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PAPER-1:

CHILDHOOD AND DEVELOPMENT

UNIT-1 CHILDHOOD

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UNIT 1
CHILDHOOD

1.0 Introduction:

Childhood is an important stage in one's life. The earliest experiences of childhood influence on the personality development. Psychologists like Freud and Erikson explained how the childhood experiences shape one's life. Childhood is the foundation of human life. So, a primary school teacher should have knowledge of child construct and their pre learning experiences. Moreover Primary school teacher must be thorough with the concepts like - what is childhood? Do all the children have the same type of childhood? If they differ, what are the reasons? What are the factors that influence childhood? And how parenting or child care influences construct of child? Further a teacher should know how to study children's behaviour.

A teacher who applies knowledge of above facts in the classroom is not only respected in the Parent Teacher Meetings but also regarded as the best teacher.

1.1 Objectives of the unit

This unit helps the student teachers

- ◆ To understand the concept of childhood
- ◆ To understand the commonalities and diversity within the notion of childhood.
- ◆ To understand how multiple childhood are constructed in Indian contexts.
- ◆ To know the factors that influence construct of childhood.
- ◆ To understand the role of family and school in socialization.
- ◆ To understand different types of parenting.
- ◆ To understand different methods and approaches to study children.

1.2 Constructs of childhood:

Childhood is a stage of great significance in human life. Nowadays it is commonly said that the children lost their childhood. What is losing childhood? It is commonly answered that they are missing care, play and entertainment which they

should have at this stage. Why it happens? How to prevent it? This is a major issue needs a close study.

Who is a child? What is childhood? Many psychologists, educationists, social scientists defined the terms 'child' and 'childhood'. Let us discuss some of them.

The concept of childhood emerged during the 17th and 18th centuries particularly through the educational theories of the philosopher, John Locke. Earlier to this children were often seen as incomplete versions of adults.

Both the developmentally and the biologically childhood refers to the period between infancy and adulthood.

Legally in India children up to an age of 14 are considered as children and those between 15 and 18 are considered as minors.

Philippe Aries, a historian suggested that 'Childhood was not a natural phenomenon but a creation of society' in his book 'Centuries of Childhood'.

He published that the concept of childhood is found in paintings, grave stones, furniture and school records of the later years of 16th century.

Public recognised children as separate beings, innocent, need of protection and training by the adults around them.

John Locke, the philosopher, defined the theory of the 'tabula rasa', which considered the mind at the birth to be a 'blank slate'. He stated that it was the duty of the parents to imbue the child's mind with correct notions.

With onset of industrialisation in England the divergence between high minded ideals of childhood and the reality of growing child exploitation, became increasingly apparent. Children were employed in factories and mines and often working long hours in dangerous jobs for low pays. The modern attitude towards children emerged by the late 19th century. Campaigns led to prevent the exploitation of the children, child labour and child abuse.

Several movements emerged to emphasize the role of family in protecting sanctity and innocence of childhood. Children's literature, picture books, factory made dolls, doll houses flourished in the society. The introduction of compulsory schooling of children emancipated child labour. It enabled the concept of childhood as a time of fun and happiness. The modern concept of childhood evolved during the early years of 20th century.

Children should be free from worries and work. Life should be happy and trouble free. It is believed that childhood is a time of playing, learning, socializing and exploring.

Who is a child?

According to Elizabeth B. Hurlock childhood is the stage between the age of 3 and 10 years.

In 1989, the United Nations convention on the rights of the child defined child as a human being below the age of 18 years. In India children up to an age of 14 are considered as children and those between 15 and 18 are considered as minors.

Biologically child is a human being between the stages of birth and puberty. Legally a child refers to anyone below the age of majority or some other age limit. Many psychologists defined the child span is up to 14 years. Usually the stage when they are naughty, ignorant, candid and innocent.

In 1974, Professor Kuppuswamy defined childhood as the age between infancy and puberty. Many psychologists refer the age between 3 years and 12 years as childhood. Early childhood ranges from 3 to 6 years whereas later childhood from 7 to 12 years.

Macmillan dictionary defines childhood as the period between the times of birth to adolescence.

Philippe Aries (1962) defined the age between infancy and adolescence as childhood. He cited historical evidences about childhood. The Census of India in its survey treated people below the age of 14 years as children. But as per the Juvenile

Justice (Care and Protection of Children) act- 2000, people below 18 years are treated as children.

1.2.1 Commonalities and Diversities of Childhood:

Are all children similar?

Is the childhood of all children same?

The common answers to above questions are all children are not same, but they have common characteristics and they differ in some other aspects.

Essential needs, innate abilities by birth, adult dependency, and Physical structure are common to all the children. But we find diversity in achieving these things. Let us examine few instances.

Ramu talks joyfully with others, where as Ravi never talks with anybody. Rajesh always shouts at everything and Ranjit keeps crying. Thus children exhibit different types of behaviour and behave in different ways.

What is the rationale behind these differences? It is evident that childhood experiences influence their behaviour (personality). Heredity plays a vital role on one's behaviour.

Some people rear their children with over love and affection. Some brings up with strict rules. Some may not take any care of their children.

Children coming from joint families are different from those who grew up in nuclear families. When both mother and father go to job, Sridhar was alone in the house. He feels that he is missing something, when he looks at a family, where their two children are playing together. He too needs a brother or sister.

Ramesh, who lost his parents at an early age, was an orphan who spends most of his time in playing with street boys.

All the childhood experiences influence the children behaviour. The construct of childhood depends upon these experiences and ways of child rearing.

Though children have different childhood experiences, still they have some commonalities.

Diversities are the result of childhood experiences and other factors. These diversities are result of different communities, cultures and areas.

Childhood experiences differ from community to community, culture to culture, and region to region.

The children in developed countries have different constructs of childhood, while comparing with the children in developing countries. Poor families can be seen in the developed countries as the rich can be found in developing countries.

So, the childhood experiences are different from developed countries to developing countries.

Food, play, entertainment, discipline participation in the family rituals are the factors of diversity in the childhood.

Sai was son of a rich engineer. There are many servants in his house. All the household work was done by maids. So, Sai had no opportunity to learn simple house hold things. He depends upon others for every work.

Kishore's parents involved him in every household activity. So Kishore's social adjustment is better than that of Sai.

Divergence can be seen in the food habits. Further we can see divergence in exhibiting emotions, aptitudes, attitudes, participation in social activities, moral values. Divergence can be found in ways of learning, character traits and life skills.

Commonalities and diversities are common in children.

1.2.2 Constructs of Multiple Childhoods in Indian Context

Childhood is a wonderful school. Childhood experiences are the foundations of one's personality.

Childhood is the time for play, entertainment, receiving love and encouragement from parents, growing with confidence under the care and guidance of elders. Childhood is the precious time in one's life. Childhood should be free from fear of violence, exploitation and abuse and neglect. Their future life is influenced by quality of love and affection they receive at their childhood.

Are all children growing in the same way? Do all the children have the same type of childhood? Practically it is not possible.

The following chart illustrates multiple childhood in Indian context.
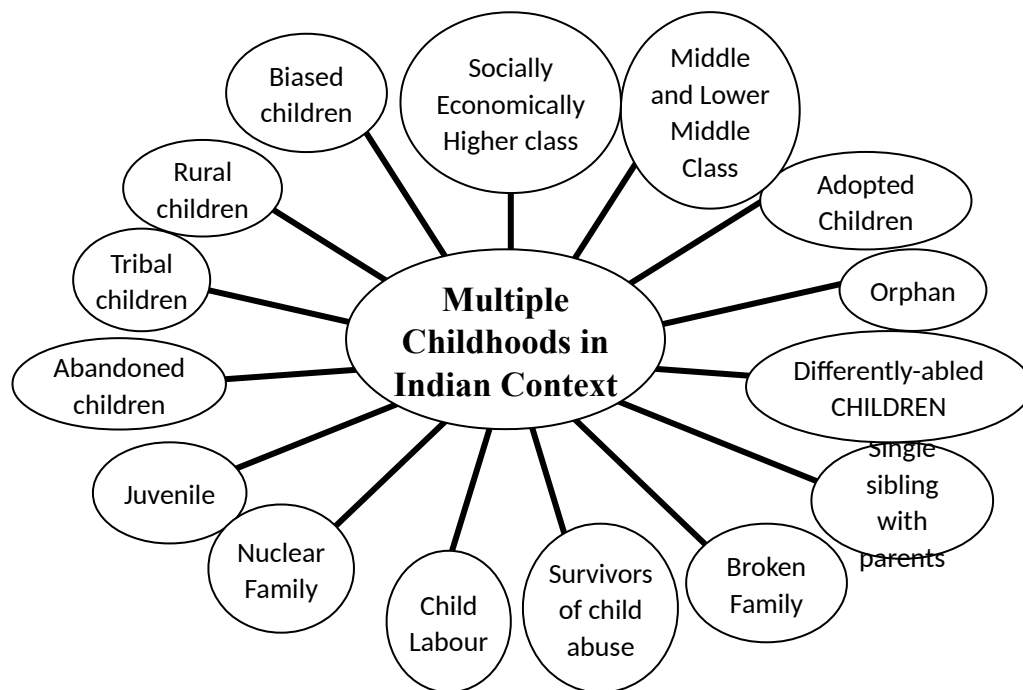
1.2.3 Constructs of Childhood in the Context of Globalisation

World is increasingly interconnected as a result of massive development in Science and Technology. Social media influenced close relationship among the people of the world.

Traditions, customs, attitudes and aptitudes of everyone from children to adults are influenced by the globalisation.

Expanding financial and non financial activities in the countries throughout the world is globalisation.

Today world is a global village. Unrestricted knowledge and labour flourished through boundaries of the nations for the development of Science and Technology led to globalisation.
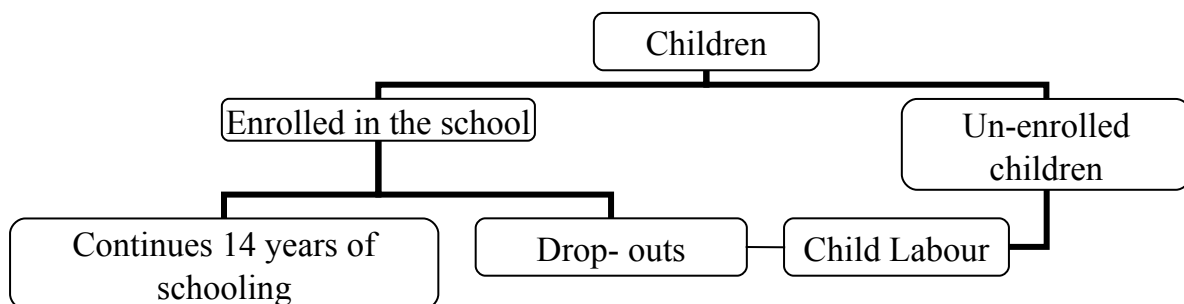
As the result of globalisation lot of changes took place in the ways of child rearing. Children became familiar with new concepts through information technology like children movies, TV shows and internet. It promotes a healthy childhood. It imports positive thinking, science and contextual knowledge which construct desirable behaviour in young ones. Children acquire more knowledge and skills than its required for their age.

If parents neglect their children, it may result in negative effects. It could inculcate evil behaviour among the children.

It is time to provide guidance to the parents and teachers to make use of media towards better constructs of childhood.

1.2.4 Child labour

Child labour is a worldwide phenomenon. But in developing countries it is very high rather than in developed countries. The constitution of India provides free compulsory education for all the children between the age group of 6 and 14. Poverty and lack of education are the major causes of the high rate of child labour in India. They find children as their source of income. In this context children are depriving joyful childhood with play and entertainment. They become child labour.

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                          ┌──────────┐
                          │ Children │
                          └──────────┘
            ┌──────────────────────┴──────────────┐
    ┌────────────────────┐                ┌─────────────┐
    │ Enrolled in the school │            │ Un-enrolled  │
    └────────────────────┘                │  children    │
         ┌────────┴────────┐              └─────────────┘
 ┌─────────────────┐  ┌───────────┐  ┌──────────────┐
 │ Continues 14 years of │ │ Drop- outs │──│ Child Labour │
 │    schooling    │  └───────────┘  └──────────────┘
 └─────────────────┘
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Today we consider all the out of school children (6 to 14 years age group) as child labour. When they are not in the school, somehow they are engaged in any form of work (for example taking care of siblings younger than the child).

Child labour is the practice of having children engage in any economic activity on a part or full time basis.

International Labour Organisation defined the term 'child labour' as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development.

'India Census 2001' office defined child labour as participation of a child less than 17 years of age in any economically productive activity with or without compensation, wages or profit.

'The mining act of 1952' prohibited the employment of children below 18 years of age in mines.

UNICEF estimates that in India there are 28 million children of 5 to 14 years age group engaged in work.

When children participate in work, they are deprived of their precise childhood and facing difficulties in their physical, mental and social development and it provokes violence and abuse against them.

Education in its true sense along with development it should help the children to protect their rights. For smooth construct of childhood, all the children must be enrolled in school. It is the responsibility of a teacher to educate the society and help to emancipate child labour.

1.2.5 Child Abuse:

Though the World is well advanced in science, technology and education, still we can find child abuse everywhere in the world. Child abuse is an international phenomenon. Child abuse is physical, sexual or psychological maltreatment or neglect of a child or children, especially by a parent or other care giver.

Child abuse can be physical and mental abuse and injury, neglect or negligent treatment, exploitation and sexual abuse that such violence can affect the normal development of a child impairing their mental, physical and social being. In extreme cases abuse of a child can result in death.

Child abuse has many forms. Physical, emotional, and sexual harassment neglect and exploitation which are harmful to a child's health, survival, dignity and development are some of the forms of child abuse.

Physical negligence or lack of proper supervision

Emotionally neglect

Medical neglect

Educational neglect

Neglected children experience adverse physical and psychological effects. Emotional abuse results in severe psychological hazards.

Sexual abuse is engaging or forcing a child in any sexual activity, using a child in pornography etc.

Neglecting the children physically or psychologically and physical punishment are common everywhere.

We can also see quarrels on issues of children in the house. (Male child, female child, unwanted child likewise)

Parents addicted to bad habits used to abuse their children.

In some families if a child was forced to severe abuse, another child was treated with love and affection in the same family.

Government of India enacted the Protection of Children against Sexual Offences Act- 2012 (POCSO) for the protection of children from sexual abuse and exploitation. To provide emergency assistance a 24 hours free telephone helpline service -1098 is provided. Countries throughout the world are enacting many acts to

avoid child abuse. But it yields only when there is an attitudinal change in the parents and others.

Educating the parents on child rights,

better ways of child rearing

Guidance and counselling to parents as well as children

Publicity through different media

Playing documentaries

May be some of the steps to prevent child abuse in the society

1.2.6 Childhood in the Context of Poverty

Poverty causes major effect on the childhood. It deprives children meeting their physical needs like water, sleep, food and rest. It also prevents children from having social and psychological needs like dress, accommodation, identity etc.

According to the theory of Erik Erikson, if child experiences failure or difficulty in psychosocial crisis, it results mistrust, doubt, guilt, inferiority and role confusion in the child.

They can't enjoy the rights bestowed at them like 'Right to live', 'Right to develop' and 'Right to seek information'.

Poor children are always away from nutritious food, good education and medical facilities. It confines children to express their abilities.Lack of self confidence, fear, superstitions, and illiteracy of poor parents affects their children behaviour.

Parents want to give holistic development to their children, but poverty ceases everything.

Poverty severely affects children's physical, mental, social, emotional, moral and creative development. It is the responsibility of the teacher to pay special attention on the children from the poor families.

1.3 Family – Socialisation

Socialization is a process in which a child acquires appropriate abilities to participate in the society.

Howard E. Freeman & Morris Showell : Socialization is the process of learning to group standards, morals and traditions and becoming imbued with a sense of oneness, inter communication and co-operation.

First people to meet in one's life are his parents. The first social institution for a child is his home or family.

Psychologist and social scientists accepted that the role of family is dominant throughout the life of an individual and on his development.

Whitmer H and Koteenski R (1972) explained three major functions of home are

1.   Extending love and affection to children
2.   Developing social values from infancy to adolescence
3.   Providing social identification (empathy)

Home is the source of love and affection to a child. It trains the child for different types of learning. Home is the monitor, which observes the child's behaviour and encourages desired behaviour and condemns wrong ways. It makes the child to live comfortably in the future society.

Children also feel proud to be identified as the member of their family.

1.3.1 Socio – Economic and Cultural differences in Socialization

Socio economical and cultural conditions of the parents affect the socialization process of a child.

The scope of his society extends as the child grows in to an adult starting from parents, through context of his family

Playing, interacting, moving with peer groups, and exhibiting same likes and dislikes are evident for their social behaviour. All the children are not exposed to the same social range. It differs based on the individual differences among the children.

Well disposed and initiative people have more friends. Life style is designed based on the social status. It is revealed in the home management, marital relations, family values and discipline.

Rodke (1946) observed the behaviour of the children of parents with different mentalities.

Economical factors influence everything. House, food, facilities, surroundings and habits are the based on the parental income.

Social status of the family also depends upon their economic status. Tagarden (1946) opined that financial barriers results in excitement and lack of care in the parents which in turn influences psychological problems in the children.

In higher class societies children are left to maids or servants to take care of. But, these care takers don't have any understanding or interest on child rearing. The effect on these children is more severe while comparing with their counterparts from poor families. Economic status of the family develops not only satisfaction and hospitable relationship but also influences social behaviour of the child.

Culture is a way of living. Family is an institution that passes on culture from one generation to the nest. Culture, traditions, discipline and language of the family influence socialization. Different cultures results in different ways of childhood.

1.3.2 Child Rearing

Child Rearing or parenting is an important concept in the childhood. Childhood experiences result in ones construct of childhood and personality in the future.

Sigmund Freud (1856-1939) in his Psycho-Analytical Theory explained that ways of child rearing and parental behaviour influence children's personality.

According to Erik Erikson, in each stage the child experiences a Psycho Social Crisis – trust vs mistrust, autonomy vs doubt etc. – the outcome results in one's personality.

Different types of child rearing, parenting and the relation between children and adult show major effects on their development.

Spera quotes 'while child rearing provides desirable behaviour for socialisation, style of parenting exhibits emotional environment in children'.

1.3.3 Adult – Child Relationship

Adult - child relationship is based on many factors in the family.

Way of child rearing, size of the family, brethren relationship, home environment, social status, family status etc are some of the issues that influence adult - child relationship.

The relationship between the child and the adult is based on the parent's family time, games, interactions, positive approaches, caring at children's needs, affection, methods of discipline, and aspirations of the parents from children. When parents are alcoholic, it severely influences the relationship between the child and adult.

Age of the parents also results on their relationship.

Mother's attitude towards maternity is a factor of influence on their relationship. 'Age of the mother and her inclination for conception has close relationship. When there is no more gap between first child and second child, mother may be disgusted with her maternity' – Volin, Relay (1950)

According Rodke (1946) parent - child relationship is very important. Holistic development of a child was influenced by the over protection, accept, reject, influence and obedience.

Cordial and friendly environment between adult and child results in all round development of the child.

Patience, positive approach and the way of responding to problems at the juncture of a child growing in to an adult helps the children for identifying and adjustment. It strengthens their relationship.

1.3.4 Ways of Child Rearing

Mother is the first teacher of a child. She renders her responsibilities from birth and rears the child. Father and other members of the family join with her.

Child rearing differs from joint family to nuclear family.

Advancement in education and the issues on parenting in media changed the ways of child rearing.

When both parents are employees they leave their children in day care or child care centres or engage a maid to look after the child at home, which in turn results in the behaviour of the child.

Parents are the basic models for their children. Their behaviour should be model for the all round development of the child.

When parents receive their guests in warm hospitality, children will imitate them when they have the same experience in future. Parent should exhibit different models of desired behaviour and freely allow the children to select their choice. We can't assure any method will be completely successful. So, parents should encourage children to construct their behaviour on their own experiences.

Parents should always encourage their children. So, children could develop confidence in their parents and improve their self confidence.

When parents show different ways in parenting, it leads to a conflict among the children. When a child makes a mistake, if one of the parents supports it and the other condemns, child could not discriminate whether it is wrong or right.

Child rearing reflects in food habits, dressing, discipline, toilet training, ways of communication, social ethics and culture.

Developing self respect, self-dependence, self control, social behaviour encouraging good deeds and habits, spending more time with children, behaving like a role-model to children instead of punishing, explaining their mistakes and flexibility in the needed situations promote children development.

When children understand that they have parental support, their urge for learning increases Parents should satisfy the needs of the children through observation. Parents should encourage their children to develop confidence on their parents.

If parents start arguing, children start neglecting their words. When parents shout at them, they feel that parents are angry and complete the work with fear. If they insist, they rebel against their parents. Sometimes it leads to the practices like forbidding the house or committing suicide. So, parents should always behave in a positive way.

Parents shouldn't repeat the same words which are already known to children.

When children did not understand the facts, they could not act according to the situation. Parents should teach them right responses to overcome the problem.

Styles of Child rearing:

Baumrind and Block (1967) observed different styles of child rearing. They proposed three postulates based on the most effective and the least effective styles. They are

1. When parents accept children's feelings and thoughts, an emotional bond inculcates between the parents and children.
2. When parents monitor children's behaviour, children can acquire more matured behavioural patterns.
3. When parents allow freedom to their children, they learn self reliance.

The major child rearing styles are

1. Authoritative parenting style
2. Authoritarian parenting style

3.   Permissive parenting style

4.   Uninvolved parenting style

1. Authoritative parenting style

This is the most successful parenting style. Parents allow autonomy to children. They accept children's feelings and thoughts. They follow participatory approach and exhibits deserved monitoring skills. They love their children and satisfy their need.

They develop relationship with children to share joyful emotions. It elevates a close bond between the child and parents.

Authoritative parents exhibit specific, accurate and rational behaviour. They encourage their children to behave up to their age, give reasonable explanation for their assumptions. The way they monitor their children inculcate self discipline among their children. They always observe the place and actions of their children.

Authoritative parents allow their children to take self decisions with in their level.

They allow the children to express their feeling, thoughts and needs. If there is any dispute between the child and parents about their decisions, they discuss and solve it. It promotes imitativeness, self confidence, self-control, problem solving ability, school achievement and co-operative behaviour in the children.

2. Authoritarian Parenting Style

Authoritarian parents disregard children's thoughts and feelings. They don't involve in children's ideas. They forcibly control their children. They allow less freedom. Children don't love this type of parents but protest them.

To control the behaviour of the children, they shout, command, criticize and frighten them. 'Because, I said so' is the approach of these parents. They are the sole decision makers of their children. Children should obey the words and orders of their parents.

When children don't follow them, they punish the children. They demand more than the capabilities of their children which make their children to experience excitement and tension. Children from this type of parents are sad, alone and have low self dependence. They show anger and aggression in frustration. When they don't

meet with what they want, they use force like their parents. Boys exhibit more anger and disobedience than girls.

3. Permissive Parenting Style

Permissive type of parents loves their children more. They accept all the thoughts and feelings of their children. These parents may be over affectionate or neglect. There is no control over the behaviour of the children. They don't instruct their children to exhibit the desired behaviour up to their age. They allow their children to take their own decision, even when they are not mature. They have low control over their children. Instead of allowing a systematic freedom; abundant freedom is given to make their own decisions. They are not particular about teaching good behaviour. They are not confident about themselves to influence their children.

Children from this type of parents are not obedient and rebel against everything. They don't depend more on their parents. They are not perseverant in solving the problems. Low school achievement and antisocial behaviour are common among these children.

4. Uninvolved parenting style

These parents do not have any idea about their children. They have with drawing nature.

These parents receive their children very less. They abandon their behaviour and their control. They differ in allowing freedom to their children. Majority of this type of parent do not control their children's behaviour. They neglect child rearing. Depressed, disappointed and over stressed parents show no interest on their children.

These children are backward in their school achievement. Anger, aggression and antisocial views are seen in this type of children.

1.4 School - Socialization

School is next to home where children spend most of their time. Peer groups, school culture, school environment, influence of the teachers, student-teacher relationship, school achievement and games in the school affect child's socialization process.

Children acquire social adjustment required for their social development in the school. Though foundations for social behaviour are laid in infancy, the school experiences construct it. The reinforcement for their behaviour is available only in the school that results in their social behaviour.

1.4.1 Peer Group Influence

According Rubin, Bukowski and Parker (2006), at first children form group with the same age group (with in class room) children. Gender, race, school, academic achievement, and uniform behaviour are some of the factors behind these groups.

While playing games, following rules of a game, resolving the quarrels and dealing with the violent children and the relationship between children influence their socialization. As they spend more time with the peer group, they develop their social behaviour by encouraging, by discouraging, by imitating the models, by the rules formed in the peer group. (Rubin, Bukowski and Parker (2006)

Gender is meant for self identification and to identify others perception. It also develops gender related socialization. Children from various constructs of childhood are found in the school. Peer groups influence promoting interrelation ship and developing social skills in the children.

Peer groups help in making friend ship, developing competition, enhancing moral values, to play the social cultural role and promoting individual freedom.

1.4.2   School Atmosphere - Culture

School culture is reflected in norms, beliefs, values, celebrations and traditions of the school.

The concept of 'School Culture' was first seen in Willard Waller's book 'The Sociology of Teaching' in 1932. According to him each school has its own culture. It has school traditions and norms to build students behaviour and relationship.

Fullan and Hargreaves (1976) expressed that there are individual and co-operative cultures in the school. Teacher's personality and the leader ship qualities of

the headmaster reflect on school culture. Children spend more time in the school. So, the school culture influences their physical, social, cognitive, spiritual and moral development.

Skinner (1964) expressed that the relations developed in the school play key role in the positive development of the children. Peterson and Deal (2003) expressed that school culture focuses on what is important and what is valuable in children's behaviour. Further they added that school culture enhances productivity and capability of the school.

So, school programmes like, good stories, social values, good school norms and social activities improve school culture. Teachers, parents and children should participate in social service for all round development of children.

1.4.3 Relationship with the Teacher

Children behaviour is mostly affected by the teachers. Many students take their teachers as their role models and improve their character. They have more confidence on their teachers than their parents.

Teacher students' relationship influences on education and social development of the student. Teachers should help the students to learn in a congenial environment and to develop their social and educational skills.

The cordial relationship between teacher and student raise class room educational and social productivity. Teacher student relationship should be close, affectionate and positive in outlook. When there is positive approach in teacher student relationship, students treat educational and social issues as challenges that affects in social and emotional development of the children.

When there is no good relationship between the teacher and students, it leads to students scaring of school, leaving the school and dislike the school. Teacher should develop close relationship with the students and encourage them to effectively face the problems of society in future.

1.4.4. Teacher Expectations and School Achievement

Every Teacher expects more academic achievement from his students. While setting the objectives, individual differences of the children should be taken in to consideration. Based on their individual differences, objectives should be set. Then students can work with satisfaction. When the academic objectives are above the standards of the students, they can't achieve the objectives and it develops inferiority complex among the children.

Expectations of the teachers motivate the children's achievement. Rosenthal and Jacobson experimented on several children about their expectancy effects. They published the result in their book "Pygmalion in Class room". The high estimations of the teachers promote the performance of the students. Children showing better performance to achieve the higher expectations of their teachers are called 'Pygmalion Effect'. So, the teacher should act logically in drawing the better results from his students.

1.4.5. Being Out of School Children

According to Right to Education Act - 2009, the government should provide free compulsory education to all the children in the age group of 6-14. The Government of India implemented many programmes to achieve it.

Out of school children means

* Children un-enrolled in the school (6-14).

* Enrolled but not attended children.

* Drop out children.

* Un-enrolled children because of school less habitations.

When children are out of school, they are deprived of all their rights and it's a hurdle in their all round development. They are deprived of their life skills also.

Some of the reasons behind out of school children are - lack of access to school, social customs, gender bias, poverty, migration, early marriages and scarcity

of teachers. Though the government of India is initiating many programmes to overcome these problems, many children are not still attending schools.

Quality education is necessary for effective implementation of government projects, to reduce infant mortality and to increase national productivity. Education develops children physical, mental, cognitive, social and moral values.

So student-teachers should canvas door to door to bring all these children to school and change the attitude of parents. Children should be given appropriate guidance and counselling for their development.

1.4.6 Learners with Over Age:

Over age children means children above the age of that class. We can call them adult learners.

When children are above the age of the class, they cannot adjust with other children resulting problems in the class room. When grownups are in the class their way of thinking, habits, and participation in the games are different from others which causes frustration in them.

It is observed that the late joining in the school, retention, children with special needs are some of the reasons for this problem.

Teacher should develop a friendly relationship with these children and plan separately according to their needs and give sufficient reinforcement at their own time.

Guidance is needed for parents of this type of children in the school.

1.5　Methods, Techniques and Approaches for Data Collection

Teachers need to collect data of their students in different occasions to study their behaviour. Many researches are to be conducted for child study. So, a teacher should use different methods, techniques and approaches available to him.

For effective study of children's behaviour he has to select appropriate research method and choose suitable tools to collect the required data. Stanley Hall, Elizabeth Hurlock and Gesell are popular in child study methods.

Let us discuss some of the research methods and research tools in detail.

Research is a scientific process in which the following steps are followed

Identifying the problem

Making hypothesis

Collecting the data

Analysis

Interpreting the analysis

Report making and publishing

Researches can be classified in to different types. In Child Psychology researches are grouped in to four types.

1.   Historical Research

2.   Correlation Research

3.   Descriptive Research

4.   Experimental Research

1.   Historical Research:

Research conducted to find the facts related to past are Historical Research. Example for this type of research is a study on children of 15th century- concepts about children, child rearing systems and development activities for children during 15th century are studied.

The data is collected through primary sources or secondary sources. They are analyzed and reported.

To identify change of approach towards children from ancient, medieval, modern and present day, Historical Research is necessary.

2.   Correlation Research

This type of Research is conducted

To know whether there is any relation between the qualities of children and the qualities the parents in child psychology.

To study the relationship of the locality where children live and the communication or language development of the children.

To study the relationship between parenting and academic achievement of the children.

This method shows if there is any relationship between two variables and whether quantitative behaviour of a variable has any relation with another variable.

When quantitative behaviour of one variable is known, we can assume the behaviour of second variable and draw conclusions.

3. **Descriptive Research**

Descriptive Research describes present state and reflects on it.

By studying the present situation (Globalisation, nuclear family system, employee mothers, crutch, nursery, play school, mass media, Computers, Mobile games, Video games) and their effects on children's physical, mental, emotional, social, moral and spiritual development styles, beliefs, approaches and attitudes are observed, described and reflected in the Experimental Descriptive Research method.

Children's case history, survey, observation, anecdotal record and reflective journals are used to collect data. Then the data is analysed and reflected.

We will discuss the above experimental tools in this unit.

4. **Experimental Research**

An experiment is an analytical description of what happens to the subject in a carefully controlled situation.

In this research while conducting experiment experimenter controls the experimenting variable and observes the changes.

Subjectivity is not important in this method. More importance is given for objectivity.

Control over the variables is the key factor of this method. So this method is in wide use in psychological studies.

It is based on John Stuart Mills – 'The law of single variable'.

"When two variables are similar, by adding or subtracting an element from a variable, if there is any difference between the said two variables, the difference is the result of adding or subtracting an element".

Some of the **Test Tools** are

1. Observation
2. Interview
3. Anecdotal Record
4. Reflective journals
5. Narrations
6. Child case history
7. Experimental method – Action Research

1.5.1 Observation:

Observation is the tool for studying children's behaviour.

According to Young (1977) - 'Observation is systematic study of incidents at a time'.

Atkinson defines observation as 'a purposeful study of facts for data collection'.

Observation is a complex phenomenon. Observer has to use all his sense organs along with playing different roles. (Atkinson & Hamersley) - 1994

Observation is 'an experimenter or a teacher studying the selected area, with prior preparation, interest and clarity; then collecting, analysing and interpreting the data'. Observation takes place in natural or controlled conditions.

Observations are two types. They are

a). Natural Observation

Observing the data in natural conditions is called 'Natural Observation'. In this observation subjects of observation are ignorant of they are being observed.

Observing the children when they are playing is an example of this type of observation.

Gesell constructed the observation dome to observe children. The 'see through screens' allows only observer to see the children inside the dome. Those who are inside the dome cannot see outside.

For effective observation the following facts should be predetermined

- What to observe?
- How to observe?
- Who to be observed?

Tape recorders, cameras and video recorders may be used in this method.

Uses: Direct observation of factors influencing the behaviour

Limits: In the hands of an untrained observer, the observation may be incomplete.

b) Controlled observation – Artificial observation

Observing the data in a controlled or artificial situation, by controlling the natural behaviour and natural conditions is called controlled observation or artificial observation. Natural situations are artificially created and controlled for the purpose of observation. So, this type of observation is also called Experimental observation.

1.5.2 Interview

Interview is an important tool in collecting data for child study.

Maccoby, 1954, defined "the interview is a face to face verbal interchange, in which one person, the interviewer attempts to elicit information as expression of opinions or beliefs from another person or persons".

Two persons are involved in an interview. The person who asks questions is interviewer and the person who answers the questions is interviewee.

There are basically two types of Interviews.

1. Structured interview and

2. Unstructured Interview

a) Structured Interview

In this interview questions are predetermined. Interviewer plans the order of questions in a systematic way and he presents the questions in a face to face interaction, collects data and analyses it.

b) Unstructured Interview

In unstructured interview, interviewer has flexibility to ask questions. There is no preset of questions to ask. Interviewer asks the questions based on the context to collect data. Key point in any interview is cordial relationship between interviewer and interviewee. So, the best way to collect data is creating good relationship with interviewee at the beginning. Interviewer should get the confidence of his subject, that the data shared is confidential. He should create a hostile environment. The interviewer has to question to get the genuine data.

Uses

When interviewee responds sincerely, it is the best way of collecting data.

It is suitable to recollect past experiences of a person.

It reveals the facts like internal behaviour or facts which can't be observed

Limits

Subjectivity is more in this type of interview.

If there is no cordial relationship, interviewee may not express everything out of fear.

1.5.3 Reflective Journals

Reflective Journal is a record in which children share their own thoughts or teachers record the facts they observed.

It helps children for self evaluation of their thoughts, feelings and learning which they respond and record in the journal. It helps children to classify known and unknown things resulting in their Cognitive development.

It tests children's self reflections and feelings. It also promotes learning new concepts or ideas, solving difficult problems and self expression among the children.

It helps for effective learning as the children monitor their thoughts by themselves.

It helps the teacher to guide the children for their cognitive development.

1.5.4 Anecdotal Records

In this method it is planned to observe the children behaviour in the particular incident or situation like when they are quarrelling or emotionally excited. Observer sits at a distance and observes whether there are any abnormalities in the children behaviour. After observing completely he records the things – name, gender, age, time of the incident, children behaviour before the incident, rationale behind the incident, the way in which the child participated, language, emotions etc.

Personal opinions should not be expressed. Incident should be recorded in detail with facts. Clear explanations should be added. This method studies needed and selected behaviour only.

1.5.5. Narratives

Narrative method is recording the behaviour or actions of the children in the order of it occurred.

The scope of this method is not limited to a particular incident like anecdotal record. What are the children doing, how do they behave with in the classroom and out of the classroom. How they are responding with other children is also recorded. The above facts are recorded in the order of their happening. After analysing the data, one can make assumptions of their behaviour.

Uses of the data collected are

Sum of children's behaviour

It is not specific to a particular behaviour. Collects all types of behaviour of an individual.

It helps to understand not only the behaviour of the subject but also the reason behind it.

Limits:

It is difficult to observe all the children

It takes a long time.

1.5.6. Experimental Method

This is the most scientific and objective method of studying behaviour. In 1879, Wilhelm Wundt, a German psychologist founded the first laboratory for psychology in Leipzig.

The experiment method helped to consider the status of science to psychology.

An experiment in psychology means measuring the behaviour of the subject, by varying the stimuli in rigidly controlled conditions.

"An experiment is a phenomenon or behaviour studied under controlled conditions".

Terms used in Experimental method

- ◆ **Stimulus:** A thing or an event that evokes change in the behaviour of an individual.

- ◆ **Response:** The behaviour that results from stimuli.

- ◆ **Experimenter:** A person who conducts an experiment is called an experimenter. An experimenter controls variables.

- ◆ **Subject:** A person who was influenced by the experiment is called subject. Subject is the person, whose behaviour is measured or observed with the influence of independent variable.

- ◆ **Variable:** A factor or condition that manipulates or charges in an experiment is called variable. A variable is anything that can vary – changed or be changed.

Variables are three types.

(a) Independent variable (b) Dependent variable (c) Intervening variables

a) Independent variable:

An independent variable is one that can be introduced, varied or removed by the experimenter in order to study its effects on the phenomena he studies. Independent variables are the cause of the response.

b) Dependent variable:

A variable that is influenced by the independent variables in an experiment is dependent variable. An experimenter measures or observes the changes in the dependent variable. Dependent variable is the response or result in the experiment.

The variable that is in the control of the experimenter is independent variable and the variable that is influenced is dependent variable.

Example (1): If we study the influence of self learning material on the achievement of a student, here

Achievement of the student is Dependent Variable

Self learning material is Independent variable.

Example (2): In an experiment on study of influence of glucose on the activeness of the students.

Dependent variable is students' activeness and

Independent variable is consumption of Glucose.

c) Intervening variables:

Variables which are not controlled by anybody and influence the dependent variable in an experiment

(or)

Variables that influence dependent variable other than the independent variable is called intervening variables.

Mental condition, ill-health, fatigue, failure of instruments are examples of intervening variables.

Example: A teacher is examining the effects of computer based learning on the achievement levels of the students. The experiment is failed because of virus affected computers. The intervening variable is virus in the computer.

The following steps to be followed to conduct an experiment by an experimenter / teacher.

Identifying the problem

Defining the problem

Construct a hypothesis

Collection of data according to hypothesis

Analyzing the data statistically

Inferring the results

Accepting or rejecting the hypothesis.

This is called scientific method or an experiment.

Groups:

There are two types of groups in an experiment.

1) Controlled group:

The group which does not receive the experimental treatment is called controlled group. The state of controlled group is controlled state which is a natural state.

2) Experimental group:

The group which receives experimental treatment is called experimental group. The influence of Independent variable is estimated on experimental group. The state of experimental group is called experimental state.

Based on the experiment, resources available and other aspects of experiment, experimenter selects the type of experimental model. Some experimental models are

1. Single group model
2. Parallel group model

3. Rotational Groups model
4. Multiple group model

1) Single group model:

There is only one group in this model. At first the group acts as controlled group and then it acts as experimental group.

Analyzing and inferring results from the same group. At first the group is treated in the controlled state, and then in the experimental state.

Ex: Influence of activity based method on student's achievement.

Step-1	Controlled state	Base line test	Teaching in traditional method	End test-1
Step-2	Experimental state		Teaching in activity based method	End test-2

2) Two groups model or Parallel group model:

In this model experimenter uses two groups. The experimenter designs the subjects of both groups are uniform in all aspects (age, gender, group, intelligence, social status etc). At first one of the groups is experimental group and the other group is controlled group. A Base line test is conducted for both groups. Effect of the experimental group is treated with experimental state. An end test is conducted for both groups and the result is compared and analyzed.

