MANGALORE UNIVERSITY

CENTRE FOR DISTANCE EDUCATION

Mangalagangothri - 574 199, Dakshina Kannada Dist., Karnataka

COURSE 3
Learning and Teaching
(Perspectives in Education)
BLOCKS 1, 2, 3 & 4

B.Ed. DEGREE PROGRAMME

(OPEN AND DISTANCE LEARNING)

FIRST YEAR B.Ed.

Course - 3

LEARNING AND TEACHING
(Perspectives in Education)

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Contents

Course Overview

Dear Students,

This core course will bring together number of perspectives from many other courses and draws upon theoretical frameworks from psychology, philosophy, sociology, and language learning. This course gives an opportunity for you to reflect on and critique notions of learning and teaching that you have already formed so far, and to rebuild the same with a more comprehensive perspective. You will be able to analyse the notions of people, in general, about learning and teaching and realise the need to reconstruct these concepts.

You will realise through this course that learning encompasses many dimensions like knowledge, skills, values, beliefs, attitudes and habits. This course gives you opportunities to clarify the theories of learning as conceptualized currently within psychology and cognitive science. You will also engage critically with theories that reduce learning to behavioural and testable components, which have been influential in education, but which narrowly limit the perspective on education. Hence, through this course you will deduct your own conclusions about learning and the related aspects.

The issues related to the above aspects have been discussed in the present material under six blocks. The first block deals with issues that help to understand and form a clear and comprehensive concept of learning, including the implicit knowledge and beliefs about learning, different perspectives of human learning, relevance and applicability of various theories of learning, and also the role of learner and teacher in the context of learning. The second block deals with learning in constructivist perspective, identifying the distinction between construction of knowledge and transmission of knowledge, processes of facilitating knowledge, creating facilitative environments for learning. The third block orients you about the concept of teaching, reflective teaching along with the challenges of teaching in diverse classrooms. The fourth block deals with the concept of teaching as a profession helping you to understand what makes teaching a profession, need and importance of teachers to develop as professionals, approaches for professional development. This also facilitates you to critically analyse the concepts of teachers' autonomy and accountability.

In total, this course will help you to get comprehensive concepts of learning and teaching and demands you to think critically about different perspectives of learning and teaching presented in the past by experts in the field. Make the best use of this material and grow as prospective teachers.

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Block 1 : Understanding Learning

Unit 1 : Implicit knowledge and Beliefs about Learning (Demystifying Misconceptions)

Unit Structure

1.1.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain the meaning of Learning;

- Explain the merits and demerits of rote learning;

- Analyse the implicit meaning and beliefs of learning;

- Recognise the factors that cause misconceptions;

- Give examples for the misconceptions that are generally found among learners; and

- Describe the measures that rectify the misconceptions.

1.1.2. Introduction

Generally when we speak about education, school, teaching and learning it is implied that teaching-learning are the two faces of the same coin. That means to say if at all a teacher is teaching in a class room then we take it for granted that students are learning.

But in reality the thing will be entirely different. For example suppose there are 45 students in one class, whatever may be the quality of teaching say, the best is done, even then, you will get at least 10 or 15 students who are lagging behind your expectations. Of course there are plenty of reasons for this, which includes individual difference among the students also. This is just a starting point, if seriously explored the causes for lack of learning and misconceptions will be plenty.

Such misconceptions some times are seen in teachers also. And general publics as well as learners are no exception here. The main purpose of this unit itself is an attempt to identify such misconceptions and correcting them as far as possible. So further you will come to know about implicit knowledge of and belief about learning that are commonly seen among people, followed by discussion and measures that can rectify these defects in learning.

1.1.3. Learning Points and Learning Activities

1.1.3.1. Implicit knowledge about learning

Activity 1
Following is an event that has occurred really. It is presented exactly how it has occurred.

Radha a 13 year old girl was very active and intelligent by nature. During 2002-2003 she had applied for entrance exam to get an admission in one of the reputed schools in the city. Earlier also she was studying in one of the good schools only. There she was recognised as an intelligent girl. And she was getting good marks in all tests and exams almost topper all the time. Because her father got transferred it became inevitable for her to get a seat in another school where her father is posted now. And Radha felt that the exam was very easy and she has answered all the questions correctly. Thus she was damn sure of getting a seat in that school. Her parents were also very sure of her getting the seat. But unfortunately Radha could not clear the entrance exam. This was very shocking to Radha. Later after some rigorous enquiry they came to know that quite a good number of questions were answered wrongly by Radha.

After analysing the above incident so many points will get explored, they are,

- It does not give any guarantee of getting through the entrance examination just because she was the topper in her earlier schools.

- The scores obtained because of rote learning will not give the real picture of learning outcome.

- Students should invariably gain knowledge beyond the textbook and the regular syllabus. One has to be keen and alert enough to observe the things which

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naturally occurring in our surrounding and also it is important to enhance their common sense.

- Each and every student is unique, and will have his/her own competencies. But in our country, we follow a common curriculum, common examination and also the system follow a common criteria of assessment.

All the above said aspects have made the learning process much complicated.

If we take the notion proposed by the Kothari Education Commission, it says the destiny of the nation is decided in the class rooms. In turn it emphasises how significant is the process of education, teaching, learning and personality development. The classroom environment is very much occupied by teaching and learning process. But there is no surety of learning just because teaching has taken place. And also there will be no evidence to say about the application of the learnt things. This is what happened with Radha's case. Whatever she has learnt earlier to the entrance exam was of not much help for her to clear it. In this way there is an urgent need to analyse the process of teaching and learning separately. And especially to focus on learning and learning outcomes is of utmost important. So now let us try to understand the common notion about learning as "implicit knowledge of and beliefs of learning" as well as misconception, its nature, and the measures to rectify the misconceptions.

The word implicit means could be with anything, like, meaning of some words, some events or about some places etc. Implicit knowledge is the knowledge that is gained through incidental activities, or without awareness that learning is occurring. Here learning proceeds without making demands on central attentional resources. The learner remains unaware of the learning that has taken place although it is evident in the behavioural responses which are made by the individual. Thus learners cannot verbalize what they have learned, but it could be noted in their behaviours. Implicit knowledge is the one in which learners have minds of their own and may follow their own inclinations, irrespective of the nature of the instruction they receive. Following are the some of the implicit knowledge that are prevailed regarding learning:

We all know that there is a saying like "learning by listening; learning by seeing; learning by doing" which reveals, that some learning can take place just by listening attentively, some learning can take place by seeing and some need to be learnt by doing only. This shows there are certain learning which can occur without much difficulty and there are certain learning which demand true commitment, practical experience and focused mind. There is some discrimination with the level of difficulty of learning.

Learning brings some changes in the learner which could be observed explicitly in the behaviour of an individual. This has led to define learning as "the process which involves bringing the desirable behavioural changes in a learner for relatively a permanent period".

If anything or any process is repeated by an individual for several times then in due course that will bring a drastic change in the personality of that individual. So thus the changed almost permanent behaviours are called "learning" – by Wood Worth (1945). The behavioural change may be good or bad but only the good or positive changes are considered as learning.

In a class room context whatever the teacher taught, is going to be expressed by the learner means people will think learning has taken place. But in reality there will be too much of diversity and different levels in learning.

Some students will learn by rote / by heart and some will learn by understanding. But in our examination system both the students have to face the uniform pattern of examination. In this type of evaluation system one cannot identify, which student is writing on what basis. Whether it is learning by doing or learning by memorization. It only gives the picture of whether the given/written answers are correct or wrong. Therefore sometimes the student who writes all the correct answers due to his rote-learning habit will get more marks and will be recognised as intelligent student in the class.

Children usually imitate their elders, isn't it? So imitation is also a type of learning. Albert Bandura in his social learning theory has explained the process of learning in social context, as modelling, and imitating of elders. Commonly people will be expressing their views as learning occurs because of association. Sometimes the association will result in bad / negative learning also. Observational learning and imitation learning are all due to association learning only.

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. "Implicit" means

    a. Knowledge obtained without consciousness

    b. Knowledge obtained by trial and error

    c. Knowledge obtained by insight

    d. Knowledge obtained by regular practice

2. Learning is a _____

    a. Process that depends upon teaching

    b. Complex process

    c. Simple process

    d. The process run by teachers

3. Learning means _____

    a. Desirable behavioural change expressed by an individual

    b. Knowledge acquisition

    c. Personality change

    d. Personality development

4. Rote learning is

    a. The one which help for more scoring

    b. Not a quality learning

    c. Good than learning by understanding

    d. Very easy

5. Learning which occurs due to association

    a. Is good learning

    b. Is defective learning

    c. Could be good or defective learning

    d. Social learning

6. Imitation means

    a. A type of learning

    b. Imitating like others

    c. Enhances critical intelligence

    d. A thoughtless process

1.1.3.2. Implicit beliefs about learning

Activities 2

Review report:

English language curriculum at the secondary stage-perception of learners and teachers – a research study by RamanujanMeganathen, Associate Professor, Department of Studies in Language NCERT.

The above research report has brought the following points to the reflection by educators:

1. How do learners and teachers perceive English Language teaching-learning in a rural setting?

2. How many languages the learners know and what are the domains of the languages used by them?

3. Whether teacher's beliefs and perceptions are influenced by language policy and curriculum reforms?

4. How English language in classroom is organised to promote language learning?

5. Whether the curricular reforms have an impact on the perception of earners and teachers?

Beliefs are always will be individualistic. Beliefs are formed in individual based on the type of his personality and the experiences he gets in his environment. Every individual will have his /her own beliefs which are sensitive to inner feelings and expressed explicitly. In a society there are varieties of communities and likewise, varieties of beliefs system are existing. Similarly the belief system in India and abroad will vary. Let us see how these beliefs with respect to learning varies from country to country.

Usually teachers are considered as the fund of knowledge. And common people including students think that teacher is the one who knows everything. The schools follow textbook and regarding textbook there is an unwritten law, like, if anything appears in textbook means it is the correct information only. And one more belief among students especially with their teachers is that, if their teacher is not able to give answer for a particular question means no body can give and also nowhere it is available.

Now take the example of teachers, generally teachers are of the opinion that, only a handful of students are capable of learning English Language and the remaining majority in a class lack this language skill and good communication. Even the schools consider students as "only the children who have a hold on English language can adjust with other students in a high standard schools and they only can learn well". Because of this reason many children will be deprived of high standard schools. Their family background, socio-economic state, illiterate parents or class 4th employees (vehicle drivers, labours, garage workers and daily wagers) etc. are negative factors for their setback in education.

The education system will have a descending pattern with reference to curriculum, syllabus and textbooks. Text book is considered as the best tool to achieve the goals and aims as well as objectives of the curriculum. Similarly whatever content seen in the textbook is again considered as relevant to the age of the students with their respective standards. But this may be one more strong belief that teachers will have. Such generalization denies the individual difference among children and treats them uniformly. This is against to reality.

Teachers believe that textbooks achieve the intended objectives of the syllabi. They also believe that the lessons or poems printed in the textbook is relevant to the children's age group and language needs. Teachers usually describe "the textbook as very useful for teaching-learning English but very difficult to learn from it" what a paradoxical feeling! Now let us summarise the points about learning:

- Learning is affected intensively by emotions

- The effective learning is possible in an interactive environment with meaningful, purposeful learning points/concepts.

- Learning is a complex but non-linear process.

- Learning is purposeful and goal oriented. The scope of learning is too wide and it is a comprehensive proves covering all the domains-cognitive, affective and psychomotor of a human personality.

- Learning is a universal and continuous process. It occurs irrespective of age, sex, race or culture. As it is expressed by Crow and Crow learning involves new ways of doing things and there are divergent methods of learning.

- If learners are aware of how learning takes place, and the role of their critical thinking ability, then it will lead to enhancement in learning. The learner also will have grip over his/her learning.

All the above said points make it very clear that individuals will acquire knowledge and intelligence in many ways. Also the factors and beliefs that prevail in his/her surrounding play dominant role in the process of knowledge acquisition. This is true irrespective of whoever it is. Educationists should understand this. Such beliefs influence students' behaviour, and also fills a sort of moral courage in them. There is a direct correlation between the belief of a student and his achievement. Student achieve better in which he will have beliefs. Therefore teachers have to plan and design their teaching based on such beliefs that exist in students.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Beliefs of an individual _____

   a. Inherited

   b. Experience based

   c. Biased

   d. Produced by experience and environment

2. Eastern and Western beliefs are

   a. Mutually adjusted

   b. Mutually opposite

c.　Completely different

　　　d.　Reciprocal to each other

3.　The information/concepts printed in textbooks

　　　a.　Always true and correct

　　　b.　Could be wrong also

　　　c.　Truth for ever

　　　d.　Imaginary

4.　Teachers means

　　　a.　Are source of all knowledge

　　　b.　Whatever they say will be true only

　　　c.　Even they are learners so, always need not give answers

　　　d.　If they don't give the answer means nowhere one get

5.　For effective learning

　　　a.　Teacher's class room teaching is needed

　　　b.　Teachers' notes will help

　　　c.　Rote learning is inevitable

　　　d.　The interactive situations that are meaningful and goal oriented

6.　Students' learning is influenced by

　　　a.　Beliefs

　　　b.　Facilities at home

　　　c.　Socio-economic status

　　　d.　Occupation of the parents

1.1.3.3. Misconceptions in learning and teaching

Activity 3

　　　To hope that all children in a classroom will think in the same line is absolutely a wrong thing. Just because they are in the same class that does not mean, all of them will think in the same line. But generally teachers feel that all students are alike, and think alike, feel alike. This is quite opposite to the reality. According to psychological researches, there are six common thinking styles among children.

Now you try conduct a small survey in your classroom regarding creativity, interest and attitude that possessed by your students.

For example although there are seven notes in music (sa, re, ga,ma, pa, da,ni,)if played in different instrument it is expressed in different ways is it not? Like, sitar, veene, flute, violin and harmonium. Similarly children mind will be in terms of consciousness, sub-consciousness and un-consciousness. All these types of mind will be working in different context. While teaching in a classroom is going on both the teacher and taught will make use of conscious mind much. But for an effective and efficient learning involvement of only the conscious mind is not enough. Because the other part of the mind like, sub-conscious and un-conscious influence the current situation. If these things are taken care of then only one can think of effective and efficient learning by the students.

Misconceptions are quite common among people. However these are individual specific and they occur due to several reasons. It could be because of prejudices, previous experiences and unscientific beliefs, misunderstood concepts, regional/indigenous misconceptions and misconceptions of facts. For example, the belief regarding "thunder doesn't strike on the same place again and again", and "usually bad things happen only on new-moon day". Such misconceptions are many and few of them are discussed in this section.

Now-a-days the concept, namely, "neuromyths in teaching-learning practice" is gaining momentum. These are myths which act as hindrances in the effective functioning of an education system. Neuromyths are superfluous which create misconceptions. Neuromyths are generally defined as false ideas; beliefs, the common misconceptions, misunderstandings, misreading, which deliberately warp scientifically established facts is coined as 'neuromyths' by the organisation for Economic Co-operation and Development (OECD)-2002.

(OECD's Brain and Learning Projec-2002 emphasised the concept of 'neuromyths' that create a number of misconceptions among educationists and professionals leading to adverse effects on educational practices).

The neuromyths mentioned by the OECD-20002 are as follows:

1. People use only 10% of the brain

2. Hemispheric Dominance

3. VAK-Learning Style (Visual-Auditory-Kinaesthetic)

4. Myths about multilingualism (in our country the education system follows three-language formula. Here students feel that learning of second language – usually English, is difficult)

5. High consumptions of water enhances learning

6. Men and Boys – have different brains from women and girls

People use only 10% of the brain

      Wanjek 2002 says that the idea that we use only 10% of the brain is one of the most popular myths is neuroscience. It is because our brain works with full capacity even during rest. The un-used portion of brain is not at all proved scientifically-Beyerstein (2004). Science has shown that although people can live with severe trauma, this does not confirm the existence of "useless areas" –and all areas in the brain have a known function.

Hemispheric Dominance

      The idea of hemisphere dominance came from the study "split-brain" by Roger Sperry, Joseph Begen and Michael Gazzaniga (1965). 91% of teachers believe that the difference between the LHS and RHS creates Individual Difference among learners. The left hemisphere is responsible for language process and the right hemisphere is responsible spatial awareness. However the brain functioning should be considered as a whole, because both the hemispheres work together and are always involved in all cognitive tasks (Goswami 2004). Researches have also proved that neither hemisphere is solely responsible for one type of personality.

VAK-Learning Style (Visual-Auditory-Kinaesthetic)

      Neuroscience or any other science has so far not found support for the educational value of categorising learners by their sensory modality or any other type of learning style.

Myths about multilingualism

      The fact that brain can adapt to any environment and is capable of learning throughout lifespan as it is plastic age and that educational rehabilitation in adulthood is possible and worth investment (Blackmore and Frith 2005). The brain's capacity is of two types, namely, (i) Experience-expectant, (ii) Experience-dependent. OECD (2002) says experience-expectant learning takes place when the brain encounters the relevant experiences, ideally at an optimal sage of development-these periods are also known as sensitive periods or windows of opportunity. It is very functional period for learning of specific skills such as language. Experience –Dependent this will take place at any moment in individual's life.

      Exposing children to foreign language interrupts knowledge of the first language-another misconception. Though children are found to have problems in learning a second language in school, it is found that some educational system expose them to foreign language too early. This helps them to avoid difficulty in learning a foreign language. Researches showed that human beings can have strong command in more than one language at a time and hence it is stored in areas far from the area reserved for languages. Hence children who are exposed to the two languages at an early stage, do not get weaker in the first

language, but are able to grasp the fundamentals of both the languages (Petitto 2009). OECD (2007) says when the second language is acquired early, multilingual education doesn't lead to a delay in development.

High consumptions of water enhances learning: this is not supported by neuroscience. **Men and Boys – have different brains from women and girls:** Men tend to have larger amygdala- a region associated with emotion. But no significant difference between the gender, because its function is highly influenced by the environment. Men were better systematisers, good at understanding mechanical systems and women are better empathisers, good at communication and understanding others. However male and female brain doesn't show any radical differences. Women tend to score higher in verbal abilities, men have a slight edge with visual-spatial skills. No gender difference in maths skills. Both boys and girls are capable of doing anything (Hyde and Janet 2009).

Though we say that learning depends upon practice and experience, it is not possible to observe directly what learning is. But it could be estimated through learning outcomes. Learning is a complex process and will be highly get influenced by good environment, good teaching, training, practice, and the interest on the subject as well as motivation. Learning is the one, very powerful instrument which brings changes in an individual. Especially the desirable relatively permanent behavioural modification only is considered as learning-this we should not forget.

Check Your Progress - 3

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. The capacity of human brain

   a. Favours the learning of any language

   b. Helps only learning of mother tongue

   c. Makes learning of English language easy

   d. Very limited

2. Common curriculum, common teaching, common learning and common examination for the students of a class is-

   a. A simple plan to reach maximum number of students

   b. A complex situation with maximum number of problems and challenges

c. Very much suitable for Indian classrooms, the country with very high population

d. The system which will make optimum use of parents' teachers' and students' collective efforts

3. When teacher and students are absorbed in teaching-learning situation, then
   a. They are using their conscious mind

   b. They are using their sub-conscious mind

   c. They are using their un-conscious mind

   d. They will be knowingly participating

4. Neuromyths means

   a. Unscientific understanding and blind belief of facts and truths

   b. A type of psychological disease

   c. A branch of neuroscience

   d. True beliefs

5. In brain the left hemi sphere is responsible for language hold and the right hemisphere is responsible for spatial knowledge is –

   a. A misconception in teaching-learning

   b. A popular saying

   c. The opinion of the majority of the teachers

   d. Disproved scientifically

6. The flexibility of brain is

   a. Experience-expected and experience-dependent

   b. Emotions

   c. Intelligence

   d. Interest

1.1.3.4. Demystifying misconception

Activities

In spite of so many efforts and good teaching a teacher may come across failure among students. Even students may be lagging behind to learn the basic things also. This is not only surprising but also a very tough challenge. And above all the students who are so called brilliant will give answers to the questions based on their memory. If the same questions are asked in different way students will feel difficult to give the answer.

The research reports and the study conducted by Mazur (1996) reveals that even in physics while solving an equation children used to answer by rote method only! You will not be surprised if students are confused with the directions, as well as lack the scientific knowledge regarding sun rise and sun set. All these are example for misconceptions found among students. You can do a small survey in your class only and find the types and levels in misconceptions!

