characteristics of Learning

- Learning has to change behavior
- The change should be relatively permanent
- The change should be as result of experience
- Learning is an internal process
- Learning occurs under conditions of directed attention and deliberate effort and
- Learning is distinct from biological maturation and imprinting.

BEHAVIOURIST APPROACH

Behaviourist approach to learning is based upon the idea that learners respond to stimuli in their environment. The behaviour approach to learning is to specify clear behavioural objectives in the beginning and then supply learning opportunities that ensure that the objectives are met. In this approach, role of the facilitator is to provide relevant and useful stimuli so that the learner respond and gain the required knowledge or experience. Learning occurs could be conditional or unconditional.

The behaviourist approach to learning emphasis the belief that appropriate behaviour can be taught through constant repetition of a task combined with feedback. Positive feedback encourages and reinforces sues while negative feedback and immediate correction discourages the repetition of a mistake or undesirable behaviour.

In 1927 Ivan Pavlov conducted a famous experiment with dogs. Pavlov taught the animal to salivate on hearing a ringing bell by linking the time of their feeing of to their bell being rung. Later he stopped feeding them in this way, but the dogs continued to salivates when they heard

the bell, in other words the learned behaviour was a result of a sequence of events experienced, rather than the conscious thought process.

The association between stimulus – response can be made more effective by reinforcement. Reinforcement can work in both positive and negative ways. A positive reinforcement is anything that strengthens the desired response. In teaching where aim is earning for example, this might be stimulated by verbal praise, a good mark, or a feeling of achievement. On the other hand if verbal praise withdrawn this will have a negative effect and motivation to learn will decrease. Hence the teacher needs to give external reinforcement to motivate and encourage learners to reach the stated objectives.

SOCIAL COGNITIVIST APPROACH

Social Cognitive approach is concerned with the role of active mind in grasping the knowledge from the process of learning from opportunities. This approach focuses on process by which student build knowledge rather than receive it. This approach emphasizes the learners to continuously check new information against our mental rules in order to internalize and act on information.

Here, the teacher and the learner are engaged with gaining knowledge; the role of the teacher is choosing the best method to convey understanding. Dewey (1938) believes learning involves “learning to think”. He says the process of learning is more than doing a task or activity; it also requires reflection and learning from this. To Dewey, the purpose of thought is attaining a state equilibrium, enabling an individual to solve problems and to prepare them for further inquiry.

His approach is associated with “progressive education he said that learning only occurs if the student plays an active role in the processes”. For learning individual should critically reflect on information presented; they have to be able to ‘experience’ the information and the way to facilitate this is to draw on past experience.

Teachers employing Dewey’s approach to teaching play a key role in learner’s development. But in a more indirect way, than that implies in the behaviourist model. For example, planning sessions that encourage interaction with the material presented and reflective thinking as well as creating a climate where learner can structure their own learning.

INFORMATION PROCESSING APPROACH

The focus of the model is on how information is selectively perceived, stored in memory, and retrieved. The information processing models are more linked to concepts and principles developed in cognitive psychology. Interest in mental processes had been gradually restored through the work of Piaget and Tolman. But it was the arrival of the computer that gave cognitive psychology the terminology and metaphor it needed to investigate the human mind. The start of the use of computers allowed psychologists to try to understand the complexities of human cognition by comparing it with something simpler and better understood i.e. an artificial system such as a computer.

The use of the computer as a tool for thinking how the human mind handles information is known as the computer analogy. Information is received through the senses and then is perceived by the mind. It enters short-term memory either from the process of sensation or from long-term memory. Concepts are stored through schemata. Essentially, computer codes (i.e. changes) information, stores information, uses information, and produces an output (retrieves info). The idea of information processing was adopted cognitive psychologists as a model of how human thought works. The information processing approach is based on a number of assumptions, including:

- i. Information made available from the environment is processed by a series of processing systems (e.g. attention, perception, short-term memory)
- ii. These processing systems transform, or alter the information in systematic ways.
- iii. The aim of research is to specify the processes and structures that underlie cognitive performance.
- iv. Information processing in humans resembles that in computers.