Example: Influence of Internet on Educational achievement

Controlled group	Experimental group
Group A	Group B
Base Line Test	Base Line Test
Learning in traditional way	Learning through internet and video
End Test	End Test

3. Rotational Group model:

In this model experiments are conducted on two uniform groups.

Experiment is conducted in two steps. In step -1 one group is controlled group and the other group is experimental group. Experimenter collects data from both the groups. In step-2, the group which was in controlled state in the prior experiment, now undergoes experimental state and the experimental group in the step-1, becomes the controlled group.

In this model both groups act as controlled group and experimental group in rotation. Data collected from both steps are analyzed and interpreted.

Experiment : Influence of Glucose on activeness of the children

Step -1

Controlled Group	Experimental group
Group A	Group B
Base Line Test	Base Line Test
Learning without Glucose	Learning after taking Glucose
End Test -1	End Test -1

Step 2

Controlled group	Experimental group
Group A	Group B
Base Line Test	Base Line Test
Learning without Glucose	Learning after taking Glucose
End Test -2	End Test -2

4. Multiple Group Model:

In this model more than two groups are taken. One group acts as controlled group and all other groups are experimental groups.

Ex: Newspapers influence on students attitude towards reservations in employment

Controlled group	Experimental group-1	Experimental group-2
Base Line Test	Base Line Test	Base Line Test
Reading the newspapers that are not mentioning Reservation	Reading the newspapers with positive view on Reservation	Reading the newspapers with negative view on Reservation
End Test	End Test	End Test

Experimenter collects the data, analyses scientifically and interprets the result.

Uses of Experimental method:

This is a scientific method

The results are more reliable

Cause and effect results are derived

This method has more objectivity

Teachers can examine their method of teaching and improve them.

Limitations of the method:

Controlling the intervening variables is very difficult

All types of behaviour can't be examined in the laboratory

Certain experiments are conducted on birds and animals and they are applied to human behaviour. Whether it is applicable or not is to be studied.

It needs more money and time

1.5.6 Questionnaire:

Questionnaires are mostly used in personality assessment test.

Goode and Hatt (1952) defined 'Questionnaire is a device for securing answers to questions using a form which the respondents fill it'.

Personality of an individual is assessed through collecting data from his answers to questions on various issues and analyzing them. Usually each question has three options like – Yes, No and Not Known.

Questionnaires are two types

1. Close ended questionnaire
2. Open ended questionnaire

In a close ended questionnaire, the subject has to select any one of the options given for a question.

Example: Are you afraid of going to school alone (Yes/No/ No answer

In an open ended questionnaire one can express the answer individually.

Example: I am afraid of school, because -----------------------

Questionnaire saves time to collect information from more number of people. Conducting a questionnaire is easy. We can collect information from the people at a distance, by post or e-mail. Some people may skip to answer all the questions. There is chance for subjectivity. Analyzing data from an open ended questionnaire may be difficult.

Example for Questionnaire: 16 P.F Questionnaires (RB Cattell)

1.5.7 Case study method.

Case study is an up close, in depth and detailed examination of a subject and collecting data to analyze and interpret.

This method is also called 'Clinical Method'.

Bonnie and Haul Pillman expressed that 'case study is an empirical inquiry that investigates the problematic student to prevent the problem'.

There are two stages in case-study method.

1.   Identifying the problem stage
2.   Preventing the problem stage

1. Identifying the problem stage

- Identifying the problem behaviour in the person.
- Assuming the reasons for the problem and hypothesis
- Collecting the data regarding the problem from different sources like diary, letters, Interview, School Records, Progress Reports, Cumulative Records, Anecdotal Record, Rating Scales, Inventories etc.
- Analyzing the data, interpreting the results and verifying with the hypothesis.

2. Problem solving stage

- Based on the nature of the problem, selecting the suitable solution like treatment, instructions, changing the situations etc.
- Observing how the steps of solution succeeded.
- Interpreting the positive changes in the behaviour.
- Preparing a detailed report.

Irregular attendance to school, stealing, aggression, backwardness in academic achievement, frustration, over shyness and refractory are some of the behavioural problems for case study.

Information to be collected for case study

- Student's personal information.
- Information about parents and family members.
- Information about Neighbourhood
- Information about peer groups and friends
- Physical and cultural conditions of the home
- Academic achievement of the student
- Information from teachers and peer group
- Data collected through psychological tests
- Conforming the problem
- Preventing measures
- Final Results

1.5.8   Rating scales:

Rating scales are used to measure the children's traits. Leadership qualities, emotional equilibrium, co-operation, confidence are some of the traits that could be measured through Rating scales.

Rating scales of 5 point or 7 point scales are used to estimate the personality of an individual. These scales contain neutral at the centre. One side it goes with positive description in ascending order and the other side with negative description in descending order.

The person who assesses the personality has to read the sentence and put a '√' mark against the trait which appropriately relates to the subject.

Example: Nishant is honest.

| Fully agreed | Agreed | Neutral | Not agreed | Fully not agreed |
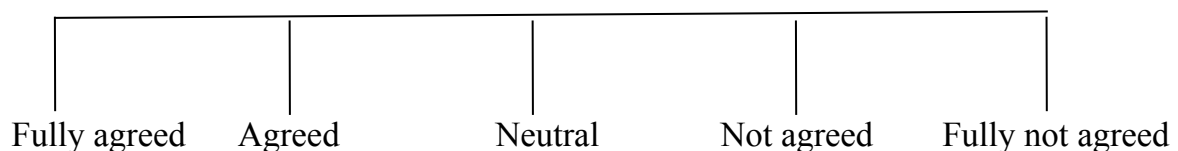
Rating scales are two types

1. Self Rating scales
2. Rating Scales by others

Self rating scales:

In this Rating Scales subject himself puts a '√' mark against the characteristic option that is related to him.

When the subject is honest, self rating scales are the most useful. But small children, people with psychological disorders and the illiterates cannot use it.

2. Rating Scales by others:

In this rating scale, to assess the personality of the subject, others (those are close to subject or a person told by the subject) are asked to rate the scale. Here the level of the trait is decided by other than the subject. So, this type of rating has more

objectivity. When these rating scales are applied the problems are – 'Halo effect', 'generosity errors' and 'errors due to central tendency'.

To overcome these problems, information is collected from more than one person. But one cannot observe all the qualities of another person. To achieve the accurate assumptions of personality it is better to apply both self rating scales and rating scale by others and correlate the result to agree or to reject.

The Vineland Social Maturity Scale, The Fels Parent Behavior Scales, Wittenborn Psychiatric Rating Scales are some of the popular rating scales.

Action research:

Stephen M. Corey defined - Action research is a process, searching for solutions of real life problems.

Action Research helps a teacher to overcome the problems in teaching learning process, when the teacher and students are participating in learning process. Action Research is an active research, where teacher identifies to change appropriate solutions or practices and prepares questions to get the desirable changes and experiments it, draws the result and solve the problem.

Psychologist, Stiffen Kemmis remarked the following important facts about Action Research.

To solve the problems in teaching – learning process in the class room, a teacher should discuss the questions 'Why?' 'How?' 'What?' and research it.

1. Plan : A research needs a proper planning for problem solving at the beginning
2. Act : The plan should be executed
3. Observe : Observing everything during the implementation of the plan
4. Record: Observations should be recorded.
5. Reflect: Recorded information should be analyzed and reflected.

If the problem is not solved

6. Re-plan : Another plan to be setup
7. Re-act : Re-plan should be implemented

8.   Re-observe: Observe when Re-plan is implemented.

9.   Re-record: Observations of Re-Plan should be recorded

10.   Re-reflect : Recorded observations should be analysed and reflected

This process continues till the problem is solved.

1.5.9 Longitudinal and Cross sectional approach

There are two approaches to study child development. They are

1) Longitudinal approach/studies and

2) Cross Sectional Approach /studies

1) Longitudinal approach/studies:

Experimenter observes the selected sample for many times, in different stages and situations and records the changes. The period of time may be from few months to many years or even throughout the life time. It takes a long period of time to collect data in this method.

In 1931, Shirley conducted a longitudinal study on children motor, intelligence and personality development. He studied 25 babies from their birth to the age of 2 years and studied the patterns of motor development among the children.

In 1928, The University of California, Berkeley conducted a longitudinal study on 'development of children' popularly known as 'Berkeley Study on Development'. In this study they observed 61 children for decades and submitted their reports.

Uses:

1.   When the same sample is observed over a long period, relation between the past behaviour and the present behaviour can be noticed.

2.   Long term observation helps to understand the similarities, diversities and the reason behind such change.

3.   Observing the person in different situations, results in estimating his personality traits accurately.

4.   Development of each child can be analyzed.

5.   Helps to assess the influence of changes in culture and environment on children's behaviour.

Limits:

1.   As this method takes long period, there is possibility of subjects moving to other places or facing death. They disturb the collection of data.

2.   It's very expensive since the same experimenter has to continue till the end. It can't be possible.

2) Cross Sectional Approach/Studies

The defining feature of a cross-sectional study is that it can compare different population groups at a single point in time and compare the data. So, this approach saves the time of the experimenter. There is no lost of subjects during the study. Most of the child studies follows the cross sectional approach.

For instance to study the different stages of moral development of the children between the age group of 3 to 6 years, the experimenter studies the group of children with age of 3,4,5 and 6 years separately and collects the data and reports it.

Uses:

1.   It takes short period of duration.

2.   There is no lost of selected subjects.

3.   More information is gathered in less time.

4.   Low expensive while comparing with longitudinal approach.

5.   Only one experimenter can collect the data.

Limitations to this approach:

1.   Observing different groups of different age group children, we can't assure the result applies to the entire children.

2. There is no chance to study the changes occurred due to time, environment and culture.

Salient Points

•   Childhood is an important stage in human life. Period between birth to adolescent is called childhood.

•   Several similarities and diversities in the construct of childhood is the result of heredity, environment and ways of parenting.

•   The childhood experiences of an individual construct his personality. So we can see multiple childhoods.

•   Globalisation, issues of child labour and child abuse influence the childhood.

•   Socialisation is the process of cultivating social abilities to partake in the society.

•   Family, social, economical and cultural aspects influence the process of socialisation in the children.

•   Other children in the family, adult relationship, style of child rearing influence socialisation in the childhood construct.

•   Teachers use different methods and techniques to collect data to understand the behaviour of the children. Some of these methods are – Observation, Interview, Anecdotal Record, Reflective Journals, Narratives and experimental method.

•   Longitudinal approach and Cross sectional Approach are two types of approaches to observe the development of the children.

Self Evaluation

1.   Explain multiple child constructs in Indian context.
2.   Discuss the differences of social, economical and culture on socialization?
3.   Explain the influence of school on socialization.
4.   Explain different styles of parenting.

5. What is longitudinal and cross sectional approach in child study. What are their uses and limits.

6. Explain experimental method with an example.

7. Briefly explain the following

   a) Natural observation   b) Interview   c) Reflective Journals

8. What is case study? What is the importance of case study in child study?

9. Give example for rating scales.

10. What is childhood?

11. Briefly explain constructs of childhood in the context of globalization.

12. Define child labour?

13. Discuss the influence of teacher and student relationship on socialization.

14. Explain constructs of childhood in the context of poverty

15. What is Pygmalion Effect?

16. Illustrate variables in the experimental method

17. Father of the child study ---------

18. The concept of school culture was introduced by _____ in his book 'The sociology of teaching.

19. The most successful style of child rearing is

   1. Authoritative   2. Authoritarian   3. Permissive 4. Uninvolving

20. 'Pygmalion in the classroom' was written by

(1) Rosenthal and Jacobson   (2) Williamson & Darley

(3) Macauby & Macauby   (4) Freud & Ericson

PROJECT WORK

1) Collect information from parents and students on styles of child rearing when you visit schools in IOP and make a report.

2) Observe the children from any 5 Joint families and 5 Nuclear families, analyse the similarities and diversities in the children, analyse the reasons and make a report.

3) Observe the physical development of the children of class 1 to 5, when you visit schools in your IOP and make a report.

4) Identify the most backward child in the class and collect complete information of the child and the reasons for his backwardness. Suggest appropriate solutions to overcome his backwardness.

D.El.Ed.,
FIRST YEAR

PAPER-1:

CHILDHOOD AND DEVELOPMENT

UNIT – 2
PERSPECTIVES IN DEVELOPMENT

P.R.UMASANKAR,
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UNIT – 2

Perspectives in Development

2.0 Introduction

It is natural for any living being to undergo different changes to develop from its birth. For instance, human beings depend upon others for their living in childhood and get different changes before they start to live independently by themselves as an adult. These changes are called growth and development. Life of an individual starts as a fertilized egg and changes in to a fully fledged human adult. In this process he undergoes a cycle of changes brought about by the process of growth and development. Besides growth and development, maturation is another important aspect to influence the growth and development.

2.1 Objectives

This unit helps the student teachers

◆ Development - introduction

- To understand the concepts like growth, development and maturity.

- To know various aspects of development and influence of heredity and environment on development.

◆ To know physical and motor development and relation between development and maturity.

◆ Social development:

- To understand the role of home, peer group, school, social media and culture in social development.

- To know the influence of competition and co-operation, discipline, award and punishment, aggression and bullying on social development.

◆ Socialization Process

- To know the concept and process of socialization, importance of social, economical and cultural aspects of socialization.

-      To understand the influence of peer groups, friends, gender, competition and co-operation, aggression and bullying on social development.

◆   Emotional Development :

-      To know the meaning and nature of emotions and emotional maturity and the role of home and school on emotional development.

◆   Language development:

-      To understand the development of speech and the perspectives of language development according to psychologists like Skinner, Bandura and Chomsky.

◆   Moral Development :

-      To understand Kohlberg's cognitive moral development theory and cultural diversity in morality.

◆   Play and Development :

-      To understand the meaning and functions of play and its influence on different aspects of development.

-      To know the different types of play, group dynamics, norms of a play and how children solve the differences among themselves.

9.   To know the concepts like sense of self, self description, self concept, self respect, social comparison, internalization and self control.

10.   To understand culture and gender development.

2.2 Development – Introduction

………………………………

2.2.1 Concept of Growth and development:

Mostly these two terms, growth and development are used interchangeably, but in the strict sense these two terms have different meaning. While growth is quantitative, development is qualitative. For example, external changes in quantity of weight and height are growth. Qualitative changes like walking, writing etc. are considered as development. Qualitative changes occur only after quantitative changes. Hence, growth is a part of development.

According to Anderson 'Development is a complex process of integrating physical structures with their functions'. 'Development refers to change in shape, form or structure resulting in improved working or in functioning'.

According to Craig development is 'change in functions, thoughts and behaviour of an individual as a result of biological environment'.

The differences between growth and development can be studied in the following table.

Growth	Development
1. Growth is quantitative. It refers to changes in height, weight and length.	1. Development is qualitative, it refers to not only quantitative changes but also functional changes resulted from them. Eg: A child who cannot walk at the age of 6, starts to walk within a year because muscular development in legs,.
2. The changes produced by the growth are the subject of direct measurement. They are observable.	2. Development is a complex process. It is difficult to measure directly. The developmental changes are assessed through different tests, tools and methods
3. Growth is a part of development	3. Development is a broad and comprehensive term. Growth is a part of development.
4. Growth is ceased at a point of time	4. Development is functional and continues throughout the life of an individual.
5. The term growth is used in only physical changes	5. The term development implies overall changes physical, social moral etc.

Maturity:

Each individual has innate abilities at birth. Along with advancement of age these innate abilities also change in a systematic order. Maturity means the development of innate abilities of an individual along with the age. It is a systematic process. Maturity is not the result of learning, but to learn anything, maturity is an

important factor. For example in infancy a child cannot keep the head straight or crawl, without maturity. It is an innate, qualitative process that doesn't need any special training. So, maturity is also qualitative like development.

According to Gesell 'the development from infancy to adolescence is governed by physical changes that are mapped out in the individual's genes'.

According to Craig -'Maturity shows the Gene potential of an individual, the changes occurs according to the predetermined plan'.

$$Development = f \text{ (maturity x learning)}$$

2.2.2. Development as Multi Development

Development occurs in the following forms

1. Physical Development   2. Mental Development   3. Emotional Development

4. Social Development   5. Moral Development   6. Language Development

1. Physical Development:

Sensory development, changes in nervous system and body organs are all part of Physical Development. At birth head is in large size. But gradually proportions of head decreases. Motor skills are also gradually developed along with Physical development. Motor development continues starting from lying back, walking and running and at the age of 3 years a child can climb up the stairs and climbs down.

2. Mental Development:

Mental development includes overall development of abilities like language, intelligence, thinking, attention, problem solving, reasoning, logical thinking etc. intelligence does not depend upon physical development. It is pre determined at birth. Along with advancement of age intelligence also develops. It is measured with IQ.

3. Emotional Development:

Emotional development also takes place along with physical development. Emotion is the stirred up state of the organisms. Bridges conducted several

experiments on emotions. The first emotion roused in a child is 'excitement'. After three months along with excitement, a child experiences 'distress' and 'delight'. At the age of six months emotions like sadness, anger, fatigue and fear formed in the child. Jealousy starts at the age of one year and delight expands to 'pleasure' and 'affection'.

4. Social Development:

Man is a social animal. The child tries to develop relationship with the people around him from his birth. The child develops from non-social state to socialization. Parents, members of the family, neighbours and peer groups influence the process of socialization in the child. Preschool child is interested in 'solitary play'. Parallel play and playing with others start at the age of 2 years. At the age of 3 or 4 years the child participates in social play and co-operative play. He learns the value of these plays in the process of socialization.

5. Moral Development:

Children have no conscience. So they can't understand moral values at the early stages. At first they don't follow any moral standards. Gradually they learn moral values from their grandparents, parents and other elders. They learn the value of morality when parents or adults support them and condemn amoral activities.

6. Language Development:

Language Development takes place along with physical and mental developments in the children. There are four stages in language development.

a) Pre-Language Stage: Child tries to express his excitement through sounds. In this stage he has no language.

b) Babbling Stage: Between 4 and 12 months of age, the child tries to produce some sounds referring to parents and other persons in the family. These sounds don't have any meaning.

c) Sound Imitation Stage: between the age of 1 year and 1½ years, language development occurs through imitation and conditioning. They imitate sounds produced by the adults and others.

d) Sound Receptive Stage: Child listen to the sounds produced by different people and try to respond between the age of 1½ years and 10 or 12 years. He uses the language appropriate to the context because of language development. Language development is a little faster in girls than boys.

2.2.3 Development as continuing through the life span :

It is natural for an individual to grow and to develop along with the age. But the growth and development varies in the same race. For example, some children can walk at an age of ten months; where as some other people may not walk even after a year. But development follows some well defined principles.

1. **Principle of continuity:** Development is a continuous process. An individual starting his life from a tiny cell develops throughout his life span continuously.

2. **Principle of uniformity of pattern:** Development follows an orderly sequence. Though the individuals differ in rate of growth and development, even then it follows a definite sequence or pattern. For example language development of an individual starts with babbling and gradually changes in to conversations and later development of complex language skills.

3. **Growth and development is not uniform in all the stages:** Development follows continuity, yet it is not uniform in all the stages. It proceeds more rapidly in infancy and slows down in the later years of childhood.

4. **Development is an individual process:** Although development follows an orderly sequence, each child has his own rate of development and quality. For example if a child crawls at an age of 5 months, another child may crawl at an age of 6 months. In mental, social and other developments also we can see the same type of differences.

5. **Development follows a definite direction:** There are two specific facts concerning the direction of development. The first type '*cephalo-caudal'*, means development starts from head and proceeds towards heel in the longitudinal axis. First,

the child gains control over his head and then on his hips before standing on his foot to walk. The second one 'proximodigital'. The development proceeds from the centre to the periphery. At first the child exhibits control over the large fundamental muscles and afterwards on smaller muscles. For example control over fingers comes after the control over the arm and the hand.

6.   Different developments are interdependent: Different aspects of development are interdependent. Physical, mental, social, moral and emotional developments are interdependent. For example if a child's mental development is not good, he will be backward in social and moral developments also.

7.   Development is the product of interaction: Development is the product of constant interaction between innate abilities and his environment. Constant flux within hereditary forces inherent in the individual and his environment results in the personality development.

8.   Development is predictable: With the help of the rate of growth and development of a child, it is possible for us to predict the range of development in an individual. For example based on the height of a child at an age of 2 years, we can estimate his height at the age of 20 years. Similarly, mental development can also be predicted.

9.   Development is cumulative: Certain changes in the child impress the observer with their dramatic suddenness, but actually these changes do not emerge all of a sudden. Though the child's first word appears suddenly, it is the result of continuous internal changes of various aspects within the child. Every change is the result of previous experience only.

10.   Development proceeds from general to specific: In all phases of child development, general activity precedes specific activity. For instance, when a child wants to hold anything he moves his arms to hold it and gradually learns to hold it with fingers. More specific activities like holding a pencil follow later.

2.2.4 Influence of Heredity and environment on development in the socio-cultural context.

Development is a comprehensive and continuous process. Though development pattern is uniform, it differs from individuals based on their individual differences. There are many factors behind these individual differences. Each individual inherits certain specific traits from his parents at his birth. Passing on these innate traits from one generation to other is called heredity. A child, born with inherent qualities, is influenced by the intimate environment. Thus a child's development is mostly affected by the two factors - heredity and environment. The study of influence of heredity and environment is very important in child study.

Heredity and environment are two major factors that influence development of an individual. Then, which of these two factors are dominant? There are arguments in favor of heredity and environment. Let us study some of them.

Influence of Heredity – some experiments

Heredity refers to a biological mechanism as a result of which the child gets something from his ancestral stock through his parents.

Galton, Goddard, Freeman, Dugdale, Pearson and Allport are some of the psychologists who experimented on the influence of heredity on development and supported it.

Galton Francis in his book 'Hereditary Genius' explained intelligent parents will give birth to meritorious children. He studied 997 persons from genius and well to do families and 997 average men from poor families. There were 332 eminent persons have more intelligent children from the genius and well to do families and where as only 5 children are intelligent from the average men.

In the study conducted by Pearson, noticed five people from Darwin's family getting fellowship in Royal society. Illustrates that not only physical features and shape are transmitted from ancestors through parents but also qualities of intelligence are transmitted from ancestors through parents.

A study on Hominin's family proved that feeble minded mother and disabled and low intelligent father had five weak minded children and others are bad characters of their seven children.

In his study on heredity Dugdale identified that 709 descendents from a corrupt Juke's family were paupers, corrupted and prostitutes.

H.H.Gordan studied the family of Kallikak. Kallikak had two wives. First was a feeble minded girl and the other was normal. The family line established by the feeble minded woman contained 480 direct descendents of which most of them were criminals, drunkards, feeble minded, patients, sexually deviants and illegitimate etc. whereas 496 direct descendents of the normal woman, all were normal like socially high rankers-lawyers, doctors, teachers, priests etc.

Freeman conducted experiments on identical twins, fraternal twins and siblings of the same parents and cousins. He calculated co-efficient of correlations and their comparison. It proved that identical twins are mostly similar in their intelligence.

Allport explained that the influence of genes is more dominant than environment in individual differences. The great cricketers like Surender Amarnath and Mohinder Amarnath are children of another legendry cricketer Lala Amarnath. Indian Tennis player Ramesh Krishnan is son of Veteran Tennis champion. Ramanathan Krishnan, the music director R.D Burman is son of another musician S.D.Burman, the great singers Bharatha Ratna Latha Mangeshkar and Asha Bhosle are children of eminent musician Hrudayanath Mangeshkar. The popularity of all these people is evidence for the influence of heredity.

Experiments on influence of Environment

Environmentalists believe that the effect of environment is more influential than heredity. W.C.Bagley, Gordan Freeman, and Watson are some of the important environmentalists. J.B.Watson emphasized the influence of environment in a severe statement - "Give me a dozen healthy individuals irrespective of their traits. I will

make them doctors, Engineers, Teachers, clergymen and still if you need I will make them dacoits and thieves."

W.C.Bagley in his book 'Educational Determinism' expressed that educational opportunities and school facilities influence the development of an individual. The correlation between the school facilities and individual development is high. Freeman observed the identical twins, 'Milthred and Ruth' who were brought up in different environments, differed in their IQ. Gordon observed the IQ of the children of boatmen and gypsy; it's observed that their IQ in childhood is higher while comparing with that of grownups. It clearly reveals that when they got away from the school environment, the rate of development was also decreased.

Historians said that the founders of Roman Empire, Romulus and Reemus were brought up by wolves and the result was they followed wolves in walking and food collection. They used to howl at nights. The association with wolves in the childhood resulted in their behavior. In 1920, the twins Amala and Kamala behaved like wolves as they grew up in that environment.

The hereditarians and environmentalists supported their own views. Yet both heredity and environment are factors of one's development and personality. Whatever innate abilities are there, without proper opportunity and training, they could not be developed. Similarly if we train a person without sufficient innate abilities, he could not shine in the certain area. It is the role of the teacher to understand the importance of both heredity and environment and train the students' abilities and environment for overall development of his students.

2.2.5 Developmental milestones and hazards

Havighurst, a psychologist, proposed a list of common critical developmental tasks, identified for each stage of human development. Each child has to achieve the activities by the end of the stage. A developmental milestone is an

ability that is achieved by the most children at a certain age. These are the recognized pattern of development that children are expected to follow.

Milestones - Early Childhood

A child learns

- To take solid food
- To walk and talk
- To control bowel and urine (bodily waste)
- To follow sex differences and related role
- To have reading readiness
- To understand the difference between right and wrong.

At the end of this stage a child starts to know the self concept.

Milestones - Later Childhood

A child Learns

- Physical skills necessary for ordinary games
- Building wholesome attitudes towards oneself as a growing organism
- Get along with age mates
- Getting ready to play appropriate male or female role
- Developing basic skills and abilities for reading, writing and mathematics
- Developing concepts related to everyday life
- Developing self concept, values and morality
- Developing attitudes towards social groups and institutions
- Developing positive attitude towards social groups and institutions
- Achieving personal independence and freedom

Hazards

In later childhood children should be prevented from the following hazards. Some of the hazards are

- Slow rate of development
- Lack of guidance and opportunities to complete the each developmental stage.
- Lack of motivation
- Physical disabilities and inferiority complex
- Low intelligence

2.3 Branches of Psychology

Psychology is the scientific study of mind and behaviour. Behaviour includes innate stimulations like thinking, remembering, forgetting, imagination, analysis etc. and external stimulations like physical movements, drawing, writing, singing, speaking etc. When the topics of psychology such as motivation, emotions, learning, retention, attention, intelligence, personality, social behaviour etc. are applied and studied in the concerned field, it is called the particular branch of psychology.

Branch	Area of Study
1. Normal Psychology	Deals with general norms, principles and theories related to the behaviour of normal organisms.
2. Abnormal Psychology	Deals with the behaviour of abnormal persons, mental diseases and attempts to treat and cure them.
3. Animal Psychology	Deals with the study on animals. Experiments are first carried on animals and the resulting principles and theories are applied on human behaviour.
4. Social Psychology	Man is a social animal. It studies the behaviour of an individual in the society and his social aptitudes, attitudes and feelings.
5. Experimental Psychology	In this branch of psychology experiments are conducted in controlled or laboratory situations to study mental processes and behaviour and to verify the result in a scientific method.
6. Developmental Psychology	It is concerned with the different stages of human life from birth (formation of zygote) to death with reference to the growth and development and behavioural traits. Child Psychology, Adolescent

	Psychology and Old age Psychology are sub-branches of this branch of psychology.

The other branches are Para Psychology, Educational Psychology, and Industrial Psychology etc. In this unit let us study Child Psychology.

2.3.1 Developmental Stages – Child Psychology:

Human development is continuous. Elizabeth Hurlock classified the following human developmental stages and explained behavioural changes related to the each stage. He also explained specific changes in the different areas like physical, motor, intellectual, social, emotional, moral and language development.

Human life span was divided into ten different stages.

S.No	Period	Stage
1	From the formation of Zygote till the birth	Pre Natal Stage
2	From Birth to First Two Weeks	Nascent child stage
3	From 2 weeks to the end of 2nd year	Infancy
4	From 3 years to the end of 5th year	Early Childhood Stage
5	Between 6 years and 10/12 years	Later Childhood Stage
6	Between 10/12 years and 13/14 years	Early Adolescent Stage
7	Between 15 and 18 years	Later Adolescent Stage
8	Between 18 and 40 years	Adult Stage
9	Between 40 and 60 years	Middle stage
10	60 years and above	Old stage

2.3.2 Childhood Stage (Early Childhood and Later Childhood)

Let us discuss growth, development and behavioural changes in the childhood stage.

Feedback on children in the Early Childhood Stage

Feedback from Parents

1. Troublesome Age: Children depend upon their parents for everything up to this stage. But in this stage they demand freedom from their care takers. They create a lot

of problems to their parents with their behaviour. They are obstinate, foolish and oppose stubbornly anything they dislike.

2. Toy Age: They spend most of their time in playing with toys during this stage.

Feedback from Psychologists

1. Pre-Gang Age: Early childhood lays foundations for the social behaviour of the children. Children love to play with others and share their play things and toys with their friends in this stage.

2. Exploratory Age: Children begin to explore things around them. They go on asking questions to their parents and other adults like 'Why?', 'How?' 'What?' to investigate. So, this age is also called as 'Questioning Age'.

3. Imitative Age: Children imitate their parents and other elders in the family. They imitate their dress, language, food habits, traditions and customs in the family etc.

4. Creative Age: They play with toys creatively.

Feedback from Educationists

1. Pre-Primary School Age: This age is appropriate for giving training to coordination between organs, intellectual development, mental development, social development and emotional development. So, this age is considered as 'Learning Preparatory Age'. Children should be in Play schools, Anganwadis or Balwadis during this stage.

Feedback on children in the Later Childhood Stage

Children from class 1 to class 7 are in the Later Childhood Stage. During this period significant changes occur in the spheres of physical, intellectual, emotional and social developments. New opportunities in the school and aims to be achieved promote new attitudes and values in the children. Psychologists consider this stage as first step towards life.

Feedback from Parents

1. Troublesome Age: Children do not listen to their parents and disobey them in this period. They give much importance to the words of their friends. They make their parents frustrated, worried and depressed with their behaviour.

2. Sloppy Age: Parents believe that children are untidy, unsystematic and lazy during this period.

3. Quarrelsome Age: Children often quarrel with their brothers and sisters in their house and with their classmates in the school.

Feedback from Psychologists

1. Gang Age: Children want to be accepted by their peer group during this period. They like to be a member in the group or gang.

2. Age of Conformity: Children follow the language, norms, rules and regulations of the group and exhibit unity.

3. Creative Age: When the surroundings are comfortable for their creative development, creativity in the children develops. They participate in drawing, drama, songs, poetry and dance competitions.

4. Play Age: Children are very much interested in participating academic activities and games. They like games and activities very much.

Feedback from Educationists

1. Primary School Age: Children are admitted in the school and work hard to attain minimum abilities in their academic achievement. They like to do activities and home work related to their lessons.

2. Critical Age: Children want to attain their academic achievement according to their abilities. When teachers encourage them, they exhibit higher achievement. But when they are discouraged they fall to low achievement. So, it is a critical age and teachers should always encourage them.

Now, let us study various developments like Physical Development, Social Development, Emotional Development, Intellectual Development, Language and Communication Development and Moral Development during the period of childhood i.e Infancy, Early Childhood and Later Childhood in this sub-unit.

2.4 Physical and Motor Development

Physical development refers to quantitative changes in the body as a result of biological processes and growth. Motor development is the result of developmental changes occurred due to growth in different parts of the body.

Physical development is not restricted to mere growth in physique; it also includes the development of 1. Nervous system, 2. Muscular system, 3. Skeletal system and 4. Endocrine glands system (Ductless glands) and other aspects.

Appropriate development of nervous system and development of sense organs results in the development of different internal organs of the body, which in turn causes qualitative changes in the individual. The growth and development in nervous system lead to development of intelligence and change in other cognitive abilities like discrimination, creativity, language, thinking and memory. Along with these changes, development of muscular and skeletal system reflects in motor activities and expressions of children. Development in ductless glands leads to control over expressing emotions, social aspects and changes in moral development. Motor development is interlinked with the physical development of an individual.

Physical development refers to co-ordination between different systems of body and organs, using the limbs with speed and accuracy.

Motor abilities are very important in psychological and social adjustment of the children. When there is no sufficient motor development in the children, they fail to participate in the games and activities. They are rejected by the peer group. It deprives social development and mental hygiene.

Physical development is rapid in infancy. The head constitutes about one fourth of the height of body at birth, the arms and legs are feeble, but gradually develops.

Muscular development influences the sensory development for better ways of receiving external impulses. Gradually rolling from tummy to side, control of muscles at neck develops crawling skill, try to sit unsupported, stands holding support, stands alone, walk with support, walking are some of the characters of infancy. In the first year the rate of growth in weight is more than height. But in the next year the rate of growth in height is more than weight.

The first tooth appears between 6-8 months. By the end of the first year 4 to 6 teeth are found. By the end of the second year 8 teeth in upper jaw and another 8 teeth in lower jaw are formed.

The weight of the brain is one fourth of the weight of an adult brain at birth and develops to half the weight of an adult by the end of the first year. The rate of development of brain in infancy cannot be seen in any other stage. Sensory development is also more in this stage. At first vision and auditory systems develop and then gradually touch and senses develop.

In the first phase of childhood, physical and motor development is constant and continuous like infancy. Different parts of body grows in proportion, bones get firmer, control of the muscles increases. It results in motor abilities like running, jumping, long jump, throwing things. Square shape of the trunk turns in to rectangular shape.

The last four milk teeth are seen in this stage. Development of hand dexterity is exhibited in eating, dressing and combing. Riding three wheel cycle reveals leg dexterity. As the skills are immature, it causes frequent accidents. Different parts of the body become firm. Muscular control and development of motor co-ordination occurs in this stage.

The development of a child in the second phase of the childhood is rather slow, comparing with earlier stages. In the place of milk teeth permanent teeth are formed. Physique gets different changes. Drawing, painting the pictures, gardening, making things with clay and playing games are developed. Physical fitness and strength are the characteristics of this stage.

◆ Physical health – Nutritious food are important for growth and development of the children

◆ Growth and development of the children who has taken immunization vaccines are very powerful.

◆ The mental health of the quiet and sensitive children is superior to the children with emotional disturbances.

◆ Intelligent children are rather stronger and taller than the children of low intelligence.

◆ Girls are ahead of boys in gender development for one or two years.

◆ Boys are ahead in height and weight in comparison with girls.

Educational importance

◆ Parents and teachers should be very keen in physical and motor development of the child.

◆ Nutritious food and immunization should be provided.

◆ School should impart exercise, drill games and sports

◆ Regular medical check-up should be conducted and help the children to follow the prescriptions of the doctors.

◆ To develop motor skills, school should facilitate programs like dramas, dances and song competitions, karate, yoga and meditations.

2.5 Social Development

Man is a social being. He needs to live with others. Every child is born as a member of a family. The child adjusts with its surroundings in prenatal stage. Even after birth he has to adjust with the environment. A child's socialization process starts with his mother.

Social development also takes part with physical, motor, emotional and mental development of the child. Parents and friends play a major role in the social development of an individual.

Social development means developing social skills by an individual to develop relationship with others, sharing mutual understanding, co-operation in co-living and passing over the selfish behavior, living for the society instead of his progress.

Definitions of Social Development:

Sorenson – 'By social growth and development we mean increasing ability to get along with one and others'.

Mrs. Hurlock – 'Social develop means that the attaining of maturity in social relationship'.

Garret – 'Socialization or social development is the process whereby the biological individual is converted in to a human person'.

Social development refers to the process where an individual adjust within himself and develops a desired behaviour to live with others in harmony.

Socialization

Socialization is the process of understanding various life styles, ways of living, rules and regulations of the society and customs and traditions and living in adjustment with them.

Characteristics of a socially mature person

- Co-operating with others
- Accepting others ideas
- Showing interest in others
- Friendly in nature
- Healthy competitive spirit
- Follows the standards of the society
- Gives up selfishness for the society and for nation
- Works for the development of the society

- ◆ Adjusts with others according to situation
- ◆ Never steps back in doing his duty.

Socialization in children

Socialization in infancy influences more on child's social development. Family is the world for infants. So, family lays foundation for their social behavior and attitudes. There are two reasons for this basic foundation. 1) The personal and social adjustment of an individual in the future is shaped from the experiences in the infancy. 2) The habits laid at this stage are very difficult to change in the future.

Though social development is not so specific like other developments, still it follows a framework. At birth the child is not particular about the people who satisfy his needs, but after 6 weeks the child starts to recognize and smile at the people who satisfy his needs. This is the beginning of socialization, the child responds to adults first and then with young ones. Children are very balanced during the first year. So it is very pleasant to spend with them. At the early days of second year they start disobeying and non co-operative. So it is rather difficult to deal with them. But by the end of the infancy they once again get the balanced attitude and express pleasant behavior.

In the later childhood children acquire basic training and experience to become a member of a group in future. So, this stage is called 'gang age'. When more number of people is introduced, their social development makes a beginning.

Children play along with other children but independently is called parallel play. The parallel play is the first social activity. Then they go for associative play. In associative play they don't play with others, but play similar games like others. As they grow, their social relationships develop and they start to participate in co-operative games.

In co-operative games, they follow rules of the games, accept others ideas, try to attract others. By the end of this stage they learn the behavior that is accepted by their friends. In this stage they express socially accepted models such as imitation, co-

operation, pity, empathy, social acceptance, sharing, relationships etc. and socially rejected models such as negativism, aggression, authority, selfishness, ego centrism, destruction, supportive and opposing ideas against gender etc. They learn modes of rejecting. At the end of the stage leadership qualities are also cultivated.

Later childhood stage is also called as 'gang age'. They are very much interested in the peer group activities. They have a strong desire to become a member of the group. They enjoy and excite in play and want to be with the group.   Usually all the members of a group are of same gender. Their age, level of development, aptitudes and abilities are almost uniform. The children of democratic style of parents are easily accepted in the group. Children learn discipline and co-operation through games in this stage.

2.5.1 Role of Family, Peer Group, School, Social Media and Culture in Social Development

a) Family

Parents observe the children from their infancy, so they can pay more attention to satisfy their need and provide facilities.

The important duty of the parents is to accept strengths and weaknesses of their children and help them. Parents should not compare their children with other children. Children should not be criticized for their activities. Over praising of merit students is also dangerous.

Parents should identify the abilities of their children and the area in which they are interested. Then, they have to provide opportunities according to their abilities and interests to develop by themselves. Parents should visit the teacher many times to know the behaviour, performance and progress of their children. They should discuss

their performance with the teachers and share their experiences for the all round development of the children.

Nothing could substitute love, affection and support of the parents to their children. So parents should motivate their children to work up to their abilities to develop. Parents should not feel it routine to send their children to school or make them to study. They should identify the specific abilities of their children. It makes them persons with more successful abilities and trains them to succeed.

b) Peer Groups.

Peer groups influence social development from early childhood stage to adolescence stage. In early childhood, children observe how others develop social relations with each other. This experience help them to follow rules in the games, to co-operate, to be disciplined, to respect others ideas and to attract others attention. As they grew up, they pay more attention in peer group activities.

At the reaching of adolescent stage they spend more time with peer groups only. Their attitudes, conversations, aptitudes, dress and behavior are influenced by the peer groups. If there is any anti-social behavior in the peer group, the individual also cultivates the same.