Misconceptions are quite common among students. For this there will be many reasons, like, their background, parent's literacy, their occupations and educational qualifications, and also the influence of their culture and community, social environment, in this way there will be a long list if you want to say. This forms a big hurdle for science learning. Take for example the term 'cell'-in biology, shell of a battery and cell phone, all these are commonly used as well as used in classroom contexts. But the terms which are in daily usage, and those in the class room stands for different meaning in different context. This makes learning a difficult task for the student.

Here are some misconceptions found among students with different subjects, observe:

- Photosynthesis is not only food preparing process in plants but also plants respiration

- Plants do photosynthesis and animals do respiration

- Photosynthesis is a process of gaseous exchange and it involves only the intake of carbon di oxide and giving out oxygen.

- During photosynthesis plants do not respire, that means during day light plants do not respire but they do only the photosynthesis. Plants do respire only in night.

All the above said events are just examples. Teachers have to look in to it, identify students' misconceptions and should rectify it. This is teachers' one of the greatest responsibility.

Activity 5

One can take up the following activities in chemistry class:

Ask children to write a picture showing two bottles, in which the first one will be filled with air, and the second one will be the bottle in which half of the air is removed.

Now analyse the answers given by the students. And see how many students have shown the second bottle containing the half of the bottle with air and above that the bottle is empty.

Any gas will occupy all the space whatever is available. That means to say even though half of air is let out the remaining half of the volume of the air will occupy the whole bottle. So there will be no empty space in the bottle. In this example there is all be possibility like all children will answer with their misconceptions. According to Benson and et al (1993), the reasons for students' misconceptions are as follows:

Previous knowledge: these are formed by the daily experiences that a person gain. For example, ground water will be running under the ground just like as it happens above the earth. For this the perception of water movement on the earth commonly we get. Similarly among children misconceptions will be there as, heat, temperature, gravity, work, power and energy etc. – such scientific concepts are really difficult to learn (Brown and Klement 1991).

Unscientific Beliefs: these are formed due to the sources that are other than science basis but make the children believe very strongly, such as religion, customs etc. for some while waking up in the morning they should do it strictly from their right side only, for some it is not a matter at all. Likewise, the earth in solar system will not be there in the "navagraha" ., and sun in "navagraha" is a planet but scientifically sun is a star.

Misconceptions with reference to concepts: such misconceptions are formed due to the conflicts between belief and the scientific learning. These misconceptions will not give any clear picture to the students.

Misconceptions with reference to facts: this happens with an individual because of his childhood days misunderstandings. For example, thundering will not occur in the same place again and again. This is clearly a misconception of the fact that thundering happens irrespective of whether it had happened in the same place or not.

Measures to rectify the misconceptions:
- Identifying the misconceptions among the students

- Providing a suitable situation/forum/an opportunity to students so that they will become aware of themselves about their misconceptions and trying to face it properly and correcting themselves in due course of time.

- Teachers should help their students in rectifying their misconception themselves and constructing the concept with correct meaning and also internalising the correct concept. These concepts must be scientifically correct.

- Concept map can help very well in this direction (Aurans 1990, Minstrile 1989).

- Use of demonstrations (Cutze 1991) will be very effective and efficient in correcting the misconceptions

Check Your Progress - 4

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. If the gas from a bottle is removed to its half of the volume, then

   a. The remaining gas will be up to half of the bottle

   b. The upper portion of the bottle will be empty and the remaining gas will be at the bottom

   c. The bottom of the bottle will be empty and the gas will be in upper portion

   d. The remaining gas will occupy the entire space inside the bottle

2. Answering the problems in mathematics and physics by rote learning is

   a. It is a plan to get the correct answer always

   b. Will be very difficult

   c. Very easy but always the answer will be correct

   d. It cannot be considered as quality learning

3. In plant the process of photosynthesis is also the process of respiration-this is

   a. Misconception among the students

   b. Correct understanding by the students

   c. Students common sense

   d. Will be above the level of students learning

4. The cause for misconception among children will be

   a. Heredity

   b. Intelligence

   c. Creativity

   d. Their background, parents educational qualifications, occupation, culture, community and environment

5. The concept 'work' in physics- generally students understand as
   a. Day to day work

   b. They suffer from the mismatch between their real life experience and the scientific knowledge

   c. They will understand scientifically

   d. Feel difficult to understand

6. Misconceptions could be corrected by

   a. Use of demonstrations and concept maps

   b. Teachers explanation

   c. Homework given in the schools

   d. Praise and punishment

1.1.4. Let us Summarise

Teaching-learning are the two faces of same coin is an outdated concept now. Whatever may be the teaching quality, may be extremely good, even then a few students will be there as slow learners or lagging behind the normal stream. For this there will be so many reasons. In that misconceptions, misunderstandings, implied meaning of and beliefs with respect knowledge are a few.

All of us know the common saying that, listen and learn, see and learn and do and learn. This could be just a type of learning that is all. According to behaviourism a desirable, behavioural change that is relatively permanent is called learning. Learning by experience, rote learning, audio based learning, visual learning, and audio-visual learning – in this way there are varieties of learning. Learning is not a straight line like linear mode process but a complex one. Learning is highly influenced by emotions. Similarly one has to understand about the role of brain in learning. For example, the concept of hemispheres, and their

role, language learning and space related knowledge-for all such abilities, not only the left and right hemispheres but the whole brain is responsible. This has be explored by the researches.

Usually the misconceptions will occur due to misunderstandings, wrong previous knowledge, unscientific beliefs, misunderstanding of concepts and facts. Such misconceptions should get rectified by teachers' meaningful explanation, concept maps and demonstrations as well as problem solving approaches. And it is one of prime duties of the teachers.

1.1.5. Answers to 'Check Your Progress - 1,2,3 and 4'

Check Your Progress - 1
1.a 2.b 3.a 4.b   5.c   6.a

Check Your Progress - 2
1. d   2.c   3.b   4.c   5.d   6.a

Check Your Progress - 3
1.d   2.d   3.a   4.d   5.b   6.a

Check Your Progress - 4
1.d   2.d   3.a   4.d   5.b   6.a

1.1.6. Unit end Exercises

1. Discuss the merits and demerits of memory based learning and exam based learning.

2. Explain the implied meaning of learning.

3. What are the beliefs with respect to learning? How these are formed? Explain with illustrations?

4. What are misconceptions? What are the causes for misconceptions? Illustrate your answer.

5. Suggest the measures that rectify the misconception

1.1.7. References

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Block 1 : Understanding Learning

Unit 2 : Perspectives on human learning: Behaviourist (Conditioning paradigm in brief), cognitivist, information-processing view, humanist, social-constructivist (drawing selectively on the ideas of Skinner, Piaget, Rogers, Vygotsky)-concepts and principles of each perspective

Unit Structure

1.2.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Recognise the speciality of human learning;
- Explain learning from the point of behaviouristic perspective;
- Justify the relationship between contributions of cognitivist perspective and learning;
- Bring out the characteristic features of learning under humanistic perspective;

- Explain the nature of learning according to social constructivism; and
- Compare the contributions of different theories on human learning.

1.2.2. Introduction

You know that learning is a universal and ever existing process. It is true irrespective of any organism. That means, all animals, including man, birds, will have learning. There are quite a good number of theories to explain human learning. Man stands apart and ahead of all other organisms as far as learning is concerned. The main reason for this is his highly developed nervous system, brain and spinal cord. The surrounding environment, his high intelligence, his adjustment with the environment –all play a very significant role on his learning. In man both learning and development are very closely associated. There is an improvement from generation to generation and if we take an individual into consideration, learning happens throughout his span of life. So many thinkers, philosophers, psychologists and theorists have analysed human learning from different perspectives. Everyone has tried to explain learning in their own way. We can roughly categorise such theories into types, like, Behaviourist theory, Cognitivist theory, humanistic theory, and social-constructivist theory. In this unit you will be studying all the above said theories in detail with respect to their nature, characteristic features and their applications.

1.2.3. Learning Points and Learning Activities

1.2.3.1. Behaviouristic perspective on human learning

Activity 1

It is quite common to see Dog as a very pet animal everywhere. It could be any breed and some are domesticated. Sometimes people get their pets trained by police personnel also. Have you seen how he trains the dog? It will be very interesting. Basically they are "dog trainers". Once I got an opportunity to see the process of dog training.

Initially the dog trainer makes friendship with the pet by giving some eatables, like biscuits or bread but it will be very small in quantity. Later every day the pet was waiting at that particular time, thinking that again he will come and give some eatables to it. For this the main thing was the way he was treating the pet, because, the trainer lovingly handling it. And the communication between the dog and the trainer was very meaningful. For example, when he uttered "no, no…" the dog used to look at him silently and when he says "good boy" it showed happiness by some facial expressions. Totally the commands were "come-on do it" "no no", "sit, role, run, stop" etc., so gradually the dog learnt so many skills that were very interesting to see. You might have come across the trained elephant,

parrot, other birds, and monkey as well as bear. Try to observe whenever you get a chance to see the animal performances due to training.

In the above activity it is very clear, that all the desired behaviours in animals have occurred because of training. And the behaviour is modified by correcting the wrong moves by several strategies. Behaviourism is one of the major theories in human learning which mainly focuses on behaviour. John. B. Watson (1878-1958) is called the Father of Behaviourism. According to him more than heredity, environment is the main causal factor for an individual's behaviour. And he proposed that every behaviour is a **learnt expression.** However Watson's behaviourism ruled as a monopoly for so many decades in the field of education. Tolman, Karl. S. Lashley, Hull, Guthrie, and B.F. Skinner were the stalwarts of this school of thought.

B.F. Skinner was one of the eminent psychologist who proposed the theory called "Operant Conditioning Theory of Learning". It is mainly focuses on stimulus-response process. Hence it also popularly known as S-R Theory. Basically Skinner being a psychologist conducted several experiment on animal learning. This contribution actually enhanced the scientific features to the field of psychology. He utilized animals like, rats and pigeons for most of his experiments. In order to study their behaviour systematically, objectively and analytically he constructed his own method, strategies and also an equipment called "puzzle box". Though Skinner also did his experiments on the basic 'bond-strategy' it stands apart from classical conditioning. In between stimulus and response he gave scope for organism, in which it has to operate by choosing the most suitable response. His theory became so special because of the use of 'Reinforcement' principle.

Operant conditioning is also a type of conditioning, in which learning occurs through small and sequential steps. It will be made up of a cluster of actions, and conditioning will be exclusively depending upon the rewards. Skinner coined the term '***Reinforcement'*** for such rewards. Skinner has identified and defined two types of responses - the one *"Elicited"* by known stimuli, which he called *"respondent behaviour"* and the other *"Emitted"* by the unknown stimuli, which he called *"operant behaviour".* All reflex actions could be the example for respondent behaviour. In case of operant behaviour, Stimulus will be unknown, and also, the knowledge of the cause of the behaviour is not important. The operant behaviour is controlled by the strength of its consequences rather than by the stimuli. Some common examples for operant behaviour could be, like writing answer for a particular question, and doing so many daily activates. Such operant behaviours are caused by discriminated responses. Operant behaviours affect environment by their reactions.

B.F. Skinner recognized two types of conditioning that are produced by different experimental procedure. In Pavlovian experiment, the reinforcing stimulus was paired with a neutral stimulus that acquired the properties of natural stimulus. Skinner called such

type of conditioning as *S- conditioning* or *respondent conditioning*. He called his own procedure as *R- Conditioning* or *operant conditioning*, - here the response occurs spontaneously in the absence of any stimulation with which it may be specifically correlated. In operant conditioning, unless and until the required operant behaviour occurs, the reinforcement will not be provided. In this way reinforcement is conditioned to response. He considers an operant as an act which constitutes an organism's action or doing something.

What is operant conditioning?

Operant conditioning refers to a kind of learning process where a response is made more probable or more frequent by reinforcement. It helps in the learning of operant behaviour, the behaviour that is not necessarily associated with a known stimulus. Reinforcement or Reinforce is the essential term used by Skinner, which is identical or synonym to the presentation of a reward. According to B.F. Skinner, there are two types of reinforcement, namely, positive reinforcement and negative reinforcement.

1. A positive reinforcement or reinforcer could be any stimulus, such as, food, water etc; so that, the presentation of which increases the likelihood of a particular behavior. In a classroom context or in an educational set up, praise, grades, medals and other prizes, recognitions and appreciations – awarded to student are examples of positive reinforcements.

2. Similarly, avoidance of or removal of any stimulus, which increases the likelihood of a particular behavior, called a negative reinforcement or reinforce. For example, an electric shock, a loud noise or a sudden flash etc. in the several experiments conducted by Skinner. In the educational context, peers group disapproval or condemnation will act as a negative reinforcement.
   Parents may tell their children that, if they engage in studies and study well and studiously, they will be happy otherwise not, so, engaging in a very good study habit is the only means by which the children can terminate the displeasure of their parents. Children may over a period of time, learn to terminate the annoying stimulation quickly by engaging in the required task. Therefore negative reinforcement actually means, forcing behavior to occur. In a true sense, negative reinforces strengthen *avoidance response.*

3. Punishment or punisher: The negative reinforcement and the punishment are not the one and the same. A punishment or punisher is an aversive stimulus which follows a response and frequently serves to suppress it. One should not get confused

with the negative reinforce and punisher. They are distinguished from each other very clearly.

A negative reinforce proceeds the response and forces its occurrence to terminate the unpleasant condition whereas, the punisher follows the response and decreases the likelihood of the recurrence of the response. For example, if disapproval or any other annoying stimulation follows immediately after a particular behavior, then, punishment has taken place. On the other hand, when disapproval or Scolding is directed at an individual in an effort to force a behavior to occur, and this behavior can terminate this condition i.e. scolding or disapproval, negative reinforcement has taken place. If you understand this in the following manner, it becomes still clear.

a) In case of negative reinforcement, an individual initiate knowingly and habitually a particular behavior in order to avoid the unwanted issues, like, scolding, unpleasant consequences etc. It is very clear, that the behavior has occurred from an individual's point of view.

b) Punishment is a type of stimuli in which, it occurs because of a particular behavior. It may result in physical or mental pain in an individual because of his wrong deeds or mistaken works. So, punisher is always outside the personality of an individual. And punishment occurs after the behavior, may be, by an authoritative or elder persons. In order to avoid the punishment in the form of physical or mental, pain an individual will correct and modify his behavior. In this way, gradually the undesirable behavior is eliminated.

However, *negative reinforces* and *punishers* are grouped together as *aversive stimuli* and *positive reinforces* are recognized as *pleasant stimuli.*In this way the concept of 'Reinforcement' is central in operant conditioning theory of Skinner. A reinforcer (i.e. reinforcing stimulus) could be any event which changes subsequent behavior when it follows behavior in time. The definition of reinforcer runs as follows:

"Any environmental event that is programmed as a consequence of response that can increase the rate of responding is called a reinforcer". Therefore we can conclude by sayings that, Reinforces are events that raise the rate of responding. And reinforces are of three types, namely, (i) positive reinforce, (ii) Negatives reinforce and (iii) Punishment.

What are the effects of Reinforces?

Reinforces play a very significant role in learning. They are very effective in bringing out the following:

1. Strengthening of behavior: When learning is defined as a desirable and relatively permanent change of behavior, reinforcements will strengthen such behaviors.
2. Intensification of certain aspects of behavior

3. Alternation in behavior occurs immediately and
4. Persists in time becomes weaker and gradual declines in the absence of further reinforcement.

Shaping: It is the most important mechanisms used during operant conditioning. It refers to judicious use of *selective reinforcement* to bring certain desirable changes in the behaviour of the organism. Here the experimenter shapes or moulds the behaviour of the organism. Here shaping is done through a process of series of successive approximations. In case of pigeon's experiment, Skinner used to provide a pellet of food, whenever the bird was making a right movement, and this reward was avoided whenever the bird used to put a wrong step. It has been reported by Skinner that by using this shaping technique, a hunger pigeon can usually be made to peck at the disk within a period of three minutes by reinforcing those responses that make the pigeon come closer and closer to the desk and then those that bring his beak near it so, in this way the behaviour of the pigeon was shaped by rewarding the correct responses and avoiding the rewards for wrong responses. Shaping in this way, may be used as a successful technique for training individuals to learn difficult and complex behaviour and also for introducing modification in the behaviour. Such behaviour modifications techniques and aversive therapy – are used in treating problem behaviours and abnormalities.

Chaining: It is just an extension of shaping. It is a sort of chain reaction where, one object sparks the other object in its proximity and that is turn causes sparking in the next object in the chain and so on. In behavioural terms, chaining starts when one response beings the organism into contact with stimuli that both reward the last response and cause the next response. That response in turn causes the organism to experience stimuli that both, reward the response and cause the next response, and so on. So, each segment in the chain must be linked with the succeeding segment.

Discrimination and cueing: 'cues' or 'signals' are the indicators, of showing which behaviour will be reinforced or punished. In the Skinner box, the animal learns to press the lever when the light is on, and not to press when the light is off. So, the light becomes a cue or signal for the operant behaviour. Equipped with this learned signal or cue, the animal picks up the ability to discriminate between stimuli for emitting the *learned response. That means, the organism develops a* "discriminative operant" which is an operant response extended to one set of circumstances but not to another. According to Skinners' theory "Discrimination is a process of using cues, signals or information to determine

when behaviour is likely to be reinforced and /or punished". The process of discrimination has a wide applications in the field of education and behaviour modification.

Generalization: Generalization refers to the ability of an organism dealing with perception of and response to similar stimuli. It could be understood in terms of leaning process where the organism learns to provide similar operant responses to similar stimuli, but not the same as the training stimulus. Generalization is a process of seeing commonality in different events, objects or persons etc. Students must be helped to learn correct generalization and discrimination competencies for acquiring the proper concept of things and events surrounding them.

Skinner's contributions, like 'Reinforcement', 'positive and negative reinforcement', 'Punishment', 'Schedules of reinforcement', 'shaping', 'chaining', 'cueing and discrimination', and 'generalization' - all these have a very significant role in the education system.

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Father of behaviorism
   a. J.B. Watson
   b. B.F. Skinner
   c. Sigmund Freud
   d. Jean Piaget

2. The strategy that strengthens the right learning is
   a. Punishment
   b. Reinforcement
   c. Praise
   d. Condemn

3. The behavior that occurred due to the active participation of an organism is
   a. Respondent behavior
   b. Emitted behavior
   c. Operant behavior
   d. Positive behaviour

4. Negative reinforcement means
   a. Punishment
   b. Neglecting
   c. Avoiding to reward
   d. Creating avoidance response

5. Punishment means
   a. The process of conditioning forcibly
   b. Physical tortures
   c. Mental tortures
   d. Negative reinforcement

6. Positive reinforcement is called
   a. Prize
   b. Praise
   c. Pleasant stimuli
   d. Aversive stimuli

1.2.3.2. Cognitive perspective on human learning

Activity 2

You have seen the chess tournament, isn't it? Similarly you might have seen so many outdoor games also. It could be individual as an athlete or a team of a game, however you can notice there will be lot of difference between the indoor games, outdoor games and also the sports by an athlete or games by a group of individuals. In case of chess, individual's intellectual power, thinking capacity becomes very important. But in case of outdoor games the behaviour of players will be quite different. Now try to list the characteristic features of different players in the table given below:

Indoor games / outdoor games	Characteristic Features				
Chess	Players and their behaviour	Environ-ment of the game	Time taken for the game	Total number of the players in a game	Nature of winning/losing the game
Outdoor games, likeThrow ball, kabbaddi,Cricket etc.					

Jean Piaget, a Swiss psychologist and natural scientist, was born in 9th August 1896. He is famous for his pedagogic studies. Piaget studied the developmental process of ***"understanding knowledge"*** and *"working of the child's mind"*. He postulated that, like any biological organ in studied by its structure and function, human mind also has two aspects, and these two aspects could be studied as ***cognitive structure*** and ***cognitive function.***

A schema is nothing but a unit of one's cognitive structure in the form of a general potential which can result in a particular class of behaviours. Various schemas with their contents form the basic structure of the human mind. This has a close correlation with different developmental stages of man; like, for example during infant stage, schema represents some reflexes and instincts that are biologically inherited. As the child grows, by his interaction with physical and social environment, he will be able to form different schemas, resulting is changes and modifications in his cognitive structure. In case of infants, schemas are developed due to sensorimotor behaviour. Later the child looks at different objects, listens to different voices in his surrounding environment, and finally he tries to comprehend, and conceptualize the articles, animals, plants, trees, space and many other cognitive structures. This process of conceptualization depends upon the sequences of behaviour one employs while adapting to his own environment. According to Piaget, sensorimotor sequence and the cognitive structures are of the same class because they are continuous processes. As the development proceeds, each schema enlarges and changes and co-ordinates with other schemas to form more complex schemas.