Many of the tests used to measure school learning are being modified so that they consider important mental processing skills that these models are designed to address. Inquiry training / Inductive thinking method focus on concept formation, interpretation of data and formation of principles and theories. Concept attainment focuses on categorizing, concept formation and concept implementation.

TRANSFER OF LEARNING

Our old Vedic system and the Greek system of education give notion to transfer of learning. It is emphasized that mind need to be trained in all facilities to enable learning of new knowledge from the previously trained manner to get knowledge. It was considered that memorization, chanting, geometric etc. play a crucial role in training the mind to memorize. It was William James (1890) who made attempts to tests and found that practice memorizing Milton's 'Paradise Lost' did not produce any improvement in memorizing French poetry.

We need to learn in order to prepare ourselves perform effectively in many tasks of our life. We learn different things on various subjects. On the basis of their utility and wide applicability based on subjects and objectives, an individual use the learned knowledge, skills, tasks and information to solve problems in life. This learning occurs not only from life situations but also through education from our pre-primary to higher education. It could be formal or informal.

Many psychologist and educators have had many different theories concerning the subjects that should be included in the curriculum to make the students learn all the basic skills essential to their life. They believe that subjects such as mathematics, English language and science etc. would help the learners more in shaping the intellect of the students. Ex. Learning of mathematics helps a learner to solve problems in physics. Learning the skill of driving a car helps the learner in driving a bus. From these examples we could know how learning or training in one situation influences our learning or performance in some other situations. This influences are usually refers to the carryover of learning from one task to another. This carry- over of knowledge could be termed as 'transfer'. Transfer of learning happens when the application of skills, habits, attitudes, interest etc. from situation in which they were initially acquired to some other situations for which they were not specifically learned.

Definitions:

"Transfer of learning occurs when a person's learning in one situation influences his learning performance in other situations".-B.L. Bigge (1964).

"Transfer of learning means that experience and performance on one task influences performance on some sequent task".-H.C. Ellis (1965).

“Transfer of learning is the effect of some particular course on learning or execution of a performance such effect may be of a helpful nature or it may hinder” -K. Lovell (1970).

Types of Transfer of learning:

Transfer is said to have three following types namely

- a. Positive transfer
- b. Negative transfer
- c. Zero transfer
- d. Lateral transfer
- e. Sequential transfer
- f. Horizontal transfer
- g. Bilateral transfer

a. Positive transfer:

It refers to the transfer of previously learned knowledge, skill or experience to a new learning situation in a positive way. Ex: Skill in riding a bicycle helps or facilitates learning to ride a motor bike.

b. Negative transfer:

It refers to the transfer of hindrance of previously learned knowledge skill or experience to a new learning situation. Ex: Mother language hinders learning a foreign language.

c. Zero transfer:

It refers to neither influence nor obstruction of previously learned knowledge skill or experiences to a new learning situation. Ex: Learning to dance neither helps nor hinders driving a car.

d. Lateral transfer:

It refers to the transfer of knowledge and skills learned specifically in school, applied by a child in a learning situation outside the school. Ex: A child who was taught the concept of ‘addition’ or ‘subtraction’ in the context of beads or blocks or other subjects in the classroom by the teacher, could be able to apply the learned knowledge of the same in real life or

outside the school situations like paying money to buy things in a shop or counting the appropriate time in a non-digital clocks.

e. Sequential transfer:

It refers to the transfer of ideas in a sequential manner to get knowledge in a broad discipline.

Ex: In our school curriculum, the contents of the subjects are arranged in a sequential manner, so that an idea taught today will have some relation to an idea to be taught tomorrow and both ideas will have some relationship to the ideas taught the next day.

f. Horizontal transfer:

It refers to the transfer of knowledge and ideas where the learner stays within the same behavioural category in making the transfer. Lateral and sequential transfers are called horizontal transfer.

g. Vertical transfer:

It refers to the transfer of learning that implies facilitating the higher behavioural level by the lower level of learning in a vertical manner.

f. Bilateral transfer:

It refers to the transfer of learning that takes place when training imparted to one lateral automatically to another lateral, human body could be divided into two laterals; right and left.

Ex: The classical experiment of mirror drawing test.