At the end of the adolescent stage as they need special identity and select the friends based on values. Peer group influence reduces. Social ability is developed as a result of social awareness by participating in social activities. Generally boys peer groups are large in size comparing with girls peer groups. But the relationships are not so strong in boys peer groups. But in girls peer groups, members may be less but they have strong and perfect relationship. Children could construct good personality, when the teacher understands their maturity level and guide them at stress and frustration.

c) School

A pleasant and motivating school atmosphere helps the students in their social development. Teacher should move friendly with students and answer their questions patiently instead of scolding, beating, and shouting.

School should provide physical facilities for all round development of all the general and special children.

Instead of uniform educational objectives for all the children, specific educational objectives should be framed based on the individual differences of the children. Curriculum should be simple and flexible according to the diversities of the children. Evaluation should be simple and performed through different activities. Grading system is better than ranking system to promote healthy competition among the students instead of developing superior and inferior feeling among the students.

d) Social Media.

The advancement of Science and Technology brought significant changes in social media. Anyone can know anything that happens anywhere in the world. Social media become a part in the life of children as well as adults. Social media refers to radio, T.V., Newspapers, magazines, Mobile phones, internet etc. They influence the life system of everyone. They direct the way of the world.

Social media has both positive and negative influence on children's behaviour. Social media is like a knife. It helps to cut the vegetables or to kill a person. Similarly, social media helps either to develop or to destroy.

Today we can learn anything that happens on the globe. If children receive them positively as motivation or inspiration, they can develop themselves. Social media complements a teacher's work for students through providing information beyond the text books. T.V., Radio and Internet provide lessons in a detailed way. Good movies are source for developing good personality. Parents, teachers and school should guide, instruct and advise the children in using these media in an appropriate way.

e) Role of Culture

Each society has its own culture. People of a particular society follow the culture of their society. Dress, ornaments, language, art, music literature, religion are all part of the culture.

According University Education Commission 1948-49 – 'Culture expresses perspectives, eminence and highest human values in the human mind'.

National Policy on Education (NPE-1986) recommended that 'Culture should be taught through curriculum and teaching. Education should promote culture and tradition along with science and technology'.

India is home for diverse culture. Education acts as a tool to protect the cultural multiplicity in India and to promote unity in diversity. Home and society teaches a child more than a school. When children participate in social celebrations or programs, it influences on their social and emotional development. Our culture, customs and beliefs refer to our traditions. They continue from generation to generation only through social development.

Social Developmental activities for development and protection of culture

- Introducing values of ancient culture to students.
- Studying the culture of different regions.
- Encouraging modern aptitudes
- Implementing ways of modern culture.
- Encouraging cultural protection
- Passing on our culture to next generations through education
- Developing children's abilities to accept dynamic culture.
- Curriculum should reflect cultural values
- Encouraging music, dance and dramas in the school
- Field trips to Museums, Art galleries and Excursions
- Frequently conducting cultural activities in the schools.

2.5.2 Some other aspects influencing social development:

Some of the aspects that influence social development are

a)   Competition and co-operation
b)   Discipline

c)	Reward and punishment

d)	Conflicts and

e)	Aggression

f)	Bullying

**a)	Competition and co-operation:**

Competition is everywhere in the present society. Competition in the fields of business, education and employment yields in good results. But in education, competition acts as an energizing motivational factor. When there is healthy competition among the students, they can achieve better results. Co-operation is also necessary along with competition. Without co-operation from teachers and other students, competition alone could not give good results. So, co-operation is also needed for the progress of students. Friendly competition with co-operation promotes team spirit, community feeling and unity among the students.

**b)	Discipline:**

Sometimes children behave in an undisciplined way in the class room. Instead of punishing them teacher has to look in to the reasons for such behaviour and explain problems of such behaviour with the students which cause change in their behaviour. Student should cultivate good discipline. Teacher should train children to control their behaviour independently by themselves at the reaching of adolescent stage. In the childhood they follow the values appropriate to the context. But in adolescent they have to follow general adult moral values to adopt adult morality. These concepts should be based on certain ethical values and at the end of the adolescent stage they should control their behaviour by themselves. School and teachers should help the students to build a profound discipline through discussions, seminars, talks, stories to understand good and bad.

**c)	Reward and Punishment:**

Rewards and punishments are motivating factors in the school environment. It is better to avoid punishments, as they do not yield good results. More over they may cause negative effects. Punishment can be given only for avoiding bad habits or to solve certain behavioural problems. Rewards effectively motivate students to achieve good result in the future. Over use of rewards causes negligence among the students.

Merit certificates, cash awards develop self confidence, self respect and creativity among the students.

Teacher should prepare students not to depend on rewards and punishments. They have to set their own standards and work for achieving them.

d)   **Conflicts:**

It is very important to take decisions when an individual is in conflict. The future life depends upon the decisions we take in the present. So decision making should not be in a hurry. It should neither delayed nor postponed. When there is a conflict, one has to estimate the disadvantages in the situation with the abilities, liabilities and interests within himself. Teacher should assign projects or activities related to real life situations where children get training in taking appropriate decisions.

e) Aggression:

Aggression is an act of physical action on others. It hurts others. The pain may be physical or verbal. Sometimes it may cause property lost also.

John Dolard, a psychologist, in 1939, proposed that aggression is the result of blocking, or frustrating, a person's efforts to attain a goal. According to Sigmund Freud, there are two classes of instincts: 1) Eros 2) Thanatos. Eros is the life instinct that includes love, affection and pleasure, where as its counterpart Thanatos is death instinct, leads to destruction. According Bandura and Walters, children who face aggressive bahaviour showed aggressive nature and children who face non-aggressive(diffident) bahaviour exhibited normal behavior. Students learn many things by observing the bahaviour of others. So parents and teachers should develop an inspiring model behavior.

f) Bullying:

When children are not allowed to do the work they want to do and adults behave against their wish, they show their anger on children younger to them and express their distress in various ways. Parents and teachers should look for the reasons for their behaviour and provide proper guidance and counseling to the child.

2.6 Concept and Process of Socialization

2.6.1 Concept of Socialisation

A new born child is ignorant of culture, civilization and behavioral aspects. Along with the advancement of age the child learns social concepts. The process of learning these social concepts are called socialization. It is a continuous process from birth to death. Here are some of the definitions of socialization.

Mrs., Hurlock - "Social development means the attaining of maturity in social relationships".

Maclver – 'It is a process through which social beings develop relationship and association with each other'.

Ogburn – It is the process of learning norms of the group and society.

Garett – Socialization or social development is the process whereby the biological individual is converted into a human person.

Peter Worsley – Socialization as the process of transmission of culture, the process whereby men learn the rules and practices of social groups.

2.6.2 Socialization Process

Children should develop as responsible members and citizens in the society when they grow up. They should learn social values, ethics of the people around them, rules and regulations of the society. They have to preserve and pass on the values of their family and society. They should change the norms when it is necessary. This the development through socialization.

The major factors that influence the process of socialization of an individual are 1. Home (Family) 2. School and 3. Society

1. Home (Family):

The most important and basic system in the socialization process of an individual is Home or family.

◆ Family is the swing of development in good qualities of family and society.

◆ Children acquire inter-relationship with the members of the family. They also learn co-living, appropriate family traditions, norms, customs, food habits, religious facts, festivals, entertainment etc. in the family.

◆ Beliefs, approaches and habits related to society are formed in the family.

◆ Social status of the family and friends influence the socialization process of an individual.

Role of family in socialization:

● Satisfies social, intellectual and physical needs.

● Lays foundation for good character building.

● Develops the concept of citizenship as a member of the family

● Teaches language, food habits and importance of festivals.

● Makes to respect traditions.

● Controls children behaviour.

● Shows ways of living.

2.   School:

School is next to home to play the most effective role on the process of socialization in children.

Role of school in socialization

◆ Protects culture and traditions from the past generations and pass it on to the children.

◆ Makes children to develop according to the changes in the society.

◆ Increases social ability among the children. It develops social skills needed for the progress of the society.

◆ Develops moral values, social values and biological values set by the society.

◆ Develops compatibility to live in society

◆ Develops leadership qualities

◆ Develop good citizens

3   Society:

"A group of people, with a specific culture living together in a certain place is called society".

So, there is no society without people. People live in a society with inter relationship, satisfying their social needs, living together, protecting and modifying their culture according to their needs.

Role of society in socialization:

◆　　Establishes and organizes a good school.

◆　　Provides a library.

◆　　Develops literacy among the citizens.

◆　　Develops norms, rules and regulations according to the constitution and gives it to the citizens.

◆　　Provides vocational based education according to the needs of the society.

◆　　Encourages moral values, human values and social values.

◆　　Protects child rights and citizen rights.

◆　　Provides good citizenship training.

◆　　Provides training to enhance economical status of the people.

◆　　Gives proper training for physical, intellectual and moral development.

◆　　Develops leadership qualities.

Role of a Teacher in Socialization

In the process of socialization a teacher

◆　　Promotes cultural aspects related to society through students.

◆　　Makes the children to participate in cultural programmes organized in the school.

◆　　Encourages the social activities in the form of games, excursions and competitions

◆　　Conducts folk/ rural song and dance, songs and dances of different states and festivals of different religions in the school

◆　　Makes students to participate in school day celebrations, cultural festivals national and state important days, special drive weeks, parliament and assembly.

2.6.3 Socialization – Social, Economical Conditions and Cultural Diversity

Social, economical status and cultural diversities influence the process of socialization.

a)   Social and Economical status

The social and economical status of the family in the society influences the process of socialization in the children. The children from higher social status and higher economical status are easily recognized in the society and they will get lot of experience in the society. They develop self confidence. But sometimes the children of high class society spend more money on luxuries and bad habits, without knowing the value of money which results in addiction to bad habits. Educated parents give importance to the development of self control in their children.

Children from the poor families are deprived of their development because of their poverty. When parents are addicted to bad habits due to heavy stress in their life, they make feeble relationships in the family. They neglect their children. The negligence leads to low range of socialization in these children. The educational standards of these children are not up to the desired level.

b)   Socialization – Culture

Culture is an important aspect of any human society. In common words it is referred as decency and manners. Respecting and treating friendly is decency. Many people defined culture in different ways. Some of them are

E.B.Tylor – "Culture is that complex whole which includes knowledge, beliefs, arts, **morals**, law, customs, and any other capabilities and habits acquired by [a human] as a member of **society**."

M.J.Herskovits: "Culture is the man-made part of the environment,"

Culture is dynamic. It satisfies our needs and desires. So, it changes according to the styles and the ways of living of the people in the society. So, people from one culture cannot adjust in another culture and feels it difficult.

Some other factors that influence socialization are peer groups, gender, competition-conflict, aggression and bullying.

2.6.4 Socialization –Relationship with Peers.

A peer group is the group of children with same age, uniform developmental stages, aptitudes and abilities.

There are certain differences between the peer groups of rural and urban areas. The rural peer groups are formed with only familiar children on bias of religion, caste and aptitudes. But whereas the urban peer groups are formed on the basis of social status, educational status, locality, aptitudes and objectives.

➢ Members of the group discharge their duties appropriate to their aptitudes and interests.

➢ Peer group stands in the first place in clearing doubts rather than parents or teachers. A comprehensive maturity in dress and way of speaking was the result of peer group only.

➢ They could express their feelings, likes and dislikes only with members of the peer group. So, they have a complete understanding of each other and try to correct the mistakes within the group itself.

➢ Next to school, peer group is the responsible for one's customs, traditions and habits.

a)   Friendship – Gender

Adolescents spend more time with their peer group. So, peer group affects their attitudes, conversations, aptitudes, dress, language and behaviour. If there is any anti-social behavior in the peer group, the same is adopted by the individual. In adolescent boys and girls try to get special identity. Their selection of friends and differing in values reduce the influence of peer group. Though the peer groups of boys are larger in size, the relationship among them is not so intimate. Girls groups are limited in members, yet they maintain a strong and perfect relationship.

Girls could understand sexuality in programmes particularly on Adolescent Education Programmes conducted in the school under the guidance of women teachers and their mother.

b)   Competition – co-operation

Competition acts as a factor of motivation. Healthy competitions act as motivation for better learning and good results. While healthy competition leads to friendship, unhealthy competition leads to jealous, rivalry and conflict. Competition promotes achievement levels of the children. Co-operation and co-ordination between the members clarifies the doubts and promotes healthy competition.

c)   Competition – Conflict:

Usually children love to meet with each other. Sometimes there will be differences in their thoughts and attitudes. But they are temporary. It is very common that they quarrel for silly reasons and after some time they forget it. But these quarrels don't last for a long time. Very soon they forget it and continue their friendship. Gradually, when they grew up because of development they attain through emotional maturity and social maturity results in decrease in conflicts.

d)   Aggression and Bullying

Desires are unlimited in human beings. No man can accomplish all his desires. Even in children, when they could not achieve what they want to achieve or when they could not reach their goal, they exhibit aggression.

Aggression has different forms. Some of them are

1. Verbal hostility   2. Physical violence   3.Instrumental (weapon) attack

Anger leads to aggressive behavior. So, to prevent such behavior parents and teachers should know the reasons behind such aggressive behavior and context. Then they should explain the consequences to the children instead of blaming and punishing them. To promote responsible behavior in students, teachers should implement programmes like yoga and meditation in the schools. Programmes should be planned according to the abilities of the children to control their behaviour and educate them to control their emotions and make them to know the realistic conditions.

e)   Bullying:

Bullying is another type of aggressive behavior in the process of socialization such as physical hurt or psychological distress in a person. When adults prevent the children from doing things they like or if they act against the will of the children, in response children will exhibit their pain on younger ones by hurting them in a violent way. Pricking, pinning, pinching and pulling plait, pulling the dress etc are some of the ways of bullying. Boys hurt others more than girls do. Parents and teachers should

understand the inferiority complex of such children and patiently search for reasons and through guidance and counseling try to change their behavior.

Social, economical and cultural aspects influence the process of socialization in the children. Parents and teacher should always observe the friends and friendships of their children and if they notice any bad influences, they should explain, instruct and guide the children to develop better social maturity and maintain healthy competition among them. Good qualities liking helping and co-operating should be developed in the children. Through life skills oriented training programmes empathetic skills should be promoted for the comprehensive personality development.

2.7 Emotional Development:

Emotional development of the children takes place in different stages in different ways. At birth children have only one emotion excitement. Gradually emotions are developed in a systematic order. At the first year itself emotional expressions are clear and accurate. So, we can understand the thoughts and ideas of the infant.

No one is exempted from experiencing the emotions. But they are severe in some people and some people show fewer emotions. There are many reasons for these emotions in our daily life. Happiness, sadness, affection (love), amusement, despair, fear and anger are some of the emotions. Life, without emotion is barren and unimaginable.

2.7.1 Emotions - Basic understanding:

Etymologically the word 'emotion' in English is derived from the Latin word 'Emovere" which means 'to stir up', 'to agitate' or 'to excite'.

Thus emotion is a stirred up state of feeling.

It is the intense innate tendency of an individual.

Some common situations when children become emotional.

1.   When they are deprived of biological needs and psychological needs.

2.   Because of wants, desires and disturbances occurred in different states or situations.

3.   Emotions are developed based on the values and behaviour of the children.

Basically emotions are two types:

1.   Emotions of pleasure: Love, affection, happiness, pleasure, kindness, sympathy etc. are emotions of pleasure.

2.   Emotion of sadness: Anger, jealous, envious, eager, vengeance etc. are emotions of sadness.

According to Indian classical dance and drama, there are nine basic emotions called 'Navarasalu' are love, laughter, compassion, anger, courage, terror, disgust, surprise and peace.

The qualities of persons and children who experience emotions

◆   It is an intense state in internal, physical and psychological aspects.

◆   Heart beat increases, blood pressure varies, body starts to shiver, drying up of mouth and starts to sweat

◆   Change in looks and facial expressions

◆   Lose of thinking, memory, discrimination and remembrance.

2.7.2   Stages of emotional development

Along with growth in the children, they experience new emotions which gradually get generalization. At birth children have only excitement, at the age of 3 months it divides in to distress and delight, after 2 years they turn in to fear, anger, disgust, jealous, happiness, enjoyment, pleasure, love towards elders, affectionate with children. At the age of 5 years shyness, frustration, fear, disgust, disappointment, anger, envious appears in the behavior of a child.

As the ductless glands are not active in the infancy, the emotional responses are rather mild, but gradually when the glands starts functioning actively, the child experiences severe emotions. So, it is comfortable to study the emotions on the basis of stages of development.

Two distinct qualities are there in the emotions in infancy. The emotions in this stage diffuse from the emotions in childhood, adolescent and adulthood. Children severely respond to any impulse that causes emotion. But these emotions last for short time and when attention of the children is diverted on other things, these emotions die.

Secondly, as the intelligence is not completely developed, they experience the same emotions at the impulses that created unpleasant emotions previously. The common emotions during the stage are anger, fear, curiosity, pleasure and love etc.

Emotions are intense and frequent in early childhood. So, it is difficult to deal with the children in this stage. They exhibit, jealous, intense fear, tenacity. The emotions are caused by psychological aspects, but not related to biological aspects. In additions to the emotions of infancy like fear, anger, curiosity, pleasure and love, in this stage jealous and enviousness start to appear. Unlike in infancy, new things causes emergence of emotions. For instance stories, pictures, and movies may cause fear pleasure etc. Competing in any activity, succeeding in games may result in positive emotions. Parents diverting attention on others from the child, parents sharing their love with others, other children doing things which the child could not do, other children have things which the child don't have are some of the reasons for their jealous and envious nature in the childhood. Another important aspect of this stage is emotional expressions varies based on the gender.

In later childhood stage the emotional expressions particularly unpleasant emotions of the children are controlled because they learn that they are not socially accepted. Further, they feel that the adults think them as children, if they express insistence. Fear is felt cowardly nature. So they show a strong emotional control in this stage.

Though the emotions of later childhood are similar to early childhood, still they differ in various aspects. 1) They differ in the reasons for emotion. 2) They differ in the way of emotional expression. Experience, learning and maturity influence the variation in emotions of later childhood. In this stage anger arises, when somebody talks against them. Intense emotions are aroused from the different contexts, but comparing with the previous stages, this is an emotionally slow stage.

Emotional catharsis is another significant aspect of this stage. Though they experience emotionally disturbing incidents, they try to control them by diverting their attentions on other concepts or involving in an activity that keeps them peaceful. The

process or the method of releasing ourselves from the emotional stress is called emotional catharsis. There are many methods to relax from emotions. They are mostly mechanical, in trial and error method, but not developed through guidance. When a person feels that he is going to experience intense emotions, he starts to play a game or talks to his friends about the crisis to reduce the intensity of the situation.

Learning and maturity influence emotional development. For example a child who didn't fear of a snake at the beginning, when learns that a snake hurt her, starts to fear of snakes. As the children grew, they get emotional maturity.

Some common emotions:

Let us discuss in detail some of the common emotions experienced by the individuals,

 1. Fear   2. Anger 3. Jealous   4. Frustration   5. Curiosity

1.   Fear:

Fear is one of the basic emotions. Fear is a mental state appeared when an individual expects a physical or psychological hurt. Though fear is an unpleasant emotion, it has good results. Fear of god develops good behavior in the society, fear of superior makes an employ to work hard, fear of accidents make the people to follow road safety rules, fear of fail in the examination makes the student to study.

Fear can be controlled up to a certain level. If it is over the limit it causes many disorders in the person. It may cause different phobia. So, what are the ways of avoiding fear?

◆   Explaining the reasons for fear

◆   Encouraging with brave words

◆   Developing confidence regarding unreasonable fear

◆   Developing the ability to overcome fear

◆   Familiarizing the things and situation that create fear

◆   Showing a model to overcome fear.

Generally fear is very frequent in childhood. The fear of ghost created by parents at the early stages cause's harmful results.

Lowton classified 4 types of fear

a)   Fear of things : Fear of injection

b)   Fear of direct imitation: A child who observes parents behavior at the time of cyclone; he imitates it and feels fear of cyclone.

c)   Fear of sorrowful incidents: When a dog bites a child, the painful experience remains within him

d)   Fear changes with age: Things that frighten at an early age may not create any such experience when he grew up. For example a child who has fear of firing crackers, when he grows up doesn't fear to fire crackers.

2.   Anger:

Anger is very frequent in the children. They threw things with fear. When they are disturbed in their work, children exhibit anger. When they are found guilty every time or when they are compared with other children, they exhibit anger. We can see individual differences in exhibiting anger.

Reasons for anger:

◆   When children's work is disturbed

◆   When the basic needs like hunger, thirst and sleep are not satisfied

◆   When the given work is above their capacity

◆   When somebody attacks them

◆   When over discipline is imposed

◆   When they lost their patience or become impatient

Methods to control anger

To control anger among the children some of the precautions are

◆   Avoiding the behavior that makes them anger

◆   By making them to understand the situation

◆   By not forcing unnecessary conditions on them

◆ By not assigning the works above their capacity.

◆ By putting away the distressed works.

3. Jealousy

Jealous is an unpleasant emotion. When a child knows that he was missing love and affection, he exhibits jealousy. Sibling rivalry can be seen in the children. If parents explain patiently, sibling rivalry is reduced to some extent. When parents and teachers show partiality, it leads to jealousy among others. Jealous is an envious state of mind in children when they could not get love and affection from others, or the fear of not getting love and affection. When the love and affection of the parents and others are not uniformly shared, children experience jealousy.

Reasons for Jealousy

Children feel jealousy when they have to share the love and affection with the siblings or other classmates which they were enjoying.

Jealousy takes place when parents and others share their love and affection unevenly among the children.

How to reduce jealousy in the children

We can reduce jealousy among the children by

◆ Punishing when they exhibit jealousy and later explaining it to them
◆ Developing good inter relationship between siblings and other children
◆ Assuring psychological security and satisfying psychological needs

4. Anxiety:

Anxiety is the result of anticipated frustration. Increase in heartbeat, more blood supplied to muscles and sweating are the symptoms of anxiety. Students feel anxiety, before attending an examination. This is called test anxiety.

Anxiety is a painful stressed state of mind from anticipating the trouble.

How to reduce anxiety in the children?

◆ Meaningless or unreasonable thoughts of the children to be explained.

◆ Discussing merits and demerits of future incidents.

◆ Developing self confidence in the children and to train them in taking precautions.

◆ Parents and teachers should educate the child about unnecessary disturbances and anxiety.

5. Curiosity

Usually the child is not interested in his environment, but he is curious about them. So, when their observation ability is developed, they can understand many things around them. Children ask many questions in their childhood. It is the responsibility of parents and teachers to answer them appropriately and encourage their curiosity. When children are posed with some problem, encourage them to solve it by themselves.

2.7.3   Emotional maturity

The young, the old and the children are facing many problems in the modern society, because of emotions like tension, anxiety, conflict etc. All these aspects wrongly affect on the emotions of an individual.

◆ Emotional maturity is defined as ability - how well you are able to respond to situations, control emotions and behave in an adult manner when dealing with others.

◆ Emotional maturity is controlling ones emotions and behaving in such a way that is appreciated and desired in the society.

Qualities of a person with emotional maturity

◆ He has self-confidence and moral behavior

◆ Self realization of one's own capacities.

◆ He will be humble

◆ He values others

◆ He has control over his senses.

How far an individual controls his emotions to keep up his psychological balance in different situations indicates his emotional maturity. A person with emotional maturity stubbornly faces problems. A child who has achieved emotional maturity will have self adjustment, home adjustment and social adjustment. According to Cauley Emotionally matured persons are 'those who has the capacity to withstand any type of stress'

2.7.4 The role of Family and School in Emotional Development.

1.   Parents should direct the children in the right direction and guide them in selecting the appropriate emotional catharsis that causes emotional development.

2.   When the children exhibit indecent behaviour, teachers should understand him and help him to overcome from the undesired behaviour.

3.   There are both positive and negative emotions; it is the responsibility of the adults to prevent negative emotions.

4.   Emotional abilities of the children should be diverted towards constructive purposes through emotional education by conducting self administration and management, Fine art clubs, science clubs, science exhibitions etc.

5.   Developing positive aptitude in participating Scouts, NCC, NSS, Public Service, Games and Sports, Quiz etc.

2.8   Language Development

Speech is an instrument to express feelings, ideas and thoughts to others. There are two important functions in communication: 1) Listening to others and understanding them and 2) expressing ones feelings and thoughts to others in an intelligible way. Conversations, mime, poems, songs, pictures etc. are some of the ways of communication.

To communicate thoughts and to understand the actions of others, it takes a long period. But foundation for communication is laid in the infancy itself.

2.8.1   Speech Development.

Children can listen to others and understand them. But they can't express their feelings and thoughts in their words. So, they try to respond in some other ways of communication. Example: Adults can understand the expressions of the children

through gestures, facial expressions, vocal level etc. It depends upon their intelligence and the encouragement they receive.

Vocalization: After the development of vocal chords. Child starts to make sounds – cooing etc. Gradually starts to produce words from these sounds. Cooing starts at the age of 6 months. It is the flow of combination of vowels and consonants. There is no meaning for the sounds that appear at the end of infancy.

Gestures: Child starts to use gestures to express his thoughts. With the few words he learnt, he adds gestures to make a sentence. Between 9 months and 12 months of age child uses more gestures.

They wave hands to say Bye-Bye, at the age of 13 months. They put an empty cup at mouth to show their hunger, raise hands to lift or to hug are some of the early gestures expressed.

Learn to speak: In the first phase of the infancy, a child couldn't speak because of immaturity of organs of speech. So, he mostly depends on pre-speaking styles, which the child uses naturally.

Styles of Pre-Speaking:

Pre speaking skills such as crying, cooing, gestures, emotional expressions, vocalization lasts for first few months of infancy. Vocalization develops in to speech in language development.

Crying: A child expresses his needs through crying at the early days. Crying is the first social stage. The pitch of the crying expresses the reason for it.

Emotional expressions: Expression of emotion is the most important pre-speaking skill. Children express their emotions through facial expressions. They can't control emotions. So their feelings are identified through their facial expressions and body movements. Similarly children can understand others feelings by reading their facial expressions only.

Early childhood is preschool stage. It's an exploring stage, where children go on asking questions to know their environment.

2.8.2 Language Development:

Language development plays a key role in the process of socialization. A child, who can express his thoughts, feelings and ideas precisely, could develop better social relationship in his peer group and get the acceptance of the group. The child, who can't communicate properly, is not accepted by the peer group. Backwardness in the formal education is the result of slow language development.

Some important aspects of language development

❖ The pace of language development is not uniform in all the children. So, children start to express their feeling through language at different age. Children understand more information through conversations with adults rather than expressed in language.

❖ Language development is earlier in girls comparing to boys.

❖ Language development does not follow the same pace in all the children. So, language development in a child could not be compared with the language development of another child.

❖ When parents find that there is not sufficient language development in their child, then they should consult an expert doctor.

Milestones in speech development:

1. An infant at the age of 7 days can identify the voice of her mother, at the age of 2 months; the child can differentiate its father's voice with others.

2. At the age of 3 months, the child starts to utter vowel like sounds. Between 6 and 8 months the child utters sounds in combination of a vowel and a consonant.

Eg. Dada   Papa

3.   Child can follow the instructions of others. At the age of 15 months the child utters vowel sounds and consonant sounds, which resemble words. At the age of 15 months a child can say 15 words.

4.   At the age of 18 months, the child starts to pronounce nouns like 'ball' and the names of the important people to her. Gestures are also used along with the words. In the same age they learn to complete the first work and then go for the next one.

5.   At the age of 2 years, children can say sentences with simple words. At the age of 3 years, he can say sentences with 4 or 5 words, and repeats whatever he listened to. At the age of 4 years he can understand many sentences in the language. He can draw physical relation between things. Eg. In, on, beside etc. He can also say names, age and gender of the same age group children, learns to use pronouns and comprehends the language of strangers.

Activities to develop speaking ability in the childhood:

Large number of vocabulary with its meanings should be learnt. Names of colours, numbers should be expressed.

Pronunciation: Pronunciation of certain sounds or sound combinations is difficult. So, the identified difficult sounds should be drilled to learn. For instance learning and pronouncing certain vocabulary through radio and T.V. programmes.

Construction of sentences: Sentences with 3 of 4 words should be practiced by children between the age of 2 and 3 years. Sentences with 5/ 6 words can be given for practice after an age of 3 years.

In the later childhood, children's language is ego centered. They generally talk about themselves, their interests and their family. At the end of early childhood, socialization process starts in the children along with the use of language. The expansion of social groups results in the socialization of children's language and reduces ego centeredness.

Thinking: According to Piaget language helps to accumulate information in the mind. To promote effective thinking, the relationship between language and action should be

strengthened. Use of vocabulary helps to overcome the limit of temporary experiences and promotes thinking. Language helps to think the aspects of past, present and future at a time.

Language development is rapid in early childhood.

Subsystems of Languages - Phonology, Semantics and Pragmatics

Phonology, semantics and pragmatics are the subsystems of the language. They are related to sounds, meanings, sentence constructions and everyday use of language. Children can communicate effectively when they learn these systems thoroughly.

Phonology:

Phonology explains the system of sounds. A person who knows the language can understand the most complex sounds of the language when he listened to them. This ability is acquired through learning a language.

Semantics:

Semantics is the study of words and their meaning. Language is expressed through words or word groups. When a child uses a word, the meaning of the word may not be similar to the meaning given by the adults. Language learning is very effective in early childhood, because children learn thousands of meanings of words in this stage. The huge amount of vocabulary known to him helps the child to use them in different ways and create new meanings. Syntax is the study of sequence of words in a sentence. Syntax helps the children to use the language without any mistake.

Pragmatics:

Pragmatics means the way in which the context contributes to meaning. The same word gives different meanings in different context. Not only words but also gestures and pitch of the voice express the meaning according to context.

Development of conversational ability in children:

In later childhood children identify the importance of conversational ability in getting recognition in the group. So, children have the ability to communicate effectively and they try to improve their communication ability. The following three aspects help students to develop their communication ability.

❖ Parents of middle and higher class families give greater importance to communication. They motivate their children to communicate effectively. They correct pronunciation mistakes and grammatical mistakes of their children. They encourage the children to take part in the homely discussions.

❖ Observing programmes on Radio and Television promotes communication ability in the children.

❖ Children learn many subjects in the school. So, they learn new words and their meanings, when they interpret wrong meanings teachers correct them. The lessons and books read in the schools, conversations with others, influence of media help children to acquire needed vocabulary to communicate orally and in written. They learn words with different meanings and vocabulary with limited use.

The above aspects develop language ability in the children.

Certain types of vocabulary that children learn

a) Vocabulary related to manners: Example: Please, Good Morning, Bye-Bye, Sorry, Excuse me etc.

b) Names of colours: Children learn names of commonly found colours in the school as well as the colours which are seldom used.

c) Words related to numbers: Children learn mathematics in the school. So, they learn vocabulary related to numbers.

d) Words related to time: Children learn the vocabulary related to time as much as an adult know.

e) Confidential language or code language in the group: In later childhood, children use a confidential language to exchange their thoughts within the peer group.

Example 'ka' or 'cha' language in Telugu, where children add an extra sound and enjoy speaking.

Pronunciation: In this stage children usually don't make mistakes in pronunciation, but sometimes when pronouncing a strange word, they may make mistake. But when they observe the pronunciation of adults, they correct their mistakes.

Syntax: In later childhood, children can construct all types of sentences. Though they cannot construct sentences effectively between the age group of 6-10 years, they develop their ability to construct longer sentences.

2.8.3 Perspectives in Language Development - Skinner, Bandura and Chomsky

Let us study the perspectives of language development by psychologists like B.F.Skinner, Bandura and Chomsky on Language and Language Development.

Perspectives of Skinner on language development:

According to B.F.Skinner, an American Psychologist, learning is a function of change in overt behaviour. He believed that the best way to understand behaviour is to look at causes of an action and its consequences. So, his theory is called Operant Conditioning theory. According to Skinner children learn the language through imitation and reinforcement. Children say the words and when it is reinforced, they can learn the word easily and speedily. Further when parents and other adults encourage children when they learn new words and correct their pronunciation mistakes, children develop their language ability. More vocabulary is developed in the school stage. According to Skinner the programmes on Radio, T.V and different media help children to develop their communicative ability.

Perspectives of Bandura on language development:

Albert Bandura is a Canadian psychologist. He presented "Social Cognitive Learning theory". According to Bandura children observe the communication of their

parents and other elders in their environment. Then they try to imitate them. This is the basis of the language development of the children. Children develop their language by observing and listening to the adult's language attentively. According to Bandura children learn the language of his locality in which he is living. This is the reason behind children learning the language of the place where they live.

Perspectives of Chomsky on Language development:

Noam Chomsky is an American linguist and cognitive psychologist. He proposed the Theory of Language Acquisition. According to Chomsky, children have an innate ability to acquire language at their birth. There is a certain mechanism in the human brain that when they listen to the language, it starts working. Later he called it as 'Language Acquisition Device'. LAD has general innate norms and universal grammar. Using the LAD, a child can develop primary language data, semantics and grammar from the language of adults in his nearby environment. Child's mind has the ability to keep up norms of universal language and universal grammatical constructions at his birth. It applies to all the languages in the world.

Children understand the language from their immediate environment by using universal grammatical norms already deposited in their brain. The primary language data and general language rules deposited in their brain help the children to formulate grammatical knowledge and rules, through trial and error method they can develop their language to the level of an adult language.

2.9 Moral Development:

Children are ignorant of the values and culture of the society at their early days. Moral values should be developed in children from their childhood. Parents at home and teachers in the school should teach them to discriminate what is wrong? and what is right? So, it is important for teaches to know moral development in different stages of childhood.

An infant has neither moral values nor conscience. They are amoral rather than the good or the bad. They don't have any moral standards. As their intelligence was

not developed they feel things that give them pleasure are right and what bothers them is wrong. They don't have guilty consciousness as they don't know what is wrong? And what is right? The values are limited to their self pleasures and self pains. Gradually they learn it from their parents and other adults.

The rate of moral development is low in early childhood stage. Children's intelligence ability is not so developed in this stage that they can't apply abstract norms to learn whether it is wrong or right. They learn moral values contextually. As their memory is low, they make the same fault repeatedly, which is treated by adults as disobedience. As children cannot discriminate actions, they follow rules automatically. They discriminate actions only based on their consequences. It they are punished they think it is wrong and when they are awarded or praised they take it as a right thing. As the self consciousness was not yet developed, they don't feel for the mistakes they committed, but try to justify their actions.

Moral values are developed in later childhood. Peer groups severely influence morality. They discriminate what is wrong and what is right and this knowledge develops moral concepts in the children. In this stage discrimination of right or wrong is influenced by the incident, but not from the instructions of the parents. For example at the age of 4 years, a child says lying is wrong. But at the age of 10 years he says to lie at needful context is not wrong.

In this stage moral norms are influenced by the peer groups. But at the end of this stage they follow the rules and regulations laid by the adults. As a result of well developed self concept, children feel shyness or guilty consciousness when they make mistakes. At the end of the stage minor crimes committed at home and school are disappeared.

There aren't any external factors to control the perfect moral development at adolescent stage. So, it is the major obligation for adolescents to develop a set of moral values to control them. At the end of this stage, one has to acquire the following three responsibilities to adjust to adult moral system.

1.   Instead of contextualized moral values of childhood, they have to form generalized moral values.

2.   The concept of generalized moral values should be formed in to rigid moral rules.

3.   They have to control their behaviour by themselves.

2.9.1 Kohlberg's Theory of Moral development:

Lawrence Kohlberg, psychologist from Harvard University, studied children between the age group of 10-16 years and gave them different situations of moral issues and based on their judgment he proposed 'Cognitive Theory of Moral Development'. Kohlberg proposed that the development of moral reasoning is characterized by 6 stages grouped in to three general levels of morality - Pre-conventional, Conventional and Post conventional.

The following table shows the levels and stages of Kohlberg's moral development theory.

Level	Stage
1. Pre - conventional Morality	1. Obedience and punishment orientation 2. Self interest orientation
2. Conventional morality	3. Interpersonal accord and conformity (the good boy/girl attitude) 4. Authority and social order maintaining orientation (Law and order morality)
3. Post conventional morality	5. Social contract orientation

	6. Universal ethical principles (Principles conscience)

Level-1 Pre conventional Morality:

This is the first level of Kohlberg's morality development theory. In this stage children estimate morality on physical punishment. Morality is externally controlled. Children follow the instructions of parents, teachers and other adults. When they follow the instructions they are not punished. They believe that behaviour which is punished is wrong. Those are not punished are right. There are two stages in this level.

Stage1 - Obedience – Punishment orientation

Stage2 - Self interest orientation

Stage-1 Obedience – Punishment orientation:

Children obey adults to avoid punishment in this stage. Morality is estimated on the basis of physical punishment.

Stage-2 Self interest orientation:

Children behave with a motive to be awarded in this stage. Right behaviour is defined by whatever the individual believes to be in their best interest. They bargain with others. An example of self interest driven is - when parents ask the child to do his homework, he demands them to take him to movie. Similarly, 'if you give me your videogame, I will give you my pen to write' is one more example of this stage.

Level-2 Conventional stage:

The conventional level of moral reasoning is second level in Kohlberg's moral development theory. It is a typical of adolescents and adults. To reason in a conventional way is to judge the morality of actions by comparing them to society's views and expectations.

- Morality is decided by the norms, traditions and laws followed in the society. This is characterized by an acceptance of society's conventions concerning right and wrong.

- Instead of individual interests, one has to act according to the conventions of the society to develop human relationship and maintain social order. There are two stages in this level.

Stage-3 - The good boy – girl attitude

Stage-4 - Authority and social order obedience

Stage-3: The good boy – girl attitude:

Stage three reasoning may judge the morality of an action by evaluating its consequences in terms of a person's relationship. If the relationship is good, the behaviour is treated as a good behaviour. Individuals are receptive to approval or disapproval from others as it reflects society's view. They try to be a 'good boy' or 'good girl' to live up to the expectations of others.

Stage-4 Authority and social order obedience:

It is important to obey laws, dictums and social conventions because of their importance in maintaining the functioning of society. They follow laws and morality of the society blindly. According to Kohlberg a major percentage of people remain at this stage.

Level-3 Post conventional Morality:

Post conventional moral reasoning is the third level of Kohlberg's moral development theory. Post conventional moralists live by their own ethical principles. This is the highest level of moral development.

Rules, laws and tradition of society should not violate human rights. Human beings are allowed to follow / behave according to democratically approved norms.

One should follow the norms and traditions of the society. Following the norms is right and rejecting is wrong. But here people determine right or wrong based on their conscience. In this stage people follow individual morality based on the conscience, post conventional individuals elevate their own moral evaluation of a situation over social conventions. In this level there are two stages.

Stage -5 Individual human rights -Democratically approved law (Social contract driven)

Stage -6: Universal ethical principles driven

Stage – 5: Individual human rights -Democratically approved law:

Morality or moral reasoning is simpler in this stage comparing to the previous stages. To protect the individual human rights there was a contract between people and others in the moral social order. They should behave according to these rules. But, as this contract was between society and human beings, it is changeable. According to conditions and situations these laws or contract should be changed for the benefit of the society.