For example:

In the beginning (say at the stage of infant or babyhood) the concepts are formed because of reflex action and gradually as the child grow and gains experiences of many things, varieties of concepts will be formed in the child's mind. This process in enhanced by seeing. Listening, feeling, etc; with the help of all the five sense organs, the concepts (of toys, objects, things, animals, plants, or trees etc) are going to be conceptualized. The child now understands the concepts by their properties.

A dog or a cow- is understood by its unique attributes or properties. May be starting from the phonetic expressions, then the real object, its context- etc.; Hence at the end of such conceptualization process, the child identifies a dog as a dog and a cow as a cow, but not vice versa! This understanding will result in the form of a ***cognitive structure*** or ***schema*** in the child's mind. But such schema gets enhanced by further concrete as well as abstract experiences of an individual.

1. Cognitive Functioning:

The schemas which are acquired in infancy or babyhood are exercised and changed in later life. The process of schema- change will be due to two essential psychological processes, namely, 1) *Assimilation* and 2) *Accommodation*. These two are always ongoing mental activities. It is so important because, through the processes of assimilation and accommodation, an individual will attempt to adapt to his environment, and maintain balance between himself and his changing environment. Therefore the very important but integral part of cognitive development thus lies in his constant interaction and adaptation to his physical and social environment. Hence, Schema represents the Cognitive structure whereas assimilation; accommodation and equilibration represent the cognitive functions.

1) Assimilation: It refers to a kind of matching between the already existing cognitive structures and the environmental needs as they arise. Here an individual will include or incorporate, or fit the ideas about the new object or situation into already existing cognitive structures which were there due previous experiences. For example, if a new toy is given to an infant, it is like to respond by putting the toy in to its mouth. Here, his cognitive structure about old toys revolved around the sucking schema, therefore, he at once responded by performing the act of sucking.

If, the given toy is a bigger one, then certainly it needs a changed behaviour from the child, therefore the already existing cognitive structure will get changed. That means to say, that the child has to change his old ways of thinking and behaving in order to adapt or adjust to the new situation. In case of assimilation, one's responses are supposed to bank upon one's past experiences and already compiled and stored stock of information. But the process of cognitive development will not be fulfilled unless and until the *assimilation* results in *accommodation,* and *equilibration.*

2) Accommodation: It is the process of mental activity, in which one has to learn new ways of thinking and behaving by making modifications or changes of one's already existing cognitive structures. For example, in olden days, while cooking, every item was cooked separately, but by the introduction of Pressure cooker, cooking procedure itself underwent so much of modifications, and the person who deals with cooking activity, has also changed his way of thinking as well as behaving. Because of this, accommodation process, one is able to cope up with modern fast moving society!

3) Equilibration: Apart from assimilation, and accommodation, as for as child's cognitive development in concerned, Piaget postulated one more concept i.e. the concept of *"equilibration".* He was of the opinion that, mere grasping, assimilating and accommodating will not be the process of cognitive development. By the help of assimilation and accommodation, a person will proceed further to adjust or maintain a harmonious relationship between himself and his environment. Piaget calls this adjust mechanism as equilibration. He defined equilibration as follows:

"Equilibration can be defined as an innate tendency or continuous drive on the part of an organism to organize its experiences (through assimilation or accommodation) for obtaining optimal adaptation to the changing demands of its environment by maintaining a proper balance between its cognitive structure and the changing demands of its environment".

Stages of Cognitive Development

As we know that, development in general is an orderly process, so also the case of cognitive development. Piaget expressed that process of cognitive development is carried out through the mechanism of assimilation, accommodation and equilibration. Because of this one's cognitive structure get constantly organized; though this process occurs irrespective of individuals, there are individualized differences to a wider or greater extent. Children differ in their level of possession of cognitive abilities. In spite of this, the development and organization of the mental structure in all children invariably takes place in an orderly manner, involving definite stages of intellectual development. It follows a definite pattern that is quite constant and universal. Piaget has identified four distinct cognitive developmental stages, and they are,

1. Sensory-motor stage (From birth to about two years)
2. Pre-operational stage (From 2 to 7 years)
3. Concrete Operational Stage (From 7 to 11 years)
4. Formal operational stage (From 11 to adolescence stage)

All the above said stages confines to 1) infancy, 2) Pre-school 3) Childhood and 4) adolescence respectively. Each stage is characterized by a general cognitive structure and the corresponding behaviors. It should be noted that, each stage represents child's understanding of reality during that period, now let us go through the above said four stages one by one in detail.

1. Sensorimotor stage (from birth to 2 years of age)

Piaget has coined the term *"sensorimotor"* for this stage, with a meaning, i.e., the child merely senses things and acts upon them. During this period, children will be extremely

"egocentric". They cannot perceive the world from other's point of view. They are concerned not with thinking about things but rather with experiencing them. Hence Piaget has called this intelligence as *"Practical intelligence".* This period is also marked by an extraordinary development of mind. He has tried to explain the nature of intellectual development by using the term sensorimotor to this phase, as it takes place even in the absence of language, and mainly it occurs due to direct sensory and motor interactions with the environment.

From birth to almost 4 months, infants show somewhat un- coordinated reflex actions, such as sucking, looking and grasping. And during next four months, he shows little bit co-ordinations in his actions- which indicates the simple schemas development. These schemas provide the child a general potential to perform certain classes or set of behaviours. For example, the infant tries to suck anything which is put into his mouth, stares at the things, tries to reach at every thing and tries to grasp them. Almost at the end of 8th month, the infant begins to realize that the objects around him are separate from himself. Earlier to this, if a toy is taken from the infants hand (while he will be playing) and if you hide it somewhere, and allow the child to watch where you are hiding it, then also, the child will not try to trace it or chase it, but will at once forget about it, for his level of understanding, if the toy is out of his sight means, the toy exists no more. Gradually, he will realize that, the objects continue to exist even though they are out of his sight. This leads to exhibit a searching behaviour from the child. For example if the toy is hidden under a cloth, then the child tries to lift the cloth and search for the toy. He will start this searching activity with an assumption that the object has its permanent identity. This shows that, the child has developed a mental image of that object. This stage is very essential for the next stage what is known as pre-operational stage.

2. Pre-operational Stage: (2 to 7 years of ages).

Piaget has strongly opined that, the attainments of earlier stages are essential for those in later stages and some of the earlier intellectual processes may extend into later periods of development. For a child it starts with the stage of infancy, in which his sensorimotor systems become coordinated in many of his physical activities. As we know that, infants cannot speak any language, but they come to know everything around them by means of actions! Here action becomes meaningful. Therefore Piaget called it as *"Action Schema".* Beyond the age of two, children will no longer bound by their senses, as it was noted in the sensorimotor stage. Hence it shows the indication of onset of *Pre- operational stage.*

This stage is associated with language learning activity also. Therefore the child begins to utter a few words, and gradually learns to make use of full sentences. So, now he can ask whatever he want, which is a drastic change when compared with moving the

whole body to reach a particular thing and get it, isn't it? Pre operational stage running from 2nd to 7th year has been further divided into two successive sub phases, namely,

i. Pre-conceptual stage (2 to 4 years) and

ii. Intuitive stage (4 to 7 years)

i. Pre-conceptual stage:

At this age i.e. from 2 to 4 years, children show some behaviours which are universal to all children of the same age. Such characteristic behaviours could be listed as follows:

- They show egocentric nature. According to Piaget, at this age, children can see the world only from their point of view. They believe that, as they run on the street from one end to another, moon also runs with them. They cannot think and understand that, people may have different opinions and may differ in their modes of thinking.
- Unable to distinguish between living and nonliving objects.
- Sometimes they will be too imaginative and far from reality. For example, you might have seen children of this age playing with a stick and calling it as his horse or motor cycle etc. The doll in their hand is so alive for them; therefore they can feel the cry, smile or sleep of a baby doll.
- They show pretending or imitating ability.
- Children of this age can pretend and show, as if they are *a flying bird* or *crow* or *cow*. Piaget says this is an indication of their *"symbolic thinking"* ability. They just do such activities to get sheer pleasure! They want fun out of *"Pretending"* and *"make believe"* activity. This Phase is also known for their inability in differentiating fantasy from reality. They themselves can become a bus, train or elephant etc. And in their stories all animals can talk and communicate like us. Similarly drawing is another realm of symbolic function If you provide a white sheet / or a drawing book and a set of crayons, they will just become very busy in writing pictures like, sunrise, coconut tree, birds, daddy or mummy etc..
- Their thinking will be somewhat illogical: - In the early part of this stage, usually their thinking will be partially correct. Because, it is just the concept formation stage. They may make mistakes in the process of identification or concept formation. It is at this stage, they think that all men are 'daddy' and all women are "mummy".

At this stage language learning plays an important role in their cognitive development. Almost at the end of the first year children will acquire a few words and from there afterwards they go on learning new words and at the age of one and a half year, a baby will know say about 50 words. Therefore whenever they come in contact with the family members or nearer and dearer ones or neighbours, their language learning gets boosted.

ii. Intuitive stage: (from 4 to 7 years of age):

Child starts to think at this stage, but his thinking will have no logic, says Piaget. And he also says that, children's thinking will be not only illogical but also full of contradictions. His cognitive operations will show some limitations. Like, he will be not able to think in reversible terms and also he will be not able to think in terms of conservation.

For example:
1. He can think that he is the brother to the elder son of the family but at the same time he will not be able to think and understand that to the elder son of the family he himself is also a brother!
2. A child who is younger by one year to his brother will think that he is of equal age or more than by one year, when he celebrates his birthday. Because, it is unable to think that, by this time, the brother also has grown by one year!
3. Child finds it easy to add the numbers but finds difficulty in subtraction.

Similarly they show an indication of partial thinking as far as the concepts like length, volume and number are concerned.

3. Concrete operational stage (7 to 11 years of age)

At this stage the child's logical thinking will become more logic and rationale, and also it masters the various conservation concepts. At this stage children are more involved in the process of conceptualization, in which perception of concrete objects, things or experiences play a predominant role. Piaget has used the term *"operation"* meaning *"a mental activity that `transforms' or `manipulates' information for some specific purposes."* For example, basic mathematical operations, like, adding, subtracting, multiplying and dividing. Here children thinking will not go by just visuals. And the term `concrete', refers to the objects, things or visuals that give a first-hand experience, i.e. objects which are tangible. Children at pre-operational stage will have mental representations like pictures or images of what they see, and these are called *"iconic representations"* whereas, at the stage of concrete operations, children are able mentally to represent or remember events, objects, things in symbolic form. Now they are able to manipulate mentally, and can condense a great amount of information or a series of action into a single word; and in a due course, that is remembered very easily. The cognitive development at this stage will be expressed through a variety of mental operations, by children; such activities could be listed as follows:
1. Children will be able to grasp and understand the concepts mentally, and will be able to see the subtle differences and similarities in them, and can point out discrepancies and relationships.

2. They are able to perceive in terms of inter related principles, and can gain knowledge by synthesis and also can think in terms of systems.

3. They show their reasoning power. They can think inductively as well as deductively, and can bring out generalization with adequate rationale.

4. They show the ability to conserve both in terms of quantity and number of objects. Now they can understand that any apparent change of an object does not alter either its quantity or its number.

5. Now it is possible for them to think in a reversible order also. i.e., if A= B, then B = A.

6. Children at this concrete operational stage are out of their ego-centric nature. Therefore' they will not perceive the world only from their point of view, instead of this, they can understand other's point of view, even when it is quite opposite of their own.

7. The basic mental operations, like identification classification, and recognition will be well developed by this time. Therefore children at this stage, can classify objects, and can arrange them either is increasing or in decreasing order.

8. They are able to carry out any work or tackle any problem as far as they are at concrete level and not abstract.

9. At this stage they are able to understand the inter relationship between time, distance and speed and also can co-ordinate all the three of them. But as far as these three dimensions are at concrete level, they perform with all clarity. For example if a child is asked to tell particular route to some body's house, then it becomes difficult for him to tell it orally, but he can take you to that particular house literally!

10. Piaget has rightly pointed out the significance of physiological maturation at this phase, especially the central nervous system. Apart from this interaction with parents, neighbours and peers are also important. If all these conditions are fulfilled then any child can each a satisfactory level of intellectual development, as a result of this his thinking will become quite systematic and logical. The very limitation of this stage is whatever the child does or thinks, will be purely at a concrete level. Because, his thought process completely depends upon the real events observed or the actual objects operated by him. However, this stage acts as a strong pre-preparation, for the final stage of cognitive development, what is known as "formal operation stage, which mainly deals with abstract thinking.

4.   Formal operation stage (From 12 to 15 years)

This is said to be the onset of puberty stage. The mental Power in this stage gains a tremendous momentum. One can see a sort of maturity in their thinking. At this stage they will be in secondary schools, and they are teen agers now. They can perceive the problems in different dimensions and also can explore various solutions for the problem, but all this will be in a very systematic and logical way.

It will be the beginning of the most advanced stage in one's cognitive system. It could be reflected in their abilities like, (i) *inducto-deductive thinking* (ii) *Reflective thinking* (iii) *convergent and divergent thinking* iv) *Lateral thinking* v) *Hypothesizing* etc.; And also, they can verify all possible solutions in a systematic and logical way, can arrive at generalizations, show a very good decision making power. By adopting all the above said procedural and systematic, thinking, they exhibit a very rigorous and methodical way of doing the things, what we now refer to it as *"scientific method"*. They can choose any variable, and test its effectiveness on any other variable, through experiments. For example, Experiments on magnet, pendulum, osmosis, photosynthesis, or doing some comparative study- all such activities will be done from the children at formal operational stage. They learn it with some purpose and it is said to be meaningful learning. They can understand the concepts not only at concrete level but also at abstract level. They can deal with the things that do not exist is reality. The adolescents can generate hypotheses and test them to find which one seems most valid, and worth. They move beyond the conventional standards of morality towards the construction of their own moral principles.

Piaget's stages of cognitive development were also criticized by people, for; the ages at which children reach different levels vary considerably depending upon many factors. A very bright child of 8 or 9 years old may be able to analyse systematically a problem, and can test the hypotheses, where as someone at an adult stage also, may lag behind this child, and may not even achieve formal operational thinking level at all! It is a proven fact that, middle class children master conservation concepts at an earlier age than lower class children; and urban children earlier than rural.

Theory of Information Processing

Learning is the very special, very important and sacred process in individual's life. Whether it is inside the school or outside, and even if take the whole education system into consideration, the scope of learning will be beyond any boundary. Whatever we learn that has to be documented in our memory. Then only it is possible to apply the learnt things in another situation. If otherwise there will be no use of any learning. However, this belongs to one of the major parts of the human mind. In this sector of the human mind all our

learnings, past experiences, skills and habits are stored. Together it is called memory. When all such things are reused then they get generated once again. In this way whatever is learnt will undergo processing what is called "information processing" and then are stored in the memory. Rybarn (1956) defines the memory as follows:"The power that we have to 'store' our experiences and to bring them into the field of our consciousness sometime after the experiences have occurred is termed memory". Actually, the term memory refers to the process of remembering. It is not just reproduction or retrieval of what is learnt. It is a complex process, involving learning, registering, retention, recall and recognition. Usually, teacher's opinion will be that, students have to acquire and retain the knowledge that is imparted in the schools. But it is quite common to see that, students forget it very soon. And contrary to this, they do remember some other information very vividly, though it is not important from the examination point of view.

According to Woodworth and Marqin (1948), "we always weigh memory in terms of remembering what has previously been learned". It is in this sense that the terms memory and remembering (noun and verb) are used synonymously. These two terms, hence, are used interchangeably. Psychologists have tried to explain the mechanism of remembering through several theories and representative models. The process of memorization starts with interaction of one's sense organs with one's environment. It will be retained for some time there itself. Under favourable and suitable conditions, some of the information from these will be retained for a longer period or as a relatively permanent memory. This is said to be the memory store and the process is memory storage. Whenever there arises a demand, the information which is needed could be selected and used in different situation. Now the information has become a behaviour. **Because** of this it is told that information processing is composed of *information collection and information retrieval* – the two successive episodes.

According to Lyndsey and Norman, information processing has three important elements, namely,
      1. Memory
      2. Processing unit-the unit which does specific tasks and
      3. Output and products

By making use of the above said elements several information processing models have been put forward by many eminent psychologists. Among them Atkinson and Shiffrin's –The model of memory storage (1971) is one. This model has been suggested by Atkinson and Shiffrin. They say that, there are three different memory storage systems, namely, (1) Sensory stores, (2) a short term store and (3) a long term stores.

The process of memorization starts with the interaction of one's sense organs with one's environment, people, neighbours, peer group and even with pet animals etc; the sensory information is first picked up by the sense organs, then through the nervous system it reaches the brain. There the brain interprets it. These sensory information will be stored for a very short period of time. It is said to be *sensory memory.* From this sensory memory, the information will be transferred to *short term memory*. This also called *primary memory.* It is also said to be *performance memory.*

The information transferred from the sensory store to the short term store may automatically stay for up to 20 seconds. In case, the short term store is able to hold or register the information up to 20 seconds, it may move into the long term store. Thus, the short term store is responsible for the transformation of sensory information to the long-term store as well as its retrieval. It also decides which responses should be made. Because of this reason, the short term memory is sometimes called *working memory* or *performance memory*, as this is the memory employed in much of one's mental work. At this stage, the process activities like, practicing the information, encoding the information, decision with respect to which information has to be used, the strategies to be used in order to retrieve the information from the memory etc; - the information after undergoing all such treatment, it then becomes fit enough to be stored as *long term memory*. Long term memory is also called *secondary memory.* Here the information will be subjected to organized classifications.

The long term memory is used for storing the information on a permanent basis, while the short term memory contains a limited amount of activated material in current use. The long term memory is assumed to have almost unlimited capacity for the storage of the encoded currently inactive material.

The sensory information is stored or is transformed from short term memory in the coded form. According to Atkinson and Schifrin, there seems to be a sensory store for each sense – visual, auditory, smell, taste and touch. However, only the visual and auditory storage systems referred to as *iconic storage* and *echoic storage* respectively have so far been studied extensively. At the time of retrieval, the coded information is again decoded. The coding could be linguistic i.e. verbal, imaginable and motor. In linguistic coding, the information is coded in the form of language and words. Imaginable coding makes use of images and mental pictures, and the motor code is employed for remembering physical skills like swimming cycling etc;The stored as well as organized information in the long term store in the coded form is transferred back to the short term memory. There it will be decoded and employed for response as desired and ordered by the brain.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Schema means
    a. Cognitive structure
    b. Cognitive function
    c. Concept map
    d. Concepts

2. Pre-operational stage is also called
    a. The stage of schema formation
    b. Thinking stage of pre-operational stage
    c. Action schema
    d. Cognitive development stage

3. According to Lyndsey and Norman, information processing has three important elements, namely,
    a. Sensory storage, short term storage long term storage
    b. Sensory memory, primary memory, long term memory
    c. working memory, secondary memory, performance memory
    d. memory, processing, product

4. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. The aural information will be stored as echoic memory
    b. Iconic storage represents the visual memory
    c. The encoded information will get decoded during its reuse
    d. Remembrance and memory are one and same
    e. At the concrete operational stage children can think at abstract level
    f. Children show ego-centric behavior during pre-operational stage

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1.2.3.3. Humanistic perspective on human learning

Activity 3

All of you have heard about compulsory primary education policy, isn't it? In order to attract children towards the education system, government is doing so many proactive implementation as well as policies. For example, giving milk to every child every day,

mid-day meals, free books and uniforms etc. This is an incident which really occurred very near to a school. There was a slum very near to the school and a girl was studying in that school. As usual milk was given to her on that day also. But surprisingly the girl did not drink the milk, rather she hurriedly went home (located in that slum) gave that milk to her younger brothers. After her brothers finished drinking milk she came back to the school. Of course she denied that she was hungry.

Now tell me, what will be your explanation for the girl's behaviour? Is empathy, mercy, or humanism?