DEALING OF EXCEPTIONAL CHILDREN

Meaning of Exceptional Children

An exceptional child may be defined as one who differs so much from his peer average in respect of physical, mental or social characteristics that he is unable to develop his fullest potential under normal conditions in the ordinary class and for whom some special environment or organization has to be created either within or without the normal school. Exceptional children deviate significantly from the normal ones.

Kirk has defined exceptional children as, “An exceptional child is he who deviates from the normal or average child in mental, physical and social characteristics to such an extent that he

requires a modification of school practices or special educational services or supplementary instruction in order to develop to his maximum capacity”.

The environment and culture of the school setting can have a direct impact on acceptance of students with exceptionalities. Including students with exceptionalities in the regular classroom does not have a negative impact on the academic achievement of other students. Social benefits accrue to both regular and exceptional students in inclusive settings, among there increases advocacy and more tolerant attitudes. Teachers at all levels refer to special need students as those with exceptionalities. In general, exceptionalities fall in six broad categories

- **Intellectual:** This includes students who have superior intelligence as well as those who are slow to learn.
- **Communicative:** These students have special learning disabilities or speech or language impairments.
- **Sensory:** Sensory-grouped students have auditory or visual disabilities.
- **Behavioural:** These students are emotionally disturbed or socially maladjusted.
- **Physical:** This includes students with orthopedic or mobility disabilities.
- **Multiple:** These students have a combination of conditions such as orthopedically challenged and visually impaired.

Importance and Need for the Education of Exceptional Children

The constitutional Directive on compulsory education includes education for all children. The Declarative of the Rights of the child, “The child who is physically, mentally or socially handicapped shall be given the special treatment, education and care required by his particular condition”.

India’s National Policy for Children (1974) specifically observes, “Children who are socially handicapped shall, who have become delinquent or have been forced to take to begging or otherwise in distress, shall be provided facilities for education, training and rehabilitation and will be helped to become useful citizens”. Further it states, “Special programmes shall be formulated to spot, encourage and assist gifted children, particularly those belonging to the weaker sections of society”. The National Policy on Education 1986 and as amended in 1992 also envisages special provision for the handicapped.

- **Gifted Children**

Any intelligent can identify the mentally gifted children. IQ scores on intelligence testing ranges from 120 -140 have been used to identify them. Other scores on special abilities or achievement are also taken into consideration. A boy who has the ability to learn fastly is considered as a gifted boy. His achievement in all the school subjects is the highest. His highest areas of interest on any interest inventory may be scientific or mechanical. His extracurricular activities are multifarious.

Identification of gifted children:

It is necessary to identify the gifted children in the school. The co-operation of parents, teachers, psychologists and social workers are required to identify them. The methods to identify them are as

- a. Intelligence tests
- b. Achievement tests
- c. Cumulative Record Tests
- d. Teachers' Observation

Characteristics of Gifted Children

- a. Gifted children are physically than other children. They give importance to sleep. Play and good habits, dressing pattern and character
- b. Most gifted children in the school are usually high achievers
- c. They possess reading habit with deeper understanding
- d. Giftedness is characterized by enthusiasm and they are interested in activities
- e. They usually wish to persist in case of difficulty when they consider as worth while
- f. They possess a high degree of organizing capacity which influences their emotional development. They are always stable in general and emotional situation
- g. They show their superiority in character and personality

- h. They project them first in learning, remembering, ability to analyse the problem, reasoning, reproducing activities they learnt etc., They have a power of sustained attention

Promotion of Gifted Children

- a. The school should provide a pleasant environment which would help the gifted to grow positively
- b. Provision of continuous education should be rendered from one stage to another
- c. Advanced and latest learning materials should be provided to the gifted to enrich their knowledge
- d. Every school must be sufficiently equipped with efficient teachers, psychologists, guidance workers, curriculum planners and administrators
- e. Individual attention and instruction has to be provided to the gifted
- f. Effective instructional strategies like Dalton Plan, Project method, Assignment method etc should be imparted. Special library and club activities should be provided to the gifted children
- g. They could be grouped based on their homogeneous ability
- h. The gifted children should be provided with enriched curriculum and instructional materials. The enriched programme may consist of independent study, club activities, project work, debates etc.