Stage-6: Individual ethics and conscience:

At this stage the appropriate action is determined by one's self chosen ethical principles rather than avoiding the disapproval of others or society. He behaves according to ideals or ethics of his self conscience. These are based on abstract principles from justice, kindness and equality. The person who reached this stage has the highest ethics. Sometimes these ethics may be against social order.

According to Kohlberg, moral development of an individual depends upon his cognitive development. Though Kohlberg has not confined the levels of moral development to a particular age group, the morality of children can be seen in Level-1, pre conventional morality and level-3 post conventional morality in adults. But the order of morality is one and the same in all human beings and all cultures. When a person reaches the highest stage of moral development, then there is no getting back.

Educational application:

1.   Teachers should identify the morality level of the children through tests and observation. So that he can guide them to promote to next stage. Here, teacher has to consider the age group of the children, since to reach the desired stage the children should have attained required readiness.

2.   Moral development depends upon cognitive development. So, teacher should facilitate activities to develop cognitive abilities of the children. It affects in moral development of the children.

3.   First teachers should cultivate an ideal behaviour by themselves. Then children imitate them to reach a higher level. It promotes in changing the society in to an ideal society.

2.9.2. Cultural Variation in Moral Reasoning

Children should inculcate moral norms as they are the directive principles of our behaviour. School has a crucial role in making children to adjust and respect the cultural values of children coming from different cultures and contexts. Developing values, living with knowledge and discrimination are part of holistic development.

We punish children when they make mistakes. We avoid them watching T.V., or taking meals as punishment. They severely affect children's moral development. Parents should educate their children with facts. They should try to look for reasons behind the faults and explain them to children to convince them. They should teach the importance of moral values.

The people of eastern countries live in one community; they maintain good relationship with each other, they feel responsibility for others and for their welfare. But people of western countries give importance to individual life and live freely showing concern only on their welfare. Eastern people show more concern on others than western people.

So, many studies expressed that there are variations in morality of different cultures. In a latest study it's found that there is divergence in moral reasoning between the children of America and China.

2.10   Play and Development:

Right to Play is an important right in the 'Child Rights' declared by UNO. UNICEF denoted that play is essential for the physical, mental, intellectual, social and emotional development of children and it is the responsibility of the schools to make the children to participate in games for their well-being and welfare.

When children are allowed to play with uncontrolled freedom, it results in the development of creativity, imagination and thinking in the children.

Friendship, social skills and problem solving abilities are promoted in the children, when they play with their parents and others.

Play develops to explore, reduces fear and provides opportunities to play the role of adults. Co-operation, leader ship and self directing qualities are developed as a result of playing in groups.

Children living in the same locality form a culture of their own. They develop a language, code and set of informal rules for themselves. Psychologists identified this type of culture as 'street culture'.

Street culture is evident while the children of age group 7-12 years are playing freely in the streets, villages, slums, playgrounds, buildings under construction,

constructions, foot paths, gardens and banks of a river, lakes or canals. Street culture is limited to the particular groups only without controlled by anybody. They maintain secrecy and confidentiality. It's believed that the street culture is gradually disappearing in the society.

According to Richard Lour, an American psychologist, the street culture in the children is fast disappearing because of T.Vs, videogames, Tabs, Mobile Phones and smart phones. So children are experiencing with the behavioural problems, which Richard Louv called Nature Deficit Disorder (NDD)

2.10.1 Play and its meaning:

Maria Montessori stated that 'play is work world of children, where they use toys as tools'. Children learn about people and their surroundings through toys. Some of the uses of 'play'

- Helps to learn how things function.

- Inculcates new ideas.

- muscles get firm and children learn to control them.

- Develops creativity

- Promotes the abilities to solve problems

- Helps to live in co-operation

2.10.2 Types of play:

Let us discuss some types of children's play

a)   Physical play – Sensory motor plays

b)   Exploratory play

c)   Imitative play

d)   Make-Believe play

e)   Amusement play

f)   Expressive play

g)   Manipulative play

h)   Symbolic play

i)   Surrogate Play

j)   Games

a)   Physical play:

Running, hoping, moving hands, summer salts, climb up steps, rolling and hide and seek are some of the physical plays of children. They promote sensory development and bodily co-ordination in the children.

These games influence physical development of the child. Children take part in these games unknowingly or with interest. Children took support of others to play these games. These games help self assessment of their abilities. These games are inexpensive and good for their health. They promote physical development in the children.

b)   Exploratory play: Infants seek enjoyment in the games like searching for their body parts, hair pulling, finger sucking, touching sense organs, throwing and breaking things and observing them, observing the pictures in books and newspapers and identifying them.

c)   Imitative play: Infants enjoy imitating the actions of the adults around them. They enjoy acting like reading books, sweeping the floor, cooking using spoons and spatula, drawing pictures using pens and crayons etc.

d) **Make-believe play:** Make believe plays are started at the end of the infancy. They feel toys have life or they are real objects. Usually they feed, dress and talk to toys. Boys use empty boxes and cartons as vehicles and drive them.

e) **Amusement games:** It is a great pleasure for children to say rhymes, to enact roles, to tell stories, to listen to stories, to watch T.V, to dance, to see pictures in the comic books. They also enjoy chasing games, hop and touch games.

f) **Solitary play:**

There are no rules and regulations for the games played in the infancy. Infants play naturally and freely. There is no control over their plays. They can play whatever they like. Usually they prefer to play alone. So, these plays are called solitary play. In this stage children don't join with others. They don't take support of others. They don't exchange toys with other children. They don't play in groups. These are alone games. They enjoy playing alone. Toys are their best friends. Encouraging children to play in this stage influence their development. Infants play for only some time in a day.

g) **Parallel Play:** Children start to observe the play of other children at the end of the infancy. Then they start to play the similar play. They imitate the play of other children. So, these plays are called parallel plays. For example when elder children are playing cricket or kabadi, children try to play the same games.

h) **Associative games:**

After completion of infancy and in the early days of childhood i.e at the age of 3 or 4 years, children start to play in groups. Still they prefer to play independently and freely. For example when children are building forts and temples in sand, they try to build their own construction, without interference of others. Though there are many children, each child concentrates in his own play. It is mostly personal, still they take support from others. Changing from solitary play to social play is an important transition stage in child's development. Children develop friendship and make friends

in this stage. It helps language development, creative thinking and imaginary thinking in children.

i)   Co-operative games:

Playing in solitary is common in the early childhood. At the end of early childhood, children start to play games according to their choice of norms and often change the norms at their interest. Children at the age of 4 years could not play games with rules and regulations. In later childhood they enjoy board games, card games, outdoor and indoor games like chess, caroms, table tennis, shuttle, badminton, kabadi, volley ball etc. They learn the rules and regulations of the games and follow them. Elder children enjoy playing games with specific rules. Along with their growth, their way of play also changes. These games help in children's physical, intellectual, social, emotional, moral developments and maturity.

j)   Competitive play:

At the beginning of later childhood, that is when they reach an age of 5 years, children get ready to play in groups with rules and regulations. Children are very active in learning new games from adults, other children and teachers. They develop a healthy competition in the games and try to get over other children. Skills and abilities of the children are assessed and they are identified by their friends, teachers and all other adults through these games. Competitive play develops self respect and true friendship in children.

k)   Expressive play:

This game provides opportunity for children to express their ideas and feelings. Children are allowed to use drawing papers, water colours, crayons, colour pencils, clay, water, sponge, material to make toys and musical instruments to play rhythmic sounds. These activities help children to express their sensations, desires and capacity.

l)   Manipulative play:

Children enjoy playing with objects that are available in their surroundings is manipulative play. Children start to play using play tools or things from the infancy. Children play with their parents, adults or objects in the house. When they grow up they start doing puzzles and playing with mechanical toys, bat and ball. These games promote imagination and creativity in the children and help their development.

m) **Dramatization games:** Children play imitative games like - thief and police, shopkeeper, sales man-customer, teacher-student, bus driver-conductor etc.

n) **Surrogate play:**

In a surrogate play, when children cannot move completely or partially, or when they are unable to take part in the game, parents or other children play the game instead of the children. Children are motivated and enjoy when somebody plays for them. For example on Deepavali, when they can't fire crackers, they enjoy watching other children firing crackers. This is a powerful play.

2.10.3 Play and Development in various Domains

Games influence different areas of developments in the children, which affects children's personality development. Play promotes a) Physical development b) social development, c) emotional development d) Intellectual development and e) Moral development.

a) Play – Physical and Motor Development:

Games help to gross motor development and fine motor development in the children. Children make certain body movements only for their pleasure. For example dropping the things and enjoying. Children enjoy repeating the same activity. These activities proceed from simple to complex and promote physical development of the children. Physical development is the product of games. The primary outcome of any play is happiness.

b) Play-Emotional Development:

Sharing, co-operation and caring for others are cultivated in plays. Children follow rules and regulations of the games, anticipating the consequences they act according to the needs. To sustain inter personal relationship, children exhibit emotional maturity in the games. Self respect evolves in the children while playing board games, cricket, ball games etc. with parents and other siblings in the house. When parents share their happiness and appreciate their efforts, children understand their parents love and affection. So games control desirable emotions and feelings in the children.

c) Play – Cognitive development:

Children are psychologically motivated by games and sports. They acquire knowledge through games. They apply their thinking, memory, decision making, problem solving, creativity and higher order thinking in the games. They apply their ability of problem solving, thinking and memory in the games. Children's ability to solve problems is developed when they do puzzles. Children use the language while they are playing games. Their language ability is also strengthened. They express their feelings freely with other play mates, which results in their language development.

Children learn basic concepts like quantity shape, time and colour consciously or non-consciously, while they are playing games. Games make them to understand relationship between objects. The use of educational pictures and vocabulary makes them to understand their immediate world and environment.

d) Play – Social Development:

Play influences children's social development more than any other developments. Infants are ego centric. Gradually they learn to play with others. Participating in group activities and competitions influences social development. They start to share their thoughts and objects with others. They acquire qualities like patience, indifference to winning or defeat, following rules and regulations, decoding referee's signs and cultivating traditions and customs in house which promote social development of the children.

e) Play – Language Development:

Many linguists studied that there is connection between social play and language development. Child starts playing at the age of two years. It influences language development. Games play an important role in the language development of the children. We can observe their language, the clarity in expressing their ideas, patience, sharing of thoughts and understanding when they are playing games. It develops self confidence and imitativeness in the children and helps for their holistic development.

f) Play – Moral Development:

Games are bound with norms. So, children understand that participants in the games should follow the rules of the games. When they do not follow the norms or disobey them, they are either banned or forbidden from the game and sometimes they are punished for it. Now-a-days children watch games on T.V. or read them in the newspaper. So, they have sound knowledge of these norms. They can discriminate what is right or what is wrong. So, games help children moral development. Games construct sound personality traits in the children.

2.10.4 Games/Sports – Group dynamics:

Games and group dynamics are interrelated. While playing, members of the group develop a single vision because of their feelings and emotions are evolved as a result of their inter related reactions.

Competition among the groups promotes group dynamics. As a team, each team has its own specific objectives. Participants have their own aims regarding the game. But one cannot achieve his goal alone. To achieve the goal, one has to work with other members co-operatively. Working together gets success and recognition. One's ideals and needs are achieved only when he works in the team. Each member has his responsibilities and duties. The team leadership should be firm and accepted by all the members of the team to continue success and to be respected.

2.10.5 Play-Conflict Negotiation:

Conflicts are common in any game. Team leader should negotiate with the two groups to draw a happy solution to achieve the targets of the group.

Agreement is a skilled process of getting uniform opinion through consultation or negotiation. An agreement is a formal decision taken in harmony between two groups or parties and useful for mutual development without any lost to any group. Team leaders have to develop skills like

◆ Discussing the object of the conflict, reasons and factors for such situation.

◆ Negotiating skills and problem solving attitude should be cultivated.

◆ They should feel others problems as their problem and work hard to solve them, restraining their needs and desires.

◆ One should be flexible to select an alternate.

◆ After successfully solving the issues, they should be executed.

2.11 Sense of self:

To live in a better way one should know about oneself. So, it is essential for everyone to know about themselves. Self description, self recognition, self concept, self respect, social comparison, internalization and self control are some of the components of 'Sense of Self'.

a)   Self Description:

Self description is the way in which you describe or talk about yourself. Each individual is unique. Everyone has an individual method in his behaviour, performance, and ways of interactions with family or society. Knowing about himself helps an individual to rectify or modify his mistakes.

To know about himself, an individual has to know his personal opinion and the opinion of friends and parents about himself. If these opinions are accurate, one can judge ones strengths and weaknesses. He can try to come over his weaknesses and develop his strong aspects.

b)   Self Recognition:

Recognition of one's own self is self recognition. It discusses three aspects. The first aspect is one's own opinion about oneself.

Second aspect is his understanding about his abilities. And the third aspect is his traits and his individual judgment.

Everyone wants to be recognized and praised by others. Every one desires to perform better in their profession and rewarded. Self recognition is a psychological desire.

c) Self concept:

'Self concept is developed in later childhood in the children'. Self concept is the individuals belief about himself / herself including the person's attributes and who and what the self is' - Baumeister (1999)

An individual can estimate his/her self concept. It results in modifying his personality, changing his behaviour according to the needs of the society and living in a socially acceptable way. Self concept is developed by family, school and society.

d)   Self Respect:

Self respect means

1)   A proper respect for oneself as a human being

2)   Regard for one's own standing or position

Every one respects himself / herself. Further they wanted to be respected by others. Social recognition and social respect develop self respect in an individual.

Judging ourselves or estimating ourselves is self respect. The concept of self respect is developed from childhood.

Some suggestions to develop self respect in children

- Negative thoughts should be avoided and start thinking positively

- At first one has to respect himself/ herself and then respect others everyday

- Identifying one's limits and discussing with others to overcome them

- Moderating dependence on others

- We should value ourselves

- We should not think negatively about ourselves.

e)   Social comparison

Social comparison is defined as "comparing abilities and opinions of an individual or a group with the abilities and opinion of others".

If a person compares himself with people of lower status, his status also decreases. In contrast, if a person compares himself with people above his status, his status also increases from the present level.

Blanter expressed through his experiments that when children compare their academic achievement with better performed students, they can increase their performance from their present status and if they compare with low achievers their result also decreases.

So, teacher should encourage students to compare their achievement level, motivation, efforts with appropriate standards and modify themselves to achieve higher standards.

f)   Internalization:

Internalization is a process of adapting beliefs, attitudes and values in integration

Internalization depends largely on discussing different subjects with others.

So, teachers, parents and other adult members in the family should act as a good role-model to the students and discuss many things with them. They should develop self concept in the students through the process of internalization.

g) Self Control:

Self Control is an ability to regulate one's behaviour to achieve his goals and aims.

Duckworth expressed that 'Self control has major role than IQ in achieving successes'. So, children should be trained in self control to overcome their difficulties. Teachers should create situations to promote emotional maturity and self control in their students.

2.12 Culture and Gender Development

M.J.Herskovits defined 'culture is the man made part of the environment'.

World Conference on Cultural Policies-Mexico-1982 defined culture as -'the whole complex of distinctive spiritual, material, intellectual and emotional features that characterize a society or a social group'. It includes not only arts and letters, but also modes of life, fundamental rights of the human beings, value systems, traditions and beliefs.

Gender Development: Gender is a word used to express the state of being male or female. The word gender development is often confused with the word sexual development. But there are distinctive differences between these two words. Let us study some of them,

Sexual Development	Gender Development
- It is a biological aspect.	- It is related to society.
- It is natural and related to sex instincts.	- It is a social tendency resulting from society.
-It is related to basic sexual aspects like	- Based on the Masculine and feminine

reproductive system of male and female, secondary and sexual qualities development.	roles - like dress, language, behaviour, character etc.
- Sexual aspects of male and female does not change.	- Roles of male and female in the society may be changed.

In this chapter we discuss only gender and development.

Culture is related to society. Society is related to human beings. Men and women live together in the society. The society is developed by human beings. So, there is no uniform culture in all the societies. Now-a-days we find changes in the society based on the gender. We can see women playing various roles in the society – women conductors in buses, women pilots, women wrestlers, women police, women in army and women competing in games and sports equally with men. So, in changing contexts in the society, the roles of male and female are also changing.

In the developing world, cultural transition makes women to come out and work for financial development and national development. According to the public voice the laws are being changed or modified. The development indicators of society and social relation are changing because of the change in human values and traditions. Gender unbiased culture leads to the progress of the society according to the indicators of national developmental factors.

Gender development in children:

Gender (male or female) discrimination is evident in the parenting from the birth of the child. For instance the colour of things bought to a girl child is always different from the colour of things bought to a boy. Usually pink colour dress, bed sheets, and towels are preferred to girls.

The gifts on their birthday are usually different between girls and boys. At the end of the first year children express their attitude for freedom. Parents discourage this attitude in girls and encourage the same in boys. This is a constant mind set in child rearing practices.

Parents encourage male children to speak, to dress and to behave like men and female children to follow girls.

In shopping male children are gifted with toys like cars, buses, vans, and guns etc. whereas girls are offered cooking vessels and decorating material.

According to psychologists early childhood is a complicated age for the development of male and female roles. Since, male children have to behave like men and female children have to behave like women.

Their behaviour based on their roles should be accepted by their parents, relatives and peer group.

Many psychologists believed that when the children can't cope-up with their roles as male or female, they have to experience disturbances in their development in future.

Children learn the male and female roles through 1) physical appearance 2) Dress 3) way of communication and 4) behaviour.

Children cannot learn these roles at a time. They learn them in a systematic order.

◆ Children recognize that some of them are boys and some of them are girls and then men and women.

◆ They identify themselves as a boy or a girl.

◆ They identify the gadgets, dress and behaviour of men is different from women as they have separate gadgets, dress and behaviour

◆ They also discriminate the work done by men and the work done by women.

◆ At the end of the childhood they have knowledge to identify men and women. Though they know the role of male and female, there is no need for them to display. When an appropriate situation or opportunity is created they will display their knowledge.

◆ Parents and teachers should encourage male children to imitate men and female children to imitate women. They should also ask the children to imitate models and encourage appropriate behaviour.

◆ While assigning activities, games, songs and sports in schools and nurseries, teachers give bat-ball games, jumping, rolling, ball games to boys and skipping, drawing, painting, stitching, rangolis and cooking to girls. Children learn more role based behaviour in the school than their home.

◆ Children learn behaviour of their roles as male or female through media, story books, pictures, cartoon books, T.V., programmes, computer games and advertisements. It is common for children to form groups in schools and their locality. Either boys or girls follow the ideas, attitudes and behaviour according to their group. It promotes gender development in the children.

◆ At the end of the later childhood, boys and girls form separate groups.

◆ Boys feel girls are inferior to them. This feeling leads to gender discrimination. The discrimination can be seen even in the siblings.

◆ Boys and girls observe the differences between their gender. Their aptitudes attitudes, games and songs are specific for themselves. This gender related knowledge influences their development.

Piaget Cognitive development theory:

According Kohlberg – Moral development, Gender development follows the following order.

- Gender Identity: First children identify themselves as a boy or a girl.
- Gender Stability: Then the role of male or female concept is stabilized in their mind. Further they believe that it can't be changed in future.
- Gender Consistency: After acquiring gender stability, though they use the dress of opposite sex, they do the activities of the opposite sex or they act qualities of the opposite sex, they believe that they don't lose their gender, which is called concept of gender consistency.

These are some of the ideas of famous cognitive psychologists related to gender development.

Salient Points

◆ Growth and development are the two terms usually used one for the other. But growth is quantitative and development is qualitative.

◆ Organisms of the same category follow the specific principles in growth and development.

◆ Heredity and environment are equally influence the development and construction of personality of an individual.

◆ Physical development is quantitative changes in the body because of biological processes and development.

◆ Social development also occurs along with physical, motor, emotional and mental developments and plays a key role in human life.

◆ A child learns many things in the process of socialization along with the advancement of age.

◆ Emotions are developed in various types in different stages. There are many reasons for emotions in our day to day life.

◆ Speech is an instrument to express our feelings, ideas and thoughts to others. The basis of language development starts at infancy.

◆ Language development was explained through the perspectives of Psychologists like B.F.Skinner and Bandura and Psycho linguist Noah Chomsky.

◆ Lawrence Kohlberg developed theory of moral development. He proposed three levels of morality and the each level consists of two stages. But experiments proved that there are cultural variations in moral discrimination.

◆ Right to Play is one among the Child Rights declared by U.N.O. When children are allowed to play freely without control, abilities like creativity, imagination, and thinking are developed in the children. Plays promote various developments that reflect in personality development.

◆ To live a better life one should know about oneself. So, it is necessary for everyone to know about themselves.

Evaluation

Essay type questions

1) Explain the influence of heredity and environment on development.

2) Explain physical-motor development

3) What is social development? Discuss the factors that influence social development?

4) What is socialization? Explain the components that influence socialization

5) Define 'emotion' and discuss the role of family and school on 'emotional maturity'.

6) What is language development and explain the perspectives of language development according to Skinner, Bandura and Chomsky.

7) What is moral development? Explain Kohlberg's moral development theory and its importance in education

8) "Play promotes all round development of the children" – Explain

Short answer questions:-

1. What are the differences between growth and development

2. Explain principles of development.

3. Explain developmental milestones and its hazards.

4. Elaborate the words 'emotion' and 'emotional maturity'.

5. Discuss the role of group dynamics in games.

6. What is sense of self? What are the components of sense of self?

7. Explain the influence of culture on gender development.

Multiple Choice Questions

1. An important transition stage from solitary play to social play is

a) Parallel play   b) Associative play c) Co-operative play   d) Solitary play

2. 'Certain changes appear with dramatic suddenness'. It is related the developmental principle

a) Development is rhythmic   b) Development is interactive

c) Development is predictable   d) Development is cumulative

3. Social development is defined as 'Getting maturity in social relations is social development' by

a) Garrett   b) Hurlock   c) Sorenson   d) Gesell

4. Which of the following promotes 'sense of self'

a) Self Recognition   b) Self description   c) Self respect   d) Internalization

5. Which of the following development is mostly influenced by play

a) Moral Development   b) Social Development

c) Emotional Development   d) Physical and Motor Development

Fill in the blanks

1. Author of 'Hereditary Genius' is _____

2. Generally First teeth is formed at the age of_____

3. Emotional Catharsis means _____

4. _____ defined culture is manmade environment.

5. According to Kohlberg an individual follows law and order at _____ stage.

Match the following

1) Havinghurst	a) Classification of emotions
2) Elizabeth Hurlock	b) Language acquisition theory
3) Lowten	c) Stages of human development
4) Noah Chomsky	d) School Facilities and educational opportunities
	e) Activities to be conducted in developmental stages
	f) Heredity and behaviour studies

Project Task

1.   Visit a nearby primary school. Record the height and weight of the boys and girls studying in class 1 to 5 and make a report.

2.   Collect the emotional maturity scales from the psychology lab and conduct a study on emotional maturity of school teachers under the guidance of concerned lecturers.

3.   Collect the information related to different games and their uses from your physical education teacher and make a report.

4.   Study how children solve their problems / conflicts while playing and make a report.

CHAPTER-3

Cognition and cognitive development

Man is quite distinct from that of all living organisms because of his innovative ability of thinking. So we can call man as a thinking animal. Cognitive development decides the thoughts of a person and thoughts of a person decide his behavior. His behavior decides his life.

Cognition includes the activities and processes concerned with the acquisition, storage, retrieval and processing of knowledge. In other words, it might include the processes that help us to perceive, attend, remember, think, categorize reason, decide, and so on. The abilities like problem solving, decision making, reasoning, logical thinking are some examples of cognition.

Acquiring sensory knowledge, developing abilities like imagination, logical thinking, reasoning, analysis and synthesis and solving problems using these abilities using these abilities will come under cognitive development.

In this chapter we shall discuss the concepts like how this cognitive development will affect the life of a person? How we have to achieve this cognitive development in different individuals who are at different stages of maturation? Which type of teaching learning processes and instructional strategies to be inculcated to achieve cognitive development of every individual encountering the individual differences?

3.0.0. What is cognition?

By understanding the knowledge acquired through senses will be utilized for giving responses to the respective stimuli. The knowledge acquired through senses will lead to experiences and which may lead to concept formation.

For example, we got the knowledge of mango such as colour, size, shape and nature through senses. Then the concept of nature and characteristics of mango is formed. After that without seeing or touching a mango we can feel the characteristics of mango like colour of the mango, size of the mango by recalling the knowledge gained by our senses which was framed as a concept in our mind. So, the knowledge acquired through the senses is permanent which leads to the concept formation.

Slowly with the increase of maturation levels a series of concepts will be formed which leads to a hierarchy of learning. So, we can define cognition is a series of thinking process in which they apply their knowledge.

"Cognition is a mental process of acquiring knowledge and understanding through thought, experience and the senses". The word cognition came from the word "cognitio" which means **"acquiring knowledge".**

The cognitive development of an individual varies in his various stage of growth and development. There are several stages of growth and development in the life span of a human being. The stages of growth and development are Infancy (From0-2Years), pre-childhood(3-5years), Late childhood(6-12years), adolescence(13-19years), adulthood(20-60years), Old age (above 60 years). From infancy to adolescence they will be gradual growth in cognitive development and it is maximum in adolescence.

cognitive development in infancy:

In the infancy the child will respond to the stimuli present in the surroundings and he tries to understand the surroundings through his senses. At the end of this stage the abilities like using small words and sentences, thinking, memory, intelligence will be developed in the child.

cognitive development in early childhood:

In the early childhood child is very curious to know the surroundings by asking questions like what is this? What is that? At the end of this stage the concepts like space, time, colour will be formed. He is able to solve small problems by his own thinking and reasoning. Children represent the world with words, images and drawings. But he can't distinguish which is real and which is not real. By this confusion he will be in illusion. Cognitions are dominated by geocentricism and magical beliefs.

cognitive development in Late childhood:

In late childhood he will come out of MAGICAL BELIEFS, illusions and dreams and he is capable to distinguish which is real and which is not real. Children form stable concepts and begin to reason. The child is also so curious to understand the truth and reality in the world and tries to know by asking questions like why? How? They will show much interest in stories. They will start thinking logically. In this stage the child can discriminate good and bad also.

cognitive development in Adolescence:

In adolescence the intelligence of a person will increase up to maximum extent. By this they can develop independent thinking, creative thinking, abstract thinking and criticism. They use to participate in debates expressing their views in a logical manner. They tend to learn arts and skills. The attitude of inventing, the aptitude of research will be more in this stage.

There are so many factors that influence cognition and cognitive development. Especially in the childhood the factors like perception, conception, thinking, reasoning, Meta cognition, creativity, intelligence and multiple intelligence will influence the cognitive development of the child.

Developmental factors of cognition:

Perception:

In our daily life we are feeling so many experiences by the sensation of touch. In most of the cases we can't recognize them. We are seeing so many objects in our surroundings. We can acquire the knowledge about those objects and we can understand the correlation between those objects and their characteristics and nature by using our senses. For example, life is like a flowerbed for some persons based on their experiences in their life but for some persons it may be very bad based on their personal experiences. we can tell" giving **meaning to experiences based sensory knowledge is** perception"

perception not only depend on the stimuli present in the surrounding but also on the previous experiences, needs, the actions of revenge that are taking place in the brain. The environment may affectto some extent on the growth, development, maturation of an individual. The simple perception will gradually becomes complex with age.

According to Morgan" **a person with surroundings the way he can visualize the, the way he can listen, the way he can experience, the way he can taste, the way he can smell that is only the perception".**

(To perceive = To Attend + To Think)

Process of perception:

sensory Knowledge-attention-interpretation-Response-perception
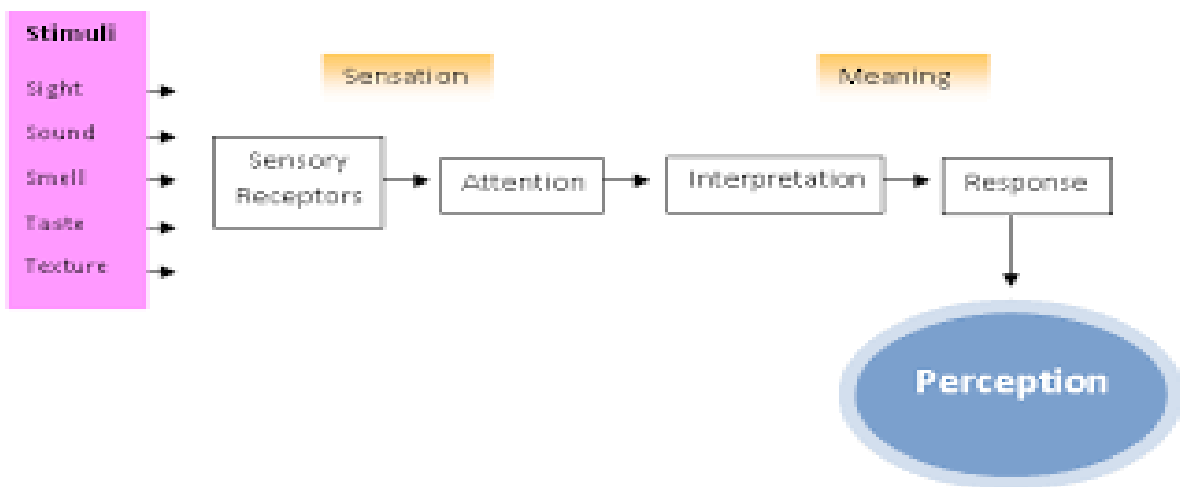
Block diagram of process of perception

we can explain the process of perception by analyzing the sensations which we get through our senses. We respond to the stimuli   like sight (eye), taste(tongue), smell(nose), sound(ear), touch(skin) in our daily life. For every person the responses will be the same. The concepts like a shape, a picture, music, Dance will be formed due to perception and they will be fixed in our brain. We

can treat everything in our surroundings as a whole but not individually. For example, We can feel a bicycle as a whole but we can't feel bicycle as the individual parts like wheel, chain, pedal etc. This is called the concept of gestalt perception.

In this gestalt theory everything will be treated as a whole. For example, if you see a letter "I" there are three lines two horizontal and one vertical line. But separately those three lines are not visualized separately but we shall see that as "I" as a whole. This is because of gestalt perception.

In gestalt perception Brain tends to see a thing a meaningful organized whole. Gestalt means "Shape" or "Form". We perceive the world as meaningful and complete objects, not a series of independent parts. This is the way the organization of perception happens. we can explain these perceptional experiences through some instructional principles called gestalt principles.

Laws of perceptual organization:

The main Gestalt laws are Law of Proximity, Law of similarity, Law of figure and ground, Law of continuity, Law of closure, and Law of symmetry.

Law of proximity:

Proximity describes the tendency to perceive objects that are close to one another.

  For example, in first figure you are likely to perceive no groupings in the series of equally spaced groups. If you see the second figure there is a much gap in between the horizontal rows thereby you are likely to perceive them as groups

  The vertical distance between the dots is less than the horizontal distance. This creates the visual effect of columns instead of rows, even though all the elements may not be the same
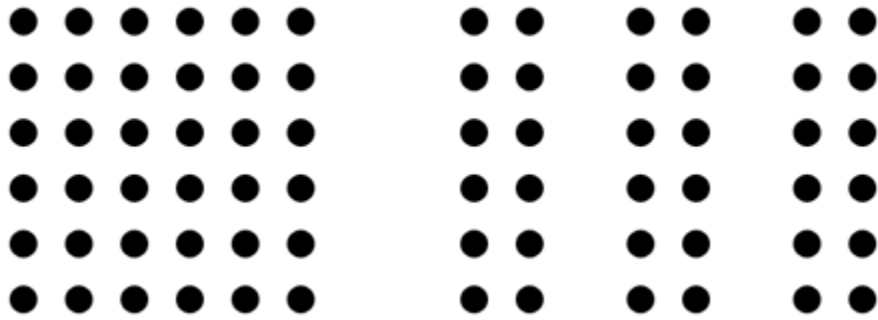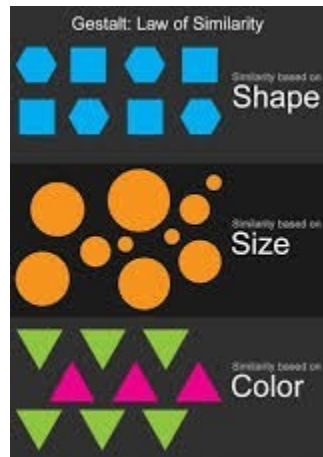
Law of similarity:

Based on similar or identical characteristics like colour, shape, magnitude etc. grouping objects together is called law of similarity. In this figure we are seeing we are categorizing objects into groups due to their similarity in shape
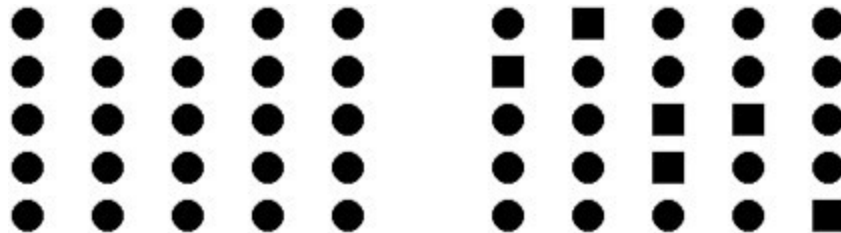
. We can categorize the objects in our surroundings based on colour and magnitude also.

Law of Figure and Ground:

This relation explains how you organize your perceptions in terms of foreground objects, figures which are clearly defined. Rubin is the first psychologist who explained about the Figure – Ground relationship. Visualizing the difference between shape and field is the basic principle in the organization of intelligence. Behind every object we see there will be a picture.

We tend to perceive an object either as the element of focus in the foreground or as part of the background. In the image below, do you see two faces or a vase?

In the following example you can see wolf before after you will get the perception of a boy
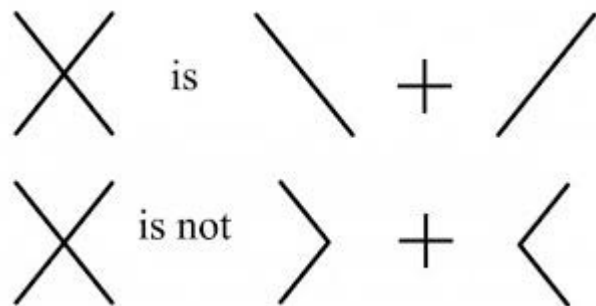

Law of continuity:

Objects aligned along a line or curve are perceived as belonging together, and we will perceive the simplest, smooth path rather than a complex path.
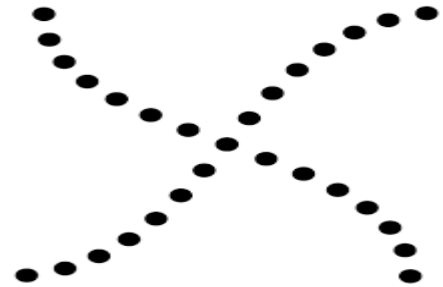
By arranging stimuli continuously perception will be organized.

For example, we perceive the pattern below as two lines intersecting each other rather than two angles joined at their axes

For example, see the following example
We shall perceive a curve

Law of closure:

Incomplete figures are perceived as complete or whole

Closure describes our tendency to look object as a whole single unit but not individual units. For example, it is likely that you perceive the series of disconnected lines represented below as a square, and the series of disconnected dots as forming a single circle. Closure explains why we see the instructional image, depicting the parts of the brain in creating long-term memory, as a whole head.
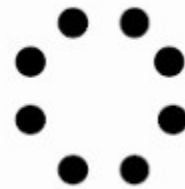
"colours, illustrations,lines,pictures,sounds,symbols,texts and words should be integrated in such a way that they can be interpreted as a meaningful whole rather than a number of individual elements" (Petterson,2010)

Law of symmetry:

We perceive symmetric objects as figures over ground and we perceive those objects as symmetric around a central axis. Objects that are balanced and symmetrical are seen as complete or whole. Brain feel back and front for complete picture

For example, in the following pictures there are two symmetric triangles.
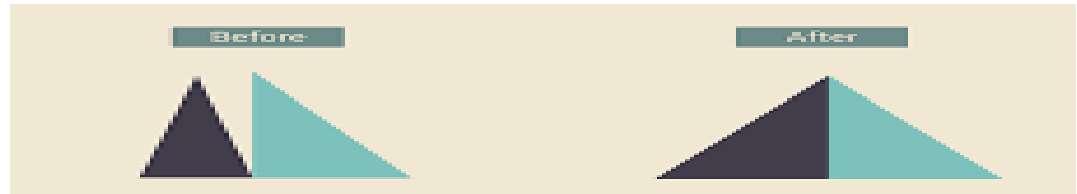
Perception –characteristics:

1. Perception depends upon sensation
2. It is a process involving synthesis and analysis
3. perception involves keen observation
4. This is a coordination action
5. Perception begins with sensations due to sensory organs
6. With the help of intrinsic and extrinsic motivation perception can be started easily

Influencing factors of perception:

Two types of factor will influence perception. They are
1.Personal factors 2. Objective factors.

1.Personal factors

The natural characteristics like Interest, Attitude, Familiarity, Context, Previous experiences are the individual factors that influence the perception.

Interest:

The energy possessed by our mind that can yield concentration on a topic is called interest. The energy that leads to the attention of a person in a topic is called as interest. Every person will have his own interests. Based on those interests they will feel perception in that particular topics or subjects. If we take the example of newspaper Some people may see the editorial page, some people may see sports news page, some people may see movie page, some people may see political news page based on their interest.

Attitude:

According to Freeman "The way of response towards a situation or towards a person or towards a thing is called attitude." Persons will have a special attitude towards different things and issues. In a context some people may have positive attitude on that context whereas some people may have negative attitude towards that context. Some people belonging to a political party they will feel that those people belonging to that party are good where as the people opposing that political party they will feel that the people belonging to that political party are bad.

Familiarity: In some situation stimuli will arise immediately. For example, if we see a dining table, immediately we shall feel the food items.

Previous Experiences: How we respond to a situation depends upon our previous experiences. For example,even though if it is written like this '   'we shall recognize it as '   ' only because of our previous experiences.

2. Objective Factors:

The objective factors like wholeness, similarity, nearness, same measurement will affect perception.

Educational Implications:

1. No adequate analytic power and experience will be there to children
2. Various types of teaching learning materials shall be used to create meaningful shapes and imagination
3. Teaching should be meaningful so that student has to understand the interrelation between different concepts.
4. Figure- Ground principle has to be used as a teaching strategy,
5. Training given should lead improved concepts.
6. Training given should lead to learn Simple techniques in the construction of knowledge.

Disasters in Perception:

Every day we are hearing the famous proverb "All the things what we see are not real". Not only the stimuli but also the personal and objective factors will influence perception. So, in some cases we shall feel the proper stimuli also as wrong stimuli. These are called illusions. In the night time we shall feel on seeing a rope as a snake and also on seeing shadow as a ghost. That means illusions are wrong perceptions. Distortions in our daily life are due these illusions only. Persons has to see in a realistic dimension. Then only they won'tundergo illusions.

If we feel impulses in a different way that is an illusion. If we won't feel any impulse that is called Hallucinations. These Hallucinations will be more in those persons who take drugs and in those people who are in mental depression.

Concept formation:

Persons analyze theirexperiences, feelings and also, they will recognize the general characteristics and special characteristics of those experiences and feelings. As a result of these acquired knowledge and concepts new relations will be established. Establishing relations between different things or different issues with symbols or signs is called concept.