Say about approximately in 1960s there appeared a rare and new phenomena regarding human learning. That is nothing but humanism. Humanistic school of learning or humanistic theory of learning tried to consider a learner in his/her holistic perception. Freedom, self-respect, self-dependency, autonomyand independent nature of man were the basic principles of humanism. According to this school of thought, learner is the centre of any educational programme. This resulted in the formation of individualising the learning process. According to Abraham Maslow human beings are basically good or neutral than evil. And everyone will be craving towards growth or the fulfilment of one's potentials. Humanism states that every person will have his own decisions, purpose of life, and values which makes his actions or behaviours (Hute-2011). The outstanding characteristic features of humanism are listed below, go through them:

- One has to consider the individual or the student as a hole rather than as a partial personality. This is true with the teachers also. And it is also true that every individual will be changing as the age proceeds, and hence one cannot say with all rigid statements and declare a person is so and so….. For always.
- According to humanistic school of thought, motivation in humanism, commitment to any chosen and focused goal, the process of self-realization, all will be determined by the individual only. Whether it is a quality work, sincerity, dedication all has to be the person who does is himself and his decision only.
- The eminent persons in humanism are, Abraham Maslow, Carl Rogers, and Malcom Novels. The main purpose of humanism is making an individual an independent, autonomous and self-reliant and bringing development in him until he reaches the self-actualization.
- The teacher's role will be like a facilitator, making the learners to learn on their own, so that the system will switch over to learner cantered. The main objective of humanistic approach will be making use of affective domain, emotions, cognitive domain and setting a forum that is more congenial, conducive and demands active participation from the students.

- In the true sense, humanism is nothing but pedagogy and it elicits the hidden talents and abilities among students and make of its best use in the learning situations.
- We making of our own goals, having our own control on the work we do and added to this bringing welfare of the society and human beings, are the broader aims of humanism. Hence the path we choose, the goal/aim we perceive both are our own. According to humanistic theory there will be plenty of potential power in each person for the above said statement.
- Teachers are supposed to provide a positive environment to learners to learn without any hindrances, hesitations, inferiority/superiority complexes, but learn with active participation and volunteering for learning on their own. This will enable every child to learn on his own pace of learning.

According to Abraham Maslow self-actualisation must be the ultimate goal for any individual. And to achieve that one will get several scaffolding objectives very often. Maslow gives an account of such objectives in the following manner:
- Exploring a job or the destiny
- Acquisition of knowledge and values
- Awareness regarding the present life itself is "a wonderful gift"
- Complete involvement in whatever the job/task one does
- Satisfaction of achieving something at least

Carl Rogers also stressed upon the above said points with a reference to humanism. Basically Rogers was a psychiatrist, hence, many of his postulates are common to learning as well as psychiatric problems. According to him to understand a learner is of utmost important, and a teacher as to perceive the individual with a holistic view. It is also important to know about the background, interest, socio-economic status, parents' literacy, occupation and the order of the birth of the learner. The students must be accepted by teacher along with their strengths as well as weaknesses. He advocated that students have to be treated as similar to that of clients. Because there it is clients centred and similarly it should be here as learner cantered.

Check Your Progress - 3

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. It is advised to teachers to consider the learner as _____ in humanism
   a. Part of a hole

b. A hole

c. Younger to them

d. An individual without any knowledge

2. _____ is also one of the important humanistic scholars

a. E.B. Herlock

b. Robert Havighurst

c. Abraham Maslow

d. Vygotsky

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:

a. The goal chosen and the means to achieve by an individual both will be of himself only

b. If the students are allowed to learn according to their pace of learning, then it affects the achievement of the whole class

c. Acquisition of the knowledge and values are one of the major objectives of humanism.

d. Carl Rogers is one of the proponent of humanism.

e. Basically Carl Rogers is a psychiatrists

f. There must not be too much of challenges in learning as it affects the progress

1.2.3.4. Social-constructivist perspective of human learning

Lev Vygotsky (1896-1934) was one of the contemporaries of Jean Piaget. He was a social-psychologist. He analysed learning from socio-cultural context. Unfortunately he died at a very early age (38 years) and so many of his ideas were left without his contribution. But the people of the same field continued his work with the same mission and vision. Though he belonged to the same period of Piaget, his contributions were not influenced by Piagetian theories. He did not support Piaget's viewpoints also. His theory was completely dominated by social and cultural factors. He being a Russian psychologist, and died at a very early age, so many of his works were not known to the public, until 1962. We all agree that man is a social animal, and his learning is very much influenced by society and culture. This assumption was supported scientifically by the Vygotsky's theory. According to him social interactions are the basis for cognitive development. In this direction the role of community and the role of near and dear one's will occupy the pivotal position. Because of such interactions the child will learn to "understand" and the process of cognition will get started. Hence Vygotsky's theory is considered as one of the significant theories in the present context. Now let us see a few technical terms used by Vygotsky in his theory:

1. Social interaction
2. The more knowledgeable other (person)
3. Zone of proximal development

Social Interaction:

Outstandingly Vygotsky has proposed his points of views which may appear quite contrast to Piagetian contributions. For example according to Jean Piaget, learning occurs after the development, but in Vygotsky's view it is cognitive development is the root cause of learning. For Piaget development precedes learning whereas for Vygotsky learning precedes development. Emphatically Vygotsky puts forth one more point which is very interesting, that is "every action occurs twice in a child's cultural development". First it happens at the social level, and next the same thing happens in child's mind and this will be followed by firm registration in its mind. Things which will happen between two or more people, that too in a social context, is called "Inter-psychological" and the things which will happen inside the child's mind is called "Intra-psychological".

The more knowledgeable other (person)

Just observe the above figure, you will come to know the role of different factors in a social context. The more knowledgeable person could be any one, like, the teacher, elder brother or sister, parents, senior students, alumni, peers, and even sometimes he/she may be a younger person also. Only thing is that they must be very knowledgeable, experienced and with rich exposure to learning environment. This could be with any learning concept, skills, or in any task or work also. Sometimes the computers, educational digital packages or electronic devices also can fulfil the role of the more knowledgeable other.

Zone of Proximal Development

Zone of proximal development is mental construct and this has been identified in between two fields. They are, the zone in which the performance of an individual is possible in the near presence and guidance of his friend, peer group or any elderly person and the

zone in which the individual can do anything on his own efforts or independently. So the difference between these two zones is recognized as Zone of Proximal Development. According Vygotsky this is the zone where learning process is ever occurring.

Based on the social actions and interactions that happens between the individuals Vygotsky has proposed several of his phenomenal statements. As he says, men use the communication skills and techniques which will be the product of his own culture and community. This will be in the form of a bridge for their talk, conversations and writings and makes connections between the individual and the society. In the beginning children use this competence only for their social works and to reveal their needs or requirements. When such devices (like, talk, and verbal writings) get internalized in them, then it is possible for them to think/ponder over on higher level of concepts/mental process-says Vygotsky. This is applicable to children's behaviour which shows voluntarily developing the skill of observation, concentration, logical memory and conceptualization etc. and concluding he says all the higher order of thinking process are generated only because of social interaction between inter-individuals.

According to Vygotsky's theory, the process of cognitive development in children depends upon the zone of proximal development. When children involve themselves in social interactions, the possibility of development will be in multiple dimensions. Therefore the total development of proximal zone will be completely depends upon the interactions. The quality of learning will be excellent if it occurs because of the interaction, guidance and cooperation with the elderly people, peer group and friends.

1. As it was proposed by Vygotsky, the lion share of cognitive development will be because of community and culture.
   a. There are no defined stages of development as we see in Piaget's theory
   b. According Vygotsky cognitive development varies with the different culture. But contrary to this Piaget is of the opinion that there will be no correlation between the culture and the cognitive development. It is a general process and hence irrespective of any culture the cognitive development occurs invariably.

2. Social factors are very significant as causal factor for the cognitive development of an individual.
   a. Cognitive development occurs due to social interactions, guidance available in zone of proximal development and other nurturing factors like help, co-operation, co-ordination and support. Here both children and parents will construct their own knowledge.

b. The way children think, what they think and what they do/actions is very much influenced by the environment in which they are growing.

3. Vygotsky has given much important to language development also. And he is of the opinion that language development influences the cognitive development to a greater extent. In the beginning the thoughts and language will be there as a separate system but as soon as the child reaches 3rd year, the thought and language will get amalgamated with each other. So it is concluded that cognitive development occurs due to the internalization of language. Therefore in this context the role of seniors, elders, experienced people, and adults will influence very significantly on the cognitive development of the child.

The interaction and the communications with the skilful teachers will help immensely for the cognitive development of students. This could be with the model behaviour by the teachers, or their guidance and directions also. Vygotsky has called such processes as "co-operative and co-ordinated conversations". In such type of situations, child will try to understand the directions given by teachers or their actions, (as teacher's role will be very next to the parents) and get internalised. The knowledgeacquired thus will be utilised in different context and situations in terms of self-directions and self-control.

Language is the best device for communication and connections among human beings. Because of this it is possible for getting connected with outer world and obtain knowledge. Based on his theory Vygotsky has given the following generalizations:
1. Language is the major medium for the elders to transmit their knowledge to the younger generation
2. Language is the strongest device for adjustment and intellectual co-ordination

Vygotsky (1987) differentiates between three forms of language:

Social speech which is external communication used to talk to others (typical from the age of two);

Private speech (typical from the age of three) which is directed to the self and serves an intellectual function; and finally

Inner speech: Private speech goes underground, diminishing in audibility as it takes on a self-regulating function and is transformed into silent inner speech (typical from the age of seven).

For Vygotsky, thought and language are initially separate systems from the beginning of life, merging at around three years of age. At this point speech and thought become interdependent: thought becomes verbal, speech becomes representational. When this happens, children's monologues internalized to become inner speech. The internalization of language is important as it drives cognitive development.

'Inner speech is not the interior aspect of external speech - it is a function in itself. It still remains speech, i.e., thought connected with words. But while in external speech thought is embodied in words, in inner speech words dies as they bring forth thought. Inner speech is to a large extent thinking in pure meanings.'

Vygotsky (1987) was the first psychologist to document the importance of private speech. He considered private speech as the transition point between social and inner speech, the moment in development where language and thought unite to constitute verbal thinking. Thus private speech, in Vygotsky's view, was the earliest manifestation of inner speech. Indeed, private speech is more similar (in its form and function) to inner speech than social speech. Private speech is 'typically defined, in contrast to social speech, as speech addressed to the self (not to others) for the purpose of self-regulation (rather than communication).' *(Diaz, 1992, p.62)*Unlike inner speech which is covert (i.e., hidden), private speech is overt.

Through private speech, children begin to collaborate with themselves in the same way a more knowledgeable other (e.g., adults) collaborate with them in the achievement of a given function. Vygotsky sees "private speech" as a means for children to plan activities and strategies and therefore aid their development. Private speech is the use of language for self-regulation of behaviour. Language is, therefore, an accelerator to thinking/ understanding Vygotsky believed that children who engaged in large amounts of private speech are more socially competent than children who do not use it extensively.

Vygotsky (1987) notes that private speech does not merely accompany a child's activity but acts as a tool used by the developing child to facilitate cognitive processes, such as overcoming task obstacles, enhancing imagination, thinking, and conscious awareness. He proposed that private speech is a product of an individual's social environment. This hypothesis is supported by the fact that there exist high positive correlations between rates of social interaction and private speech in children.

Children raised in cognitively and linguistically stimulating environments (situations more frequently observed in higher socioeconomic status families) start using and internalizing private speech faster than children from less privileged backgrounds. Indeed, children raised in environments characterized by low verbal and social exchanges exhibit delays in private speech development. Children's' use of private speech diminishes as they grow older and follows a curvilinear trend. This is due to changes in ontogenetic development

whereby children are able to internalize language (through inner speech) in order to self-regulate their behaviour.

Check Your Progress - 4

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. The proposer of social constructivism
   a. Vygotsky
   b. Jean Piaget
   c. Kohlberg
   d. Erickson

2. "The more knowledgeable other" means
   a. Co-learner
   b. Parents
   c. Teachers
   d. All the above

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
   a. Vygotsky has given the stages of development similar to that of Piaget's cognitive development stages
   b. Cognitive development varies with the different culture
   c. There will be no correlation between the language development and language development
   d. Social speech means public talk
   e. Approximately at the age of 3 children show "private speech"
   f. Approximately at the age of 7 children show the ability of "inner speech"

1.2.4. Let us Summarise

So many theorists have tried to explain the developmental process of man. Conveniently these theories have been classified into a few major theories, namely, behaviourism, cognitive theories, humanism and social constructivism theories. Behaviour theories mainly depends upon the stimulus-response, the desirable relatively permanent change in behaviour itself is considered as Learning. Here learning is strengthened by Reinforcement. The change of behaviour what is seen in an individual will be because of operant conditioned learning. Behaviour modification as …. , chaining, discrimination and

cues (formation of habits) and generalisations- are the important and significant contributions from Skinner. And all these contributions have a very important role in the field of education. Jean Piaget's theory deals with cognitive development in which cognitive structure, cognitive function and scheme are the important factors. According Piaget cognitive development occurs in four sequential stages which are universal to all individuals. The four stages of cognitive development identified by Jean Piaget are as follows:

1. Sensory Motor stage (0 to 2 years)
2. Pre-operation stage (2 to 7 years)
3. Concrete operational stage (7 to 11 years)
4. Formal operational stage (11 years and up to teen age)

Independence, autonomy, self-respect, self-confidence and potential powers that each and every individual will have- all such concepts are the basis for humanism. According to humanism every individual is responsible for his own growth and development. Vygotsky's propositions apparently look like they are diagonally opposite to what Piaget has proposed. And he said for cognitive development social interaction is the most important support. According to Piaget development is followed by learning whereas Vygotsky is of the opinion that learning precedes development. Vygotsky has pointed out one more very interesting thing that is every event occurs twice in the context of cultural development of a child. First the event occurs in the social context and next the same will be repeated in child's mind. After this process the information will be stored firmly in the mind. The interaction between two individuals at social context is called "inter-psychological" and the interaction that occurs within an individual/child is called "intra-psychological". Language development is recognised with social speech, private speech and inner speech. According to social constructivism the child development depends upon social interactions, the more knowledgeable other, and the zone of proximal development.

1.2.5. Answers to 'Check Your Progress - 1, 2, 3 and 4'

Check Your Progress - 1
1. a   2.b   3. c   4. d   5. a   6. c

Check Your Progress - 2
1. a   2. b   3. d   4. a- "   b- "   c- "   d- X   e- X   f- X

Check Your Progress - 3
1. b   2. c   3. a- "   b- X c- "   d- "   e- "   f- X

Check Your Progress - 4

1. a   2.d   3. a- X b- " c- X d- X e- "   f- "

1.2.6. Unit end Exercises

1. Answer the following questions:
2. Explain Operant Conditioned Theory of Learning.
3. What is Re-inforcement? How many types are there? Give examples.
4. Explain the different stages of cognitive development according to Piaget.
5. What is the significance of information processing in learning? Explain.
6. What are the major goals of humanism? Mention.
7. Explain the salient features of social constructivism as proposed by Vygotsky.

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Block 1 : Understanding Learning
Unit 3 : Applicability of Different Perspectives of Learning in different Learning Situation

Unit Structure

1.3.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain the significance of Perspectives of Education;

- Bring out the correlation between the perspectives of education and curriculum;

- Discuss the perspectives of education elucidated in National Policy of Education 1986;

- Explain with illustration the application of National Curriculum Framework 2005;

- Justify the role of education in bringing out the gender equality; and

- Create your own learning situations to show how to bring joy of learning among children.

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1.3.2. Introduction

You all know the significant role of education in a civilized society. The contributions of education in constructing a civilized society will be immensely important. The statement -"The destiny of our nation is written in the classroom"-by Kothari Commission is not an exaggeration. Our great national leader Mahatma Gandhi was of the opinion that, education can be a very powerful device in the eradication of social injustice, violence and inequality in any social system. If we just elaborate these ideas, we will come to know about the design of future education system, like, how and what to be taught, what to be learnt, how to create the learning situations, what training to be given and what skills have to be taught and also how much freedom should be there for children to select any subjects or career on their own choice. Whatever we want in future, can occur only if we plan and do something today. It could be creating a forum, laying foundation, planning for the future, designing the instructions, constructing the general as well as instructional objectives etc. for such a dynamic and functional task educational perspectives give a very strong support and foundation. In this unit you will be studying about the educational goals and aims, objectives, learning situations and the corresponding different perspectives. These perspectives are subjected to changes. This is very obvious because education has to take care of the society and the individual in which the societal as well as individual needs and demands to be fulfilled but they vary from time to time. Because of this reason the education system of post-independent India has undergone changes for several times. In the beginning of this unit you will find the analytical explanation regarding the education system. And further the present perspectives and their application in different learning situations are explained.

1.3.3. Learning Points and Learning Activities

1.3.3.1. Different Perspectives of Learning - Background

Activity 1

This is the scene once I saw in one of the government school:

The whole campus of the school was beaming with children's noise, joy and enthusiasm. All the children were very happy and active and it seemed there was no limit for their joy. There was a reason for this. That day the school had arranged the whole campus as a centre for – children to get experienced with the process of sale and purchase through which they will get the first hand information regarding profit and loss, and the percentage of profit or loss. There, one could see the vegetables, stationeries, sweets, fruits and other daily useable commodities for marketing. Some were the owner of the shops and some were purchasers or consumers. Here the shop means a place of 5X5 sq. area in which each student had a chance to sale. It was just with a boundary marked by *rangoli* powder.

To avoid the hot sun they had used the umbrella made of big bed sheets/clothes/some shelter. Because of this some of the children learnt making use of simple balance, some learnt the mechanism of sale and some learnt adding, subtracting and simple calculation. All the experiences whether it is receiving or giving back the change (the differential amount) made the children feel happy and they were solving the problem. The whole event had the strong support of parents, other leaders of the community and school administrators. Actually these activities were nothing new, rather these are the day-to-day events in everybody's life. But this exposure gave the children to tackle the real life situation by applying their knowledge whatever taught and learnt in the classroom.

Activity 2

Similarly as told above, in another school, a competition was arranged for the school children. Here the children allowed to make use of sprouted seeds, dry seeds, nuts, dry and juicy fruits, vegetables, salt, sugar, chilly and pepper etc., by this they were challenged to prepare some eatables without making use of fire. They were not allowed to cook anything or make use of any fuel and stove. Here also all the children were extremely happy and totally it was giving a feeling of some festival. What all could have been taught through such activity? I leave this for your imagination!!

Now you just think for a while, the activities above said could also be conducted in your schools, is it not? Try it in your own way. And a very important thing is, get it recorded so that, next time, if you want to do it again you can definitely go with some positive modifications.

Two important commissions, namely, secondary education commission (1952-53) and national education commission (1964-66) studied the importance of education and education related activities in post independent India. The whole country's scenario had underwent a strong change. That was due to the changed social and political situations. During that period the system of education was following "Basic System of Education" proposed by Mahatma Gandhi. The central government had given full freedom to the state government to take any decision regarding education system at school level. Education under the Indian Constitution until 1976 allowed the state governments to take decisions on all matters pertaining to school education, including curriculum, within their jurisdiction. The Centre could only provide guidance to the States on policy issues. It is under such circumstances that the initial attempts of the National Education Policy of 1968 and the Curriculum Framework designed by NCERT in 1975 were formulated. In 1976, the Constitution was amended to include education in the Concurrent List,and for the first time in 1986 the country as a whole had a uniform National Policy on Education. The NPE (1986) recommended a common core component in the school curriculum throughout the

country. The policy also entrusted NCERT with the responsibility of developing the National Curriculum Framework, and reviewing the framework at frequent intervals. NCERT in continuation of its curriculum-related work carried out studies and consultations subsequent to 1975, and had drafted a curriculum framework as a part of its activity in 1984. This exercise aimed at making school education comparable across the country in qualitative terms and also at making it a means of ensuring national integration without compromising on the country's pluralistic character. Based on such experience, the Council's work culminated in the National Curriculum Framework for School Education, 1988. However, the articulation of this framework through courses of studies and textbooks in a rapidly changing developmental context resulted in an increase in 'curricular load' and made learning at school a source of stress for young minds and bodies during their formative years of childhood and stress for young minds and bodies during their formative years of childhood and adolescence. This aspect has been coherently brought out in Learning without Burden, 1993, the report of the Committee under the chairmanship of Professor Yash Pal.

NPE proposed a national framework for curriculum as a means of evolving a national system of education capable of responding to India's diversity of geographical and cultural milieus while ensuring a common core of values along with academic components. "The NPE - POA envisaged a child-centred approach to promote universal enrolment and universal retention of children up to 14 years of age and substantial improvement in the quality of education in the school" (PoA, P . 77). The POA further elaborated on this vision of NPE by emphasising relevance, flexibility and quality as characteristics of the National Curriculum Framework. Thus, both these documents envisioned the National Curriculum Framework as a means of modernising the system of education. Here one can clearly see the perspectives of education with the process of designing the system of education. Similarly if we examine the guiding principles of education it again gives the clear picture of perspectives of education.