- **Backward Children**

Cyril Burt defined, “A backward child is one who is in the middle of the school (i.e. about ten and a half years) is unable to do the work of a class below than which is normal to his age”. The backward children occupy at least ten percent of the general school population.

According to Schonell, “Backward pupil is one who when compared with other pupils of the same chronological age shows marked educational deficiency”.

Characteristics:

- a. They look so dull and present a serious educational and vocational problem
- b. The average boy or girl would be almost dull in every activity he/she intends to do
- c. The I.Q of average child ranges between 80-90
- d. They could be socially under-developed and learns slow in areas like academic, social and physical
- e. Average child would have a short span of interest and attention
- f. They could not work independently and break rules in conduct and games

Promotion of Backward Children

- a. The physical, academic and emotional aspects of the backward child should be developed and guidance should be given accordingly
- b. Personal difficulties in home, school and community should be solved
- c. Backward children should be guided given vocational choices
- d. Special classes and group counseling could be given
- e. They should be helped to do practical works like gardening, kitchen, needle-work, etc.,
- f. The backward child can be adjusted to the school environment by continuous help and encouragement
- g. The backward children should be encouraged to take part in various group activities like games, programmes etc.,

• **Mentally Retarded Children**

The children who have subnormal development of intellectual abilities are called mentally retarded. Their character and conduct would differ entirely from other normal children. Their I.Q level would be less than 75.

Characteristics

- a. The mentally retarded would have low intelligence
- b. They have a peculiar shape of head, legs, and hands

- c. Their muscular function would be below normal
- d. They would be very slow in walking, talking and other social habits
- e. The capacity of emotional integration and adaptability would be below normal
- f. Medical reports shows that they have a shorter life span than compared to normal persons
- g. The morons or educable retarded have I.Q between 50 to 75
- h. The imbeciles or the trainable retarded are those with I.Q from 25 to 50
- i. The idiots are the untrainable retarded are those having I.Q below 25.

Identification

The methods to identify the mentally retarded are

- a. Observation by the teacher and the parents
- b. By giving informal tests
- c. By giving intelligence tests
- d. By giving socio metric test
- e. By taking evaluation from the teachers, parents and other people around them.

Promoting Mentally Retarded in Education

- a. Mentally retarded children should be identified with help of achievement tests, intelligence tests, mental check up and with the help of collected materials from parents, friends, psychologists, psychiatrists
- b. The parents of the mentally retarded children should be clearly educated about the mental caliber of the children
- c. Counselors should pay individual attention to the child and take him in confidence. There is no possibility of individual attention if the density of the class is higher
- d. Indirect knowledge should be given to the child so that he knows himself and his aims
- e. Mentally retarded children should be taught in special schools

- f. Specially trained teachers, counsellors, psychologists should take care of them
- g. The curriculum should be special according to their needs and activities
- h. Psychological methods of teaching should be made by the teachers. The teacher should make use of illustrative and audio-visual aids. The teachers should make use of love, affection, sympathy, patience, repetition and simple language.

• **PHYSICALLY CHALLENGED CHILDREN**

The physically handicapped children may have many specific problems of adjustment towards environment. They may have fears and loss of ability to make a living and lacks confidence to compete in an occupation. The physically handicapped children should be trained in a way to adjust with themselves and environment. They are categorized into

- i. Visually challenged
- ii. Deaf and Dumb
- iii. Orthopedically challenged

Identification

- a. The visually challenged could be identified by symptoms and observable behaviour like watery eyes, holding books or things too close or at distance to view, rubbing and blinking eyes more frequently, getting others help in writing work etc.,
- b. The nature of hearing impaired like partially impaired could be identified by diagnosing and careful observation
- c. The orthopedically challenged could be diagnosed even in the womb itself and also observation after birth and in different stages of development.