"The general understanding related to a person or a thing or a situation is called concept".

That means the generalized understanding is concept. We can tell the term concept will attribute a general property to things, situations. If proper concepts are not formed due to the lack of clarity the subject could not be understood properly. By this the children will attain poor understanding.

How the concepts will be formed?

If we follow the following sequence of steps correct concepts will be formed which leads to clear understanding of the concepts

- I) Situation to be observed in depth
- II) By comparing the situations from those general characteristics should be identified
- III) The identified general characteristics should to be kept in brief
- IV) Characteristics should be verified
- V) The abstract of these characteristics should be named properly

In children according their age, experiences and environmental factors the concrete concepts like –colour, shape, weight, place, time andalso theabstract conceptslike self-concept, will be formed

In Psychological development of a person concept formation is one of the factor. Based on the stimuli exposed on a person the concepts will be formed. The

concept will be formed based on one single stimulus. Only if a person faced a group of stimuli by understanding the similarities,identical characteristics and interrelation between those stimuli a person can from the concepts.

For example, 1. Three sides must be there 2. Three angles must be there 3. Three vertices must be there 4. Figure must be closed.Depending on the above all these general characteristics of a triangle children can form the concept of triangle.

Classification of concepts: According to education aspect s we use to face two types of concepts.

1. Concrete concepts
2. Abstract concepts

1.The concept formed with the help of sensory organs is called **concrete concept**

For example, the concepts formed by seeing with eye like – horse, fish, grab etc. Likewise, the concepts may form based on smell by the nose. For example, concept of jasmine will be formed on its colour, shape and smell. The concept of rose can be formed only onseeing its colour, shape without smell.

The concept formed by the qualitative characteristics beyond the subject acquired by the sensory organs is called **abstract concept**

For example, happiness, what is meant by light year, what a prime minister is,what is democracy, what is socialism etc.

Types of concepts:

In children initially, some of the concepts will be there. After sometime so more concepts will be formed. Afterwards a large number of concepts may form.

Space concept:

Initially children won't have any idea about distance, quantity,directions. There will express the direction like that side and this side like that only. After some time with the increase in their age they will express the direction like left side, right side, top and bottom. Then they are able to express the four directions. After time being with their growth there are able to express eight direction like northeast etc.

Time concept:

Initially the concept of time should be abstract and complex. After along with the increase of their age they will develop slowly the time concept using the words like yesterday, tomorrow, day before yesterday, day after tomorrow.

Form Concept:

Below three years only the concept of shape will be formed among children. Along their age they will attain the concepts starting with small shapes afterwards the shapes like square, rectangle will be developed among them leading the concept formation

Colour concept:

The children which are in the age group between 3 to 5 years can able to recognize the primary colorus like red, black, white etc. Along with increase in their age they are able to recognize the other colours easily

|Beauty concept:

This concept is a very complicated concept. The children start to exhibit this concept from five years of their age by imitating others. Along with the increase of their age there are able to express on their own.

Money Concept:

In the primary stage of the child don't know the concept of money.They will feel money is only for purchasing things. But they don't know it's value. With the increase of their age they will know, what they can do with the help of money.

Likewise, the formation of concepts startfrom their childhood only. With the increase of their age the formation of concepts will be developed. At first the concrete concepts will be formed by sensory organs. Afterwards these concepts will lead to the formation of abstract concepts.

Concept development:

The concept will be formed by the following

1.Sensory Manipulation: Based on the responses given by the stimuli faced by the infant's experiences will be formed. Based on those the experiences concepts will be formed

2.Motor Manipulation: By the touch feelings acquired by moving their legs and hands concept will be formed among children.

3.Questioning: Along with the age the children are very curious to know the situations what they will face in their day to day life. To know these situations, they will ask questions related to those situations and they will clarify their doubts. By this process the children are able to form correct concepts.

4.By Reading: Children will from concepts by reading books and journals, essays related to their area of interest

5.Intellegence – Reasoning: Children can understand the correlation between several issues and things with their intelligence. Children can form concepts by establishing the relations between various things with discrimination and reasoning etc.

6.Training: Children form concepts with the help of proper training and guidance given by using the methods like problem solving method, experimental methods, guided enquiry, meta cognition etc

7.In generalization children can identify 'allflyingare not birds.' For example, children can recognize that bats are not birds even though they will fly and they will recognize that bats are mammals. Likewise, the children are able to recognize the exceptions also in the process of generalization.

8.In the abstract concept formation different issues and aspects regarding an object or a situation will be given in an elaborated way.

For example,on seeing an elephant specifying its long teeth, big years, pillars like legs and small eyes and giving information elaborately about an elephant is called formation of an abstract concept.

Role of teachers in conception:

> While giving concepts teachers has to follow a clear strategy in imparting knowledge to a student. By giving more and more examples the teacher has to connect surroundings to the child with the implications in their everyday life.
> Especially while teaching concepts related to science the teacher has to make the student to identify the general characteristics for the correct concept formation
> The mode of usage of language should be apt for effective learning
> The relations between various topics should be compared with a correct concept
> The students should be energized to generalize their direct experiences
> Developing abstract thinking, reception energy among students
> Having thoughts regarding different issues and topics

- Preparing students to take correct and intelligent decisions
- Developing the competencies like understanding the problems in a correct way
- Giving opportunities to the students to understand the social and moral values
- Teaching should be such that the student can understand the concepts very clearly and easily – elaborating the content very clearly
- The characteristics of each concept should be taught in a simple way. For example after giving the concept about a rectangle and a square then the concept of types of quadrilaterals should be given for more simplicity
- Clarifying the students doubts
- Saying the various examples of daily life in an order
- Verifying the old concepts, elaborating them and connecting them with new concepts
- Making students to elaborate or to define the concepts what they acquired

The teacher should help for the concept formation among students by teaching in his own style and teaching strategies according to the requirements and needs of the students.

3.2.3 Thinking

The man withstands superior to other all other living organism in the world due to his ability of thinking only. No human being will be without though. For every work thinking is very important.Without thinking man will become a machine, he can't solve his problems, he can't adjust with the lack of intelligences and competencies.Ultimately, he will be in a dangerous stage.

Man is a living organism with knowledge and wisdom. These knowledge and wisdomdepend upon his thinking

"elaborated thinking, wisdom, discrimination are the qualities that are more required for leading happy life. So, the persons which are developed in these will become respectable and competent persons. The developed heritage culture from generation to generation, inventing new things, industries, new life style, modernization etc. are all examples for developed human thinking and wisdom.

They are a vital role for thinking in teaching. The ability of thinking is important in Coinciding all the experiences, memorizing those experiences and using them in the required context.

Definitions:It is a cognitive activity • It is directed to achieve some end or purpose. •

According to N.L. MUNN "Thinking is described as problem solving behavior.by using Signs Symbols Mental Imagines".

According to NIMOHASIN **"Thinking is an unseen internal behavior for problem solving"**

Thinking Process:

"Thinking is behavior which is often implicit and hidden and in which symbols (Images, Ideas, Concepts) or ordinarily employed." In these concepts, signs, symbols, mental images are very important. Thinking refers to a pattern of behavior which we make use of internal representations (Symbols, Signs etc) of the things and events for the solution of some specific purposeful problems. In this the person purposefully arrange his imaginations and he will establish some new relations that can satisfy his needs.

Characteristics of thinking

❖ Thinking is a mental activity in its cognitive aspect or mental activity with regard to psychological aspects

- ❖ Thinking is a result-oriented process
- ❖ Thinking is an implicit problem-solving behavior
- ❖ Thinking is a mental exploration instead of motor exploration.
- ❖ In thinking frequently, the changes will occur
- ❖ Thoughts are implicit. They will be in the form of conversations.

According to DECARUS – "**The root of the existence of man is thinking only**". The development of the society is the product of correlation of thoughts between different individuals. If some thoughts

Lead to good for world and some thoughts may lead to destruction of the world. Hence, we shall observe how many types of thinking are there.

Concrete or Perceptual thinking:

This is a very thinking methods. Acquiring knowledge through sensory organs directly and thinking about that one is called concrete thinking. This is because of seeing things directly. For example, pen, book, tree …. This type of thinking will be in children in their childhood stage.

Abstract or Conceptual Thinking:

This is a very complex thinking process. Thinking about shapeless things which we cannot see directly is called abstract thinking.

Thinking about the unknown things, inventing new things, initiating zeal are the key concepts in this type of thinking. For example, scientists, poets, philosophers will have this type thinking. This type of thinking will start from adolescence.

Convergent Thinking:

Solving a problem towards a goal using the available information and knowledge gained from the books is called convergent thinking. In this type of thinking there will be

no chance of creativity. The people who are having this type of thinking will get more score in intelligence tests.

Divergent thinking:

Thinking about an issue or topic in many dimensions thereby creating a new trend is called divergent thinking. That is thinking a solution for a problem not even a single solution but also so many solutions having same importance. Originality will be there in this type of thinking. Persons with this type thinking will get good score in tests related to creativity.

Example: Telling 2X2= 2+2, 2X2= 5-1 , 2X2= 4X1 , 2X2=8/2 is called divergent thinking.

Imaginative Thinking:

Thinking related to the imagination with the help of symbols in our memory is called imaginative thinking. For example, thinking the circumstances at the year 2025 due to population growth in India.

Associative thinking:

When two issues, topics or parts are put together, comingsecond one into our recall while thinking the first one is called Associative thinking. For example, when thinking about marriage unexpectedly we can recall the issues like marriage stage decoration, relatives, banquet halls etc.Associative thinking is very important for effective learning.

Directed thinking:

Getting the expected outcomes by using our thinking strategy is called directed thinking. These type thoughts will be useful for inventing new. All the above discussed

types of thinking concrete thinking, abstract thinking, convergent thinking, divergent thinking will come under directed thinking.

Non-Directed Thinking:

It is quite different to directed thinking. It will be without any goal. When a person can't solve his problems in his life thenbegins day dreaming, illusions, behaving as a mad person. In adolescent stage these type of thoughts will be more.

Factors affecting Thinking:

So many factors will influence thinking. Among them Some of the following factors are important.

1.Percepts:

The psychological feeling when sensations received by sensory organs will create some thoughts. The sensation once we felt will remain in our brain. This help for thinking process.

2.Images:

The knowledge perceived through our sensory organs will be formed as symbols and figures in our brain. Those are called as Images. These images will act as models for the real things, experiences and actions. These are very important for thoughts.

3.Concepts:

In our thoughts there will be images and abstract concepts also. That means on seeing a thing the concepts and characteristics related that particular thing will be memorized in our brain.

4.Signs & Symbols:

The signs and symbols in our memory will affect out thinking. For example, even though there are so many coloursidentifying the red colour is used to stopand green colour is to go in traffic signals.

5. LANGUAGE:

Language is one of the main factor that influence thinking. without language there will be no thinking process. Our brain will think in different ways while reading, writing and hearing. So, while reading books the thinking process will be fast.

6. Interest and attention are so important for thinking

7.Motivation is so important for thinking

8.The simplicity and activeness help for thoughts. Matured intelligence is necessary for thinking.

9.Knowledge about Language, understanding the knowledge are helpful for the development of thinking.

10. Thinking style should bein a correct systematicway when a person was introduced to the people having various different traditions and culture and various different habits.

Class room implications:

- ❖ Let the student maketo think after giving some problems according to their age and maturation
- ❖ Let the students made to think how the concepts in their curricular subjects can be utilized in his day to day life situations.

- ❖ Let the students should be given the opportunity to discuss their thoughts. They should be given freedom to express their views deliberately.
- ❖ Let the students should be given the opportunity to think differently, imaginations and fictions.
- ❖ Rational thinking should be encouraged among children.

Reasoning:

Among the actions perform by the mind after thinking analysis and reasoning will be there. This characteristic reasoning will be in human beings only. The talented reasoning in human beings is called 'knowledge of discrimination'. Logical thinking is main for reasoning. This will regulate the thinking and is useful to decide whether thinking is correct? No? how much extent it is correct?

Definitions:

Reasoning is a stepwise thinking with a purpose or goal in mind" —Garrett.

"Reasoning is the term applied to highly purposeful, controlled and selective thinking"—Gates

Reasoning is solving problems by creating or generating conclusions based on the previous experiences but not based on the previous repeated answers – Mann

Characteristics

- ❖ Reasoning will have a fixed systematic way
- ❖ Utilizes the previous knowledge and previous experiences
- ❖ Symbols, signs, icons, concepts and language will be in reasoning
- ❖ An unexpressed action which is useful for problem solving.
- ❖ Follows the rational and logical path
- ❖ Goal achievement is the ultimate goal

❖ The thoughts executed in inductive and deductive methods is called reasoning

Reasoning Process:

Every person will have a problem but that may vary in different ways. The solutions are also are not same. According to type of problem and extent of problem we shall think the solution. That means by observing problem in so many dimensions and analyzing we can find the solution. The finding solution depends upon his reasoning ability. Intelligence, commitment and previous experiences are so important are so important for this.

There are some important steps in reasoning in the process of problem solving

1. Finding the aim and objectives of the problem
2. Finding the ways for problem solving
3. Recognizing responses
4. Identifying whether the solution given for the problem is correct or not

This reasoning process totally depends upon the way how a person behaves, the attitude about the problem and insight

Types of Reasoning:

Reasoning is of two types. They are
1. Inductive Reasoning
2. Deductive Reasoning

Inductive Reasoning :

The process of reasoning from specifics to a general conclusion related to those specifics. Inductive reasoning allows humans to create generalizations about people, events, things in their environment. That means coming particular aspects to general aspects. That means proving a theorem by using general principles is inductive reasoning.

For example: Memory power increases with the practice of yoga.

Ram's memory power increased due his yoga practice every day. Robert's memory power increased due his yoga practicesevery day. Rahim's memory power increased due his yoga practice every day. Therefore, we can confirm memory power in human beings will be increased due to practice of yoga every day.

Deductive Reasoning: The process of reasoning from general statements to a certain and logical conclusion

For example, solids expand on heating. Gold, Copper, Silver, Iron are solid substances. So, they expand on heating.

Classroom Implications:

- ❖ The content related to the student should be kept before the student.
- ❖ The student should to be given a scope to think the solution to a problem in scientific way.
- ❖ The problems should be designed according the age, intelligence and interests of the student.
- ❖ The student should be given flexibility for his logical thinking based on this previous experience.
- ❖ Training should be given for taking decision in a proper way.
- ❖ A discussion should be conducted on curricular content and local problems and make the students make to given ultimate solutions to those problems.
- ❖ The knowledge of problems which they will face in their real life situations should be given to the students , and they should be discussed. Opportunity should be given for their thoughts associated with reasoning

- ❖ Opportunity should be given to the students for questioning
- ❖ Reasoning ability should be developed among students by conducting various experiments and projects in a scientific way.
- ❖ Reasoning ability should be developed among students by conducting meetings with eminent educational experts

3.1.5 Meta Cognition: - "Knowledge one's own mind"

Meta Cognition means big thinking. That means a person thinking about his thoughts is called "Meta Cognition".

Thinking by himself about his thoughts and thinking process in detail s called Meta cognition.

The process of questioning, analyzing, summarizing, assessing, imagination with the help of visualization himself about his thoughts is called Meta Cognition.

By using Metacognition, the students will become good readers. The students will learn themselves only by reading the subject in the text books. So many students don't know about the questioning, analyzing, evaluating, discriminating their thoughts themselves. The teacher has to give training such that the students are able to analyze, assess their own thoughts themselves only.

Advantages of Meta Cognition:

1. The students can learn their subject in depth. By this they will get more understanding which leads to construction of knowledge.
2. The process of Meta Cognition develops creative, logical and summative thinking.

3. Meta Cognition makes the students as responsible good citizens. By the proper implementation of meta cognition student can lead their adulthood with good individual matured life after his studies also when he enter into his life. There are three parts in Meta Cognition. They are

1. Planning
2. Supervision
3. Evaluation

Application of the above three steps in education

1. Preparation of lesson plan
2. Supervision of teaching
3. Evaluation of the learning outcomes

1.Preparation of lesson plan:

❖ Thinking about the title of the lesson
❖ Reading the front and the last page of the text book
❖ Studying about the name of the lesson and author of the lesson
❖ Studying about the introduction of the lesson
❖ Studying the index and aims and objectives present in the beginning of the lesson
❖ Studying the diagrams, photos, titles present in the lesson
❖ Studying the important topics, sub topics and conclusion completely
❖ Connecting the unknown subject with subject learns through their lesson
❖ Thinking about the strategy of arrangement of topics in a lesson or in a text book
❖ Explaining the lesson in own words

Supervision:

- ❖ How much extent is the level of understanding the content present in a lesson
- ❖ Is there any ambiguity or doubts formed while learning the lesson
- ❖ Learning by questioning their self how much extent they understood and framing the answers.
- ❖ Establishing the relation between different topics and increasing his level of understanding
- ❖ Expecting about the upcoming events and situation
- ❖ Conformation of the content
- ❖ Preparing diagrams
- ❖ Supervision of thoughts by framing questions and searching answers for them
- ❖ **By r**eading the lesson on supervising his thoughts Student can recognize whether he is able to understand the lesson or not and he can also recognize whether his brain can concentrate on lesson or not?
- ❖ **Whether the student can remember the lesson he learnt?**
- ❖ **Is there is any answer for his questions or not?**
- ❖ Whether the student can remember important topics, concepts, words etc.

Likewise, the above points the student can control his learning by himself and he can show progress in learning

Creativity:

Introduction:

Among all births human birth is great. Comparing other living organisms in the world man having more wisdom than others. This wisdom of a person depends upon his thoughts and understanding. These thoughts must be wishing the good even in the critical situations also without losing his wisdom. This type of new thinking is called creativity.

Creativity is a topic related to the multiple intelligence. According to Gilford **"creation of new patterns, a transformation of knowledge and meaning or use the functions of objects in a new way."**

"**Creativity is the capacity to produce ideas that are both new and useful through divergent thinking".-Guilford**

 "Creativity is marked by the ability or power to create — to bring into existence, to invest with a new form, to produce through imaginative skill, to make or bring into existence something new. " . The newly created object and imagination should be useful to solve the problems to a person.Thatmeans creativity not only a process or strategy but also the new created must have practical implications in day to day life

Creativity = production process + implication

Definitions

According to Hutchinson" it is new process that will concern about any art, language,music or science."

According to Med wick Creativity is producing compositions, products or ideas which are essentially new and previously unknown.

According to Chaplincreativity is the ability to create new contents by transforming relations and generating new correlates by using this thoughts". According to Asbell Creativity is summative product of intelligence, aptitudes, personality traits and characteristics of problem solving

The process which is useful and satisfactory and agreeable new outcome by transforming relations and generating new correlates

Nature of Creativity:

1.Creativity is universal

2. Creativity is naturalistic and also gained

3. Creativity is always composed of new flavor

4. Creativity is a directed distinct goal-oriented thinking

5. Creativity is a process and is also a product

6. The scope of creativity is very wide

7. Creativity inter depends to some extent on intelligence.

8. Creativity directs towards the solution to a problem

The stages involved in the process of creativity:

Creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one...Walla's explained the stages regarding the process of creativity in four steps.

1. Preparatory Stage

A person has to collect the content when he wants to write new writings or when he wants to draw a new painting. For this he will recall his previous knowledge and experience that are present in his memory. HE may consider so many aspects and he may read so many books in this regard. By using the data collected and the previous knowledge and experiences in his memory he is ready to invent new ideas or strategies or things. So, we can call this stage as preparatory stage.

2.Latency Stage:

Persons when they are ready to do with the knowledge gained then only they will go for another work putting these aside. The other work means gardening, painting andmusic etc. Then only a situation will arise to solve a problem. Stress will be reduced in a person. In a person the creation that has to create will be hidden internally. So, this stage will be called as latency.

3.Insight stage:

Creativity will be emerged in the form of a sudden flash after sometime by the knowledge which is hidden in himself for a long time. Then a feeling will arise that a problem can be solved like this. In any stage when the knowledge hidden stage a person may feel he can search a solution like this. By this new concept will be formed. In this stage a person should create new with utmost happiness.

4. **Proving stage**:

Person will verify his solutions with his imaginations and fictions. When there is correlation between this these two only people will express his new inventions in the society, by this the process of creativity will be completed. That means the creativity will be evaluated.

Ways to develop creativity:

Even though creativity is mainly due to hereditary the environment effects creativity a lot. The plucking out the innermost creativity in children is the responsibility of parents and teachers. For this the following aspects should be kept one's mind

- ❖ The feelings like fear and shamefacedness will be avoided in children
- ❖ Competitions like Debates, essay writing, elocution, paining should be conducted.
- ❖ Encourage the various abilities self confidence, commitment.
- ❖ Preparation of activities so that those activities will create intrinsic motivation.
- ❖ The ides and feelings of freedom should not be criticized
- ❖ New ideas and new strategies should be encouraged.
- ❖ Children should involve in conducting science fairs, participating in field trips etc
- ❖ Brain storming method should be used

Measurement of creativity:

Observation and Activity method are more useful for measuring creativity. In Minnesota university Paul Torrance conducted several experiments on creativity for several years. By these experimental results he prepared a test "Minnesota Test of creative Thinking". In these there are ten different types of testes will be there. In these there will be four types of scores namely Fluency, Flexibility, Neutrality and Novelty.

Topics of specific advantages will be there in the test prepared by Valla's&Kogan. For example, how we can use the following things

- ❖ Knife
- ❖ Tires of vehicles
- ❖ Old footwear
- ❖ Lids of bottles
- ❖ Old news paper

This test is in usage for the primary school children. using this test we can assess the creativity of the children in age group of 6-12. Some more topics in this test will be like this.

- ❖ Tell some circular shaped objects
- ❖ Tell some names of objects which produce sound
- ❖ Name some machines which will rotate on wheels
- ❖ Name some things or objects having four side

Likewise, there are some tests.

Intelligence:

The Factor that decides the individual difference in a person is intelligence. Man is in a higher status due to his intelligence. There are individual differences in intelligence from person to person. Heredity and environment is responsible for these variations in

intelligence from person to person. The persons according to their intelligence can be categorized as idiots,imbecile,superior and genius. The reason for the backwardness and high achievement in their curricular aspects in education is intelligence only. So teachers must be well-known about what is intelligence, Importance of intelligences, types of intelligence, Intelligent quotient, measurement of intelligent, intelligence tests.

Definitions of intelligence

We can observe the intelligence in many dimensions. There are above 360 definitions are there for intelligence. By this we can know the importance of intelligence. On summarizing all these definitions, we can categorize intelligence into three main categories

1.The adjustment and facing the new situation in an effect way quickly:

According to Edvard 'The ability of adjustment by using symbolic processes´.

According to stern "intelligenceis a general capacity of an individual consciously to adjust his thinking to new requirements"

2.The competency of using abstract concepts:

- ❖ The competency required for abstract thinking is intelligence---MacDougal
- ❖ The power of abstract thinking is intelligence ---- Terman
- ❖ The supreme energy which will express power of assimilation is intelligence—Galton

3.The ability of learning by understanding the relations:

- ❖ The internal energy which can see the interrelations is intelligence----Spearman
- ❖ The summative administration of competencies which are useful for learning is called intelligence --- Gates
- ❖ The inherent ability in the persons who will do the activities associated with creativity, adjustment, social values etc.---

On arranging all the above definitions Weschler defined the intelligence.

"The competency required for a person for purposivebehaviorism, rational thinking, moulding the environment according to his needs."

Types of intelligence:

American psychologist Thorndike categorized intelligence into three types.

Abstract Intelligence: Understanding letters, digits, symbols, diagrams, words, sentences and ability to convey meaning with the help of these is called abstract thinking.

Mechanical intelligence: Administration of physical objects is called mechanical intelligence. For example, administration of physical objects means handling things, objects, apparatus, machines easily.

Social intelligence:

The competency of achievement according to his requirement by understanding his surroundings and responding careful according to the feelings of the surroundings.

Concept of intelligence Quotient:

Every person will have two types of ages

.1. Chronological age 2. Mental age

i)Age

1.Chronological age:

`The age is calculated from his birth is called chronological age. This age is related to body only. This age can be measured in days, months and years.

2.Mental age:

The age decided according to the achievement in the intelligence test with no relation with the chronological age is called mental age. The person who suggested the term mental age is Alfred Bennet.

ii) Intelligence Quotient:

The product obtained by multiplying the ratio of mental age to chronological age with 100 is called Intelligent Quotient. Stern at first proposed the Intelligent Quotient.

Intelligent Quotient = (Mental age / Chronological age) X100

iii) Consistency of Intelligence Quotient

Intelligence is the inherentinternal property of a person from his birth. The mental age will change along with the chronological age. So this intelligent quotient is constant

among persons. There is a probability of increasing intelligent quotient to some extent with the inspirational atmosphere, good motivation.

Limitations of intelligent Quotient:

Intelligent Quotient can be calculated by using various intelligence tests. But care must be taken while using these tests by the teachers. For example, while calculating the intelligent quotient of 18 years person Their mental age is also has to taken as 18. For this age group of persons only the abstract intelligence and concrete intelligence will be measured but not the social intelligence.

Classifications of Intelligent Quotients:

Terman-Mirral drew a intelligence polygon curve based on the experiments conducted on several people. They also proved that this intelligence polygon resembles with the normal probability curve. Based on this curve they concluded that most of the people's IQ will be in the range 90-100. Persons are categorized based on this Intelligent Quotient.

Measurement of intelligence:

Measurement of intelligence is not the measurement of external factors like height and weight. Intelligence is measuring the internal competencies. For the last 100 years so many psychologists prepared so many intelligence tests. So no other competency or ability is having these number of tests to measure them.

French psychologist Alfred Bennet in 1980 at first designed an intelligence test in French language. Along with another psychologist Simon he conducted this intelligent test for French students to analyze the reasons why they are backward in their

achievement level. So this intelligent test is called as Bennet-Simon intelligence Scale. This test measures the intelligence consists of 50 items measuring the age group 3 to 13 years children.

Both Terman and Merrill modified this intelligent test which is suitable to measure the intelligence of the age group 2 to 18 years. This intelligence tests depends upon the factors like attention, memory, discriminative reasoning etc.

Types of Test of Intelligence:

The tool which estimate the intelligence by comparing his chronological age and mental age is called Intelligence test. Intelligence tests can be categorized based on the factors like content in the test, once how many persons can be tested into 4 categories.

1.Verbal – Non-Verbal Tests

2.Individual-Group Tests

3. Paper-Pencil – Performance Tests

4. Power – Speed Tests.

|Based on content intelligent tests are categorized into two types.

Verbal tests:

To answer the question present in this the knowledge of language and moths is necessary. The questions in this test consists of audio recognition, antonyms, categorizing words, reasoning and mathematics related.Reading, writing, computing abilities are necessary for the persons who are attending this intelligence test. Based on the answers given by the people who attended this intelligence test only the intelligence of these people can be computed.

Example: Army General Classification Test, Weschler Verbal test

1.Non-Verbal tests:

This test will consists of observation of diagrams, drawing diagrams, responding to the given instructions etc. For this test no need of knowledge of reading and writing.

Example: Drew-A-Man Test, Raven's Standard Progressive Test, Matrices Test

According the number of persons at a time exposed to a test the intelligence tests are categorized into two types.

1.Individual Tests:

If only one person can be tested at a time using the intelligence tests then those tests are called individual tests.

Example: Bennet-Symon tests, Weschler child intelligence scale.

2.Group test:

If more than one person can be testedat a time using the intelligent test that test is called group test.

1.Example: Army Alpha test, Army Beta Test, Raven's Standard progressive Test.

Based on attitude of response the intelligence tests can be categorized into two types.

1.**Paper Pencil tests**: The test in which answers can be given with pen or pencil on a paper for the questions given in the test can be called as paper pencil t

2**Performance tests:**These tests are administered to the illiterate persons. The persons who are attending to this test has to show their skills. These tests generally

involve the construction of certain patterns or solving problems in terms of concrete material.

Example: Koh's Block Design Test, Bhatia intelligence test, The Cube Construction Tests

According to the speed of completion of the test intelligence tests are classified into two types.

1.Power Tests:

The person will complete the test in his own method and by taking time according to his need. Some liberty will be given He will complete test by completing one by one.

Example:Raven's progressive intelligencetest, PinterPatterson Test

2.Speed tests:

Test has to completed in a stipulated time . Time bound will be there to complete the test.

Example: Army Alpha Test, Army General Classification Test.

Uses of Intelligence Tests:

1. Classification or Grouping pupils for school work according to their abilities
2. Determining the level of abilities and competencies and thereby selecting the course which is suitable to them.
3. Predicting success in particular Academic Subjects

4. For diagnosing disabilities in school subjects and identification of backward and also intelligent students. Thereby giving suitable educational strategies according to their abilities

    5Educational and Vocational guidance

    6   Guidance and Organization of Learning activity.

Limitations of Intelligent tests:

1.The intelligence tests that are suitable to our current situations are not available

2.This is very risk process with more expenditure. There is a scarcity of well trained persons on these tests.

3.No reliability in these tests always

4. Even though we calculated the Intelligent Quotient we can't tell it to students.

5. In intelligence tests there is no chance of measuring commitment and self-confidence.

Theories of intelligence:

    There are different theories of intelligence, none of which agree with each other. So, based on their observations, research and experience intelligence is categorized in many ways. Based on this there are so many theoriesof intelligencewhich are in usage.

1. **Unifactor theory:** This was prepared by traditional psychologists like Bennet, Terman and Stern. According to them intelligence is composed of a single factor only. According to them if a person showed good performance in science, social, music or any other will also good performance in any

sector. But this was proved wrong by so many psychologists by their experiments.So this theory is not valid.

2.Two Factor Theory:

This theory was proposed by Spearman. according to him intelligence composed of two factors general factor and specific factor. General Factor will be unique. But there are so many specific factors. Mathematics computation skills, aerator skills, local interaction etc all come under general factor G .But Spearman suggested that in all these in everyone there will be one specific factor S

3.Multi Factor Theory:

This theory was proposed by Edward Leo Thorndike. According to him intelligence composed of so many factors. Effect of these factors will be in their every mental activity of an individual. The correlation between two mental activities will depends upon the similarity of same factor in two mental activities and extent of that factor influence in the two activities. Based on the theory Thorndike prepared a test called C.A.V.D. test. C means completion, A means Athematic reasoning, V means vocabulary, D means following direction.

4.Group Factor Theory:

After conducting several experiments on intelligence, The American Psychologist LuyeeThurstone proposed this Thurstone. In his book 'Primary Mental Abilities' he suggested intelligence the product of so many factors. In these so many factors there may be some factors having similarities whichThurston called them as Groups. According to his Research in every task or work there will be seven primary competencies related to mind.

1. V(Verbal) 2. M- Memory, 3.R(Reasoning) 4.N (Numerical ability), 5.S(Spatial Relations) 6. P(Perceptual Ability),W(Word Fluency).

Based on this theory Thurston prepared so many intelligence tests.

Theory of Structure of Intellect:

This theory was proposed by J P Guilford. This theory is most popular and satisfactory theory suitable to current trends. The content present in the intelligence is analyzed using the statistical technique called Factor Analysis and proposed three Diacritics. 1.Content 2. Operations 3. Products. In every Diacritic there will be some special factors. In content 5 factor, in operations 5 factors, in products 6 factors will be there. Every person will use minimum any three Diacritics for intelligence. So according to Guilford the summative product of 150 factors (5X5X6=150)is the intelligence.

Culture Fair Tests:

Intelligence tests can be administered at any place to any one without the limitations of language and culture. This type of tests are Culture Fair tests. The verbal intelligence tests will have so many limitations. For example, if a question in the test is asked like this "What is value of Dinar and Rubel in Indian currency?", then the person with the age of 5 years cannot answer this because he don't have an idea about the currency exchange. TO overcome these types of limitations thenonverbal tests or power tests.

Multiple intelligence:

Every day we are seeing some people who are successful in many sectors. Every person will be successful even in a single sector. Some may show affinity towards music while some may show affinity towards science and technology. Some people may shoe

affinity towards more than one sector. This is called multiple intelligence. For example, in a classroom if some student are successful in their studies and also in sports, music,dance,drawing, paintingetc. Those will have multiple intelligence.

If a student got poor marks we shall treat him as a backward student. Success in studies only called as intelligence? Success in other sectors except in education is not the intelligence? Howard Gardiner famous psychologist in his book "Frames of mind" gave the reasons for the success of a person in various sectors.

According Howard Gardiner persons will have different types of intelligence. Each type will show a unique skill. These skills and intelligence react with other gives a solution to a problem very easily. On doing research on these type distinct characteristics Gardiner explained 8 different types of intelligence.

1.Language Intelligence:

Arrangement of words, Sentence construction, Usage of phrases or group of words will come under intelligence. Usage of words fluently, writing sentences without grammatical mistakes will come under language intelligence. Sound language, good speaking ability are also examples of language intelligence. Book writers, Poets, Aerators'etc. will have more language intelligence.

2.Logical Intelligence:

Thinking every subject with logic and criticism is called logical intelligence. Abstract thinking and reasoning will be there in those people who are having logical intelligence. These people will use symbols and numbers mostly. They can solve puzzles efficiently. Scientists, Experts in mathematics, social philosophers will have logical intelligence.

Special Intelligence:

construction mind images, speculative models will come under special intelligence. They will preserve the special world in their mind and they will a imaginative shape. In the view of mathematics, it is 3D. In Sculptors, Artists, Architects, Designers this type of intelligence will be more. Ravi Varma Paintings, Sculptures in Ajanta and Ellora caves are the examples for this type of intelligence.

Musical intelligence:

Showing talent in seven ragas is called musical intelligence. This intelligence more in music creators who create music with rhythm. The musical intelligence is more in more who create topics by using musical instruments very easily. Subba Lakshmi, Latha Mangeshkar, Bala Murali Krishna , A.R. Rehaman, Ustad are the person having musical intelligence.

Bodily-Kinestistic Intelligence:

Controlling various parts of the body easily and meaningfully is called Bodily-Kinestic Intelligence. Thisintelligence will be more dancers, athletes, sports persons, gymnasts, persons who practice Yoga.

Inter Personal Intelligence:

Mingle with others, understanding the feelings, motives, wishes of others and behaving corresponding those is called inter-personal intelligence. The laity, political leaders, Social welfare activists will have this type of intelligence.

Intra Personal intelligence:

A person estimating himself is called Intra personal intelligence. Person having satisfaction, individual adjustment, healthy self-concept according to his competencies will come under Intra Personal intelligence. This type of intelligence will be useful for taking decisions which are useful to life. Philosophers, persons having Spiritual thinking, feelings will come under this type of intelligence.Yogi Vamana, Ramakrishna parama hamsa are the persons this type of intelligence.

Esthetic Intelligence:

Having total understanding about subjects related to nature is called as Esthetic Intelligence. Enjoying the beauty of nature, taste and fragrance is called Esthetic intelligence. This intelligence is more in nature lovers. Animals or birds lovers, botany scientists will have this type of intelligence.

Multiple Intelligence – Classroom implications:

1.Introducing various activities which may pluck out the multiple intelligence among children.

2. Motivating students towards individual and topics related to society along with lessons in the classroom.

3. Scope should be given to answer a question in many different ways

4. The real time situations should be corelated with classroom content

5. The possibilities and strength among children must be conveyed to the children.

6.Opportunity should be given to the children to participate in so many activities which may help to recognize the natural competencies and talent among children.

Perspectives of cognitive development – Individual differences:

study of development of information skills, language learning, live skills, Emotional significance, Attention, Amnesia among children is called cognitive development. Even though the chronological age of children is same they vary in their mental age. The study of this variation is called Cognitive development.

Teaching by paying attention on every student is impossible. Because among those the average students, intelligent students and slow learners will be there. Along with these students some mentally retarded children will be there. Even though the same curriculum and co curriculum is framed for all these students there must be change in teaching learning strategies. For the identification of these changes' cognition development helps a lot.

There will be differences among children in many aspects. There will be differences in learning competencies, social and moral developments. There are called as individual differences. Even though there difference may not be person to person but also ina person context to context also. By considering these individual differences Teacher has to teach student by considering these individual differences.

Historically, the philosopher in the fifth century BC Plato in his book " **Emilee"** told that each person has some specialty in terms of nature and the education should be given according to that only. In 1929 John Dewey in his book "Democracy and education "stated that the development of the country can be done by building the distinction between the students of the individual education system.

Sir Francis Galton, a British scientist is the first person who observed individual differences in scientific perspective. His famouswriting "**Inquiry into Human Faculty and it's development**" is the first book in Individual differences. Meckel Cattle is the person who had done a lot of research after Galton.

There are two main reasons for the existence of individual differences. They are the heredity and environment, Economical status of parents, level of parenting, discipline the affection shown are also reasons for individual differences.

Types of individual differences:

There are two types of individual differences. They are

1.Inter Individual Differences

2. Intra Individual differences

1. Inter Individual Differences:

The differences between two or more than two persons are called 'Inter Individual Differences'. There will be differences in topic like Interests, Attitude, Habits, Thoughts, Emotions, Instincts, Skills, Achievement and personality.

2.Intra Individual differences:

Having different capacities and competencies in the same person are called 'Intra Individual differences. A person can read well can not write well, can sing well but can not dance. A scholar in a language can not do well in mathematics.

Benefits to a teacher by studying Individual Differences:

The knowledge of individual differences will be very useful to a teacher in several ways

- ❖ Recognizing the competencies of children and continue to teach them accordingly
- ❖ Good guidance can be given for children
- ❖ According the level of intelligence, Interests, Attitude the teaching learning activities can be continued.
- ❖ mobility of Class models can be understood
- ❖ useful for framing direct feelings in the children instead of abstract feelings
- ❖ Helps in developing Independent thinking, creativity among children during teaching learning process.
- ❖ Useful to continue child centered education which intern it is useful for the all-round development of the children.

3.3. Cognitive Development perspectives:

3.3.1 Piaget Theory of Cognitive Development:

A Switzerland Psychologist John Piaget prepared an accurate frame to understand the cognitive development, Construction, management. According to him a person by reacting to his surroundings from the birth of a person, taking an active role in understanding the world. Some cognitive constructions will be useful to a person to understand his experiences. Those cognitive constructions are called as "Schemas".Schemas are the cognitive construction responsible for a person's organizational behavioralmodel. A person will have Schemas from birth only. For example,an infant can do Breast feeding, on touching to the lips then only to absorb, holding objects, beating etc. without any training.

Cognitive developmental Items:

Jon Piaget prepared Theory of Cognitive Development on observing and conducting research on how the children will frame their feelings like Number, Time, Morality etc. Piaget is the first psychologist who studied about the cognitive development.

Piaget Theory:

- ❖ Regarding the psychological aspects of children
- ❖ Refers to the theoretical development but not about learning
- ❖ Cognitive – Each step has a specific behavior

Cognitive Development:

 Development occurs in different stages.

According to Piaget cognitive development is a gradual revolution resulting from the environmental experiences with biological aspects with maturation. Development occurs in different stages.

There are three major steps in Piaget's theory.

1.Schema

2.Explains about the ability of adjustment and adjustment process When the baby turns from one step to another. In this there are three processes.

1.Assimilation

2. Accommodation

3. Equilibrium

1.**Assimilation**:

Assimilation means Combining the known knowledge with the new knowledge.