Those guiding principles are enlisted below, observe:
- connecting knowledge to life outside the school
- ensuring that learning is shifted away from rote methods
- enriching the curriculum to provide for overall development of children rather than remain textbook centric
- making examinations more flexible and integrated into classroom life and
- nurturing an over-riding identity informed by caring concerns within the democratic polity of the country.

Continuingly it is said that in the present context, there are new developments and concerns to which our curriculum must respond. The foremost among these is the importance of including and retaining all children in school through a programme that reaffirms the

value of each child and enables all children to experience dignity and the confidence to learn. Curriculum design must reflect the commitment to Universal Elementary Education (UEE), not only in representing cultural diversity, but also by ensuring that children from different social and economic backgrounds with variations in physical, psychological and intellectual

Characteristics are able to learn and achieve success in school. In this context, disadvantages in education arising from inequalities of gender, caste, language, culture, religion or disabilities need to be addressed directly, not only through policies and schemes but also through the design and selection of learning tasks and pedagogic practices, right from the period of early childhood.

In the formal perspective the provision for women under "equality" and the available facilities are not up to the mark. The National Policy on Education, 1986 emphasised the need to create awareness of environmental concerns by integrating it in the educational process at all stages of education and for all sections of society.

The social context of education in India thus presents a number of challenges, which must be addressed by the curriculum framework, during the planning, designing and implementing. Some of them are presented below:

- Opening the concept of knowledge to include new areas of knowledge and experience,
- inclusivity in selecting learning tasks,
- pedagogic practices that are alert to promoting participation,
- building self-confidence and critical awareness, and
- An openness to engaging with the community to explain and share curricular decisions are among the new ideas discussed in different sections of this document.

If we examine the aims and objectives of education, it becomes very vivid that they are framed based on the current educational perspectives only. The aims of education simultaneously reflect the current needs and aspirations of a society as well as its lasting values, and the immediate concerns of a community as well as broad human ideals. At any given time and place they can be called the contemporary and contextual articulations of broad and lasting human aspirations and values. Educational aims turn the different activities undertaken in schools and other educational institutions into a creative pattern and give them the distinctive character of being 'educational'. An educational aim helps the teacher connect her present classroom activity to a cherished future outcome without making it instrumental, and therefore give it direction without divorcing it from current concerns.

Thus, an aim is a foreseen end: it is not an idle view of a mere spectator; rather, it influences the steps taken to reach the end. An aim must provide foresight. It can do this in three ways: First, it involves careful observation of the given conditions to see what means are available for reaching the end, and to discover the hindrances in the way. This may require a careful study of children, and an understanding of what they are capable of learning at different ages. Second, this foresight suggests the proper order or sequence that would be effective. Third, it makes the choice of alternatives possible. Therefore, acting with an aim allows us to act intelligently. The school, the classroom, and related learning sites are spaces where the core of educational activity takes place. These must become spaces where learners have experiences that help them achieve the desired curricular objectives. An understanding of learners, educational aims, the nature of knowledge, and the nature of the school as a social space can help us arrive at principles to guide classroom practices. The guiding principles discussed earlier provide the landscape of social values within which we locate our educational aims. The first is a commitment to democracy and the values of equality, justice, freedom, concern for others' well-being, secularism, respect for human dignity and rights. Education should aim to build a commitment to these values, which are based on reason and understanding. The curriculum, therefore, should provide adequate experience and space for dialogue and discourse in the school to build such a commitment in children. Learning to learn and the willingness to unlearn and relearn are important as means of responding to new situations in a flexible and creative manner. The curriculum needs to emphasise the processes of constructing knowledge.

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. The best way to score more marks is

   a. Learning by by-heart
   b. Understanding
   c. Coherent expressions based on understanding
   d. Learning by writing

2. Meaningful educational power must be given by—

   a. Education
   b. Parents
   c. Society
   d. Subject

Below are given some statements, put '✓' mark for the correct one and X for the wrong one:

a. An aim is a pre-determined end
b. Through education it is not possible to make the children to learn values
c. Involving each and every one in the process of learning is impossible
d. One can see the perspectives of education in its goals and objectives
e. Knowledge gained inside the classroom must be linked with outside world
f. "Learning without Burden" is one of the recommendations of Yash Pal Committee

1.3.3.2. Analysis of Learning in Context with Different Perspectives

Activity 3

Talking Pictures

Show the class a picture of a household with various members of the family performing different tasks. The difference is that the father is cooking, the mother fixing a light bulb, the daughter returning from school on a bicycle, and the son milking a cow, the other sister climbing a mango tree, and the other son sweeping the floor. The grandfather is sewing on a button, and the grandmother is doing the accounts. Ask the children to talk about the picture. What are the 'works' they can identify? Do they think that there is any work that these people should not be doing? Why? Involve them in a discussion on the dignity of labour, equality and gender. Discuss the importance of each individual being self - sufficient and complete. (Courtesy NCF 2005)

The above activity could be used for nurturing the values, like, dignity of labour, division of labour, equality, individual respect and unity in diversity etc., which will definitely help the children to develop a healthy attitude.

This can be done for other topics such as good and bad work, caste stereotyping and the value - added nature of work through similar talking pictures.

Activity 4

Talking Picture Activity can be done for other topics such as good and bad work, (disposing wastes in somebody else's place, or un-civilized disposals) caste stereotyping and the value - based works, like, 'work is worship' commitment and dedications of soldiers, scientists and others. Such activities will help children in internalising the knowledge as well as values.

The NCF 2005 has stressed upon the need to recognise the child as a natural learner, and knowledge as the outcome of the child's own activity. In our everyday lives outside the

school, we enjoy the curiosity, inventiveness and constant querying of children. They actively engage with the world around them, exploring, responding, inventing and working things out, and making meaning. Childhood is a period of growth and change, involving developing one's physical and mental capacities to the fullest. It involves being socialised into adult society, into acquiring and creating knowledge of the world and oneself in relation to others in order to understand, to act, and to transform. Each new generation inherits the storehouse of culture and knowledge in society by integrating it into one's own web of activities and understanding, and realising its 'fruitfulness' in creating afresh. Learning has been supported by a varieties of perspectives and theories. Below you can observe certain specific perspectives and the respective anticipated learning situation as some citation:

Learner/child Centred Education: Giving utmost importance to the child's priority, like His/her interest, background, attitude, level of learning, level of comprehension, level of competencies, his/her level of creativity etc. in an education system will be the dominating feature of learner centred education system. But contrary to this, we see children are learning by rote learning method, or struggling to remember the taught lessons in the class, unable to reproducing them on the paper during examination and what one can say is totally a memory based education system. As an effective alternative method a paradigm shift is expected in which a live leaning environment is created, children will be interactive, getting first-hand experience, a forum for their creativity, and opportunity for feeling joy of learning. Active participation and sociability must be the trump card of any education system.

Learners in Context: Children's voices and experiences do not find expression in the classroom. Often the only voice heard is that of the teacher. When children speak, they are usually only answering the teacher's questions or repeating the teacher's words. Children will learn only in an atmosphere where they feel they are valued. The association of learning with fear, discipline and stress, rather than enjoyment and satisfaction, is detrimental to learning. Our children need to feel that each one of them, their homes, communities, languages and cultures, are valuable as resources for experience to be analysed and enquired into at school; that their diverse capabilities are accepted; that all of them have the ability and the right to learn and to access knowledge and skills; and that adult society regards them as capable of the best. Because of this reason only, the state and central government have taken certain dynamic steps, like, midday meals, free books, providing basic facilities in the school and uniform etc. All these are the developments of recent days.

The precondition for all development is healthy physical growth of all children: This requires that the basic needs in terms of adequate nutrition, physical exercise and other

psycho-social needs are addressed. Participation of all children in free play, informal and formal games, and yoga and sports activities is essential for their physical and psycho-social development. The range of abilities as a result of games, sports and yoga will improve stamina, fine and gross motor skills and dexterities, self-awareness and control, and coordination in team games. Physical development supports mental and cognitive development, especially in young children.

Meaningful learning is a generative process: Cognition involves the capacity to make sense of the self and the world, through action and language. Meaningful learning is a generative process of representing and manipulating concrete things and mental representations, rather than storage and retrieval of information. Thinking, language (verbal or sign) and doing things are thus intimately inter-twined. This is a process that begins in infancy, and develops through independent and mediated activities. As their linguistic capabilities and their ability to work in the company of others develop, it opens up possibilities of more complex reasoning in tasks that involve abstraction, planning and dealing with ends that are not in view. There is an overall increase in the capability of working with the hypothetical, and reasoning in the world of the possible.

Adolescence is a critical period for the development of self-identity: The process of acquiring a sense of self is linked to physiological changes, and also learning to negotiate the social and psychological demands of being young adults. Responsible handling of issues like independence, intimacy, and peer group dependence are concerns that need to be recognised, and appropriate support be given to cope with them. The physical space of the outside world, one's access to it, and free movement influence construction of the self. This is of special significance in the case of girls, who are often constrained by social conventions to stay indoors. These very conventions promote the opposite stereotype for boys, which associates them with the outdoors and physical process. It is important to recognise that adolescents need social and emotional support that may require reinforcement of norms of positive behaviour, acquisition of skills essential to cope with the risky situations that they encounter in their lives, manage peer pressure and deal with gender stereotypes. The absence of such support can lead to confusion and misunderstanding about these changes, and affect their academic and extracurricular activities.

Teaching for Construction of Knowledge: In the constructivist perspective, learning is a process of the construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials/activities presented to them (experience).

Implementation of Critical Pedagogy: Teacher and student engagement is critical in the classroom because it has the power to define whose knowledge will become a part of school-related knowledge and whose voices will shape it. Students are not just young people for whom adults should devise solutions. They are critical observers of their own conditions and needs, and should be participants in discussions and problem solving related to their education and future opportunities. Hence children need to be aware that their experiences and perceptions are important and should be encouraged to develop the mental skills needed to think and reason independently and have the courage to dissent. What children learn out of school - their capacities, learning abilities, and knowledge base - and bring to school is important to further enhance the learning process. This is all the more critical for children from underprivileged backgrounds, especially girls, as the worlds they inhabit and their realities are underrepresented in school knowledge. Participatory learning and teaching, emotion and experience need to have a definite and valued place in the classroom. True participation starts from the experiences of both students and teachers. Critical pedagogy provides an opportunity to reflect critically on issues in terms of their political, social, economic and moral aspects. It entails the acceptance of multiple views on social issues and a commitment to democratic forms of interaction.

Basic Capabilities: knowledge, understanding, values and skills are considered as the basic capabilities. Children's basic capabilities are those that form the broad basis for the development of understanding, values and skills. Language and other forms of expression provide the basis for meaning making, and sharing with others. They create possibilities of development of understanding and knowledge, providing the ability to symbolise, codify, and to remember and record. Development of language for a child is synonymous with development of understanding and identity, and also the capability of relating with others. It is not only verbal languages with scripts, but also languages without scripts, sign languages, scripts such as Braille and the performing arts, that provide the bases for making meaning and the expression. Capabilities for work and action involves the coordination of bodily movement with thought and volition, drawing on skill and understanding, and directing oneself to achieve some purpose or create something. It also involves handling tools and technologies, and the ability to manipulate and organise things and experiences, and to communicate.

Some principles regarding the approach to knowledge in the curriculum (NCF 2005):
- Acquiring a critical perspective on social reality and the natural environment through the lenses provided by the subject matter.

- Connecting with the local and the contextualised in order to 'situate' knowledge and realising its 'relevance' and 'meaningfulness'; to reaffirm one's experiences outside school; to draw one's learning from observing, interacting with, classifying, categorising, questioning, reasoning and arguing in relation to these experiences.
- Making connections across disciplines and bringing out the interrelatedness of knowledge.
- Realising the 'fruitfulness' and 'openness' of enquiry, and the provisional nature of truth.
- Engaging with 'local knowledge'/indigenous practices in the local area, and relating these to school knowledge wherever possible.
- Encouraging questions and leaving space open for the pursuit of new questions.
- Being sensitive to the issues of 'equality' in classroom transaction as well as established stereotypes and discrimination regarding learnability of the knowledge area by different groups (e.g. girls not being given field-based projects, the blind being excluded from the option of learning mathematics, etc.).
- Developing the imagination, and keeping imagination and fantasy alive.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. The child as a natural learner, and knowledge as the outcome of the child's own activity-proposed by
    a. NCF 2005
    b. National Policy on Education 1986
    c. Programme of Action 1992
    d. National Education Commission 1968

2. Girls doing the traditional works of boys means,
    a. It is a symbol of social change
    b. Ought not to be done
    c. Western Influence
    d. Symbol of Gender Equality

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. Children will learn only in an atmosphere where they feel they are valued
    b. Learning is Generative Process

c. Critical Pedagogy leads to many problems

d. Encouragement to ask question will lead to decrease in the interest of learning among children

e. In a classroom, always there will be scope for partiality, there will be no solutions for this.

f. Education system must give a common forum for inter relationship for different discipline.

1.3.3.3. Applicability of Different Perspectives of Learning in different Learning Situation

So far we discussed about learning in the context of different perspectives. For better learning outcome, their implications must be still more systematic. Now we shall take a chance to see how different learning situations could be created according to different perspectives with some examples and illustrations.

Learner Centred Education: to understand the applicability of learner centred teaching-learning process we shall take some constructions for our convenience. In schools every child will learn three languages and three core subjects. Three languages, are, one mother tongue, apart from this one national language (Hindi) and one more commercial language (English). Core subjects are science, mathematics and social sciences. But all these subjects are having, like, water-tight-compartments. The boundary of each subject is so rigid. So, there will be no inter-connection between them. Hence the course has become just the pieces of information. Because of this what children are learning inside the classroom will not have any relevance with outward world. So how to overcome this problem?

Day after day children bring to school their experiences of the world around them the trees that they have climbed, the fruits they have eaten, the birds they have admired. All children are alive to the natural cycles of day and night, of the weather, the water, the plants and the animals that surround them. Children, when they enter Class one (I standard) already have a rich language base of small numbers, and the rudiments of operations are already in place. Yet rarely do we hear the knowledge that they already have and which they bring into the classroom. Rarely do we ask children totalk about or refer to the world outside the school during our lessons and teaching. Instead we resort to the convenience of the printed word and picture, all of which are poor replicas of the natural world. Worse still, today in the name of computer-aided learning, the living world is being turned into animation strips (the naturally occurring butterfly, moth, frog, snail, praying mantis or cricket are completely neglected in the pure theory classes !!) that children are expected to watch on their computer

screens. Instead of this if the children are made to observe their own school campus, or school garden to identify the living and non-living things definitely it gives them an opportunity for self-learning or learning through first-hand information. Application of "Learning by Doing" principle makes the learning a learner centred and meaningful learning also.

In order to develop the competencies, like, questioning, inquiry, critical analysis and discovery following illustrations may be used to create the opportunity to students: Framing Questions…

1. Adding, subtracting, division and multiplications, are taught in the class, but how to make student to participate actively? Then ask questions like,
   How many chocolates do you want? If you would like to give to your friends, then how many do you want?
2. If the answer we want is 9 what numbers to be added? (The answer may be 8+1, 5+4, or 10-1 etc.)
3. Last Sunday I had been Ooty and returned on Friday. Then how many days I stayed in Ooty?
4. Ramesh, Suresh and Girish came and Leela, Mala, and Sheela joined them. Later, Ramesh and Mala left the place, but Mala came back again, and Suresh left the place. How many are there in the place and who are they?
5. Padma is standing near a road signal. Why is it so?
6. Rajesh is feeling very happy today. Why?

Co-operative Learning and Group Discovery: Especially these two are the strategies where children will be highly active, and interested, and enthusiastic. These activities will give them a chance for their complete involvement, ego-satisfaction, satisfying their explorative nature and curiosity. Some learning situations that give more scope for co-operative learning and group discovery are illustrated below, observe:

1. Give a bowl containing the mixture of mustard and ragi and ask them whether the seeds are similar. Are they dicot or monocot seeds? Let the children find out themselves by doing some activities, like, separating the seeds based on their morphological features. Let them grow these seeds separately (Based on their shape) in small trays. It may take 15 to 20 days. When the seedlings grow luxuriously, the monocot will show the features as Ragi and the dicot will show the features of mustard. This has to be their own exploration. Ask them to document every event meticulously. Teacher may help them intermittently.

2. Air Pollution: Ask the children to collect the leaves of big size from the heavy traffic area and also from the residential area. In the class room laboratory tell them to wipe the upper as well as the lower surface of the leaves with cotton bolls. Based on this data ask them to infer the most and least polluted area. For this allow them to discuss with their peers.

3. During winter season, you might have seen some wasps flying with green worms in their mouth. Usually at the doors, windows and some secluded places they will construct their mud-nest. Ask the children regarding this and ensure that it has created sufficient curiosity among them. Then allow them to find out the following information: (a) why the wasp carries the worm in its mouth? (b) Is it for its food? Then do you think wasp is carnivore? (c) Why it keeps the worm inside the mud-nest and finally closes it? (d) What happens to the worm at the end? Such questions with suitable environment, help to develop the skill of discovery, analysis, keen observation and problem solving among the students. This helps them to learn from their own experience and also will be confident enough to explore in new situations.

4. The carrot brought from the market has lost its colour and was too soft. Teacher brought this carrot to the class, and ask the students what is the reason for this. He encourages the students to extract a minute portion from the surface of this carrot with the help of a scalpel and observe it under a compound microscope. Teacher helps them to identify the microbes and also takes the support of internet (websites) and live videos regarding microbes. Teacher makes sure that all the students participate with a team spirit. Use of ICT and educational packages is also advised here.

5. Group activities, like, storytelling, solving the puzzles, creating new puzzles, arranging a healthy competitions between the groups, role play and dramatization-etc. Encouraging the students to do the drama of some folk stories, (like pied piper, punya koti, Akbar-Birbal and Tenali Rama's stories) etc.

6. Make the children of several group in which each group contain 5 to 6 students. Give each group the flash-card having animal pictures. Now ask them to construct stories and encourage at the end what message they would like to impart.

7. Developing self-learning competencies among students by making use of e-learning packages. Each child should have an individual access to the computer with e-learning CD and they must be allowed to learn on their own pace, like, revising, taking the same test again and again, progressing without any stress etc.

8. One can bring a quality improvement by making use of audio aids in language learning. For example while a lesson on Pandith. Mallikarjuna Mansoor, his audio records could be used. Similarly the Movies, like, "Dangal", "Tare Jameen Per",

"Check de", "Three Ediots", "Bhagath Singh", "URI", etc. would help in developing patriotism in children. Teachers along with the students can watch such movies.

9. Take a glass filled with water. Keep an ice cube on the water surface. Now give the challenge to the students. It is "lift the ice cube by holding two ends of a thread and touching the ice cube only through the thread and also one should not use their finger or hand". By trying, they will come to know that they cannot tie the ice cube and lift, and even though they try for several times, they will fail. Now the teacher gives the solution. That is, putting a pinch of common salt on the upper surface of the ice cube and trying in the same manner, the problem is going to be solved. Successfully the can lift the ice cube according to the conditions were told in the beginning. After some time as they hold it up, the ice cube will fall down owing to some scientific principle. For this the atmospheric pressure, temperature, melting point of ice cube and the presence of common salt- are the causes. Teachers can repeat this demonstration before the students and also allow them to do it on their own. For children it may appear like a magic but it is because of scientific principles only.

Check Your Progress - 3

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. One can develop imagination among children by
   a. Telling the story completely then asking questions
   b. Encouraging children to criticise the characters of a story
   c. Telling the moral of the story
   d. Telling the story half and allowing children to complete it

2. In order to develop team spirit and co-operative learning
   a. Teacher should explain the content very well
   b. Encouraging children to answer the questions under Exercise
   c. Taking the children to field visit
   d. Giving group activities/project work

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
   a. The carrot was rotten because of excess of water
   b. One cannot identify ***Ragi and mustard*** seed clearly if the get mixed up
   c. Worm is the food of the wasp

d. Educational CDs makes the learning simple and easy

e. Movies that support education could be shown to the students

f. Making students to play drama and role-play is a very good teaching strategy

1.3.4. Let us Summarise

There is no doubt in telling that education is one of the major devices in making a country to move ahead with progress. There are several perspectives of education which influence and guide the system of education in framing curriculum, teaching-learning process, evaluation system, how to teach and what to teach, as well as what are the skills to be learnt by the students. Educational perspectives also touch upon the aspects like, which are the optional tasks to be given to the students and which are compulsory. That means to say, that, what we expect or anticipate for the future, that has to be planned in advance, which is nothing but the perspectives. It could be in terms of laying down the objectives, goals, designing the curriculum and constructing the devices for evaluation etc. National Policy on Education 1986 has framed the guiding principles for education which are in the following manner:

- Connecting knowledge to life outside the school
- Ensuring that learning is shifted away from rote methods
- Enriching the curriculum to provide for overall development of children rather than remain textbook centric
- Making examinations more flexible and integrated into classroom life and
- Nurturing an over-riding identity informed by caring concerns within the democratic polity   of the country.