Promoting Education for Physically Challenged

- a. The partially visual challenged could be treated to acquire skills by utilizing their vision
- b. The blind could be provided education through channels like Braille method and auditory methods

- c. The visually challenged should be provided with segregated classroom, special instructional and furnishing materials, special tutoring and guidance corner to help them cope up with learning and day to day life activities
- d. Provision of part-time specialized classes by specially trained teachers or counsellors for academic sessions by lip reading and speech correction
- e. Training for auditory like usage of hearing aids could be provided
- f. The orthopedically challenged could be trained by physiotherapists according to their nature of impairment
- g. Training to use special equipments to help them adjust with the environment could be provided
- h. Special classroom settings like provision of ramp, low black board, sitting facility according to the nature of impairment could be provided.

EFFECTIVE CLASSROOM MANAGEMENT

Classroom management refers to the wide variety of skill and techniques and that teachers use to keep students organized, orderly, focused, attentive, on task and academically productive during a class. When classroom management strategies are executed effectively, teachers minimize the behaviors that impede learning for both individual students and group of students while minimizing the behaviors that facilitate or enhance learning. Generally speaking, effective teachers tend to display strong classroom-management skills. The interest and the attention of the learners to make them actively participate in all the activities related to classroom activities could be gained only by effective classroom management. It extends to everything that teachers may do to facilitate or improve student learning, which would include factors such as;

- i) Behaviour - A positive attitude, happy facial expressions, encouraging statements the respectful and fair treatment of students etc.
- ii) Environment - A welcoming ventilated well-lit classroom filled with intellectually stimulating learning materials that's organized to support specific learning activities.
- iii) Expectations- the quality of work that teacher expect students to produce, the ways that teacher expect student to behave to word other students, the agreements that teachers make its students.

iv) Materials- the type of texts, equipments etc.

v) Learning resources or activities - the kinds of learning experiences that teacher design to engage student interest, passions and intellectual curiosity.

We should note that poorly designed lessons, uninteresting learning materials or unclear expectations could contribute to greater student disinterest, increased behavioural problems, or unruly and disorganized classes. Healthy classroom cannot be easily separated from all the other decisions that teachers make. Some of the techniques could be adopted by the teachers for maintaining healthy classroom management is,

- i. Entry Routine
- ii. Do now written activity
- iii. Tight transitions
- iv. Seat signals
- v. Applaud up
- vi. Nonverbal Interventions
- vii. Positive group correction
- viii. Public Correction

i. Entry Routine: It is a technique in which the teacher establish a consistent, daily routine that begins as soon as students entre the classroom like preparing learning materials, making seating arrangements, passing in homework or doing a brief physical warm up activity. This activity can avoid the disorder and squandered time that can characterize the beginning of a class period.

ii. Do now written activity: Do now written activity – it is a written activity that students are given as soon as they arrive in the classroom. This technique is intended to get students settled, focused, productive, and prepared for instruction as quick as possible.

iii. Tight transitions: It is a technique in which teachers establish transitions routines that students learn and can execute quickly and repeatedly without much direction from a teacher. This technique helps to maximise instructional time by reducing the delay that might accompany transitions between activities.

iv. Seat signals: it is a technique in which students use nonverbal signals while seated to indicate that they need something such as help with a problem or a restroom break etc.

v. *Applaud up*: It is an act of publicly recognizing and praising students who have done something good such as answering a difficult question or helping a peer etc.

vi. *Nonverbal Interventions*: When teachers establish eye contact or make gestures and let students know that they are not paying attention or misbehaving could be interpreted as non verbal intervention.

vii. *Positive group correction*: It is a quick, affirming verbal reminder that lets a group of students knows what they should be doing.

viii. *Public correction*: It is a quick, positive reminder that tells on individual student what do to instead of what not to do. This is intended to establish a group culture in which learning accomplishments and positive actions are socially valued and rewarded. Healthy classroom management has received an increasing amount of attention from education leaders, reformers, and researchers who have begun to investigate, analyze and document the effective strategies used by successful teachers. The growing emphasis on classroom management and that strong management skill are foundations of strong teaching.

REFERENCE BOOKS:

1. Mangal, S.K. (2011). Advanced Educational Psychology, 2nd ed. PHI Learning, New Delhi.
2. Santrock, J.W. (2006). Educational Psychology. 2nded. Tata McGraw- Hill, New Delhi.
3. Tuckman, B.W., & Monetti, D. m. (2011). Educational Psychology. Wadsworth Cengage Learning.