2.**Accommodation**:

Combining the known knowledge with new knowledge and again reorganizing the knowledge for higher order of knowledge construction.

3..**Equilibrium**:

Every time a child receives new learning materials, the baby will be in unbalanced stage. Then by the help of Assimilation and Accommodation he will attain the balanced stage. According to Piaget likewise the new and higher level of knowledge construction will take place.

For example, a student learnt about triangles. Then the student will attain an unbalanced stage. Then then student learn about the properties of triangles. Then he will form the schemas regrading the properties of triangles. Then the construction of knowledge about the triangle. Now on assimilation of the total concepts he framed schemas and he will get the balanced stage. likewise attaining the balanced stage, he may learn about the triangles in his next class.

Now the student can assimilate the types of triangles. The knowledge assimilated should be in a positive perspective and it should accommodate with the new knowledge. Then the student will form a new schema.

The properties and types of triangles will be there in the new schema formed. Likewise, the student can form higher regular schema step by step.

According to opinion of Piaget the construction of knowledge about triangles will be formed like this.

Balanced stage- With the beginning of the lesson triangle

Unbalanced stage – understand the properties of triangles

- With the process of Assimilation
- With the process of Accommodation
- Knowledge construction with the help of new formed schemas. This schema will be like an index. In this the properties of triangles will be there.
- On adjustment reaching to the balanced stage
- Beginning of the class with types of triangles
- Again, the unbalanced stage
- Understanding the types of triangles – understanding and assimilating into the schema containing the previousknowledge about tringles
- Assimilation
- Accommodation
- Forming a new higher regular schema
- Coming into the balanced stage.

Stages of Cognitive Development:

According to Piaget Cognitive development will be done in four stages In these stages children will attain the abstract training from the stage of reliance on sensory organs. 1. Sensory Motor Stage 2. Pre operational stage 3. Concrete operational stage 4.Formal operational stage

1.Sensory Motor stage:

This stage will from infancy to 2 years. In this stage due to the lack of language knowledge he will restrict to the sensory interactions with environment . He is able to understand the things, persons, situations in the surroundings. So this stage is called Sensory motor stage.

In this stage mainly the concept of material stability will be formed. That means searching for an objective even though it is not seen. Eight months baby wont do the trial of searching for an object. But ten months baby will search the object.

UNIT 4

LEARNING

4.0 Introduction:

Learning plays a major role in the development of an individual. Child starts to learn/know/do many things to adjust with the persons and environment around him from the moment of his birth from his mother's womb. Except the natural responses like crying, inhaling, exhaling (breathing) and sucking mother's milk, the child has to learn all other activities. That means it has to start learning.

In the process of learning, aspects like emotional development, motivation, social behaviour and personality should be considered. Process of learning promotes physical, intellectual, social, emotional, moral and language development of a person.

4.1 Objectives:

This unit helps the students –

- To know the meaning and the definition of learning.
- To know the influence of home, school and environment on learning.
- To understand the different factors influencing learning.
- To know the different theories of learning and how they are applicable in the classroom and to use it.
- To understand different methods of learning.
- To know the transfer of learning and its application.
- To know the role of memory and methods to improve it.
- To understand the concept of guided inquiry.
- To understand the concepts of integrated projects and their role in learning.
- To know and apply the concepts of co-operative learning and collaborative learning.
- To know the importance of group work and learners autonomy in learning.

4.2 Definition of learning:

Psychologists Hilgard and Hunter defined learning as

- 'Learning is the process of change in behaviour due to experience and training'.

In their book 'The Psychology of Learning and Instructions', Dececco and Crawford defined learning as "any relatively permanent change in behaviour that occurs as a result of reinforcement and practice".

This definition has three important aspects.

a. Learning is a change in behaviour.

b. It is a change that takes place through practice or experience.

c. This change in behaviour must be relatively permanent.

Gates definition for learning:

– **Learning** is the modification of behaviour through experience and training.

Kimble definition for learning:

– **Learning** is a relatively permanent change in a behavioural potentiality that occurs as a result of reinforced practice.

Herban Han definition for learning:

– **Learning** is almost a permanent change in behaviour or behavioural potentialities. It is the product of experience but not occurred as a result of illness, fatigue or drugs.

Though change in behaviour is not occurred at once, the change in potentialities influences the change in behaviour gradually in later period.

Characteristics of learning

1)   Learning is goal directed or an objective oriented.

2)   Learning is dynamic.

3)   Learning is the result of interaction between an individual and the environment.

4)   Pace of learning differs from person to person.

5)   Learning is application of facts learnt in a particular context in any other related situation.

6)   Learning is an action oriented mental process, which means comparing the acquired knowledge with previous one to construct new knowledge. It's a continuous process.

4.3 Contexts of Learning

1. Family   2. School   3. Environment society

Home is the first step in children's learning. Children learn in different ways in their home. They learn to imitate their parents, siblings and other people and learn many things in their home. Then after attaining an age they go to school. First, let us examine how the family influences learning in the children.

A) Family:

Learning is influenced by home atmosphere, methods of disciplines in the home, relationship between parents and children, ways of child rearing etc. Educational levels of the parents, their attitude towards education and the number of educated persons in the family could also influence learning of an individual.

Home influences learning of the children very much. The major factors are

*   **Family Disorganisation:** When there are no proper relationships among the members of the family and there are disputes in the family, it affects children's learning and leads to backwardness in their educational standards.

*   **Parental Aspirations:** Some parents with high aspirations on their children force them to study above their level either for their social status or for the future of their children, which makes the children unable to succeed the targets which are beyond their talents. So, children feel insulted and worry with mental conflicts. They couldn't achieve anything. So, children should not be forced to unnecessary stress.

*   **Birth order:** The order of the child in the family also shows influence on his learning. When there is only one child in the family, parents pay more attention and guide the child's learning for better performance. But, sometimes when there is only one child, because of over affection they may go backward in their achievement. When there are three or four children in the house, parents won't take care for all the children. It affects their learning levels.

B) School

Children attend the school after attaining a certain age. Let us study how learning is influenced in the School atmosphere by teachers and other children.

Some of the factors in the school that influence learning are

Physical facilities – Building, toilets, water facilities etc.

Human Resources – Trained teachers and non-teaching staff

Management system – Relationship between teacher and student, ways of discipline in the school etc,.

Co-curricular activities - Organising games, songs, quiz, elocution, essay writing and cultural programmes

Facilities like **Library, laboratory, play ground and school garden** etc,.

Teaching material- Audio, visual equipment, Multimedia teaching material, use of mass media etc.

- Teachers – Teachers relationship
- Teaching methods followed by the teachers
- Teacher – pupil ratio
- Black boards, library, buildings, clean surroundings, toilet facilities.
- Teachers
- Attractive curriculum
- Bilingual and multilingual culture
- Student-teacher relationship etc.

C) Environment:

Next to school, through different aspects in the environment various new concepts are learned.

The environment around the child influence the child's learning. Environmental factors such as social, economical and cultural methods influence learning. Opinion on education, importance given to it and facilities provided for education influence learning. Local libraries, cultural clubs, Radio, Television, Newspapers and Internet could also influence learning.

4.4 Factors Influencing Learning:

We discussed different types of factors influencing learning so far. Now let us discuss the factors related to learner which influence learning. These are classified into three types

1. Factors related to learner
2. Factors related to learning material
3. Factors related to method of learning

1) Factors related to learner:

There are so many factors related to learner. Some of them are

1. Maturity	11. Intelligence
2. Motivation	12. Goal achievement
3. Concentration	13. Age
4. Attitude	14. Sex
5. Needs	15. Studies
6. Interests	16. Habits
7. Memory	17. Previous knowledge
8. Emotions	18. Physical Health
9. Innate abilities	19. Mental Health
10. Personality	

When all the above factors are properly developed, learning occurs in a desirable way in the learner.

Let us examine some of the determiners of learning such as readiness, maturity, motivation and needs.

Learning – Readiness:

Readiness is related to physical and mental condition of the learner. If the learners are ready to learn, they can concentrate on learning. They can use their complete potentialities in learning. So they can learn easily, quickly and effectively. Further they can also apply it in their day today experience also.

Before teaching his students, a teacher has to verify whether they are ready for learning or not. If they are not ready, he has to look for the reasons for their unpreparedness and solve them. Then students will be ready for learning.

Even at home when children are not ready to learn, if parents force them to learn, they pretend as if they are studying but they don't. So teachers should discuss with parents in parents meeting and educate them on readiness for better learning of their children.

Children may be not ready to learn

- When they are ignorant of the purpose of learning.
- When teaching is mechanical instead of divergent ways of teaching.
- In severe social and economical scarcity.
- When there is some sad incident either at school or at home.
- Teaching at lunch time.
- Teaching after school hours or teaching at play time, not allowing them to play.
- When there is no sufficient physical maturity to learn.

Teacher should always be attentive in observing the readiness of the learners. He should take proper steps to their promote readiness whenever it is necessary.

4.4.1 Maturity:

Development of the innate abilities within the child from his birth, with the advancement of age is maturity. When there is no required maturity in the learner to learn a concept, no training will help him to learn. For example children at the age of 6 months could not learn alphabet, as they don't have the required maturity. So learning depends upon maturity.

Maturity is a natural process with advancement of age. There are two major factors in it. They are 1) receiving impulses from the environment and 2) responding to the received impulses. Heredity influences more than environment on maturity. Birds could fly in the sky when they attain maturity. But in human beings, it is not easy to

identify whether these behavioural changes are result of learning or maturity. But through deep observation the differences could be identified.

For example a boy is riding a bicycle. It is possible only when he attained maturity and practiced it. If he rides bicycle only because of maturity, all the other boys of his age have to ride the bicycle. But it doesn't happen. So, both maturity and learning are needed to ride a bicycle.

Maturity is needed for effective learning. But children at pre - primary schools learn many things without attaining proper maturity. It makes children to learn in a long period. Further, they couldn't say or write anything properly as the concepts are not well developed. Children can't learn without attaining required maturity. Even if they learn something, it's a burden on their future. It affects their interests. Hence, curriculum should be designed based on the maturity levels of the children.

4.4.2. Emotions:

Emotions are like colourful rainbows in life. These are classified into two types: 1. Positive emotions – Pleasant emotions. (confidence, happiness, affection, sex, love, waiting, curiosity, etc..) 2. Negative emotions – Sorrowful emotions. (Anxiety, fear, shy, anger, weirdness, jealous, disappointment, etc..). The term 'emotion' is derived from Latin word "Emovere" - which means "stirred up state". We can take this meaning to the state of body and mind vibrating and moving. Emotions are influenced by heredity, maturity, mental and physical health, endocrine glands such as adrenal glands etc. Food, Yoga and meditation promote emotional development.

Definition:

While an individual is interacting with the external environment, the changes within the body bring about the behavioural changes in the individual is called emotions. Children learn these emotions in two ways: 1. by imitation and 2.by conditioning.

1. **By Imitation**: Generally, children don't have an emotion like fear by birth. For example - Children watch the elders expressing fear and anxiety, when they see a snake.

Children observe the same and express it in future. If the elders are afraid of cockroaches and lizards in the house, children also learn to express fear when they see them. It was learned at the age of 3 years.

2. **By Conditioning**: Emotions like fear, anger, love, etc can be learned through conditioning. For example; it is evident from the experiments on an 11 year boy Albert by Watson. Before the experiment Albert was not afraid of animals. But he used to fear for big sounds. While Albert was playing with a rabbit, a big sound was made without notice of the boy. Immediately Albert started to cry. When the same experiment was conducted for several time, Albert started afraid of rabbit.

Along with attaining of physical and mental maturity, children get maturity in their expressions also. Emotions are a little controlled and displayed without hesitation. – Jersild

4.4.3. Learning Environment:

Before defining the term 'Learning Environment', let us identify the places where students could learn comfortably. In an informal way they learn at home, with neighbours and through interaction with society. In addition to these places, school is the most comfortable place for their learning. Home is the first learning centre and mother is the first teacher. Exciting home environment and evoking and motivating parents could make a good learning environment. When they attain the school going age, they have to learn in the formal ways. Every child has to attend the school. A school alone can produce great personalities. So, let us know how to create a learning centre and learning environment in the schools.

Defining Learning Environment

An environment with pleasant physical facilities, exciting and joyful environment, and learning supported accommodation, providing good social relations and properly organizing management can be defined as learning environment.

1. Physical Environment:

A good school building, a large playground, shady trees, plants, play material for physical and mental development, library, laboratories for different subjects, computer aided learning facility, light and air ventilated clean classrooms, scientific thought provoking children made colourful charts, comfortable benches to sit, good black board, running black boards for children to express their thoughts, instruments that could make teaching-learning process fruitful, teaching-learning material, subject wise teachers to use the material properly, etc… are considered as physical environment.

Activity:

Give some more suggestions to enrich physical environment to make learning environment.

2. Psychological Environment:

It is a teacher created learning environment, where children can learn comfortably. Teacher with patience, kindness to help the students, positive controlling, create clear rules and regulations for the benefit of students and make them know about rules and execution of the same can provide the environment.

Aspects of Psychological Environment

1) Freedom to express students' thoughts and ideas: Freedom to express their ideas related to learning material should be provided. Opportunities to make relations with others and to promote emotional development in the students should be created.

2) Decorating the classroom with students made charts: Stories, essays, songs, pictures and cartoons prepared by students should be decorated on the walls of the classroom to develop self confidence in the students. It helps them to be identified by the teachers and other students.

3) Call the children with their names: It is very important to call the children with their names in the class. Each student should be treated and respected as an independent entity.

4) Teacher should admit the things which he did not know: Teacher should not necessarily know all the things. Instead of giving imaginary answers to mistake them, it's better to provide opportunity for them to know.

5) Teacher should read and write along with his students: Parents at home, teachers at school usually lay pressure on the children to read and write which makes them feel bore. Instead of repeating the same, teachers and parents should explain them the uses of reading and writing. They should act as a role model by reading and writing along with the students.

6) Teacher should always be pleasant: To avoid scary environment in the students and to develop a friendly environment, teacher should always maintain a pleasant disposition in the classroom and remove insecurity feeling among them.

7) Creating harmony among the students: There may be disputes among the students. They spoil the class room pleasantness. Learning environment may be spoiled. So, teacher has to clear such disputes immediately and develop harmony among the students.

8) A teacher should always be cheerful: To make the classroom cheerful and interesting, teacher has to tell simple humorous stories and narrate funny incidents related to subject. Teacher should also laugh with the students.

9) Provide opportunities for problem solving: Teacher should provide opportunities to solve problems in the class room. When they come over the problems, it develops thinking ability as well as self confidence in the students.

10) Teacher should sit along with the children equally: Sitting along with the children avoids students' timidity, fear and inferiority complex. They can express their doubts clearly and freely. When they learn to ask questions, they question the injustice when they face them in the future.

11) Organising cultural activities: Instead of teaching all through the week, once in a week the school should conduct cultural and literary activities such as quiz, song and drama competitions to develop their natural innate abilities.

4.4.4 Motivation:

Motivation is the important factor that influences learning. When a person is motivated to learn, he can pay his complete attention on what he is learning and use all his potentialities to learn. But if the learner is not motivated properly he could not concentrate on what he is learning. Crow & Crow defines -'Motivation is the basis to learning'. Woodworth defines -'Motivation is the basis for all types of behaviour'. Bernard defines – 'Motivation as a phenomenon that drives a person towards a specific action or goal'.

Broadly there are two types in motivation. They are

1. Intrinsic Motivation
2. Extrinsic Motivation

Intrinsic Motivation: Without any external influence, if the individual is motivated within himself, such motivation is called intrinsic motivation.

A person who has interest, dedication and perseverance in his work by himself, he is intrinsically motivated. A student, who reads by himself for his pleasure without expecting a reward or to avoid punishment or to get marks in the examination, is called intrinsically motivated.

Extrinsic Motivation: Extrinsic motivation refers to behaviour that is driven by external rewards such as money, fame, grades and praise. Learning of a person, who is not interested by himself, but to get reward or to avoid punishment is extrinsically motivated.

Intrinsically motivated people enjoy learning and get satisfied with their work. So, they can continue learning for a long time. As they don't expect a reward or try to avoid a punishment they learn in a uniform way. But in contrast, the extrinsically motivated learner's learning decreases when the reward or punishment is removed.

Some students score good marks in 10th class. But they could not get pass marks in Intermediate. While they were studying 10th class, parents and teachers forced them to work hard. But in Intermediate there are no such conditions. There is no extrinsic motivation. So, they fail in the examination. It clearly shows that extrinsic motivation is temporary, whereas intrinsic motivation continues for long time. The extrinsic motivation

should promote intrinsic motivation in the children and then the extrinsic motivation can also give good results.

Precautions to be taken at using extrinsic motivation:

1.   Extrinsic motivation can be used only to activate the identified capabilities of the students.

2.   Children should not be cultivated to extrinsic motivation.

3.   Same extrinsic motivation should not be used for a long period. It means, always rewarding or always punishing should be avoided. The extrinsic motivation should be diversified in its nature.

4.   When the goals are fixed beyond the levels of the learner and offered rewards, it won't yield any result. Objectives should be fixed based on the levels of the learner.

Differences between Extrinsic and Intrinsic Motivation:

A student is intrinsically motivated to learn music. But his parents did not allow him to learn music. They insist him to get good marks and offer reward for getting good marks in the examination. Then there is a conflict in the student between extrinsic and intrinsic motivations and the student could not show better performance in both of them. If there is no difference between extrinsic and intrinsic motivations there are more chances for successful learning.

Methods to develop motivation among the students:

1.   Learning should take place in a free environment.

2.   Curriculum should be up to the levels, interests and innate abilities of the learners.

3.   Guidance and counselling should be provided.

4.   Good relationship and co-operation should be maintained in the peer groups.

5.   Knowledge of result should be available to students.

6.   Rewards and punishments should be according to the needs and the context.

7.   Debates and seminars should be conducted.

8.   Help students to decide proper objectives.

Learning - Achievement Motivation:

The basis of achievement motivation is motive to achieve. Those who engage themselves in a task on account of an achievement motive are said to work under the spirit of achievement motivation. According to Mc Cleland and Atkinson achievement motivation may be associated with a variety of goals, but in general the behaviour adopted will involve activity which is directed towards the attainment of some standard of excellence. Mc cavre says "The reason behind my present status is from my yesterdays thinking about how I should be tomorrow" is a good example for achievement motivation. Those who desire to achieve alone can achieve. Though there are abilities to achieve, if the desire to achieve misses they can't use their abilities.

Achievement motivation in children is based on the relationship between parents and family members, how they value education, interaction between teacher and peer group and introducing with new people. Teachers can promote students achievement motivation. The person who is cultivated to achievement motivation enjoys his victory with pride and satisfaction. When there is no aim in the life, they have less achievement motivation. When achievement motivation is low, they could not use their abilities completely to learn.

4.4.5. Interests

Interests can be considered as likes and dislikes of an individual. Interest are naturally innate as well as acquired dispositions. Interests are developed from likes and dislikes of parents, members of the family, childhood friends and locality. Interests may change with age. The saying -'There are no friends or enemies in politics forever' is true. So, the person, the thing or the subject which is liked most today, may become point of hatred in future. That is the reason a teacher who loves his children most, is loved by his students. And they will also like the subject he teaches. If you want to be a good teacher, you should love either your students or your children. If you love both, you will be the best teacher. So, today we say instead of 'study hard', 'study with love'. When we dislike

a person, we dislike the things he likes. We love the things, hated by the person we dislike. Enemy of the enemy is our friend. According to dictionary of psychology, interests can be defined in three ways.

1. **State that sustains attention of an individual for a long time:** For example if a child pays his attention on a particular type of books for a long time in the library, it reveals his interest in the subject.

2. **An individual's feeling of importance given to an activity**, **a task or a subject:** For example when a boy spends most of his leisure time in painting, his interest is in painting.

3. **State of motivation that makes a person to move towards his goal.** For example if a child attends 'Karate classes' without encouragement of others, it is evident that he is interested in karate. _____

We can change the interests as mentioned above. So, teachers and parents should make the children to develop their interests on desirable learning aspects. Intelligence alone is not enough to become a talented person in the field. When we encourage them on their natural interests, they can prove their talent in that field or we have to develop their interest in a particular field to make them experts in the field.

Measures to Identify Interests

1. State interest: Children announce the names of the subjects or professions they like by themselves. For example when a child says that he is interested in science and he wanted to become a doctor, it is state interest.

2. **Manifest interest:** People won't express their likes and dislikes by themselves. When we observe them, if they pay more attention or spend more time on a particular aspect, we can learn their interest. This type of identification of interest is called manifest interest. Here, an individual expresses his interests through his activities.

3. **Tests of interest:** Simple paper pen tests are conducted to the subject in a pleasant environment to measure their interests. Some of the interest tests are – "Strong

Vocational Interest Blank", "Minnesota Vocation Interest Test", "Kuder Interest Tests"(Kuder General Interest Survey), "Kuder Occupational Survey", "Ohio Interest Tests", "Lee-Thorpe Occupational Interest Inventory" etc….Let us discuss Strong Vocational Interest Blank (SVIB).

Strong Vocational Interest Blank:

This inventory was developed by E.K.Strong Jr, a Stanford University psychologist. It is used to assess basic interests in different occupations, administration, school subjects and entertainment programs. In this test, three letters are given for each aspect as L (like), I (I can't tell), and D (dislike). Subject has to circle the option related to him.

S.No	Subject	Like	I can't tell	Dislike
1.	Physics	L	I	D
2.	Music	L	I	D
3.	Stitching	L	I	D
4.	Geography	L	I	D

4.4.6. Aptitudes

There are many organisms in this creation. They are classified into animals and plants. Each plant that we see has its own specialty. They are used for shade, timber, medicine, vegetables, decoration, flowers, fruits, fuel, etc.. A thorn tree which is considered as it has no use, still used as fencing. So there is no tree which has no use at all. Similarly, human beings have different energy capabilities. Everyone is useful in some way to the society. Each individual has his own special abilities. When those special abilities are identified and nurtured in the individual, along with the individual the society is also benefitted. These special abilities in the individual are called aptitudes.

Aptitudes are the in born abilities that help the individual to perform efficiently in a certain area. Everyone has a special ability by birth. When the ability is identified and it is given training, the individual becomes a master in that field. For example two doctors

completed their course at the same time. One of them became specialist in his career and became very famous. The other may not become so popular. Earlier have the abilities of a doctor by birth, whereas the later doesn't have any such abilities. Similarly when a musician becomes popular at international level, his co-learners may not achieve that much of popularity. The reason for the low performance of co-learners is lack of aptitudes.

People choose the occupations based on their aptitudes or salary. Some people apply for all the jobs and choose the highly salaried job from those they are selected. They may not attain good results in their profession and get unsatisfied with their job, when they did not select the job according to their aptitude.

Activity: India stands in second position in the world population. But still we are below many small countries in the list of Olympic medals. Why? Give your reasons.

Definitions for Aptitude:

Munn defined aptitude - "When there was inborn ability to do a work, through training experts can be developed. Aptitude is the ability or capability to achieve proficiency in a specific area".

According to Birgham – "Aptitude is a condition or set characteristics of regarded as symptomatic of an individual's ability to acquire with training some usually specified knowledge, skill or set of responses, such as the ability to speak a language, to produce music".

According to Clark L Hull – "Attitude is the current status that indicates the special abilities and capabilities of an individual in the future".

According to Hahn and Maclean – "Aptitudes are correctly referred to as latent potentialities, undeveloped capacities to acquire abilities and skills and to demonstrate achievements"

Aptitude forecasts the field in which an individual can master. A person with high aptitude will succeed in short time. The higher aptitude the more he excels in the area. Aptitude is a cryptic force within an individual. It develops through proper training. So teacher should identify and train the aptitudes of the students. When the attitudes of an individual is identified and trained properly, a teacher can easily achieve the objectives of education. For example Sachin Tendulkar has the aptitudes related to cricket; Vishwanadan Anand and Koneru Hampi have aptitude related to chess; Abhinav Bindra has aptitudes related to archery, A.R. Rahman has musical aptitude, R.P.Patnaik has singing aptitude. So they have showed their talent at international level and became very popular. If Sachin was trained in chess, Vishwanathan Anand in cricket Abinav Bindra in music and Sania Mirjain in archery, they would have remained as common people.

Tests to identify Aptitudes -

There are two types of tests to measure aptitudes. In the first type of tests, measuring the aptitudes of an individual is based on his specific aptitude. For example, a person who has mechanical aptitude, it can be measured with 'Bennet Tests of Mechanical Comprehension'; Musical aptitude can be measured with 'Seashore Measure of Musical Talent'. Graphic art is measured with 'Seashore Art Judgment test'. Teaching aptitude test is conducted for those who want to join the teaching profession. The second types of tests are conducted on persons who have no specific aptitude. And it helps to identify the aptitude of a particular person. These tests are called Test Batteries. The example for such battery is "Differential Aptitude Test Battery".

Differential Aptitude Test Battery - It was developed by George K. Bennet and his followers based on Thurstone Primary Mental Abilities Theory. There are 8 types of tests in the battery. They are

1. Verbal Reasoning.

2. Abstract Reasoning.

3. Space Relations.

4. Numerical Ability.

5. Clerical Ability.

6. Mechanical Reasoning.

7. Language usage- Spelling.

8. Language usage-Grammar

Importance of Measuring Aptitudes -

1. Aptitude tests are backbones of the guidance services. These tests are very useful in helping the people in selection of special courses of instruction, fields of activities and vocation.

2. Knowledge of student's aptitudes helps the teacher to develop interests and positive attitude towards their aptitudes.

3. Knowledge of their Aptitudes helps students not to join the professions in which they don't have any aptitudes and avoid dissatisfaction and despair in their professional life.

4. Knowledge of aptitude tests helps the managements to select the students suitable to their training and to avoid waste of time and money.

5. Knowledge of the aptitudes helps the curriculum developers to design appropriate curriculum to maximum utilize the talents of the students.

4.4.7. Attitudes

We see the persons, facts and institutions, how we look at them. When a student feels that the school is good, he has positive attitude towards the schools. So he develops interest in education and performs well at education. When the students believe that teachers punish and there is no security in the school, it affects negative attitude towards school. When he has no interest in education it causes backwardness in

education. Some of the parents threaten their children to send to school as punishment, when their children don't take meal or do mischief. It may cause fear in the children and develops negative attitude towards the schools. Children have to struggle a lot to adjust when they first go to school.

Positive attitude on any aspect, improves learning. It promotes satisfaction and pleasure. Children can develop interest on them. Good and bad are common in everything in the society. When we think of good, we can get happiness and satisfactions. If we go for bad, it results in dissatisfaction and failure in the work. Attitudes are developed from parents, family members, peer groups and neighbourhood. Certain people are attracted towards terrorism because of the influence of their parents and family members or sometimes friendship may influence it. Attitudes are developed based on the environment in which they are brought up. Negative attitudes are not permanent. They can be modified in to positive attitudes by providing new experiences and learning.

Children acquire the attitudes of the persons who influence them more. The negative attitudes that are formed may not continue through the life time. New experiences and learning may change them into positive attitude.

If the teacher has positive attitude towards the subject he teach, children can also develop positive attitude towards the subject. When we don't have positive attitude on our profession, it leads to dissatisfaction and makes us disliked by others. Though a student have high IQ, still if he has no positive attitude towards education he can't perform well.

Freeman defines attitude as - "A predisposition or a tendency to respond positively or negatively towards a certain idea, object, person or situation".

Mehran defines attitude as – "Attitude is externally responding to social issues".

Attitudes can be learnt only through external behavior. They don't act independently but work with mental and emotional status of a person. Attitudes are related to personal, social, political, financial and moral aspects.

Activity:

How attitudes influence personality development of an individual?

Attitudes are the concepts developed in social behaviour. Attitudes are the foundations of social institutions such as castes, religions, marriages, family relations etc. School has to cultivate positive attitudes in the students through proper stimuli and prevent any wrong attitudes prevailed in the social environment.

When aptitudes indicate the area in which an individual can perform well and developing proper interests and positive attitude in the field, helps an individual to become a perfect man. The coordination among the three aspects helps in promoting all round development of an individual.

School Attitudes: Attitudes about school are formed either by direct or indirect experiences of the child. Pleasant experiences form positive attitudes, whereas unpleasant experiences lead to formation of negative attitudes towards the school. This formation of attitudes may occur either before joining the school or after joining the school.

Attitudes developed before joining the school: When parents have positive opinion towards school and teachers, they talk about the pleasant environment in the school such as – school is the place where stories are told and games are played, children can develop positive attitude towards the school. It makes the children to think that school is better place than their home. When they join the school, teachers should also tell them stories and allow them to play. So, children believe their parent's words and form positive attitude towards schools. Schools should provide affectionate and friendly environment where children can easily adjust and develop positive attitude on education. They will also attract other out of school children.

Programs for developing Desirable Attitudes towards School and Education in the children:

1. School should provide a feeling that school is the better place than the home in parents. So, they can cultivate positive attitude in their children towards school.

2. Parents of yet to enroll children should be invited to the school celebrations such as cultural programs, Games and Sports Meet etc.

3. Teachers should receive children with a pleasant smile and promote child friendly environment.

4. Free environment should be provided for learning.

5. Co curricular activities should be provided according to the interests of the children.

6. Opportunities are to be provided according to the interests and aptitudes of the children so that they can succeed in their activities. Success should be encouraged.

7. Plan should be prepared to learn subjects through activities and project.

Rating scales: Thrustone developed Equal Appearing Interval Scales. Guttman developed Cumulative Scales and Likert developed Likert Attitude scale.

In measuring attitudes rating scales are very useful. These scales contain statements and each statement should be responded in a five point scale.

1. Strongly agree   5 scales

2. Agree   4 scales

3. Undecided   3 scales

4. Disagree   2 scales

5. Strongly disagree   1 scale

Example: Teacher attitude Rating scale

Read the statement and Put a (tick) mark in the box which you accept.

S.No	Statement	Strongly agree	Agree	Not Decided	Disagree	Strong Disagree
1.	Teaching profession is passive					
2.	No need for extra ordinary					

	talents for teaching profession.					
3.	Moral standards of the nation depend upon the teacher.					
4.	Teaching profession is way of living					
5.	Teaching profession is ideal to all professions					
6	Teacher enjoys with the children in his profession.					
7.	Teaching profession is the right job for lazy people.					
8.	Teaching gives self satisfaction.					

4.4.8. Memory

Memory plays a significant role in all walks of life. 'No memory, no life'. Memory means remembering what we learned or experienced in the past. Learning and memory are two sides of a coin. We can't remember without learning. Learning can't take place without memory. Memory plays a vital role in the field of education. Memory is very essential for a student to learn new things, to think differently and to write an examination on what he had learnt.

We can say the names of relations, persons, villages or parents and other important aspects when somebody asks them, because we keep them in our memory.

Plato, the ancient Greek philosopher compared our mind to a wax ball. Knowledge we acquired through our past experiences or learning is imprinted on the mind. We use them to solve problems when they are required.

Sir Francis Galton is one of the psychologists who scientifically experimented on memory. He conducted his experiments in the lab established by him- Anthropometric lab and explained his experiments in his famous publications "Inquiry into Human Faculty and its Development".

Hermann Ebbinghaus, a German, was the first psychologist conducted scientific experiments on memory. His book 'On Memory', published in 1885, is a mile stone in experimental psychology. He conducted many experiments on memory.

There are three stages in memory

a. An experience or a stimulus imprints on mind.

b. These experiences or stimuli make changes in the central nervous system.

c. These changes influence behavior.

Definitions for Memory:

1. **Stout** defined -memory is "the ideal revival so far as ideal survival is merely reproductive… this productive aspect of ideal revival requires the object of past experiences to be reinstated as far as possible in the order and manner of their original occurrence.

2. **Ryburn** defined -memory is "the power that we have to 'store' our experiences and to bring them into the field of consciousness some time after the experiences have occurred is termed memory".

Process of Memorization: There are three stages in the process of memorization.

They are   1. Engram or Neurogram

                        2. Retention

                        3. Retrieval

Engrams: Our mind possesses a special ability by virtue of which every experience or learning leaves behind memory images or traces which are conserved in the form of 'engrams' or 'neurograms'. How long do we remember depends on the strength of these memory trace.

Retention: The preservation of the memory traces by our central nervous system or brain is known as retention. The duration of retention depends upon the strength and quality of memory traces.

Retrieval: Recollecting the experiences from our memory retention, when the need occurred is retrieval. When these memory traces are died out or the retention is short termed, we can't retain what is learnt or experienced.

Aspects of Memory:

Some of the aspects in the process of memory are 1. Learning   2.Retention   3. Recall   4. Recognition and 5. Re-learning. Let us discuss them

1. Learning:

Learning is the first step in the process of memory. The following methods are suggested by psychologists for effective learning.

1. Meaningful arrangement of learning material for meaningful learning.

2. Massed learning: Learning all the material at once.

3. Spaced learning: Take resting in between memorization/ learning.

4. Part method of learning: Dividing the material into parts and learning a part after completing the first part.

5. Whole method: Learning the material completely from the beginning to ending.

6. Learning with concentration.

As the learning is the first step in memorization, if we learn effectively using the above methods, we can retain the learning material for a long period in our memory.
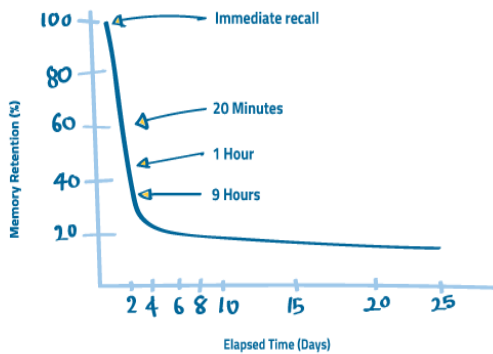
2. Retention:

The second step in the process of memory is Retention. Retaining the learned material in the mind for some period is called retention.

We know that what is learned through sense organs leaves it after effects, which is conserved in the form of memory traces by brain. The strength and quality of these memory traces retain them in the memory. They don't extinct.

Through recalling the past experiences or learned material and applying them to new material improves retention. There are individual differences in retention.

Characteristics of Retention Curve:

Ebbinghaus conducted experiments on retention and constructed the curve of retention. He plotted the data and shown in the following graph.

Retention curve   **Ebbinghaus**

Time elapsed after learning	Amount Retained	Amount Forgotten
After 20 minutes	53%	47%
After 1 day	34%	66%
After 2 days	8%	72%
After 10 days	25%	75%
After 31 days	21%	79%

The following studies can be observed in the above graph

- The rate of forgetting is very rapid at early stages.
- There is no total extinction of learned material.

- When the retention period increases there will be still a little retention of learned material in the memory.

3. Recall: Recall is the third step in the process of memory. Remembering or recollecting the learning experiences or learning material from retention is called recalling.

Our examination system often tests the retention of the students in different situations. We can find many questions related to recall in these tests. While answering essay type questions, fill in the blanks etc, students have to recall what they had learned.

4. Recognition: Recognition is the fourth step in the process of memory. The presence of the already experienced object or concrete experience aids the task of recollection is called recognition. Usually recognition is easier than recall.

When we need a person who we have not seen for a long time, we can recognize him. But we may forget his name. His presence helps to recognize him.

Multiple choice questions which we answer in Quarterly, Half yearly and Annual examinations belong to recognition type only.

Recognition score = $\left[\dfrac{\text{Number of correct trials} - \text{number of wrong trials}}{\text{Total number of trials}} \right]$ X 100

For example, in a list of 15 multiple choice questions, a student answers 12 right responses .His recognition score as follows,

Recognition score = $\dfrac{12-3}{15}$ X100 = 60

5. Relearning: Relearning is the fifth step in the process of memory. We forget what we learned after a period of time. When we have to learn the same, we can learn them easily.

Learning the same learning material which was already learned after a period of time is called Relearning. The period of relearning will be shorter than the period of learning. So, this method is also called saving method. Ebbinghas conducted experiments

on relearning. We can also measure saving period of relearning. This is called saving score.

Saving Score = $\dfrac{\text{Number of Learning Trials} - \text{number of Re learning Trials}}{\text{Total number of trials}} \times 100$

For example, a student reads a poem ten times to learn it. After a month certain errors are found in his recall. So, he learned it for second time. Now, he read only 5 times to learn. The relearning score or saving score of the student is

Learning Trials   = 10

Re - learning Trials   = 5

Saving score   = $\dfrac{10-5}{10} \times 100$

=50%

Types of memory:

1. Short term memory

2. Long term memory

3. Rote memory

4. Logical memory

5. Active memory

6. Passive memory

1. Short Term Memory: Short-term memory is the capacity for holding a small amount of information in mind for a short period of time. Short term memory is needed when we want to remember a thing for short time. Examples for Short Term memory: Phone numbers of others, Tenth class Hall ticket number, the first question in mathematics examination, etc.

2. Long Term Memory: Remembering the things for a long period is called Long time memory. Examples for Long Term Memory are Our name, Names of our parents, our educational qualifications, date of birth, certain important persons, incidents are remembered permanently. This is called long term memory.

3. Rote Learning: Under rote learning, the things are learnt without understanding their meaning. Students mug up tables and principles in mathematics and poems in Telugu without understanding their meaning and use rote memory.

4. Logical Memory: In this memory the learner tries to understand what he learns and relates it with other aspects to remember. Here, he understands what he learns and why he learns.

5. Active Memory: Learner directly participates in learning and remembers the learned material for some time in his memory. Example: Conducting the Archimedes experiment and remembering it, constructing triangles and rectangles to memorize them, dramatizing stories, incidents and situations to remember them for long time.

6. Passive Memory: In passive memory students remember things either by reading or by listening to them theoretically. Example: When teacher teaches 'how to swim' in the class room with explanation, they remember passively. Memorizing by listening to material is passive memory. Students learn topics related to science without conducting experiments are passive memory.

Some other concepts related to memory.

1. Déjà Vu or Fake Memory: Sometimes we experience that things which we are seeing now, are already seen by us though we have not seen them before. There may be some similarities to which we have already seen with the present scene. This is called Déjà Vu, a French word.

2. The Zeigarnik effect: Zeigarnik, a soviet psychologist discovered that people remember uncompleted or interrupted tasks better than the completed tasks. This is called Zeigarnik Effect.

Forgetting

Forgetting means fail to recall the learned material. We have many experiences from our birth. We could not remember all these experiences and we forget some of them. Students also forget what they learn in the school. In our day to day life, we remember only few things permanently and forget all other things.

Reasons for Forgetting:

Some of the reasons for forgetting are

1. Passive decay through disuse

2. Inhibition

3. Repression

4. Abnormal Forgetting

1. Passive decay through disuse: According to psychologists, in memorization, certain memory traces are formed in our brain. These are called 'engrams'. With the advancement of time, these memory traces or the impressions get weaker and weaker and finally fade away. But when we forget certain things over lapse of time, we still recall them when there are signs of it. Certain things can't be forgotten, thought they are not in use. For example: riding a bicycle, type writing etc. Though they are not in practice for a long time we can still perform when it is needed. Child hood experiences, poems and

songs learned in the childhood may be recalled in the old age. But sometimes it is difficult to recall the material learned two or three weeks ago. So the theory of 'Passive Decay through Disuse' is rejected.