The main perspective of the above policy was that, building a link between the world outside and the knowledge what the students gain in a classroom, education for equality, assuring children of their birth right to education and enabling them to become good contributors to the nation and society. And the perspective for curriculum construction is prescribed in the following lines:

The curriculum is a plan to develop capabilities that are likely to help achieve the chosen educational aims.Experiences of the socio-cultural world also need to become a part of the curriculum. Children need to find examples of the plurality of peoples and ways of life represented in the textbooks.

- Expanding the concepts under "Knowledge" to new branches of knowledge and experiences.

- Taking care of involving all the students while choosing the learning tasks.
- Adapting the methods that are suggested in pedagogy to get the uniform participation from all the students.
- Enabling the students to develop confidence and developing critical awareness in them.
- Motivating the community to discuss with open mindedness and to give explanations regarding the curriculum.

Child centred education, Learners in Context, The precondition for all development is healthy physical growth of all children, and Meaningful learning is a generative process which may result in managing the concrete and imaginary things intelligently, Adolescence is a critical period for the development of self-identity, Teaching for Construction of Knowledge, Implementation of Critical Pedagogy, Basic Capabilities in terms of knowledge, understanding, values and skills should be the thrust areas in curriculum. Children's basic capabilities are those that form the broad basis for the development of understanding, values and skills – all such aspects have to be taken care of while designing the education system and actually this could also be seen as perspectives of education.

Some principles regarding the approach to knowledge in the curriculum (NCF 2005):

- Acquiring a critical perspective on social reality and the natural environment through the lenses provided by the subject matter.
- Connecting with the local and the contextualised in order to 'situate' knowledge and realising its 'relevance' and 'meaningfulness'; to reaffirm one's experiences outside school; to draw one's learning from observing, interacting with, classifying, categorising, questioning, reasoning and arguing in relation to these experiences.
- Making connections across disciplines and bringing out the interrelatedness of knowledge.
- Realising the 'fruitfulness' and 'openness' of enquiry, and the provisional nature of truth.
- Engaging with 'local knowledge'/indigenous practices in the local area, and relating these to school knowledge wherever possible.
- Encouraging questions and leaving space open for the pursuit of new questions.
- Being sensitive to the issues of 'equality' in classroom transaction as well as established stereotypes and discrimination regarding learnability of the knowledge area by different groups (e.g. girls not being given field-based projects, the blind being excluded from the option of learning mathematics, etc.).
- Developing the imagination, and keeping imagination and fantasy alive.

1.3.5. Answers to ' Check Your Progress - 1, 2 and 3'

Check Your Progress - 1

1. c   2. a   3. a- " b- X c- X d- " e- " f- "

Check Your Progress - 2

1. a   2. d   3. a- " b- " c- X d- X e- X f- "

Check Your Progress - 3

1. d   2. d 3. a- X b- X c- X d- " e- " f- "

1.3.6. Unit end Exercises

Answer the following questions:

1. What is meant by educational perspectives? Explain its significance.
2. Explain the meaning of "Learning without Burdon". Discuss its pros and cons.
3. Elucidate the educational perspectives according to National Policy on Education 1986.
4. What is the role of education system in bringing gender equality?
5. Explain with two examples and illustration each with for co-operative learning and co-learning.

1.3.7. References

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Block 1 : Understanding Learning

Unit 4 : Relevance and Applicability of various theories of learning for different kinds of learning situations

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Unit Structure

1.4.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Analyse the learning situations according to behaviourism;
- Create learning situations that are suitable for the application of behaviourism;
- Explain the meaning of learning according to cognitive theory;
- Create learning situation cognitively;
- Identify the features of humanism in human learning;
- Create learning situations according to humanism;

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- Bring out the relationship between social-constructivism and learning; and
- Create the learning situations according to social-constructivism.

1.4.2. Introduction

You will be learning many interesting facts regarding learning in this unit. Usually learning is understood in context with a classroom situation isn't it? Learning means, learning of facts, concepts, learning of principles, numerical abilities, and learning of interest, attitude, values etc. So, in this way the term learning is used in several contexts in daily life situation. These aspects were quite challenging to psychologists also. In turn this resulted in the formation of varieties of theories, laws and principles as well as different perspectives about learning. Each and every theory has explained learning in different ways and means. However in each theories you will find a grain of truth. This is so because the nature of "LEARNING" only!! Learning has different dimensions. For example, swimming, cycling, singing, dancing, computing, reading, writing and communicating-all these are different faces of learning. Similarly we can find different dimensions as well as applications in different learning theories. In this unit you will come to know about behaviourism, cognitive theory, humanism and social constructivism and respective theorists especially the way they have explained learning in their own perspectives. Continuingly you will come to know about creating varieties of learning situations in context with different learning theories.

1.4.3. Learning Points and Learning Activities

1.4.3.1. Perspectives of Behaviourism and Application in Learning Situations

Activity 1
- A geography teacher taught how to read a map (map-reading). Because of this students became familiar with the skill of identifying the rivers, hills, mountains, cities, tribal places and railway tracks etc. on a map. Not only that, they also became good enough in telling about whereabouts of a place with respect to its altitude and latitude.
- Later the teacher used to give some altitude and latitude randomly, and asking students to explain the geographical features of that place (for example altitude 60 and latitude 40). Students could explain with all perfection about the details regarding rain fall, natural vegetation, weather and climate and the probable occupation of that place.

- The next activity was students have to identify about certain plants and animals and human beings and the corresponding geographical details. This was done with respect to chart as well as globe.
- If you observe the above activities, it becomes evident that, only after some training this is possible for any student.
- After sufficient exposure with map-reading now you can tell your students to sketch the area of their school, house, primary health centre, or the public/private library. Let them do it in the classroom only so that you can correct and rectify their mistakes whenever it is needed.
- Origami is an art of paper-folding. Traditional origami consists of folding a single sheet of square paper (often with coloured side) into a sculpture, without cutting, gluing, taping or even marking on it. By this, help the students to do the cuttings of dog, bird, fish, boat, ball and any other coloured 3D shapes. While guiding, teacher can make the demonstration before the students so that they can follow perfectly. This gives the way for co-learning and while doing such activities varieties of avenues get opened themselves for interested learning.

First we shall try to understand about the basic proposals of behaviourism. Behaviourism highlights the behaviour of an organism. Here it is students' behaviour which is considered as the expression of learning. Basically behaviour and learning are explained in context of stimulus and response. The salient features of behaviourism could be mentioned as follows:

Influence of environment on behaviour: the behaviour of a person is formed by his interaction with the environment. To say it still clearly, the behaviour of person is formed due to the conditioned learning, shaping of personality, feedback obtained, prizes and punishment, recognition. And based on all such causes a person will behave.

Learning is considered as the bond between stimulus-response: according to behaviourism only the observable behaviour is taken in to consideration. By that you must know that behaviourism will not consider the thoughts, emotions and analysis which can take place in the mind of an individual is not at all considered.

Learning must result in behavioural change: according behaviouristic school of thought, learning is the desirable, behavioural relatively permanent change in an individual.

Learning occurs when Stimulus-response are with time-space proximity: learners learn by responding to the stimuli correctly. For this to happen both stimulus and response should be very near by means of time and space.

There are commonality in human and animal learning: behaviourists have used several animals for their experiment. And have studied the psychology of animal leaning. Later experiments were also conducted on human learning. At the end it was found that there were so many similarities between animal and human learning. They tried to explain human learning by taking the reference/basis of animal learning.

There are so many eminent psychologists who belonged to behaviouristic school of thought. Some of them are, John Watson (father of behaviourism), Ivan Pavlov (Classical Conditioning), B.F.Skinner (Operant Conditioning) and Edward Thorndike (Laws of Learning). In the following discussion, you will come to know, some learning situations, educational implications, and contributions of behaviourism.

Ivan. P. Pavlov has proposed the theory of Classical Conditioning, in which he considered learning as the resultant of some conditions that brings a behavioural change in an organism. We all do come across many stimuli in our daily life, and thus we are usually exposed to simple classical conditioning. The findings of experiment on classical conditioning have a significant similarity on human learning also, Pavlov and his associates discovered several phenomena during their experiment on dogs.Fear, love, hatred and aversions etc; are created by conditioning, usually during early child hood days, children develop fear towards the policemen, doctors and strangers. Similarly a teacher with his defective methods of teaching or making use of inappropriate punishment techniques, may condition a child to develop hatred not only towards him, but also the subject he teaches and even the whole school environment. Contrary to this, affectionate, loving, caring and sympathetic teachers as well as the parents will produce a desirable impact on the child, through the process of conditioning. Though this theory is basically based on animal learning, it has contributed significantly to the field of education also. Following are few citations in which classical conditioning theory is applied:

- It helps in inculcating good habits, cleanliness, respecting elders, obedience, discipline and punctuality among children.
- By making use of the technique 'Extinction' bad habits could be eliminated, and also the anxiety and fear among exceptional children could be removed.

- It is used to eliminate fear and phobia, and in the treatment of mental illness and depressions.
- It helps in developing positive attitude towards, learning, school and the teachers. By giving more drill work, practice with appropriate reinforcements, conditioned learning will become stronger.
- Practice of and learning of alphabet is definitely through conditioned learning. Similarly, reading, writing, spelling, grammar and any school subjects is facilitated through classical conditioning.
- Use of audio- visual support system in teaching learning process makes it more effective and efficient. This point again upholds the educational implications of classical conditioning theory.

Thorndike's connectionism or Trial and Error Learning
[S-R Reinforcement Theory]

Edward. L. Thorndike (1874-1949) - The famous psychologist was the initiator of this theory – The **Trial and Error Learning Theory**. Based on the experiments on animal learning, Thorndike has conducted several experiments on human leaning also. According to him new bonds are formed through experience. The clarity in the experience, mind-set, learner's ability, continuity of the situations, frequency, novelty, intensity and satisfactions that are going to be acquired – all these are basic elements of the process of bond- formation. Thorndike depicts all these aspects in his principles of learning. Law of exercise, Law of experience and Law of readiness- are the predominant ones, and these three are considered as basic principles of learning. He has postulated few other supplementary principles, like, multiplicity of responses, Sequence adaptability, lateral activities, illustrations, actualizations and displacements etc. Thorndike explained learning in human beings in the following manner:

1. Learning follows the process of drive satisfaction.
2. Learner will do many responses
3. The response which results in goal achievement is said to be the satisfying response.
4. Satisfying responses are learnt excellently
5. The responses which are not satisfactory are left out.

Students will try to solve the problem only and only when they have a very strong inner urge, that too, if the salvation of the problem results in fulfilling their needs, they initiate to solve the problem. Therefore learning activities must be in such a way that they fulfil the needs and requirements of the students. Posing problems facilitate developing

problem solving skills. Therefore in order to ascertain desirable learning out come from the students get the students in problem solving situations. Whenever the student exhibits the suitable and correct responses, it has to be confirmed through appropriate reinforcement. Practice makes man perfect. Hence, adequate drilling exercises and repetitions must be there for students. This will enhance the memory power and longevity of the retention. Ample scope must be there for students to find out themselves, the suitable response to the specific stimulus. Conducive environment enhances an effective, efficient and quality leaning. So, teachers must make the learning situation as a *joy of learning.*

Learning according to B. F. Skinner and his Operant Conditioning Theory

B.F. Skinner's proposition regarding learning has brought many revolutionary changes in the field of Education. From his theory a concept called "self-learning" has evolved. The instrument which are used for this are denoted as "Self-Learning Devices". Teaching Machine, Programmed Instruction and Computer Assisted Learning-all these are modified output of operant conditioning. His theory is outstandingly recognised for the contribution of "Reinforcement Technique". Operant conditioning refers to a kind of learning process where a response is made more probable or more frequent by reinforcement. It helps in the learning of operant behaviour, the behaviour that is not necessarily associated with a known stimulus. Reinforcements play a very significant role in learning. They are very effective in bringing out the following:

1. Strengthening of behaviour: When learning is defined as a desirable and relatively permanent change of behaviour, reinforcements will strengthen such behaviours.
2. Intensification of certain aspects of behaviour and
3. Alternation in behaviour occurs immediately and
4. Persists in time becomes weaker and gradual declines in the absence of further reinforcement.

The principle of operant conditioning may be successfully applied in behaviour modification. We have to patiently wait and observe, to find something which could be rewarded to any individual for his behaviour, and immediately provide the reward when he does a right thing. Because of this the frequency with the desired behaviour occurs will go up. When the behaviour occurs next, again it has to be rewarded, so, proceeding in this manner, we can make an individual to learn the desired behaviour or modify his behaviour. Though the theory of operant conditioning directly doesn't speak about motivation, it deals with indirectly. It will be in the form of consequences of the correct behaviour, like, *"Success"*, and its *"Confirmation"* – act as a source of motivation to further occurrence of that behaviour. For example, "food" is reinforcement to a rat or a pigeon. Similarly the

"knowledge of result" – for a correct response, is reinforcement to a learner. And the secondary reinforcement also has proved to be very important sources of motivation for a learner. Verbal praise, a nod from the teacher, positive facial expressions, medals etc., will act as motivating factors.

Whenever a desirable behaviour change is seen from a student, it has to be supported by positive reinforcement, and whenever an undesirable behaviour is seen, it has to be treated with negative reinforcement. For example if a student shows less interest or no interest in studies – a teacher may make use of negative reinforcement like "ignoring him". This will make him become sensitive enough, and bring about a desirable modification in his behaviour.

Check Your Progress - 1
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:
1. According to behaviourists the learning of human and animal
   a. Are different
   b. Are similar
   c. Has more commonalities
   d. Has more differences

2. Learning by Trial and Error was proposed by
   a. B.F. Skinner
   b. Ivan Pavlov
   c. Thorndike
   d. John Watson

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
   a. Learning occurs due to the proximity of time and space with respect to stimulus-response
   b. The behavioural change of an organism due to certain condition is learning
   c. The classical conditioning theory of learning is not in much practice
   d. Thorndike proposed the technique of reinforcement
   e. Operant conditioning is the contribution of B.F. Skinner
   f. 'Knowledge of Result' is also one of the techniques of reinforcement
   g. 'Computer Aided Learning' is in accordance with B.F. Skinner's Learning Theory

h. Classical conditioning is used in treating the phobic problems among mental patients

i. Learning of alphabets is an example for Pavlovian theory

1.4.3.2. Perspectives of Cognitive Theories and Application in Learning Situations

Activity 2

The teacher has taught how to calculate the area of a triangle in classroom. Students have also practiced and solved many problems on this concept. One day the teacher entered in to the class and simply started distributing a paper cut of perfect quadrilateral. Then he challenged the students to find the area of that paper. And he said that students may make use of scale, pencil, pen etc. Many children tried but in vain. One girl student not knowing what to do next, simply started folding the paper and accidentally she has folded the paper diagonally. Then immediately she observed that the quadrilateral is now appearing like a triangle. She felt happy because to calculate the area of a triangle is an easy task for her. She calculated the area of a triangle of the given paper and multiplied it by two. Obviously it was the area of the quadrilateral.

The activity above reveals the features of cognitive learning. Here the student has used previous knowledge, right application of the earlier knowledge, reasoning, and hypothecation trying and testing the hypothesis which leads to solving the problem. This is said to be "Aahaa" Learning. This could be one of the best strategies in teaching mathematical problems.

Cognitive perspective is considered as the basic source for learning. It is because, the origin of knowledge itself is cognitive. According to psychologists, an individual get the information through his sense organs and mind, but that will be in raw form. When the active participation of the mind is guaranteed, then only the received information will become meaningful. Due to the analytical, reasoning and synthesising power of mind, knowledge is formed or constructed. The cognitive perspective of learning deals with how knowledge is acquired, processed and stored in memory and also it deals with how such obtained knowledge will be utilised while interpersonal interactions take place. How an individual responses to the audio and visual stimuli, how he understands these stimuli as well as how he will design/plan for the responses, are important for cognitive perspective. Awareness, comprehension, sensation, perception, concentration, analysis, logic, reasoning, synthesis and problems solving-all such behaviours are the expressions of cognitive domain. And behaviour of these kinds are taken into consideration here.

Awareness/sensation: it is process in which the environmental stimuli are perceived through senses and mentally processed to one another to make a meaningful whole. Here the information is just received and recognised properly. Such things when occur on a continuum

basis, that will lead to comprehension. Learning is explained as a process of knowledge acquisition which is the result of perceptual experience. This results in change of the likelihood to act differently even though this may not necessarily be demonstrated in the form of changed behaviour. It is believed that schemata are significant to cognitive learning. Piaget postulated action to be source of knowledge suggesting one way of dealing with how external reality becomes internal knowledge. Here the mind of the individual will be active in observation, comprehension, assimilation, accommodation, schema formation, storing in the memory, coding and decoding of the information-such activities.

Cognitive perspective of learning has tried to explain an array of learning such as, Insightful learning, field learning, gestalt learning and problem solving. According to this theory, learning cannot be just the resultant of stimulus-response bond or habit formation rather, it is a conscious, cautious activity done with more efforts. Wolfgang Kohler, Max Wertheimer and several eminent Gestaltists belong to this school of thought.

Creating Learning Situation:

The responsibility of creating an interesting and creative learning situations lies on teachers only. Teachers have to motivate the students to learning process. By this reaching the educational goals and objectives will be easy. Whatever may be the situation, first one has to consider in its totality-this principle must be inculcated among the students. This is what gestalt theory postulates. Even in the maxims of teaching, part to whole as well as whole to part speaks gestalts perspective only. Cognitive theory put more thrust on thinking process, hence one has to motivate children to think divergently, convergent and multiple ways to answer one question. The learning situations could be problems, demanding the decisions, judging and problem solving approaches. There is no need of previous training or guidance for such situations. This should be like a challenge to students. The main purpose of such situations is compelling children to think, motivating them to come up with their own solutions. There will be no different/sequential stages or application of already learnt principles or rules, but it needs understanding, perceiving the totality of the situations, observation, creativity and cognitive processing skills. In spite of this, cognitive learning is composed of meaning, memory, application, creativity and evaluation. Now let us go through the following examples and illustrations:

1. What are the advantages of banning plastic completely? And also what are the disadvantages?
2. All of you have seen now a days that everyone is using mineral water bottles, or aqua guard, as an effort to secure the safest drinking water. But contrary to this there is one school of thought which says that by this we are losing the natural

water with its inbuilt minerals and micro-nutrients. This will result in reducing the immune power in us. So arrange a discussion session on this topic. Encourage to give solution, like, how one can retain the required nutrients, minerals and safest water in a natural way.

3. Garbage disposal-a burning issue. You can highlight the issue in Bangalore city, where recently a fire accident occurred in the heap of the garbage. Encourage students to discuss without any hesitation and also for suggestions for solving this problem.

4. There is one very interesting activity called "Reflective Learning". You can adapt this to any subject. The sight they saw, articles they read, experiences they got, given pictures-etc. Use them to stimulate thinking process.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. In cognitive learning children show _____
   a. Reasoning ability
   b. Habits
   c. Trained Skills
   d. Emotions

2. _____ is seen in cognitive learning
   a. Imitation
   b. Problem solving
   c. Comprehension
   d. Perception

3. Below are given some statements, put '✓' mark for the sentences showing cognitive learning:
   a. Just a look at pickles make one to salivate
   b. Estimating how far yet they can continue riding by looking in to the remaining fuel in a vehicle
   c. By-hearting the text
   d. Deciding about whether the books in cupboard to be arranged vertically or horizontally
   e. After listening to the weather report from TV cancelling the journey
   f. Choosing the same optional subjects just because his friend has chosen them

1.4.3.3. Learning Situations-Perspectives of Humanistic Approach and its Application

Activity 3

Once it happened like this:

The teacher gave an innovative opportunity to the students. After conducting the unit test the teacher told the students that they have to evaluate their own answer papers. This was very much incredible to the students, so they simply gaped at the teacher. But the teacher was very firm on this aspect and made it possible also. However the students were quite reluctant about this task. They were told not to enter the scores or mark anything on the answer script. The obtained scores/marks should be written on a separate paper and handover to the teacher at the end. Here the scores obtained by each student was kept as a secret. This was followed by one more evaluation session for the same answer scripts. But this time every student evaluated the answer script of the student who was sitting adjacent to him/her. Again the condition was same, like, scores should be entered in another sheet of paper and at the end with the total score they have to handover it to the teacher. These scores were also kept as secret. The answer scripts were finally evaluated by the teacher. Next, the teacher entered all the three scores i.e., one was self-evaluation, another one was peer-evaluation and the last one was teacher-evaluation. Now all the children felt like it was so joyous to compare the three type of evaluation for the same answer scripts. There was a huge difference between each evaluation. Each one has given almost the maximum marks for their own answer script. But the scores given by their friends was much less than to their evaluation. And there is no need to say about teacher's evaluation!! Here all the students were biased. When they compared all the three scores, they understood about the objective valuation and the real meaning of scoring. All of them liked this activity. So based on their demand this activity was repeated on many tests and on different subjects also. This made the students to learn not only how to evaluate scientifically and critically but also the exact meaning of scoring marks. After many exposures, at last, they found that the scores obtained by the peer evaluation, self-evaluation and teacher evaluation approximately same.