2. Inhibition: Interference affects forgetting, which is called Inhibition Effect. These are two types. They are a) Proactive inhibition and b) Retroactive inhibition.

a) Proactive inhibition: The past learning interferes with present learning and interrupts the present learning. It means the past learning inhibits the present learning.

Study the following experiment that explains the proactive inhibition.

Group	1st Learning	2nd Learning	Recall
a) Experimental group.	10 Vemana poems	10 Sumathi shataka poems	Sumathi shataka poems
b) b)Controlled group	Rest	10 Sumathi shataka poems	Sumathi shataka poems

In the above experiment students who learned Vemana poems first and then learned Sumathi shathaka poems, got interrupted in learning Sumathi shathaka poems by Vemana poems. Proactive inhibition occurs when there are more similarities between learning material.

b) Retroactive inhibition: Present learning interrupts past learning in Retroactive inhibition. Present learning inhibits past learning.

Study the following experiment

Group	1st Learning	2nd Learning	Recall
a) Experimental group	10 Vemana poems	10 Sumathi shathaka poems	Vemana poems
b) Controlled group	10 Vemana poems	Rest	Vemana poems

In the above experiment students learned Vemana poems first and then learned sumathi sathaka poems. While recalling their Vemana poems the later interrupted their

learning of Vemana Poems. In retro-active inhibition present learning inhibits the past learning.

3. Repression:

Repression means one deliberately tries to forget something. It is a defense mechanism. Under this process the painful experiences and bitter memories are deliberately pushed into the unconscious layer of the mind and are left there for forgetting. These experiences and memories try to come into the conscious mind. When these suppressed experiences and memories are over loaded, they exit in the form of dreams and mental disorders.

In Psycho analysis, Psychiatrists could measure these repressed experiences and memories through dream analysis. In free association an individual deliberately expresses his thoughts and feelings. A psychologist will listen to them and analyze.

4. Abnormal Forgetting: 'Amnesia' can be occurred from mental trauma or physical trauma. Amnesia is an abnormal forgetting. Another type of abnormal forgetting is 'Feud'. An individual may forget his name and place. He goes to a new place and starts a new life with a new name. If he meets with any shock, there are chances of recollecting his old memories.

Methods to improve memory

Some of the factors that influence memorization or retention are as follows

1. Motivation: Proper way of motivation could improve memory. Good memory leads to good retention. To improve retention in the students, a teacher has to take on good motivational techniques.

2. Interest and Attention: Interests and attention also help to improve memory. Appropriate aptitudes and proper attention will develop level of retention. So, students' aptitude should be properly encouraged in the school. When students learn the content by developing interest on the subject and paying attention on what they are learning helps them to improve their memory. Avoiding inhibitions also helps improving memory.

3. Less Emotional: Emotional intensity effects memory. Things learned with immense emotions are lapsed from the memory easily. Students should be pleasant while learning.

4. Association of Ideas: The association of ideas develops memory. It is good to follow the principle of association in learning. For example, the association between Tajmahal and Shahjahan helps the students to remember Shahjahan, when they listen to the name of Taj mahal. Similarly sometimes distinction may also help to develop memory. For example the word heaven recalls its antonym hell.

5. Over Learning: Over learning is learning the same material even after we learned it. It promotes reinforcement to sustain retention.

6. Recitation: Recitation also develops memory. It improves retention. So, students could recite certain information to improve their retention.

7. Mnemonic devices: Mnemonic device helps to improve memory. For example the code VIBGYOR helps to recall the colours in the rain bow. Similarly, in Telugu, 'Ya, Ma, Tha, Ra, Ja, Ba, Na, Sa, La, Gam' is a mnemonic device to identify the meter in a poem.

4.4.9. Personality

People consider the term 'personality' related to physical appearance or beauty. The personality of a hero or a heroine in the movies is a common talk. Personality includes not only physical characteristics but also mental, social and moral characteristics.

"The term personality means the configuration of individual characteristics and ways of behaving which determine an individual's unique adjustment to his environment" – Hillgard

"When a person reacts with his surroundings, the presence of his specific organization of permanent mental characteristics indicates his personality" - Wilbeard James.

"Personality is the subjective option of culture" – E.Faris

Components of Personality:

Peter Sandiford identified the following eight traits of personality.

1. **Physical traits:** Physical traits such as height, colour of hair, colour as skin, physical structure, health, good looking etc., helps to predict personality of an individual.

2. **Physiological Traits:** Internal biological processes, blood pressure, ratio of contents in the blood, a proper balance between secretion of glands, blood pressure etc., also influence the personality of an individual.

3. **Intellectual abilities:** Thinking, creativity, intelligence, learning etc., also affects the personality of an individual.

4. **Aptitudes:** Abilities like music, drawing, dance, mathematics and language which are in born and developed through training could also influence the personality.

5. **Skills:** Physical skills, which could be done easily and accurately like playing, writing drawing etc., also includes in the determiners of personality.

6. **Habits:** Habits, the acquired responses in everyday life, also part of one's personality.

7. **Abilities:** Certain abilities like sensations, reasoning, decision making, retention, language ability, observation, memory, attention etc., also play a major role in one's personality.

8. Traits: Trait is a behavioural disposition model- such as gentleness, simplicity, harshness, bitterness, and passive nature etc., either temporary or permanently, naturally occurred or acquired things. These are also personality aspects.

These elements are not independent in a person. They are interchangeable in a person.

Personality Development

Though personality is in born, environmental factors and habits influence personality development.

1. Physical factors: Though body, structure and shapes are decided at birth, physical exercises in the morning and in the evening give a better shape to it. Balanced diet, fresh vegetables and fruits in the diet modifies the body colour and fitness.

2. Intellectual factors: Though intelligence is in born and a product of heredity, participating in listening and discussions in the schools, improving reading habits, solving puzzles, and solving problems can improve intelligence. A person who engages his mind in work will show better performance than a person, who keeps his mind always passive.

3. Emotional factors: The stirred up state of mind is called emotion. These are like colours in the life like a rainbow. Life without emotions is barren. A person who can control his emotions and expresses at desired level becomes a model for others. Yoga and meditation help to control emotions. Emotional quotient is measured to appoint high level positions in the reputed institutions.

4. Communicative factors: How long do we speak, is not important. How much does the listener understand is important. Our communication should be comprehendible to the audience. The personality of the person, who speaks brief but conveys information, can

influence the personality of others. Body language should be according to the speech. Even in written communication, the language should be intelligible to others.

Personality Development Components: "A sound mind in a sound body".

1. Physical Exercise: A healthy mind is in a healthy body. To keep the mental state fit, one has to keep his body fit. Exercises in the morning and playing games in the evening keep a person healthy. It develops a good physical structure. According to Eric Ericson, a person who plays well could work hard in his education to become a talented person. Absent of physical exercises leads to obesity. Increase in cholesterol may cause cordial diseases.

2. Meditation: Yoga and meditation help to keep physical diseases away and promote mental peace. They develop balance between external and internal glands for proper secretion. It improves pleasantness in the face and emotional control for personality development. It improves memory. It gives fair thoughts. Yoga cures physical diseases and chronicle diseases.

3. Reading: We acquire knowledge through listening and reading. Students acquire knowledge through listening to lectures of their teachers and lecturers in the schools and colleges and take down the notes. Now-a-days psychologists suggest that students should learn by themselves learning rather than listening to someone. For better self learning one has to read many books by himself. A person with good knowledge can influence others. So, a regular habit of reading improves meaningful learning.

Factors that interrupts personality development:

1. Over sleeping: Eight hours of sleep is sufficient for the young. Children need to sleep more time. But gradually, they too decrease the period of sleeping. Diseased people may sleep more than eight hours according to prescription of the doctors. High emotions decrease sleeping and affect physical health. Over sleeping causes not only ill health but also decreases time to study, that may cause backwardness in education.

2. Laziness: Laziness can be defined as averse or disinclined to work, though one has ability to work. Avoiding to work is laziness. Children are inclined to avoid home work given in the schools. They try to avoid the work given by their teachers. It affects their mind. When an orthopedic bandages the fractured hand and removes the bandage after some time, it takes few days for the hand to work by itself. Similarly a lazy man's mind and body lost its activeness.

3. Postponement: Mahatma Gandhi said "Do tomorrow's work today and the today's work now". But usually students postpone all their work. A week before the examination they take up all the work and do it fast. It leads to emotional imbalance and scoring low marks/ grades in the examinations. It affects the quality of education also. Students should plan their work day wise, based on the tasks given by the teacher and prepare for their examination in a planned way to complete the syllabus. Students could show their merit when they act according to the plan.

4.5   Perspectives of Learning and its Application:

Education should satisfy needs .When education could not satisfy the needs, there is no desire for learning. Needs are two types. They are 1) Primary needs and 2) Secondary needs. Maslow classified needs into 5 types

Primary needs like food, water and sleep (rest) are the most basic needs. Satisfaction of these needs is very much essential. The secondary needs are mental security, social recognition and self respect, love etc.. There are two types of relationships between primary needs and learning. First, when the primary needs are not satisfied, an individual cannot concentrate on his learning. When his mind is focused on water or food, when his primary needs are not satisfied, he could not pay attention on what he is learning. For example when children are hungry they can't learn that was taught to them. The primary needs are temporary obstacles for learning. The second relationship is when learning satisfies basic needs of an individual, it provides effective learning in the learner.

To satisfy secondary needs such as social recognition, children learn new things. For example - To get recognition in his village, a student want to learn to speak English. He works hard to speak English and get recognition in his village. Students study hard to get good marks to be recognized in their classes. When teachers and parents looked down at a student who got low marks in the examination, he feels that his self respect is disturbed. Next time he works hard and gets good marks. Children love to get this type of recognition from the society by scoring more marks in the examination. So, secondary needs influence learning very much.

Along with primary needs, secondary needs such as love, affection, recognition, self respect etc., influence effective learning in education as well as employment.

In addition to the factors related to learner, the factors related to learning material also influence learning. They are (1) Size of the learning material, (2) Meaningfulness, (3) Difficulty level and (4) Organisation of concepts and units

Factors related to method of learning should also used appropriately. They are (a) Spaced Vs Un spaced method (b) Whole Vs Part method (c) Rote learning and (d) Over learning

4.5.1. Theories of Learning:

Psychologists conduct several experiments to develop a theory with an ideal, aim, a way of thinking and perspective. The set of rules formulated on the theory and phenomenon were further strengthened through reviews and experiments conducted by their followers. Now let us study some of the theories on learning for our present study.

Some important learning theories are 1) Conditioning 2) Trial and Error 3) Insightful Learning, 4) Learning by Observation, 5) Bruner's Learning Theory and 6) Constructivism

1. Conditioning

According to Drever : "Conditioning is a process by which a response comes to be elicited by a stimulus, object on situation other than that to which it is the natural response"

Conditioning is two types. They are a) Classical conditioning and b) Operant conditioning.

a) Classical Conditioning:

Ivan Pavlov, a Russian psychologist, gave birth to the process of conditioning theory in one of his experiments. The theory, discovered by Pavlov, is known as classical conditioning.

Pavlov tied a dog and fitted a rubber tube to its salivary glands in the mouth .The other end of the rubber tube was connected to a measuring jar. When the dog salivates, it was collected in the measuring jar. So the amount of saliva was measured when it salivates
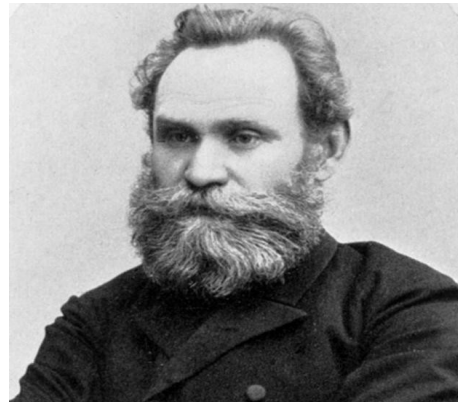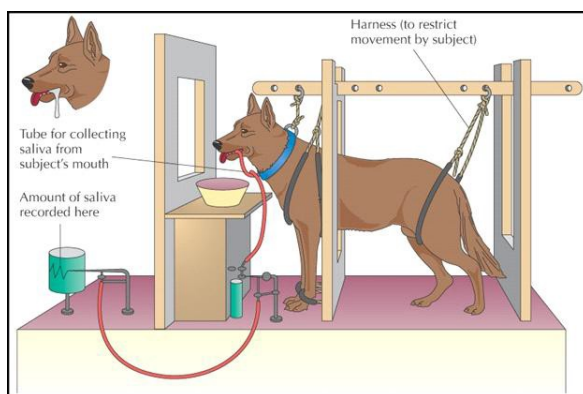
Pavlov experiment:

Pavlov fitted a hungry dog in a mechanically controlled device. A rubber tube was fit in his mouth and its other end is connected to a measuring jar. So, the amount of salivation can be measured.

1. At the first stage, food (natural impulse) was presented and the amount of salivation was measured. He conducted the same experiment for several times and measured it.

2. In the second stage, when the food was given to the dog, a bell (an artificial stimulus) was rung. Salivation of the dog was observed. This process of ringing the bell with food was conditioned for several times.

3. In third stage, the bell was ring, the dog used to salivate at the receiving of the bell.
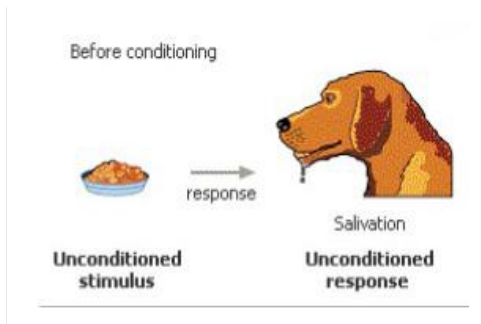
In this experiment he associated an artificial stimulus along with natural stimulus and got the natural responses for the artificial stimulus. It means artificial stimulus also got importance in this bonding. So, this is called Type 'S' Conditioning.

Pavlov conducted many experiments and published his theory. So it is called Pavlov s Classical Conditioning Theory.
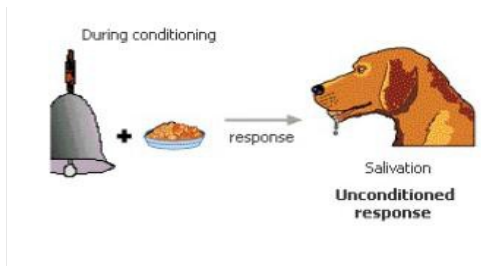
The order of Pavlov experiment can be seen in the following diagram.

1. First stage:

Food	Secretion of saliva
Natural stimulus	Natural response
Unconditioned stimulus (UCS)	Unconditioned response (UCR)

Before conditioning

response

Salivation

Unconditioned stimulus

Unconditioned response

2. Second stage:

During conditioning

response

Salivation

Unconditioned response

Ringing the bell (Artificial stimulus) along with Food	Secretion of saliva
For Natural stimulus	Natural response (UCR)

3. Third stage:
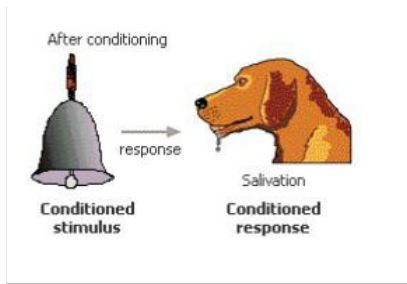
| Ringing the bell | Secretion of saliva |
| Conditioned Stimulus (CS) | Conditioned Response (CR) |

According to Drever – Conditioning is associating a neutral stimulus with a natural stimulus that acquires all the characteristics of the natural stimulus.

The laws of Classical Conditioning are as follows:

a) Law of Reinforcement: When the bell is associated with the food, conditioning takes place. The more intense the association, the more rapidly the conditioning will proceed and larger the CR will be. It is called Reinforcement.

b) Extinction: After the conditioning, it can be withdrawn. When the bell (CS) was not followed food (UCS) for several times, the dog stops to secrete saliva or the conditioning extinct. This is called Extinction.

c) Spontaneous Recovery: Even after extinction, after a lapse of time, suddenly the conditioning re-appears. This is called spontaneous recovery.

d) Generalization: Generalization is a process in which a conditioned response to a stimulus is generalised to a similar category of stimuli. For example, when it is conditioned to sound of a bell and get conditioned response of salivation, for a similar sound either a buzzer or horn it starts salivating, that is conditioned response

Watson, in his experiments on a boy Albert created fear for white rats artificially. When the boy went near the white rat, he made a big sound by dropping a plate on the floor. It caused fear in Albert. The boy showed his fear not only when he sees a white rat, but also any white fur toys or similar objects. It clearly shows that the boy generalised his fear of white rats.

e) Discrimination: Discrimination is another aspect of conditioning. This is in contrast with generalisation. Discrimination means conditioning is restricted to particular

conditioned stimulus only. For example : When the boy was frightened to white rat along with white fur toys and then similar objects, after sometime he restricts his fear only to white rats. This is called Discrimination.

f) Higher order conditioning: Pavlov experimented that conditioned stimulus could be used as an unconditioned stimulus in further conditioning. Let us observe higher order conditioning

After first conditioning

Ringing the bell	Dog salivates

In the second order

Put on the bulb Ringing the bell	Dog salivates

In the third order

Put on the bulb	Dog salivates

The ringing of the bell conditioned to salivate, and then put on the bulb associated with the ringing of the bell to make the dog salivate. Then the dog starts to salivate for putting on the bulb. This is called Higher order conditioning.

Classical conditioning – Educational importance

The theory of conditioning could be applied in Learning

- Between the shapes and the sounds of the letters
- Between number concepts and numbers
- Between names of the objects and the objects
- To act according to traffic lights and school bells by Public and students
- Conditioning between music and singing /dancing that promotes uniformity in dance / song
- To conduct an activity properly classical conditioning is necessary in the students
- To cultivate discipline
- To avoid bad habits

- To promote good attitudes

- To avoid fear

- To attract towards lessons

- To avoid nail biting /finger sucking /bed welting.


b) Operant conditioning:

B.F Skinner, an American psychologist is the protagonist of the operant conditioning. Operant conditioning proposed by B.F Skinner and his behavioural experiments on animals, influenced psychology and particularly educational psychology. Operant condition is also called as 'Instrumental Learning'.

Skinner worked in a book shop after completing his graduation. There he read essays and books of Pavlov and Watson, which influenced him to study psychology. He joined in Harvard University and received his PhD degree in psychology from the university.

According to Skinner's operant conditioning living beings are dynamic. They always interact with their environment.

1. An organism is always dynamic. It responds and interacts with its environment.

2. In operant conditioning, stimulus plays the role of reinforces.

3. When the environment of an organisation is controlled in an order carefully, their behaviour can be controlled.

He kept a rat in the box. There was an iron lever in the box. The lever can be pressed down. When a hungry rat was kept in the box, it makes several trials in search of food. When it presses the lever at random, the food is given to it. Thus the rat learns that to get food it has to press the lever down. Skinner described this type of learning as operant learning.
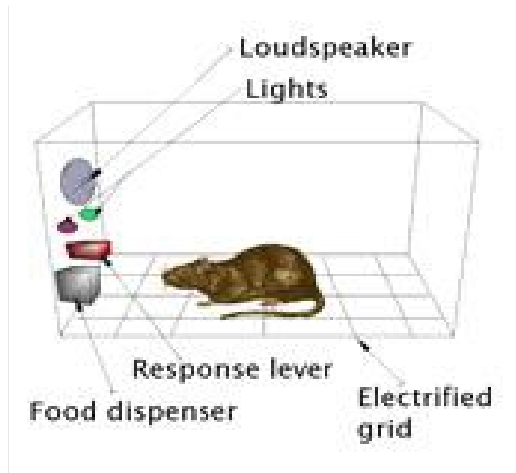
Skinner Box   B.F.Skinner

The rat learned to press the lever, when it needs food (the more reinforced stimulus).

There is an association between responses and stimulus. Only for correct responses, the reinforced stimulus was supplied. So this association is called R - Type conditioning. Here the responses are given importance. So it is also called as R - S type conditioning.

Further skinner explained that the association between responses and the stimulus is behaviour, whether that behaviour is observable or not depends upon the availability of stimulus. When the rat could not get food when it press the lever, it stopped pressing the lever. This is extinction. The principles formulated by skinner are very much influenced behaviourism. The important outcome of operant conditioning is 'Programmed Learning'.

Based on the operant conditioning, skinner introduced the new process in education called Programmed Learning. It is also called as teaching machine. In this teaching method, complex teaching aspects are divided into small steps. These small steps are called frames. In this process teaching items are divided into small steps. Students have to answer /solve a question /problem after reading them. Then he can verify his answers. It leads to self learning. He learns whether his answer is right or

wrong. Learning is based on individual differences of the learners. In fact the teaching machines are first discovered by Pressey. Then it was developed by Skinner.

Differences between Classical Conditioning and Operant Conditioning

Classical Conditioning	Operant Conditioning
* Stimulus oriented conditioning. It's called S type conditioning.	* Response oriented conditioning. It's called R type Conditioning.
* Association between stimulus and response.	* Association between response and stimulus
* Association between natural stimulus and artificial stimulus.	* Responses are voluntary
* Responses are drawn.	* Responses are expressed
* Learner is passive.	* Learner is active

2) Trial and Error Learning:

Edward L. Thorndike, an American psychologist, conducted experiments on chicks and cats in Harvard University under the supervision of William James. He was awarded PhD., from Columbia University.

He explained the results of his experiments in his book "Animal Intelligence - Experimental studies". Let us examine the Thorndike's experiments on cats and the laws derived from these experiments.

In trial and error learning, learning occurs at making mistakes and correcting them. Edward L. Thorndike was an important psychologist in conducting experiments on trial and error learning. He used a puzzle box to conduct his experiments.

He kept a hungry cat in a puzzle box. He arranged food outside the puzzle box that could be seen by the cat. The cat was to press a switch to open the box. The cat made several attempts to open the box. It pressed the switch in its random efforts and door was opened. The cat come out of the puzzle box and got his food. The cat attempted several

trials, made mistakes and corrected the mistake in its last trial. The cat was kept in the same box again. Again it made several attempts. But this time the number of mistakes is reduced. The duration of learning is also decreased.

When the cat was exposed to the experiment several times, it learnt to press the switch to open the box. The results of these observations are mistakes are reduced after continuous efforts and time taken for learning is decreased. At last the cat learned to operate the switch to open the box.

Learning takes place when the number of efforts is increased and errors are reduced. This method of learning is called Trial and Error learning method.

Aspects of trial and error learning are:

1. Organism be motivated

2. It moves towards goal.

3. It confronts with obstacles

4. Responds variety of actions

5. Gets the result by chance

6. Stamps in the correct responses /responding

7. Stamps out the incorrect responses

8. Selects the right response –bonding or connecting

9. Strengthens the bond between the problem and response.

These aspects can be seen in animals, children and human beings and promote learning.
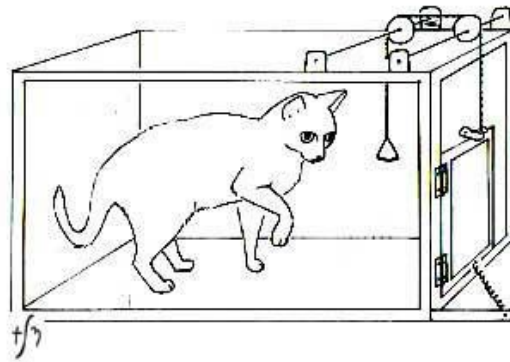
Edward L. Thorndike   Puzzle Box

Thorndike's Laws of Learning:

Thorndike propounded certain laws of learning based on his experiment on putting a cat in the puzzle box. According to Thorndike, 'Learning is the result of connecting'. So his theory is also popular as "Connectionism".

The following are the three important laws of learning by Thorndike.

1) Law of Readiness
2) Law of Frequency
3) Law of Effect

1. The Law of Readiness:

Law of readiness is the most important law of Thorndike. Children are ready to learn, when the teaching items are according to the needs of the learners. We know the well known proverb, "You can lead a horse to water, but you con not make it to drink". So, the most important aspect in learning is making the learner ready.

Herbert expressed - Preparing the students for learning as the first step in his steps of teaching. Class room teaching should be useful to the individual in his future

Educational Implications of Law of Readiness: While teaching students, the first step of a teacher is motivating the children. The Learning material should be according to the needs of the children. Principle of learning 'from known to unknown' should be followed.

Teacher should act as a guide in promoting students' interest in his teaching. Awards, stories, rhymes, acting, teaching material, audio visual equipment etc., make children ready for learning.

2) Law of Exercise:

Everyone knows that "Practice makes a man perfect". Law of exercise has two parts. 1) Law of use and 2) Law of disuse

Law of use refers to the strengthening of connection with practice while the law of disuse refers to the weakening of connection or for setting when the practice is discontinued.

Educational Implications of Law of Exercise: Law of exercise encourages drill. Vocabulary and skills can be learned through drill. Law of exercises also recommends home work. When some assignments are given to children to do at their home, it makes students to understand the concept.

When children apply what they learnt in the school, in their daily life, it retains in their mind. Children can also remember things when they review what they learned. Review promotes effective learning of the students.

3. Law of Effect:

According to this law, learning depends on the result. "when a modifiable connection between situation and response is made and accompanied or followed by a satisfying state of affairs, that connections strength is increased. When made and accompanied or followed by an unknowing state of affairs, his strength is decreased".

Educational Implication of Law of Effect:

- Learning experiences provided in the class room should be satisfactory to the students.
- Students need to be motivated properly. When there is no motivation, there is no learning.

- When students identify that what they learned in the school are useful in their day to day life, learning occurs effectively.
- When educational programmes are successful, learning becomes effective.
- Awards and praise promote students learning properly.
- Assignments should be achievable to students.
- Teacher should praise the students when they have done their work. It satisfies them.
- When learning is joyful, it promotes concrete learning.

3) Insightful Learning:

Gestaltism was proposed by German psychologists - Max Wertheimer, Kurt Koffka, Wolfgang Kohler and Kurt Lewin. Gestaltism is also called as cognitivism. The German word, 'gestalt' means 'configuration' or 'an organised whole' or 'total'.

Gestalt psychologists used the term 'gestalt' in the sense of 'organised whole' or 'configuration' in their theory. The basic idea of Gestalt psychologist is that a thing cannot be understood by the study of its constituent parts but only by the study of its totality.

Kohler, a German psychologist, conducted experiments on insightful learning. He conducted experiments on the chimpanzee, sulthan, along with other chimpanzees, in Tennereef Islands in 1914. To explain these experiments, he wrote a book 'The Mentality of Apes'. Size and shape of human brain have many similarities with the brain of chimpanzees. So, he selected chimpanzees and gave them simple problems and observed how they solved those problems.

Joining two sticks to make a long stick by chimpanzee   Kohler

In one of his experiments Kohler put a chimpanzee in a cage and the banana was hang from the roof of the cage. Two sticks, one larger than the other, were placed inside the cage. The chimpanzee first tried these sticks one after the other but failed. It observed the whole situation and understood that if it joins the two sticks, it can reach the banana. Here, chimpanzee made the perceptual organisation and solved the problem. This type of learning is called insightful learning. Observing the situation as a whole, trying to see relationship between things and in the sudden flash of thought grasping of the solution of the problem are the qualities of insightful learning.

Educational implications:

Insightful learning has a major role in education. We can see insightful learning in the following situations.

- When students are asked to solve the problems in problem solving method, their creativity was developed

- Insightful learning is useful in project method. Project is an activity with purpose.

- Meaningful teaching will promote students effective learning.

- Teachers should focus on organisation while teaching to students. So, students can understand the concepts properly.

Differences between theories of conditioning and theories of insightful learning:

Theory of Conditioning	Theory of Insightful Learning
Behaviourism	Cognitivism / Constructivism
Theories of Pavlov, Skinner and Thorndike	Kohler theory
Learning is an association between Stimulus and Responses	Learning is the organisation of experience into Cognitive structures
Learning is based on relationship between small parts /aspects	Total or whole is important in learning rather than parts
Trial and Error method and Stimulus – Response are the basis of learning	Insightful Learning is proposed
External physical behaviour is important	Internal or mental actions of an individual is important
Creativity , discrimination and thinking has no scope in this Theory	Creativity, Problem solving abilities, Thinking and Discrimination are focused
It is an analytical approach	It is a synthetic approach

4. Social Learning Theory:

We studied many aspects related to intellectual, social, emotional and moral development in "Growth and Development" unit in educational psychology.

Infants of eight or nine months learn motor skills, speaking and gestures through observation and imitation.

When children go to school they imitate their schoolmates. They imitate their favourite teachers. They observe all the social aspects in the home and learn to imitate them.

For example language, eating habits, way of dressing, offering prayers, celebrating festivals, customs, rules etc... are learnt only through observation and imitation.

In adolescent "Hero worship" is the most popular mental process. Children learn things which they like or favour from their favourite person or persons.

For example the way of speaking, body movements, actions, thoughts, opinions, attitudes and likes and dislikes are learned through imitation.

Social psychologists believe that children take their favourite person as their model and build their character for their holistic development. They observe social aspects and learn them through imitation. So this is called "Social Imitation Learning". As they learn through imitation, with intense observation, this process is called "Learning through Imitation".

In this process they select a person as their model and try to behave like them. So this is also called "Learning by Modelling". As it takes place in the intense observation, it is called as 'Learning though Observation'.

Children learn many things through observation. They imitate their elders through role play. They imitate their parents, teachers, judges etc.., in their dress, language, conversation etc..,. It plays a major role in their socialisation. According to Dr. Bandura, children need proper models. When children listen to great patriots like Gandhi, Patel, Subhas Chandra Bose and see their pictures, children want to imitate them. Teacher should be a role model to his students. It promotes proper behaviour in them.
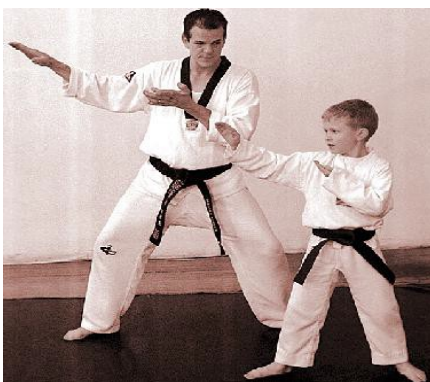
Dr.Bandura

Dr.Bandura classified that there are two mental processes in learning through observation.

1. The person identifies himself with a model and accepts the behavioural traits of the model willingly. This is called "Identification". **Identification** occurs with another person (the model) and involves taking on (or adopting) observed behaviours, values, beliefs and attitudes of the person with whom you are **identifying**.

2. The person internalizes the behavioural traits in to his mental organisation. This mental process is called "Internalisation".

According to Bandura there are four steps in learning through observation. They are

1) Attention

2) Retention

3) Performance

4) Reinforcement.

Let us know about them.

1) Attention: When a person wants to learn the behavioural aspects of his model, he has to observe the model intensively and attentively. Attention and concentration makes easy to grasp the meaningful aspects of the behaviour.

2) Retention: Retention means retaining the grasped aspects. Observed aspects should be kept in mind in audio or visual form. It should be imitated or followed in the mind.

3) Performance: Aspects, which are learnt through observation thoroughly and kept in the mind, should be performed taking from the memory. Performance means displaying the behavioural aspects of the model, which are received and kept in the memory, wherever it is needed.

4) Reinforcement: Whether the model behaviour that is learning through imitation is similar to the real model or not, is revealed in reinforcement rather than in performance. Whether to continue the same model behaviour or not should also depend upon the reinforcement.

Only when children receive positive reinforcement such as awards, praise and acceptance, they continue the behaviour they learnt by imitation. If they had negative reinforcement such as punishment or reproof, the model behaviour disappears.

Dr.Bandura explains that children learn the behaviour of the model with attention keeps it in the mind and perform. This learning through observation depends upon the reinforcement they received.

Educational implications:

1) Children learn many things by observing the behaviour of others. So, teachers and parents should present an inspiring role model to them.

2) When they perform acceptable behaviour, it should be praised to fix it. Teachers should show that model to others to be motivated.

3) When they express undesirable behaviour, it should be negatively reinforced to avoid such behaviour. It prevents others not to follow it.

4) Popular personalities of different fields in the local community should be introduced to students and made them to speak with children. If they can't attend the school, teachers can tell about them to the students.

5) The service of the National leaders, scientists and grate personalities of different fields should be explained through the dramas on their biographies. These plays should be level specific to the students.

6) Student should be made ready to satisfy with their own standards without depending on the rewards and reproof and to achieve them.

5. Bruner Theory of Instruction:

"The process of education" which was written by Jerome Bruner, became source of pedagogical theories, curriculum designing and teaching activities.

- He noticed that behaviourist who proposed conditioning has not considered the discrimination ability of human beings. It is a mistake on the part of behaviourists.
- The focus of learning process should be on the way of students thinking but not on the learning material
- Learning is construction of knowledge. There is a relation between knowledge and the individual experience
- His theory is popularly known as 'Discovery Learning' as 'Theory of Instruction'

Bruner was inspired by Piaget's theory of cognitive development. Though he was inspired by Piaget, he did not accept several aspects in Piaget's theory. Piaget expressed that learning should fallow maturity, but Bruner declined that there is no relationship between leaning and maturity. He opposed the learning theories of behaviourists. According to Bruner

- Fruitful teaching is possible for any concept, to anybody and at any developmental stage.

- Interest and curiosity of the learner are major factors of learning.

- Self learning should be given more importance.

- Teacher should act as a monitor and play the role of a counsellor.

- Method of teaching is important rather than learning material.

 This system is called as "Bruner's Theory of Instruction".

There are 4 aspects in Bruner's Theory of Instructions. They are

1) Learning readiness
2) Content construction
3) Content seriation

4) Reinforcement

Learning readiness: Bruner recommends promoting learning readiness in students by providing learning material according to the previous experiences, interests, culture and traditions of the students.

Content construction: Content construction should be structured is such a way that students can understand and apply them easily. Content construction should be based on the student's level. When teacher has a proper content construction, students could develop basic concepts of those aspects and understand them.

Content Seriation: Teacher should grade the learning material according to the complexity and rationality before they should be taught.

Reinforcement: Bruner represents that to reinforce the learning; intrinsic motivation is more influential rather than extrinsic motivation. Though, the teacher provides extensive motivation, solving a problem or learning an aspect act as a real motivation to the students and lead to further learning.

Educational implications of Bruner's theory of instruction:

1. Modern educationalists do not accept Bruner's view of "No need of maturity for learning". But they agreed to make a child comprehend the content, role of the teacher is very important.

2. The meaning of teaching is expanded. Teaching is not mere teaching something from the book, but structure of the content and order of teaching them are also part of the teaching.

3. It stressed the importance of intrinsic motivation in learning.

6. Constructivist Learning Theory – Vygotskey's Theory of Learning:

Lev Semionovich Vygotsky was a Soviet psychologist, who propounded the Socio Cultural Theory that supported the Cognitive Constructivist Theory.

Piaget and Vygotsky opposed behaviourist's view of learning as the association between stimulus and response. They proposed that knowledge is constructed on the basis of experiences. They supported cognitivism.

According to cognitive constructivist theory- Knowledge is constructed from the experiences of the individuals. Learning is construction of knowledge. Mental processes should be given more importance than observing the external behaviour. This theory advocates - Process is more important than the product.

Children constructing knowledge with present experiences based on the precious knowledge is called construction of knowledge. Thoughts and previous experiences play a major role in construction of knowledge.

Knowledge can't be given by somebody. It is reciprocal teaching:

In this method teacher forms a collaborative group with 3-4 students. Students express dialogues one after another. The members of the group use four types of cognitive strategies – questioning, summarizing, clarifying and predicting. Teacher generates questions from the highlighted information. Students answer the questions. They ask additional questions. When there is difference of opinions among the members, they will read the text again. Teacher summarizes the information. Students discuss the information and clarify.

Collaborative learning – Co operative learning:

According to Vygotsky in a peer group the expert will promote the development of other children. In collaborative learning children form into small groups and work at achieving a common objective and develop their abilities. Knowledge is constructed through the mental process in the children mind. Knowledge can be constructed in situations when children ask questions, apply the information which they learned in the school within out of school experiences, responding to the problems in different ways and expressing their ideas.

Children construct their knowledge by themselves. Development takes place only through learning. Language has a major role in the cognitive development of the children.

Zone of Proximal Development (ZPD):

Zone of proximal development refers to the difference between what a learner can do without help and what he or she can achieve with guidance and encouragement from a skilled partner.

Scaffolding:

Scaffolding, which means to support the student as he or she is led through the zone of proximal development, is another important aspect in Vygotsky's theory. Social media like computers, internet, encyclopaedia, Dictionaries, video clippings, libraries, and laboratories could supplement cognitive construction of the children. This is called 'Social Scaffolding'.

Further Vygotsky classified the mental processes into two groups.

1) Lower Mental Processes
2) Higher Mental Processes

1. Lower Mental Processes: These processes can also be mentioned as Innate Abilities. These abilities are naturally developed in the individual from the time of birth. Examples are observing, identifying, remembering, questioning, comparing, knowing etc.

2. Higher Mental Processes: Thoughts and behaviour of an individual develop highly, as a result of the interaction between an individual and his environment, based on his lower mental processes. Examples are analysis, synthesis, creative thinking, rational thinking and discrimination.

Educational implications:

The important educational implications of this theory are

- Collaborative learning should be provided in the process of learning.
- Importance on language development.
- Learning material should be meaningful and connected with the local context.

- To comprehend complex concepts methods of analysis, synthesis, rational thinking should be adopted.

4.5.2 Learning curves:

A learning curve is a graphical representation of how an increase in learning comes from greater experience.

There are three types of learning curves. They are

1. Positively Accelerated Learning Curves
2. Negatively Accelerated Learning Curves
3. S - Shaped Curves

1) Positively Accelerated Learning Curve: It shows improvement and positively directed.
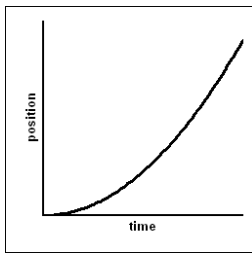
We divide number of trials or units of time on x-axis and performance or efficiency in terms of correct responses on Y-axis.

When the number of trials is increased, performance or efficiency in terms of right responses also increases.

2) Negatively Directed Learning Curve: This learning curve shows negative direction.
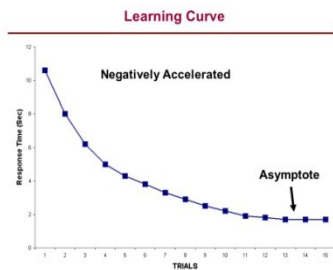
We divide units of time or number of trials required for learning on X-axis and units of performance (efficiency in terms of wrong responses) on Y-axis.

When the number of trials is increased, the performance on efficiency in terms of wrong responses decreases.

3) S-Shaped Learning Curves:
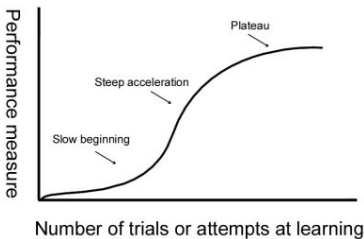
We divide number of trails or units of time on X-axis and units of performance or efficiency in terms of right responses on Y-axis and then S-type curves are formed.

When learning material is initially very complex, gradually becomes easy and at last again they are complex we can get S – Shaped Learning Curves.