You can also do this activity on your students. Try this and get it documented properly. And also write a report on how this activity changed the students' perception about scoring and evaluation.

Humanism is also known as the theory of 'wholeness'. It consider man in a holistic approach. Any individual's behaviour must be considered with its root causes and situations says humanism. Just the observation of the behaviour will give half of the picture. May it

be a crime, or good deeds. So, what are the salient features of humanism? What are its main propositions?

- Humanism as a psychological perspective emphasises the study of whole person (known as holism). It looks at human behaviour not only through the eyes of the observer, but through the eyes of the person doing the behaviour.
- It believes that an individual's behaviour is connected to his inner feelings and self-image. It says each person is unique, and has free will to change at any time in his/her lives.
- Everyone is responsible for their own happiness and well-being as humans byhaving the innate capacity for self-actualisation i.e. The unique desire to achieve the highest potential.
- The most enduring and influential theories in humanistic psychology that emerged in 1950-1960 by Carl Rogers and Abraham Maslow.
- Humanistic education is individual centred. Empathy, caring about students, genuineness on the part of the learning, facilitator, were found to be the key traits.
- Humanistic learning theory involves learning through watching, the behaviour of others; however learning does not have to involve a behaviour change.
- Teachers' role is to be like a role model. They are expected to provide a reason and motivation for each task, teach general learning skills, and foster group work.
- Generally developing the concepts and learning competencies related to affective domain are well supported by humanism. For example, it will be a smooth going process to teach brotherhood, patriotism, values towards our cultural heritage, concern about indigenous talents and democratic values.

Check Your Progress - 3
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. _____ proposed the theory of Humanism
   a. B.F. Skinner
   b. Thorndike
   c. Abraham Maslow
   d. Ivan Pavlov

2. According to humanism ——— is the supreme level of learning
   a. Securing a job
   b. Acquisition of knowledge
   c. Skill learning
   d. Self-actualisation

3. Below are given some statements, put '✓' mark for the sentences showing cognitive learning:
   a. Teacher's role is a facilitator to learning
   b. Scoring more and more marks in the examination is the most satisfactory stage in learning
   c. One can read, write and do whatever but must become a human being first
   d. Concern, empathy and mercy are the basic emotions of humanism
   e. There is more advantage by becoming intelligent rather than a man with good values and emotions
   f. Humanism helps in teaching of democratic values

1.4.3.4. Perspectives of Social Constructivism and Application in Learning Situations

Lev Vygotsky (1896-1934) was one of the contemporaries of Jean Piaget. He was a social-psychologist. He analysed learning from socio-cultural context. You have already studied about his contributions and salient features of social constructivism in second unit of this block under the caption of 2.3.4. Now once again let us take its reference in a different context. According to him social interactions are the basis for cognitive development. In this direction the role of community and the role of near and dear one's will occupy the pivotal position. Because of such interactions the child will learn to "understand" and the process of cognition will get started. Hence Vygotsky's theory is considered as one of the significant theories in the present context. The technical terms used by Vygotsky were social processes in the real sense, like, Social interaction, The more knowledgeable other (person) and Zone of proximal development.

Vygotsky argued that learning is rooted in the socio-cultural set up of the child where the child is not alone. The cultural set-up in which the child is reared provides him thinking perspective. He observed that children are capable of solving problems independently which he termed as Zone of Actual Development but he believed sometimes children solve problems with the support, termed as Zone of Proximal Development. The interaction between a skilled and experienced teacher, communication and guidance are of utmost importance for the maximum cognitive development in a child. Vygotsky has recognised such conversations as "co-operative/co-existent conversations". In the social context teacher's role comes soon after the patent's role, hence the child tries to understand, internalize, and store in its memory. Again this is going to be used by the child in the next but new situations, by means of self-directions and self-control.

Language is the best device for communication and connections among human beings. Because of this it is possible for getting connected with outer world and obtain knowledge. Based on his theory Vygotsky has given the following generalizations:

1. Language is the major medium for the elders to transmit their knowledge to the younger generation.
2. Language is the strongest device for adjustment and intellectual co-ordination.

Vygotsky (1987) differentiates between three forms of language, they are,

Social speech which is external communication used to talk to others (typical from the age of two);

Private speech (typical from the age of three) which is directed to the self and serves an intellectual function; and finally

Inner speech: Private speech goes underground, diminishing in audibility as it takes on a self-regulating function and is transformed into silent inner speech (typical from the age of seven).

Children raised in cognitively and linguistically stimulating environments (situations more frequently observed in higher socioeconomic status families) start using and internalizing private speech faster than children from less privileged backgrounds. Indeed, children raised in environments characterized by low verbal and social exchanges exhibit delays in private speech development. Children's' use of private speech diminishes as they grow older and follows a curvilinear trend. This is due to changes in ontogenetic development whereby children are able to internalize language (through inner speech) in order to self-regulate their behaviour. Hence the social-constructivism has given some guidelines to teachers in order to ensure the learning among children, they are as follows:

- Children are capable of active participation, construction of their own knowledge based on their hand-on experience. But it is a must that learning process should occur under the guidance of a responsible and knowledgeable person (here it could be a teacher, elder ones, experienced individual or more knowledgeable classmate also), amidst real and live events.
- The medium used in a learning situation must be through socially negotiable and with a mutual communication mechanism.
- The knowledge to be learnt and skills to be acquired must be compatible to the students' level of knowledge, understanding, background and their previous competencies.
- As the process of learning proceeds, it should lead the students to their autonomous, independent learning. Teachers should guide the students for self-regulation, self-motivation and self-evaluation of their own learning.

- Basically teachers should help and facilitate learning among students and not making them to follow their orders.

For Example:

1. In order to facilitate learning among students with respect to social values and to understand the life styles of the people who live in their vicinities, it is better to conduct field visits, study tours, community awareness programmes, citizenship camps and other social service oriented activities.

2. Dramatization of historical events, like, Dalhousie's "Doctrine of Lapse", "story about Wadiyar Dynasty and the Course", and any other such folk stories, making them in the form of dance, drama will definitely enhance learning among students.

3. Encouraging "Do it yourself" activities, giving opportunity for guided discoveries, simple experiments, explorations and literature surveys and also encouraging students to make use of innovative approaches for scientific explorations will help in the process of knowledge construction among children

4. Allow children to collect a huge varieties of dicot and monocot plants. Ask them to observe keenly. Let them classify the heap of these plants based on their own criteria. Then ask them to list the differences with respect to stem, leaves, fruits, seeds, stem and root system. After this let the class go for anatomical study also. Let them compare the Transverse and longitudinal sections of dicots and monocot plants under the microscope.

5. Ask students to collect leaves of different species with different shapes, like, heart, kidney, needle and palm etc., and let them study in detail, including drawing, and if possible growing the same variety in mini pots. For this a healthy competition could be added among the students.

6. The light bulb on the wall of a class room was burnt. It needs a substitute. For that a ladder was needed. But the ladder which they had in the school was a short one. So the teacher asks the students to calculate the exact length of the ladder by which one can climb and put the new bulb into the bulb-holder. To get the ladder with exact length was the problem. Teacher told the students to find it by applying a mathematical formula. (Here they are supposed to make use of Pythagoras formula).

7. Ficus fruit, (Ficus racemosa tree) all of you have seen it!! You also might have experienced that whenever you open the fruit, inevitably there will be flying fruit flies inside the fruit itself. Now the challenge to students is let them collect the ficus fruits with no insects inside in it! Definitely students cannot win this challenge. Because, the presence of flying small fruit insects are due to a natural process what is known as "pollination". It is occurring in such a way that whenever the insect enters the flower for nectar, it lays the eggs inside the flower then and there only.

So naturally when the flower changes itself into a fruit, inside that, these insects also develop along with the developmental process of fruit formation. When the fruit is ripened, the insects will be in their matured state already. After teacher's explanation, all the children will feel wonder stuck.

8. Similarly in mango fruits (Neelam variety) you always can see two insects inside the seed. They will be of a house fly size and black in colour. Challenge the students regarding this amazing phenomena and let them find the root cause for this. By giving such explorative and challenging situations, a teacher can make science learning a joyous process and students will learn with more zeal and enthusiasm.

9. As it is told earlier, by organising certain activities like, school exhibition, fun-fair, sandy, competitions like, preparing eatables without making use of fuel/fire, learning how to use the physical balance, calculate the profit and loss etc. – all will enhance the social-constructivist power among students.

10. For all the above activates teachers must make a meticulous plan with clear objectives well in advance and it should have an inbuilt evaluation mechanism also. Documenting such activities will be the part and parcel of the responsibilities.

Check Your Progress - 4
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. _____ proposed the social-constructivism theory
    a. Lev Vygotsky
    b. Ivan Pavlov
    c. J. Watson
    d. Robert Gyane

2. _____ is essential for the construction of knowledge
    a. Studying books
    b. Guidance by elders
    c. Training
    d. Social interactions

3. Below are given some statements, put '✓' mark for the correct sentences and X for the wrong sentences:
    a. Every events occurs twice, that is once in reality and in second time in the mind

b. Language role is not that important for connecting purpose.
c. Public speech means a politician's talk.
d. The child learns inner speech at the age of 2 to 3 years
e. Child talks to itself and that speech is known as public speech
f. The zone of proximity plays a significant role in child's learning

1.4.4. Let us Summarise

Learning is a very complex process with multiple dimensions. Therefore many psychologists have tried to explain by means of a variety of theories. Behaviouristic theory, cognitive theory, humanistic theory and social-constructivist theory are a few to name them. Behaviourism highlights the behaviour of an organism. Here it is students' behaviour which is considered as the expression of learning. Basically behaviour and learning are explained in context of stimulus and response. The law of proximity on learning has explained that, when the proximity of stimulus and response are with the vicinity of time and space, learning is guaranteed. Ivan Pavlov, Thorndike, B.F. Skinner and other contemporary behaviourists have contributed to this theory. Similarly in cognitive theories one can see the varieties like, insightful learning, field learning, gestalt learning, problem solving learning, are learning according to cognitive theories. Cognitive perspective of learning has tried to explain an array of learning such as, Insightful learning, field learning, gestalt learning and problem solving. According to this theory, learning cannot be just the resultant of stimulus-response bond or habit formation rather, it is a conscious, cautious activity done with more efforts. Wolfgang Kohler, Max Wertheimer and several eminent Gestaltists belong to this school of thought.

Humanism as a psychological perspective emphasises the study of whole person (known as holism). It looks at human behaviour not only through the eyes of the observer, but through the eyes of the person doing the behaviour. The most enduring and influential theories in humanistic psychology that emerged in 1950-1960 by Carl Rogers and Abraham Maslow. Humanistic education is individual centred. Empathy, caring about students, genuineness on the part of the learning, facilitator, were found to be the key traits.

Lev Vygotsky proposed social constructivism. According to him social interactions are the basis for cognitive development. He observed that children are capable of solving problems independently which he termed as Zone of Actual Development but he believed sometimes children solve problems with the support, termed as Zone of Proximal Development. The interaction between a skilled and experienced teacher, communication and guidance are of utmost importance for the maximum cognitive development in a child.

Vygotsky has recognised such conversations as "co-operative/co-existent conversations". In the social context teacher's role comes soon after the patent's role, hence the child tries to understand, internalize, and store in its memory. Again this is going to be used by the child in the next but new situations, by means of self-directions and self-control.

1.4.5. Answers to 'Check Your Progress - 1, 2, and 4'

Check Your Progress - 1

1. b 2.c 3. a- " b- " c- X d- X e- " f- " g- " h- " i- "

Check Your Progress - 2

1. a 2. b 3. b;d

Check Your Progress - 3

1. c 2. d 3. a- " b- X c- " d- " e- X f- "

Check Your Progress - 4

1. c 2. d 3. a- " b- X c- X d- X e- " f- "

1.4.6. Unit end Exercises

1. Explain the process of learning according to behaviourism.
2. Suggest a few learning situations that suitable for behaviouristic theory.
3. What is meant by cognitive learning? Mention its salient features.
4. Give examples for cognitive learning.
5. Bring out the salient features of humanistic theory of learning.
6. How Vygotsky's theory of social constructivism is connected with learning? Justify.'

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Block 1 : Understanding Learning
Unit 5 : Role of learner in various learning situations, as seen in different theoretical perspectives

Unit Structure

1.5.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Decide the different learning situations according to Behaviouristic theory;
- Analyse the behaviour of students according to behaviourism under the different learning –situations;
- Provide varieties of learning situations that satisfy the conditions of cognitive theory;
- Design and decide the role of the learner as well as learning situations according to humanism; and
- Facilitate learners to create certain social constructions through learning situations.

1.5.2. Introduction

This unit is meant exclusively for the concept of learning only. You have studied different learning theories and their implications in the previous units. Now in this unit let us look in to the learning situations which are supposed to be the bridge between learner and the learning theories. This needs a special reference for the creation of learning situations that are compatible with different learning theories, namely, behaviourism, cognitive theory, social-constructivism and humanism and the respective role of the learner. Regarding theories you have already studied in detail, so let us take this previous knowledge as benchmark and try to proceed for the next relevant concepts.

1.5.3. Learning Points and Learning Activities

1.5.3.1. Behaviourism, Learning Situations and the Learner

Activity 1

All of you have the experience of classroom teaching. But you also know that if there is no learning means teaching has no value, rather it will be a waste of time and energy. Children show various types in their learning style. Some children if they listen with concentration, is enough, they will learn it. But for some teacher's explanation, use of audio-visual aids, writing it on the board, and making them to read loudly and repeating all these activities for many times, - all these are needed. Some children over all this, show the habit of writing the text/content repeatedly, for learning. Have you noticed such behaviours among your students? If yes, try to classify them.

Behaviourism gives too much of importance for behaviour. These behaviours must be observable, and measureable. According to behaviourists, learning is the behavioural change due to interaction between the individual and the environment. You have already studied about the contributions of Ivan Pavlov, B. F. Skinner and Thorndike. The interactions that occurs between the individual and environment results in learning. It depends upon the reinforcement also, may be positive, negative and punishments as a consequence of the interaction. The prizes, appreciations, recognitions, praises, and rewards. The rewards, prizes, appreciation and identifying and recognizing an individual by his achievement-all these are considered as positive reinforcements. Similarly the negative reinforcements also bring about the desirable behaviour in an individual. For this a technique called "delaying the reward", could be one of the examples.

Reinforcements give a tremendous results in human learning. As we have already observed in students' learning, we can say that Reinforces are play a significant role in

1. Strengthening of behavior: When learning is defined as a desirable and relatively permanent change of behavior, reinforcements will strengthen such behaviors.
2. Intensification of certain aspects of behavior and
3. Alternation in behavior occurs immediately and
4. Persists in time becomes weaker and gradual declines in the absence of further reinforcement.

The major implications of Skinnerian theory is recognised with shaping, chaining, discrimination, prompts, cues and generalizations. To learn any skill Skinnerian techniques is the best. For example, the discipline children learn in the schools which makes the desirable behavioural changes in them. To tell few more good points about skinner's contributions, could be the example of programmed instructions, self-learning techniques, and computer aided learning and behaviour modifications due to training. In programmed learning the content to be learnt will be divided into smaller bit by bit, but linked, meaningful chunk of information. They are arranged in terms of frames, these frames will be teaching frames, practicing frames and testing frames etc. After going through the frames the student is supposed to take the testing frames and answer then and there itself. At last "submit" button will be there. That has to be pressed indicating all the exercises are complete. Immediately the result will be displayed on the screen giving the feedback to the students. If the learning outcome is not satisfactory, the same unit could be taken for the repetition as many times as the individual needs, so that complete mastery is expected at the end. In the market there are varieties of 3D CDs as learning packages for the respective subjects. These are very effective, because the subject matter is presented through multimedia applications with animation, simulation and with 3D effect. They are learner friendly, and hence children will love to learn by this method. These are very meaningful bridge between the learner and the subject matter, every student can learn according to his/her pace of learning. Apart from this in schools, for national festivals and for other functions you give practice to students for songs, group songs, dance, drama etc. in all such cases it is skill learning only and will be through the techniques and the laws proposed by the behaviourism.

Thorndike has contributed very functional laws of learning, which are very helpful in learning situations. For example, the law of readiness, will give the guarantee of the readiness of the learner, which could be extended to the maturity, interest, background, level of learning and the previous knowledge of the learner. Therefore it becomes very important for a teacher to know about the readiness of the child so that it will help for two way communication between the teachers and taught.

Law of effectiveness speaks about the effect of learning on children. If the learning is very joyous, and happy and if children are properly motivated by the teachers, it will result in effective learning among students. In the same way the law of exercise, the importance of repetition is highlighted. For any learning, understanding, practice, and repetition are important. The questions asked at the end of the lesson also serve the same functions. What is practiced successfully, will becomes the habit at the end. Practice makes man perfect.

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Behaviorism ——— learners
   a. Identifies the reasoning powers among
   b. Emotions of the
   c. Attitude of the
   d. Recognizes only the observable behaviors

2. Negative reinforcement means
   a. Avoiding the rewards
   b. Punishment
   c. Praising less
   d. Withholding the prizes until the correct response occurs

Fill up the blanks in the format given below:

Types of Reinforcement	Chosen topic/concepts	Effects
Positive Reinforcement	——-	——-
Negative Reinforcement	——-	——-
Punishment	——-	——-

1.5.3.2. Cognitive Theory, Learning Situations and the Learner

Activity 2
   a. Analyze the content in the text book of the subject you teach in terms of learning of facts, concepts, skill learning, developing the skill of reasoning and critical analysis and also their adoption in day to day life situations.

b. If children opt for self-learning through experiments, what are the learning situations that you give to your students? Make a list of it.

c. If children love to learn through computers how will you plan and arrange for it? Prepare an instructional plan for computer aided learning meant for your specific students group.

While designing the above said activities, just try to doself-observation by yourself also. You will be surprised to know about the amount of time, intelligence put on it. Cognitive theorists have explained the evolution of intellect and reasoning power in man by analysing the process of learning, human growth and development. According to them man is not just a helpless toy under the influence of environment or external stimuli. He is not a just a passive creature rather he can modify the situation or environment according to his whims and fancies. He can use his intelligence and modify the surrounding environment. So many inventions in science and technology is the example for this notion. Man is at the apex of all animal kingdom, - this is because of his thinking capacity, understanding ability and several cognitive competencies including intelligence.

By active participation in learning situations, making use of several strategies, and understanding the situations with their own ways and means children will construct their own knowledge. This happens in the inside-classroom as well as outside-classroom also. In all such cases they get the first-hand experience and information. By this we must understand that students are not just an empty vessel, teachers will pour the information into it. The cognitive theory is rich by the contributions of Jean Piaget, Bloom, Bruner and Ausubel. There are a cluster of varieties of models of teaching which are very much suitable for the classroom situation. Models of teaching will enhance the active participation by the students, social interactions. In the later stages, they show the ability of selection of relevant information, construction of hypotheses, testing of the hypothesis, collection of evidences, and finally evaluation. The previous knowledge or the older and the new explored knowledge will get merged meaningfully in an individual's mind. By this their schema structures will get renewed again and again as a continuum.