4) Typical learning curve:
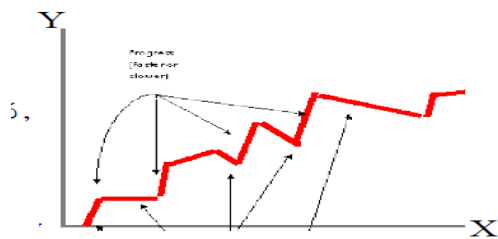
We divide number of trials or units of time on X-axis and performance or efficiency in terms of right answers on Y –axis.

Features of a typical learning curve:

a) Initial Spurt: In any type of learning there is an initial improvement where learning is rapid. It is called initial spurt.

b) Stage of fluctuations: Learning becomes a little slow after initial spurt. There are various ups and downs.

c) Plateau stage: Plateau stage is an important stage in the process of learning. In this stage there seems to be no growth or improvement. It is a stationary stage. An individual

can't show any improvement in his learning pace. Even after several trials he can't show better efficiency. It seems as if the learning has been ceased. But it is not true. Plateau is only a temporary stage. Modifying errors in learning methods, motivation or reinforcement should be adapted to avoid overcoming this plateau stage. Sometimes certain obstacles in achieving the goals may cause plateau stage. Through offering certain incentives will help the students to overcome this stage.

4.5.3. Transfer of Learning:

According to Garret transfer of learning refers to completely or partially applying the knowledge or skills learned in one situation to another situation .

There are four types of transfer of learning. They are

1) Positive Transfer

2) Negative Transfer

3) Zero Transfer

4) Bilateral Transfer

1) Positive Transfer:

Transfer is said to be positive when something previously learned benefits performance or learning in a new situation. For example training in driving a car helps to drive a tractor. Similarly, a person, who knows to type, can work easily on a computer. A person who known Hindi, can learn Sanskrit easily.

2) Negative Transfer:

Transfer is said to be negative when something previously learned hinders performance or learning in a new situation. For example who is good at Telugu or Hindi feels difficult to learn English. When there is diversity in two aspects, it hinders transfer.

3) Zero Transfer:

When the previous learning shows no difference in at all to the performance or learning in new situation that is said to be zero transfer. For instance talent in games may not show any influence on scholastic development.

4) Bilateral Transfer:

Bilateral transfer is transference of the physical performance learned by one side of the body to the opposite side of the body. For example, when a person learned to shoot arrows with one hand, it is not difficult to transfer that learning to the other hand.

Theories of Transfer of Learning:

Some of the theories related to transfer of learning are mentioned below.

1. Theory of formal discipline: It is the oldest theory. Now a day this theory was rejected by psychologists. This theory assumes mind is composed of so many independent faculties like reasoning, thinking, memory, observation, judgement etc.., In olden days activities are conducted to strengthen these faculties. Teaching of science to promote observation, teaching of logic to promote reasoning, teaching of mathematics to promote concentration etc.., are some of the activities followed in the olden days. But now a day psychologists rejected this theory.

2) Theory of Identical Element: E.L Thorndike was the chief profounder of this theory. According to his theory, transfer is possible when there are common or identical elements in the situations. According to this theory similarity of contents and similarity of attitudes promotes transfer of learning. Similarity of methods could also help transfer of learning. For example proper mathematical skills can be transferred to technical and mechanical education, as the symbols and formulas are similar. When learning the languages with similar grammatical rules can be learnt easily. Transfer is possible when the rules of the languages are similar. The similarity of key board in type writer and computer makes a person who knows type writing to learn computer easily.

3) Theory of Generalisation: Charles Judd put forth the theory of generalisation to explain transfer of learning. This theory advocates the transfer of generalisations in the new situation in place of identical elements. Judd took two groups of children in his experiment. The experimental group was given a full theoretical explanation of refraction and the other group was left to work without explanation. Both groups are asked to hit the dart under water. Both the groups did not do well and showed similar performance at their first trials. When the depth of the water was changed, the experimental group understood the situation and hit the target where as the other group could not show any progress in their performance. The theory of generalisation emphasises to teach rules and theories. For example a person who can repair a motor car engine, can repair a motor boat, because the rules are same in repairing in the two situations.

4) Theory of Ideals: This theory was developed by W.C.Bagley. This theory is similar to the Theory of Generalisation. According to this theory when importance of an aspect is identified, it develops an attitude. These attitudes promote transfer of learning. For example a person who maintains neatness in the house, maintains the same in his office also.

5) Theory of Transposition: This theory has been propagated by Gestalt field psychologists. This theory is also called as "Organised Whole Theory" or 'Constellation Theory'. Accordingly to the theory the relation between parts and whole can be transferred to new situation.

Gestalt psychologists give importance not to the principles but to the whole situation. They focus on organisation of whole situation.

Educational Implications of Transfer of Learning

The mechanism of transfer of learning has a wide educational implication. Learning in one area should be applied in another area. So, teacher should guide their students to apply what they learn in a subject in other subjects. The following suggestions will help the teachers to achieve maximum use of transfer of learning.

1. Applying class room knowledge in everyday life.

2. Promoting meaningful learning instead of rote learning to develop insight.

3. Providing attractive and effective learning through teaching with audio visual material.

4. Helping the students to solve their problems by themselves.

5. Developing proper attitudes and values in students which in turn useful for their life time.

4.5.4 Role of Repetition and Practice:

1. One of the important principles of Pavlov, Law of reinforcement, says that when the natural stimulus is associated with an artificial stimulus repeatedly, the conditional response will be strong. Things learnt through repetition sustain in the memory strongly.

2. Thorndike in his experiments kept the hungry cat in the puzzle box for several times that made the cat to learn how to open the box to get food in short time. It emphasised the role of repetition in learning.

   "Practice makes man perfect". To strengthen the association between the stimulus and response, they should be used repeatedly. It is explained in the Law of Exercise. The Law of Exercise encourages saying tables in mathematics, reciting rhymes and poems and drilling. It supports home work and assignments.

3. In B.F. Skinner's experiments on rats, they move the latch to get food. Though it gets foods at random trials in the first, they learn to move the latche only after several trails only. Skinner also expressed the importance of repetition in this experiment.

4. Hull in his famous theory on habit formation explains doing the same job repeatedly cultivates habit in the organism. Repetition strengthens the habit formation.

5. Ebbinghaus, who developed The Curves of Retention related to memory and forgetting, expressed the importance of repetition. He proved that forgetting is rapid

in the early stages of learning and nearly 66% of material was forgotten within one day. Learning of material which was already learned avoids forgetting. He emphasized the importance of "Repetition" of learning.

The views of Cognitive psychologists like Piaget and Vygotsky on Repetition:

Let us discuss the role of 'Repetition' in view of "Learning is the construction of knowledge".

1) According to Kohler - The profounder of Insightful Learning:

- Repeated trails are basis for successful learning.
- Repetition helps the learning material to form as memory traces (*Encoding*) in the mind and strengthens learning.
- Repetition of learning materials helps to organise and re organise in the organisms.

2) Jean Piaget:

- Repetition provides opportunity to construct schemata and new re-organized schemata construction with creative development.
- Repetition helps for accommodation and for adaptation of environment or learning material easily.

3) Vygotsky:

- Repeated experiences promote the development of higher order mental abilities in the children.
- Repetition helps to internalise learning material/ aspects in the children.

4) Alfred Bandura: According to Bandura Profounder of Learning through Observation

- Children can exhibit model behaviour easily, when they repeatedly observe the model.
- By repetition of learned skills or abilities, new complex tasks can be achieved.

Psychologists expressed that repetition is an important aspect in learning. When some material was read or achieved only once, it can't be kept in memory. But if the

same material is used repeatedly, it can be learned. Learning tables, reciting the rhymes and poems, vocabulary development and learning their meaning are possible only through their repetition.

It is said that 'Practice Makes Man Perfect'. We learn many things in the life. This is called learning. We have already learned many definitions of learning. We learn in different ways. When we repeat the same, we can cultivate them. For example activities like – saying poems in Telugu, tables in mathematics, singing songs, learning music, riding a bicycle, cooking, drawing pictures in science can't be learned if we do it only once. We have to practice them. Only genius can learn what they listen to or read or do only once. But it is not possible for all. So, when something should be learned, repetition and exercise are necessary.

To retain the learned material permanently in the memory, repetition is essential. Many experiments proved that even after learning a material, certain additional repetition is required. This is called over learning. Over learning helps to retain the material in our memory and reduces forgetting. It improves memory.

Law of exercise was emphasised in Trial and Error Learning by Thorndike. Exercise means doing the same task several times. Practice makes man perfect. It increases memory and reduces forgetting.

4.5.5 Guided inquiry:

How to educate our students to study science and technology, to satisfy their needs? How to prepare them to collect the world wide data? What are the ways to make them to think properly and take right decisions, to become experts in their fields, and to learn life long? These are some of the questions faced by the teachers. Can we modify

our schools to meet these challenges? What are the ways to promote cognitive development, to achieve the abilities and to learn to explore?

Guided inquiry is the co operation and co ordination of lessons, concepts, and teacher's instructions, from schools, library and classmates in collecting data for an integrated experiment.

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┌─────────────────┐
│ What do I know? │
└────────┬────────┘
         │
         ▼
┌──────────────────────┐      ╭───────────────╮      ┌──────────────────┐
│ What do I have to know?│ ──▶ │ How do I know? │ ──▶ │ What did I know? │
└──────────────────────┘      ╰───────────────╯      └─────────┬────────┘
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                                                      │ How to use what  │
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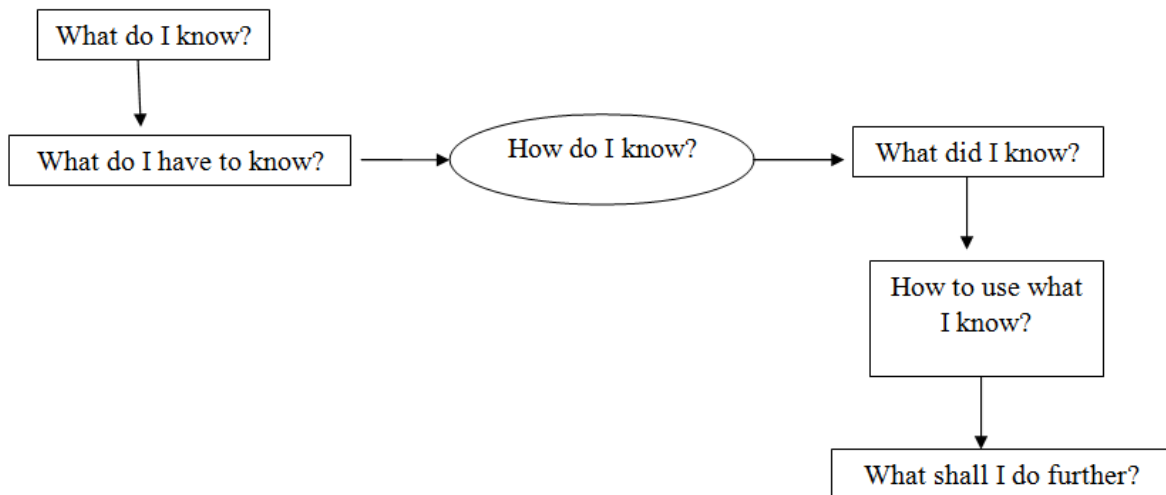
Though there are so many methods to inquire answers to the above questions guided inquiry is the best method to achieve it.

Guided inquiry helps for lifelong learning. It helps students to think deeply and succeeded in all aspects. It promotes learning ability.

Guided inquiry is a way of learning. It needs proper planning, monitoring and continuous evaluation. So, student can acquire proper knowledge and skills.

Students have to answer the following questions in Guided Inquiry to proceed successfully.

Extended questions for guided inquiry

The above questions motivate the students for further learning. Students thinking ability should be raised to develop their learning through this system.

Advantages:

Guided Inquiry helps students

- To develop social, language and reading abilities.
- To construct self understanding.
- To act independently in learning through experiment.
- Be motivated highly.
- To apply Learning methods and skills in observing the project.

4.5.6 Role of Integrated Projects:

An integrated project is where children participate themselves in learning - take up a special programme or find solution for a problem.

Integrated project is a co-operative work, thought and carried out by group of students. It depends on learning by doing. It is closely connected with Pragmatism, propounded by John Dewey.

The project work is based on Thorndike's Law of Readiness, Law of Exercise and Law of Effect.

For example

- Dictation and analyses of vocabulary in the Environmental Studies Text book.
- Drawing a map of water sources in the village.

- Common errors committed by the students in additions and explanation.

Doing Project works promote students learning abilities, their socialisation, self decision abilities, planning executing and achieving results. It makes students experts. Students should be encouraged to do integrated projects to develop their abilities.

4.5.6 Co-operative learning – Collaborative learning

Constructivists introduced certain valuable and successful principles in teaching-learning process. Co-operative learning and Collaborative learning are some of the important aspects of constructivist pedagogy.

a)   Co-operative learning:

Co-operative learning is a group learning activity. In this process along with their learning, students support the learning of other students. It is a social method of an organized group. This method encourages both social and academic abilities of the learners. It helps very much for their learning. This method not only develops social abilities of the students, but also teaches them how to co-operate in groups. Academic standards and abilities could be achieved in this method.

Characteristics of Co-operative learning

- Learners co-operatively work in groups to achieve common educational tasks.
- Exhibits co-operation and social behaviour in working in the groups.
- Students positively depend on one another.
- All the members of the group show individual responsibility.

Objectives of Co-operative learning

- Co-operative learning provides opportunities to learners to express their feelings.
- Information and communication skills are developed.
- Promotes scientific thinking.
- Motivates the learners.

- Stress - free environment is provided
- It cultivates co-operation among the students.

Uses:

The feeling of co-operation developed in the students help to express their ideas freely and to develop their abilities. Let us discuss some of the uses of co-operative learning.

- It promotes learning abilities of the students and help in their academic achievement.
- It promotes retention in student's memory.
- Students satisfy with their learning experiences.
- Collaborative skills, information and communicative skills are developed.
- It gives self satisfaction to the learners.
- Students construct their own knowledge
- It develop their social qualities
- Dialogues between students or groups are developed
- Develops self learning abilities without depending upon the teacher
- Students come out from the feeling of loneliness
- It promotes confidence as a member of the group

Aspects of Co-operative learning: Group efforts yield better results rather than individual competitions or efforts. It is limited to certain aspects.

1. **Positive Grouping:**
- Efforts of all the members in the group results in the success of the group
- Individual efforts are source for group efforts.

2. **Face to Face conversation**
- All the members of the group discuss for success of the group.
- Everyone teaches their knowledge
- Discuss the comprehended concepts

- Connects them with previous experiences

3. Individual and Group responsibility

- Group should be small in size.

- Individual assignments should be provided

- Each students has to exhibit his progress to the group

- Progress of each student has to be recorded

- There should be an observer in each group and everyone has to submit their reports to him.

4. Interpersonal skills - small groups

- Aspects like social abilities such as leadership, decision making, developing confidence, information and communication abilities and conflict management should be taught

5. Collaborative Process

- The members of the group should discuss the ways to achieve their goals

- Strengths and weaknesses of the individuals in group should be discussed

- Social behaviour should be discussed and decided.

b) Collaborative Learning:

Collaborative learning is a group of learners working together to solve a problem, to create an object or to do a task. All the members of the group participate actively in the discussion. Learning continues by participating actively in the group discussions. In fact it is a social activity. Students take individual responsibility with desirable adjustment. Facts are discussed face to face successfully. They develop individual objectives with collaborative skills. Self analysis takes place. Learners share their thoughts with each other. The work ability of the individual is questioned. Learning continues toward object development.

Uses of Collaborative Learning:

Collaborative Learning

- Develops Higher Order Mental abilities.

- Strengthens Teacher- student relationship.

- Develops abilities.

- Promotes self respect.

- Satisfies Learning experiences.

- Develops Conceptual understanding.

- Develops Oral Communicative skills.

- Develops Social Interpersonal skills.

- Provides active exploring learning environment

- Develops individual responsibility in problem solving and social activity

- Provides variety of understanding

- Increases students responsibility in learning

- Provides students participation in curriculum development

- Develops Critical thinking

- Develops Individual abilities

- Promotes interpersonal relationships

- Develops Positive attitudes

- Increases Achievement levels and percentage of attendance of students

- Develops Problem solving abilities

Similarities between Co-operative Learning and Collaborative Learning

- Sharing of responsibilities

- Learning through participating in social activity

- Higher order mental abilities are developed as a result of participating in group activities

- Learners are active

- Responsibilities between teacher and student are distributed

Differences

Co-operative Learning	Collaborative learning
- It is an interaction for achieving the goals	- It is a philosophy of individual way of living
- It is a teaching aim in the social skill development	- It assess social abilities
- It strengthens individual, social and cognitive skill development	- It strengthens construction of knowledge and autonomy
- It organizes activities of the learners to achieve their objectives	- Students construct their activities and discuss.
- Role of the teacher is centralized	- No influence of teacher on students
- Teacher monitors closely	- Teacher is a facilitator
- Teacher is active	- Learning continues toward formation of objects
- Non recurring tasks are selected	- Recurring tasks are conducted
- Students submit the assignments after the task for evaluation	- Draft copy was prepared before the task

4.5.7 Diverse Resources for Learning:

Diverse resources, other than the teacher, classroom, Blackboard etc. play a major role in learning of the children. These resources are very essential in the present day context. Use of more divergent resources helps students learning.

Some of such Diverse Resources are

1. **Personal Resources:** Intelligence, memory, thinking, personality etc.
2. **Home Resources:** Parents, Education, locality, social status, economic status etc.
3. **Social Resources:** Nature, financial NGO, G.O s, social administration
4. **Technical Resources:** Movies, videos, internet, computer, OHP, smart class etc.
5. **Mass Media:** T.V., radio, Cell phones, Newspapers, books, magazines etc.

The use of above resources helps students learning and learning abilities and makes the students successful in their learning.

4.5.8 Group Work

In the traditional teaching learning process, the teacher plays a major role and student's participation is less. Sharing of information from other students is less. In traditional classrooms teacher makes the child to sit passively and one way transaction goes on. This is not the right way of teaching. Teacher should be within the reach of the students. Students should be in close accessibility to the teacher. Teacher has to observe the work of the students. He should make the students to work in groups. To develop students unity teacher should help them

- To participate in teaching learning process actively.
- To participate in individual, group and whole class activities in the learning process according to context. Organizing learning process in small groups is essential.
- To share their feelings freely in group activities.
- To develop communicative skills through participating actively in learning.
- To promote leadership qualities.
- To develop thinking abilities.
- To participate joyfully and curiously in learning.
- To achieve good results.

To achieve better results in group activities students should not be divided in to uniform groups. A group should comprise all types of students. Children should be encouraged to express freely their feelings in a pleasant environment. Self learning should be focused in group activities. They should be encouraged to achieve good results.

4.5.9 Class Room Discussion

In a common class room conditions, traditionally teachers actively participate in teaching the lessons. Role of the teacher is more dominant than the role of the student. So, students are usually away from learning. Classroom discussions should be organized on the learning material to avoid such situations. Curriculum, needs of the students and

social aspects should be discussed in the class room. Teacher should make all the students to participate in such discussions to express their ideas and to share their feelings. Resolutions and decisions taken after the discussions bring desirable changes in the students.

Organizing classroom discussions helps students

- To develop self confidence
- To promote communicative abilities in the students
- To inculcate social awareness in them
- To promote self observation in the students
- To assess their role
- To be encouraged
- To cultivate adjustment
- To develop proper personality traits.

Class room discussion achieves good result in the student's learning. It makes the children to participate actively in the learning process.

4.5.10 Learners Autonomy

When the learner was given freedom in teaching learning process, he can actively participate in learning process and attain good results in his learning. Development takes place in a free environment, when there is no fear and stress in the children. When the feelings and aptitudes of children are considered and valued, they can joyfully and actively participate in learning. To make them participate actively in the learning process, child centred teaching learning processes should be implemented. When children are given freedom and provided autonomy they continue their learning.

Ways to improve Learner's Autonomy

- Teacher should provide opportunities to students to ask questions to get their doubts clear by providing freedom.
- Learners should be encouraged to ask questions
- Teaching learning process should be level specific.
- Activities should be enthusiastic, motivating and interesting.
- Teacher should act as a guide, a counsellor, a facilitator and a friend.
- Make the students to share their learning.
- Stress free and punishment free environment should be created.
- Help the students to respect others feelings.

Learner's autonomy develops positive attitudes in the students which results in their mental development. It leads to the development of intelligence and personality. So, learner's autonomy plays a major role in their learning.

4.5.11. Role of Teacher as a Facilitator

School, teacher, black board etc., basically help learning in the class room. In the present day educational context, students' participated teaching learning situations should be created. Teacher should act as a friend or a facilitator rather than a teacher in promoting the learning abilities of the students. Otherwise the gap between teachers and students will be increased which affects the desirable learning in the students. Hence, instead of taking up all the responsibilities, a teacher should provide learning environment and learning material to help learning in the students.

4.5.12. Qualities of Teacher as a Facilitator

Teacher should have
- Successful listening ability
- Understanding ability
- Respecting nature
- Intelligence
- Inter personal communicative abilities
- Ability to motivate students

- Ability to organize smart class room developed on modern pedagogy.
- Knowledge of e-learning and social net working should be introduced in the classroom to promote learning in the students.

4.6 Learning Disabilities

We know that there are individual differences in the individuals. Children show the same differences in their learning also. Children follow different methods in learning particularly in reading, writing, understanding and solving small problems etc. Some students have exceptional problem. These exceptional problems lead to learning disabilities. Some students have certain special problems. These problems may make them struggle for learning. But they did not make them disinterested in learning. Though they don't have any physical, mental or sensory disabilities, still they face disabilities in their learning process. So, it is necessary for a teacher to understand concepts like – "What is 'Learning Disability'?" and "What are the different types of learning disabilities in the children?"

Children who have one or more problems in reading, writing, doing mathematical processes and language expressions are called 'Children with Learning Disabilities'. In 1962, a psychologist, Samuel Kirk first used the term 'Learning Disabilities'. In his book "Exceptional Children" he mentioned the children with these problems as 'Children with Learning Difficulties' or 'Children with Specific Learning Needs'.

Definitions

Children with learning disabilities are those who have specific problems in learning and in the process of attention.

As a result of central nervous system dysfunction, children with significant learning problems such as reading, writing, language, speech and mathematical process are called "Children with Learning Disability" - as per the definition of Kirk.

Learning disability is the result of the intrinsic factors (abilities or aspects) such as

- Central nervous system dysfunction
- Factors related to genes
- Immature nervous system and deferred action
- Imbalance in life process

Characteristics of Learning Disabled

- Low auditory ability or auditory impaired
- Visual impairment due to nervous system
- Reading or writing words from the reverse side
- Low revision in drawing graphs
- Lack of finger dexterity-unable to write good handwriting
- Immature pronunciation
- Disorder in language learning
- Problems related mathematical functions
- Lack of proper responses
- Lack of proper performance

Children may have one or more problems mentioned above.

Causes for Learning Disabilities

Generally the factors causing learning disabilities may be found to fall in to the following three categories.

1. **Intrinsic factors:** Disorder in the construction or functioning of central nervous system is called Minimal Brain Dysfunction. It is the major factor for learning disability. Hypoglycemia - low levels of sugar in the blood causes learning deficiency. Any other factors that hurt central nervous system cause problems in learning.

2. **Genetic factors:** One of the behavioural genes - Hyperactivity may cause learning disability. In addition to this, a genetic deficiency – "Turner's Syndrome" is also a reason for learning difficulties.

3. **Environmental factors:** The medicines and drugs received by the foetus when in the mother's womb, critical delivery, insufficient supply of oxygen at birth, premature delivery, lack of proper care in infancy, lack of proper stimulation, teaching deficiencies are some of the physical factors influence the learning disabilities.

4.6.1 Types of Learning Disabilities

Learning Disabilities can be classified in to different types based on the basic problems of the children in their learning.

1. **Disabilities in Speech:** Children with disability in speech have problems in understanding and expressing the language. There are two types of disabilities in speech. They are Dysphasia and Aphasia.

Dysphasia: The children with dysphasia have partial disorder in understanding and expressing the words.

Aphasia: The children with aphasia have complete disorder in understanding and expressing the language.

2. **Disability in Reading:** There are two types of disabilities in children's reading. They are

Dyslexia: Children have problems in comprehending the reading material and inability in reading properly is called dyslexia.

Alexia: Children have problems in reading the printed material is called Alexia.

3. **Disability in Writing:** Children have problems related to their hand writing.

Dysgraphia: Children who have problems related to vision and motor development face problems in writing. This is called dysgraphia.

4. **Disability related to mathematics:** Children with disability in understanding mathematical concepts, attaining knowledge of numbers, reading and expressing numbers is called Dyscalculia.

Identification of Learning disabled children:

It is easy to identify the children with learning disabilities when they join the school. Kirk explained three types of methods to identify the learning disabilities.

- Medical tests
- Studying the family, school and environment
- Assessment of behaviour

It is easy to assess the learning disabilities of the children through the above methods. We can easily identify the children who have learning disabilities. So that we can understand the type of support we have to give and the type of educational programme to be conducted for them.

4.6.2 Importance of Early Interventions:

- Medical assistance and guidance can be provided to their disability.
- To retain them in the school without developing dislike towards school.
- By identifying the level of disability, providing better teaching learning methods to make them to learn along with the normal children.

Learning Disability – Individualized Educational Planning (IEP)

We can provide there are three types of educational facilities to the children with learning disabilities.

1. **Special Education**: Organizing special schools for learning disabled children and providing special education for them. These children need special teaching methods based on their individual differences. General education is taught in special methods.

2. **Partially Differentiated Education:** Partially Differentiated Education is conducting special classes for the disabled children in the regular schools. Special teachers are trained in special methods and teach along with the regular teachers. The children participate in all the school programmes in common, but teaching of lessons will be organized separately for them.

3.   **Integrated / Inclusive education**: Children with low levels of learning disability study with regular children in the regular schools. When the school is recognized as inclusive school, the Resource Teacher will teach Special Education for these children.

4.6.3 Differentiated Learning:

Teaching according to the abilities of the children, using the available resources and teaching material is called 'Differentiated Learning'. Teaching learning material, activities and learning material should be modified for the learning disabled children and academic backward children with low efficiency. For example, picture books, alphabet chart, Audio - Visual material for teaching the children with reading disability. Similarly cutting and pasting newspaper clippings and picture clippings, using action cards, 'do the action shown in the cards', classify the objects are suitable for children with writing disability.

4.6.4 Special Education:

Education given to the children with special needs is called special education.

Special education addresses the needs of the children with special needs, by promoting their personality and socialization process for re-habitation.

Education is the basis of physical, intellectual, social, economical, political and moral development of an individual. Comprehensive development and education are interrelated. Hence, in our constitution, article 45, provides Universal Free Compulsory Primary Education for the 6-14 years age group children. Government takes special care on all the children in the age group based on this.

Nature and Scope of Special Education:

The special schools are established in addition to the existing general schools. Children, whose needs are not satisfied in a general school, are admitted in these schools. Even some special schools are arranged with in the General Schools. The system of education in the special schools is child centred education. Children design their educational activities with the help of the teacher. Each student in the special school is regarded and respected to their level. The teaching learning activities, methods and

material are natural and up to the needs of the children. Parents of the children with special needs are basically considered as teachers in this programme.

Assessing the needs, teaching learning process and evaluation also includes within the scope of these schools. They are

- Addressing individual educational needs
- Individual teaching methods, activities and evaluation
- Teaching in psychological methods
- Providing special training to teachers and parents
- Providing re-habitation

Children with special needs:

The Uniform curriculum is designed on the assumption that all the children in a specific class have the same type of knowledge and understanding along with their age. But in contrast, while some children learn in a short period, certain children may take more time to learn the same. There are children with physical and mental disabilities. The uniform teaching may not be successful with all these children in achieving the objectives. Education should be based on the levels and the needs of the children. The children who have individual educational needs are called children with special needs. There are nearly 10-15 percent of the children in the population are children with special needs.

The common curriculum is not suitable for the physically or mentally challenged children, gifted children and low proficient learners. So, special educational programmes should be planned for these children.

Types: Physical, Mental, Social and Emotional diversified children are treated as children with special needs. Teacher should have knowledge of classification of these children to teach according to their needs. Prof. Dunn classified the children with special needs in to 12 types. They are 1.Gifted children, 2. Educable Mentally Retorted children, 3. Trainable Mentally Retorted children, 4. Socially distressed children, 5. Emotionally

exceptional – Delinquents, 6. Impaired speech, Deaf (Impaired hearing), 7. Partially deaf, 8. Blind (Impaired vision), 9. Partially blind, 10. Physical disables, 11. Children with long time diseased.

4.7 Creating Inclusive Learner Friendly Environment:

Many children could not seek their right to primary education and complete their elementary education, though the concepts of integrated education are provided in our constitution. India is also one among the nations signed on 'United Nations Millennium Declaration -2000'. Its major declaration is to achieve universal education by 2015. "Sarva Siksha Abhiyan" and "Right to Education Act-2009" are implemented in our country towards achieving the goal. Every year we are achieving 100% enrolment target. But after completing certain level (Primary, Upper Primary or High School) 100% retention is not achieved. The state statistics says that only 62 students are completing their High School level out of 100 students, who are admitted in class 1, ten years ago. These figures are still low, in cases of scheduled caste, where only 50 students and in scheduled Tribe only 32 students are coming to 10th class. Moreover, different surveys conducted in the state says that students are not achieving minimum levels of learning and our school are not successful in providing quality education to students.

4.7.1 Importance

Though government is providing all the facilities and achieving 100% enrolment, the above statistics reveals that we have not achieved desirable enrolment and quality education in our children. Though there are many factors, the major cause for not achieving the goal is- teaching learning processes in the schools are not effective in making the children to learn meaningfully and joyfully. We are retaining only the children's physical sub state in the schools and if we can sustain their mental sub state, we can achieve 'integrated education' in the schools. Each student has to feel 'This is my school. My school is the pleasant environment' and 'All the activities in the class room are interesting'. They should feel coexistence is inevitable. They have to share their

thoughts and experiences with others, and consider the talents of their classmates. The programmes in the school should create an urge among the students to develop social construction programs with peer learning and co-operative learning. So, a teacher has to develop learner friendly inclusive environment in the school.

4.7.2 Need for Multiple Resources:

In an Inclusive School along with general students, Children With Special Needs - 1) socially backward children, 2) Children with linguistic problems 3) children of gender biased, and 4) children from minority and suppressed communities also attend the same school. When we provide uniform education to all these groups, they may dropout from the schools as their needs and levels are not satisfied. Each individual is unique. They should be free from the stress from their diversified needs and continue learning without any hindrances. This is the responsibility of the Inclusive Education. So, it is necessary to provide multiple resources to achieve learner friendly inclusive environment. It helps to satisfy diversified needs of the children.

- Active participation in teaching learning process is encouraged in a Multiple Resources Class Room

- It provides active learning by creating interests and thinking in the children

- It provides such a learning environment that children discuss the topics, analyze and make proper solutions and decisions through experience.

- As all the learners participate in groups, the group mindedness and leadership qualities are developed.

- Provides opportunity to express children's innate abilities. It helps to provide guidance and skill oriented development.

- Multiple resources provide meaningful learning, participatory learning and creative class room activities.

- The social and human resources become parts of school organization to improve students' learning and create concepts of concrete development in them.

4.7.3 Ways and Means for adapting Diversified Needs

Right to Education Act - 2009 provides the right to receive quality education to all children between the age group of 6-14 years. This right also applies to those children who are not in the school. It's not mere responsibility of the government. It becomes easy when public, parents, teachers and every one share their responsibility with government. The following facilities should be provided for the disabled children.

- Basic facilities to be created not only in their house but also in the schools
- Instruments to reduce their disability, seating facilities in the school and ramp facility should be provided.
- A special Assistant should be provided.
- A special teacher should be appointed for their special education.
- Creating home based educational facilities to encourage.
- Medical assistance, Physiotherapy, Speech therapy etc. should be facilitated
- Treatment by medical experts should be provided for children with Physical, Mental and Neurological problems

4.7.4 Flexible plan

Teaching learning process is comfortable only when the students are mentally joyful. But now-a-days children in the schools are acting mechanically as if it is a simple process of getting marks or grades. They are doing meaningless tasks like reading different books, question banks and guides, copying them and by hearting them. Simultaneously teachers are also worrying to identify the needs of the children, assessing their levels and teaching the material in activity based methods. So, simple and flexible planning is needed to modify the learning material, teaching learning process, and teaching and evaluation methods to the level of the students to provide quality education. We have to change the planning according to the needs. So we need a flexible plan. The following are some of the suggestions for flexible planning.

- Teacher should not sit in the chair while teaching. He should sit on the floor along with the students and continue teaching

- The activity should be designed to sustain children's interest and active participation

- Each item should be interacted individually, in group and in whole class for smooth learning process

- Attractive, preferably low cost or no cost, material should be used in class room teaching process

- Before teaching any new concept, student's previous knowledge should be assessed and teaching process should be based on that previous knowledge only.

- Appropriate educational programmes should be designed for identified students

- Proper evaluation methods should be identified to assess the execution of the planning.

4.7.5. Class Room Management:

Management is a common process. Management is dealing with a plan to complete a task, to take support and to control.

Class room management is a plan how to conduct teaching learning process with the co-operation of the children to achieve the objectives and how to control students behaviour.

Organizing all the activities in the classroom properly to achieve better results is classroom management.

As a head of the family, father conducts the programmes with a specific planning in the family. Similarly, a teacher is role model to his students in the class room. So, for successful class room management teacher has to play a major role along with his students. For successful learning process and to modify the classroom in to a pleasant environment class room management is very essential. Proper class room management helps

- The children to develop friendship with each other
- The teachers to provide child centered education
- The children with special need to learn according to their needs. Makes all the children to participate in the teaching learning process.
- To organize attractive teaching learning material on the walls of the class room
- The children to have self learning experiences.
- To create always novelty in the teaching learning process.
- To promote positive attitude towards learning in the children
- To develop psychological confidence in the children through punctuality and good discipline.

4.7.6. Inclusive Schools:

Education is the right of all. It is the responsibility of the government to provide free and compulsory education to all children in the society. But it is not successful at school level. Children with physical and mental disorders and backward children are not treated equally by the society, teachers and parents. Still they are treated separately.

Children with special needs, girls and children from the suppressed families are away from education till 18th century. The following institutions are established in our country for the children with special needs at the first time.

1) National Institute for hearing impaired (NIHH) in Mumbai for hearing impaired people.

2) National institute for Visually Handicapped (NIVH) in Dehradon for Visual impaired people.

3) National Institute for Mentally Handicapped (NIMH) in Hyderabad for mental retarted people.

4) National Institute for Empowerment of person with Multiple Disabilities (NIEMD) in Chennai for Multiple disables.

Now, Inclusive Education was mentioned in the parliament report. Many committees or commissions appointed on education have stressed the need and the importance of inclusive education. Government of India made 'The Inclusive Education Act' in 1974 declaring that it is a wrong concept to treat the disables not to study with regular students and further it stressed the need to join the children with disabilities with general students for their education. Now Sarva Siksha Abhiyan is organizing these Inclusive schools.

Need for Inclusive schools:

In the modern society, Inclusive schools are very important. These schools

- Protect rights of all groups of children
- Develops self confidence in the children with special needs
- Creates confidence in CWSN that they can also learn like other children
- Provide educational facilities to rural children also
- Help educationally backward children and provide them educational facilities
- Provide equal educational facilities to all the children without the bias of race/ religion/ caste / gender
- Provide education to multilingual without linguistic bias
- Prevent inferiority complex and develops self confidence
- Promote feelings of helping and co-operation in the children.
- Help children to participate freely in non scholastic programmes.

Evaluation

Essay Type Questions   **8 Marks**

1. Define and explain the nature of learning

2. Discuss – 'Learning depends upon Readiness, Maturity and Motivation'.

3. Illustrate the differences between classical conditioning and operant condition with classroom application.

4. Explain how the Theory of Social Learning is superior to all other learning theories.

5. How learning takes place in Trial and Error Learning. Explain Thorndike's laws of learning?

6. What is transfer of learning? What are the types of transfers? Explain the theories related to Transfer of Training.

7. Discuss – How Special Education, General Education and Inclusive Education differs with each other.

Short Answer Questions   **4 Marks**

1. What are the factors that influence learning

2. Explain Bruner's Theory of Instructions?

3. Explain the steps in 'Learning through Observation'?

4. What is Insightful Learning?

5. Explain 'learning curve'?

6. Explain the components in the Typical learning curve?

7. What is Memory? What are the components of memory?

8. What is forgetting? Give reasons for forgetting?

9. What are the methods to develop memory?

Very short Answer Questions   **2Marks**

1. What is learning disability?

2. How a proper classroom helps the students?

3. What is plateau in the process of learning?

4. What are the laws of conditional learning?

5. How many stages are there in the process of memory? What are they?

6. What are the qualities of children with learning disabilities?

7. What are the aspects to be remembered by a teacher in a flexible planning?

8. Write the importance of inclusive schools.

Fill in the blanks   **½ Marks**

1. Thorndike explained the results of his experiments in his book _____

2. What Thorndike's Law explains the saying, 'We can take horse to water, but we can't make it to drink'?

3. _____ is the Gestalt concept.

4. Bruner's _____ book is the basis for teaching programmes.

5. Author of 'Inquiry in to Human Faculty and its Development ' is _____

Multiple choice Questions   **½ Marks**

1. Teaching Machine was first invented by   (   )
   a) Skinner   b) Pressey   c) Thorndike   d) Kohler

2. Remembering the received aspects is   (   )
   a) Attention   b) Retention c) Performance   d) Reproduction

3. The propounder of 'Theory of instructions' is   (   )
   a) Bruner   b) Piaget   c) Thorndike   d) Pavlov

4. The stage in which learning ceases without progress   (   )
   a) Stage of Fluctuations   b) Initial spurt   c) Extinct   d) Plateau

5. If the training in one area inhibit or disrupt the training in another area is called
                                                                       (   )
   a) Positive transfer   b)Negative transfer
   b) c) Zero transfer   d) Bilateral transfer

6. Keeping learned material in the mind is called _____   (   )
a) Learning   b) Memory   c) Retention d) Forgetting

7. Recognition score   (   )
a) Right responses /wrong responses   b) Right responses – wrong responses

c) Right response-wrong responses/ Total responses

d) (Right responses – wrong responses /Total responses) x 100

8. Saving score   (   )

 a) Learning trials – Relearning trials

b) Relearning trials – Learning trials

c) Learning trails – Re learning trials / Learning trials

d) None of them

9. The feeling that you have already experienced your present situation is   (   )

   a) Déjà vu   b) Zeigarnik   c) Repression   d) Inhibition

10. Abnormal Forgetting can be treated as   (   )

   a) Amnesia   b) Feud   c) Motivation   d) Repression

Match the following   **½ Marks**

   1. Theory of Mental Discipline   (   )   A. Charles Juder
   2. Theory of Identical Elements   (   )   B. Kohler
   3. Theory of Generalization   (   )   C. Bagley
   4. Theory of Ideals   (   )   D. Thorndike
   5. Transposition Theory   (   )   E. Thomas Aquinas