Bruner has explained learning as "conceptualisation". In the process of conceptualisation individuals will get the mental pictures as cognitive representations. This looks exactly like that of schema formation as explained by Jean Piaget. According Bruner teachers have to take the learners' level of learning, competencies, and his needs and requirements before designing the learning situations. The same is explained as "Law of Readiness" by Thorndike, in his trial and error method of learning, isn't it? This was

followed by operant conditioning theory in which students will learn naturally when the learning information is provided with simple, sequential and individual specific as programmed instruction. This is again supported by the concept of reinforcement. Apart from this, cognitive learning could be seen, in inquiry learning, guided discovery, self-discovery, concept attainment model and problem solving skills. In case of problem solving and discovery learning student will learn by his own thinking, analysing and observation skills. He will apply his own strategies and plans to solve the problem. For example:

1. Preparing small battery based toys/machines, toy-fans, toy-cars and toy-scooter and other materials by making use of magnets/dry shells. In case of cars, the magnets could be used for remote controlling, like forward/backward movement in which the principle of like poles repel and opposite poles get attracted etc.
2. Preparing vermicomposting manure in home
3. Constructing rain water harvest in home and observing
4. During festivals, like, Ganesh Chaturthi, Dasara, preparing small water fountain for the decorative purpose.
5. Doing experiment based on electrolysis and observing the deposition of one metal over the other
6. Making rain bow to appear on the wall, with simple experiment (application of sun rays, mirror, principles of light)
7. Growing mushrooms and learning about their life cycle
8. Preparing the models of rocket and understanding the laws of motion
9. Preparing innovative equipment to demonstrate Newton's III law of motion.
10. Identifying and explaining the concepts, like, force, acceleration, velocity, speed and inertia in indoor games, like, carom, shuttlecock, and outdoor games like, through ball, basketball and cricket.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. In cognitive learning
   a. Hypotheses will be there
   b. Training of skills will be there
   c. Explanation of imagination
   d. Description of historical event

2. Inquiry learning
   a. Difficult for students
   b. Not liked by students
   c. Means to intensify the students intellect
   d. Develop discipline among students

Fill in the blanks in the table given below:

Topic/Text chosen	Cognitive learning situations
Science	———————-
Social Science	———————-
Mathematics	———————-

1.5.3.3. Social Constructivism, Learning Situations and the Learner

Activity 3

Learning by seeing, learning by listening and learning by doing-all these proverbs you might have heard. Now observe the illustration given below and decide the theory which is suitable to the given situations.

It is a normal day in a homely environment, in which a school going son and father are there. Father was telling "I never gave up any task in between or as half-done. So that whatever I am reaping now is because of that perseverance, dedication and commitment". It had an implied meaning telling that, whatever is done on full commitment, dedication, sincerity and perseverance will get good results and success. With respect to the homework given by the school, father was commenting like this "I know you are intelligent, and will do all the homework meticulously with concentration". By this the son used to get motivated and he took his father as his model and followed his path only. Son assumed himself as a hard working individual, and liked to become as his father. Because of all such good habit, he got tremendous success also.

Children adopt values, attitudes and commitment by themselves as it was in the above illustration and also they learn self-regulation.

Social constructivism has given a very effective proposal for the construction of knowledge. For this contributions from Albert Bandura and Vygotsky could be taken as examples. Since man is a social individual socialization for learning is a must. If otherwise learning will have no meaning. A scientist may be very eminent in his field, but unfortunately he may not find any interrelationship between his knowledge and the society surrounding him. Similarly if there is no relevance between his scientific knowledge and the whole

world, then his contributions will be futile and questionable also. UNESCO in 21st educational conference "Learning the Treasure within 1996) has identified four supporting bases of learning, and they are: 1. Learning to know, 2. Learning to do, 3. Learning to live tighter and 4.Learning to be.

1. **Learning to know:** The very first need of the education system is making students to "learn to learn". Learning to learn is a process in which learning occurs by means of observation, self-experience, experimentation, analysis, synthesis and exploration. Here the student will be learning independently.
2. **Learning to do:** As the famous social reformer of 12th century Basavanna says "work is worship". Students have to become dynamic and work-minded. This is the important need of the hour. If not whatever students learn in the class room it will confine to bookish knowledge only. They must be taught the concept of "Division of Labor" and "Respect for Each work". All work are equally important. Classroom activities must include the learning situations which depict the above concepts.
3. **Learning to live tighter:** Co operation, coordination and co-existence - all are causal factors for the development of a civilization. These are very much needed at different level, may it be, like, a house, a state, or a nation, excluding such social values nothing could be achieved or developed. Classroom learning should get enhanced with the above said horizons.
4. **Learning to be:** In this universe, each and every creature is born with its own potential. Similarly, in case of man, the child get adequate nurture and support through education system so that its potential abilities will get expressed as competencies.

Albert Bandura (1977) He was one of the most eminent psychologist, who contributed particularly the concept of **moral development**. The essence of his theory lies with the importance of reward and punishment. Children get their moral development from their experiences as well as from the input of reward and punishment. He gave one generalization, which states that. "Children's responses that are reinforced are more likely to recur than the responses that are not reinforced". He opined that, there is a positive correlation between reward or punishment and their effect on the behaviour of the child. According to him the children learn most of the time by imitating elders. It is also known as "Observation Learning". Learning is said to be the main source of development. For example, a toddler learn to clap when it sees the mother is clapping. But Albert Bandura opines that, children as they grow will become choosier in selecting and adopting the behavioural model of

elders. Sometimes you might have come across people telling that "I should have done the task still better", or evaluating their own deeds, as how far they correct or wrong, what others are telling about their performance and based on a varieties of feedback deciding how to plan for the next performance etc. Now, you once again analyse the activity 3 given in this unit.

Vygotsky also, has contributed regarding learning by children in his social-constructivism. According to him social interactions especially, between children and the knowledgeable elders in the society, like, conversations, discussions, doubt-clearance and thinking aloud all will provide an open option for creative thinking and learning to children. Hence the classroom which follows the vygotskian model, children will learn by their own exploration, with teacher's guidance and directions. In such situations they learn cooperation, coordination and utilizing the situations for co-learning also. Vygotsky advocates teachers to make use of give and take opportunities in academics, create teaching-learning situations with co-operations and co-learning.

Now let us see the role of the students in learning situations designed according to social constructivism through following examples and illustrations:

1. Select any one simple children story book and allow all the students to read it. Then make all of them to gather at one place. There the teacher or any elderly person will start the discussion about the different roles in that story. This could be called as "interaction based book reading". The events that come across in the story and the difficult word- should be clarified if necessary. There must be scope for asking questions and criticism. Thus one must help the children to analyze the story and to see analogy in the day to day situations. Totally there must be equal chance for every participant in the group to interact and express their own opinion.

2. Out of class room activities like, taking the children to field visit, educational tour, a visit to museum, library, park, zoo garden, bird sanctuary, community centers, nationalized banks and primary health centre etc. For every such visits, there must be proper planning, with clear objectives and the purpose of the visit, and a scheme of evaluation.

3. Encourage children to prepare articles on different issues. This will enhance their writing skills.

4. The communication skills in the form of writing, like, letter writing, poem writing, descriptions of certain events, or any such challenges must be given to the children. This will make them to think critically and express their ideas creatively.

5. Establishing a Model Educational Centre and conducting varieties educational activities with the help of students, teachers, administrators, community people and other resource centres with cooperation and coordination.

6. "School towards the Community" as slogan says, plan activities, like, awareness programmes and allow the children to take responsibilities in its execution, and make it sure through your timely supervision.

7 Providing an opportunity to observe certain skills which are very specific to certain community or group of people. For example, making artistic materials, like, bamboo baskets, bags, etc. Identifying medicinal plants, and making herbal medicines, rearing domestic animals, apiculture, agriculture, sericulture and Floriculture etc. Children must get trained in these skills as an opportunity.

8. Making the student to do some simple survey, like, how many graduates or people with SSLC as their educational qualifications are there in their surrounding area, in that how many are male, and female, if the obtained data is analyzed and expressed in terms of percentage what does it mean, how this could be graphically represented and also in what way such explorations could be useful in future. Make a comparison of such data with successive three years. Based on such activity let children prepare their own report.

9. Who is ruling our state now? How did they get this role? What is the significance of majority in democracy? If there will be no authentic and standard opposite party what will be the state of democracy? - By provoking such questions in the classroom create a forum for open discussion and debate.

10. All of you know that our state as well as central government are conducting so many activities. For all such activities money is important and will be the basic need. How the government will get this money. Why is it important that citizens should pay the tax to the government? Arrange a panel discussion on such issues in the school.

Check Your Progress - 3

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. In the conference on 21st century education UNESCO has proposed ———
   a. Learning the treasure within 1996
   b. Learning to do
   c. Learning to know
   d. Learning to learn

2. The theory proposed by Albert Bandura
   a. Trial and Error learning
   b. Observation learning and imitation
   c. Operant conditioned learning
   d. Classical conditioned learning

3. Below are given some statements, put '✓' mark for the sentences showing cognitive learning:
   a. As the development progress children will be choosier in selecting and adopting the behavioral model of elders
   b. Taking children to field visits will be of no use, because they will spend the time just by teasing each other and time-passing games
   c. Schools and communities should go hand in hand
   d. Children consider teachers as their model
   e. Children must be given an opportunity to learn the skills that prevail in their community
   f. Social constructions actually hinder the educational achievements

1.5.3.4. Humanism, Learning Situations and the Learner

Activity 4

Usually adolescents will have plenty of problems. They will have finance problems also. For you it may be a surprise, but it is true. It is because there will be some or the other requirements for an adolescent which needs financial support but without knowing how get it children suffer a lot. By analysing this problematic situation, one of the teachers launched a programme called "Earning and Learning". This being a scheme focused only the adolescents. She did a meticulous plan for this scheme, like, the work experience period and one hour after the day's long bell were stipulated time. This happened twice a week. During this time, children learnt some embroidery work, mushroom culture, preparing paper bags, and apart from this, growing vegetables in school garden, making greeting cards etc. One day they started an activity of building a classroom. They took hardly one to finish the construction of classroom. Starting from getting the raw materials, like, bricks, cement, sand and water-all was done by students only. The room was inaugurated by the education officer of that area. Later with the consent of all the concerned persons that room was converted as the school library.

- List the positive points that you observed in the above illustration
- With few modifications how could you conduct the same activity in your school? Do it and prepare a document on it.

- After the establishment of the plan what activities were conducted? Document it.

You have already studied about humanism in the unit two. During the year 1960 a new theory was evolved and it is nothing but humanism. The major theme of humanism, was focused around freedom, self-respect, autonomy and self-reliance. Everyone is responsible for their own happiness and well-being as humans by having the innate capacity for self-actualisation i.e. The unique desire to achieve the highest potential. Abraham Maslow, Carl Rogers and Malcom Novels are the eminent scholars of humanism. The salient features of humanism are as follows:

- Humanism as a psychological perspective emphasizes the study of whole person (known as holism). It looks at human behavior not only through the eyes of the observer, but through the eyes of the person doing the behavior. Due to the process of development and increasing age an individual will show change of behavior. So one should not judge a person just by looking at the time being behavior. Everyone will have sufficient time and space for improvement and for the rectification of the mistakes. Because even a stopped clock also shows the correct time twice a day!

- It believes that an individual's behavior is connected to his inner feelings and self-image. It says each person is unique, and has free will to change at any time in his/her lives. According humanism, the motivation, self-actualization, to pursue any field for special study, all will be one's own decision.

- Everyone is responsible for their own happiness and well-being as humans by having the innate capacity for self-actualization i.e. The unique desire to achieve the highest potential.

- The most enduring and influential theories in humanistic psychology that emerged in 1950-1960 by Carl Rogers and Abraham Maslow.

- Humanistic education is individual centered. Empathy, caring about students, genuineness on the part of the learning, facilitator, were found to be the key traits.

- Humanistic learning theory involves learning through watching the behavior of others; however learning does not have to involve a behavior change.

- Teachers' role is to be like a role model. They are expected to provide a reason and motivation for each task, teach general learning skills, and foster group work.

- Generally developing the concepts and learning competencies related to affective domain are well supported by humanism. For example, it will be a smooth going process to teach brotherhood, patriotism, values towards our cultural heritage, concern about indigenous talents and democratic values.

- The role of the teacher lies in creating learner centered approaches, opportunities for self-study and independent learning. Teachers must use the combination of

affective domain and cognitive domain and frame a conducive environment for learning. It should have sufficient opportunities for co-operation and coordination.

- In the real sense humanism is educational pedagogy. Perspective with respect to learning says it is a process that brings out the potential power of a personality and helping an individual to reach the maximum achievement.

- We are responsible for our own up-liftment. We, including the surrounding environment and this universe as a whole, must decide our destiny for the human welfare and are answerable for it. That means, the aims and the means both are in our hands only.

Now let us take some learning situations according to humanism and see the role of the students and the teachers:

1. Every student is unique and will have his/her own pace of learning. Hence adopting self-learning techniques will be more advantageous. Here one can make use of computer aided instructions, programmed learning so that each and every student will learn with his own commitment and there will be no humiliation or comparisons or inferiority complex.

2. Instead of punishing the child for the mistakes committed, give good opportunities for further learning with meticulous planning. This makes the child feel motivated and better if the child and teacher both sit together and plan for the future. By this children their freedom with self-discipline and responsibilities.

3. Encourage the student to compare their performance with their own earlier achievement and not to compare with others' performance.

4. The teachers who show cooperation, empathy, mercy, will in turn get love, affection and respect as a natural phenomenon. In order to please the teacher children will make up their mind to study sincerely.

Give small responsibility (but harmless) to the students so that, they cultivate the habit of self-regulation and dedication. In such situation usually children will not give up their responsibility in the half way of the task. For example,

- Shall we re arrange the benches in the form of arch/circular or shall we leave it as is?

- Can we talk with low voice or shall we shout?

- Which project work do you want?

- Without troubling others how will you solve your problem?

- In what way shall we design our learning activities?

- On what days would you like to have homework is it between Monday to Wednesday or Wednesday to Friday?

- What type of games you want? Is it group or individual game?
- Can we select certain homework from daily newspaper, TV programme and current events?

Children learn from their mistakes also, that happens only when their mistakes are not punished but treated with empathy and understanding. For example unworthy choices will result in unwanted consequences. If one day is skipped in regular schooling, then for the whole day one has to stay without doing anything! Usually when children do mistakes elders will start scolding them, instead of this if they show empathy, like, "ooo you missed the school bus? So unfortunate, because the class was fantastic today, you missed it"-such words by teacher influence much on the students.

Check Your Progress- 4

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. The proverb which expresses the humanism
   a. What you sow that you reap
   b. Hard work gives sweet fruits
   c. Even a stopped watch also show the correct time twice a day
   d. Guilty must be punished

2. For each and everyone's achievement
   a. Environment is responsible
   b. Individual himself is responsible
   c. Facilities from the government are important
   d. An individual must be rich enough

3. Below are given some statements, put '✓' mark for the sentences and X mark for the wrong sentences:
   a. Education should bring out the potential abilities of human beings
   b. Stress free situations must be there for learning for children to participate actively
   c. A strict and disciplined teacher make the children learn well
   d. Self-learning devices are designed according to humanism
   e. It is important to design the future days positively rather punishing what has already committed mistakes
   f. Children must be given freedom with responsibilities

1.5.4. Let us Summarise

According behaviourism the desirable behavioural changes which are relatively permanent in an individual is considered as learning. The role of the learner is understood with respect to computer aided learning, computer assisted learning (Skinner theory), reward and punishment (Thorndike Theory) and other skill learning. Intellectual challenges and activities are suggested to enhance learning under the cognitive theory. Similarly based on the universal statement proposed by UNESCO and social constructivism several creative activities are suggested with adequate guidance and directions. These could be adopted in any learning situations with relevant modifications. There are certain measures according to humanism, which help how to motivate children for learning, regulate and be empathetic. In all the above said theories the role of learner and the respective learning situations are analysed.

1.5.5. Answers to ' Check Your Progress - 1, 2, 3 and 4'

Check Your Progress - 1
1. d 2.d

Check Your Progress - 2
1. a 2.c

Check Your Progress - 3
1. a 2.b 3. a- ✓   b- X c- ✓ d- ✓   e- ✓   f- X

Check Your Progress - 4
1.c 2. b 3. a- ✓ b- ✓ c- X d- ✓ e- ✓ f- ✓

1.5.6. Unit end Exercises

1. Give illustrations that suit the learning situations according to behaviourism and role of the respective role of the learner.
2. Discuss the role of the learner in the cognitive learning situations.
3. How a teacher should design the social constructivist learning situations? Explain.
4. Give two examples with illustrations learning situations according to humanism and the role of the respective role of the learner.

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Block 1 : Understanding Learning

Unit 6 : Role of Teacher in teaching-learning situations as (a) transmitter of knowledge (b) facilitator (c) negotiator (d) co-learner

Unit Structure

1.6.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Explain that teaching-learning situation as socio-emotional system;
- Express the features of a teacher as a transmitter of knowledge in teaching-learning situation;
- Describe the merits and demerits of teaching-learning situations confined to transmission of knowledge;
- Illustrate the teaching-learning situation where the role of teacher will be a facilitator;
- Justify the need of a facilitating teacher;

- Explain the significance of the role of a negotiating teacher; and
- Identify the situations where the teacher will be a co-learner.

1.6.2. Introduction

Teaching-learning situations form the heart of any School education, instructions and students'' development programme. These teaching-learning situations will be socio-emotional in their nature. In spite of this the school and the education system will run according to the societal demands. This is like a triangle with three vertices. Teacher, student and the subject matter are the three apex bodies of this triangle. In olden days, teacher occupied the pivotal position in an education system. The subject/topic to be taught, curriculum and teaching-everything was decided by the teacher. Teachers were just transmitting the knowledge to the students. Even now, the teacher is considered as fund of knowledge. The instructional design will be decided by the teacher and the student's role be just accepting whatever the teacher delivers as the knowledge transmission. Almost the student's role was passive. Here the teachers used to impart the knowledge to the student. Their age, experience and knowledge helped them to perform the role of a knowledge transmitter. But as the time passed, there appeared an inevitability to change the role of a traditional role of a teacher. Because of this emphasis, the teacher's role changed to facilitator, negotiator and co-learner. This unit will present the detailed information regarding the above aspects.

1.6.3. Learning Points and Learning Activities

1.6.3.1. Teacher in teaching-learning situations as a transmitter of knowledge

Activity 1

Carl Jung "one looks back with appreciation to the brilliant teachers, but with gratitude to those who touched our human feelings. The curriculum is so much necessary raw material, but warmth is the vital element for the growing plant and for the soul of the child".

The above reference might bring the memory of your school days, isn't it? Try to write a short essay on your teacher at school level, who has impressed you a lot. And try to analyse why you liked that teacher.

The teacher today is not confined to the classroom, textbook or even to the daily timetable. But is a catalyst of change in this ever changing world. The teaching has to

meet the demands not only of today's but tomorrow also. In the past teachers were major source of knowledge, the leader of the class. But now they need to become facilitator, negotiator, co-learner along with their traditional role as knowledge transmitter. A good teacher can be defined as a teacher who helps the students to learn. We could see the role of the teacher in different approaches, like, teacher centred, learner centred, subject centred and activity centred.

In case of teacher cantered approach the total achievement of a student is considered where as in case of child centred or learner centred how the learner achieved the objective becomes more important. A teacher must and should have the knowledge of educational technology. There is a strong dearth of teachers who have the knowledge of modern technology based communication skill. Otherwise the society will brand them as "outdated teachers" and totally reject them.

When a teacher performs the role of a knowledge transmitter the whole classroom environment will be dominated by the teacher. For example, lecture method, lecture-cum-demonstration method. Apparently the students may appear here as passive participants but they will be silently listening. In case of Ausubel's Advanced Organiser Model of Teaching, the teacher decides everything regarding the teaching-learning process well in advance. Students will learn as it is delivered by the teacher, like, step by step. Certain difficult concepts, very old or ancient events and new concepts need such approaches.

In case of teacher centred approaches learners will be relatively less active but they could be silently understanding whatever the teacher explains in the class. This is recognised as meaningful receptive learning. Sometimes the learning outcome may not be visible in overt behaviour. The difficult concepts, like, evolution of man, DNA structure, certain derivations in mathematics and physics need teacher centred approach only. This will help the leaner to understand thoroughly. Because to learn themselves may not be possible all the time for the students, may be because of the level of the difficulty. But an experienced teacher may make it easy to learn. Though we say that students must be the centre of the teaching-learning process, there must be ample activities and student friendly measures, the reality will be different. However an experienced teacher will make the learning process very interesting. Use of LCD projector, smart board, and computer assisted learning and on-line, off-line learning modes make the learning process not only very interesting but also result in effective teaching. In all such activities though the teacher's role appear to be dominant, but actually it will be the role of knowledge transmitter. Sometimes a teacher can bring simple investigations in the classroom quite surprisingly. This will be very much

liked by the students. Here they will get first-hand information and will learn based on their own experience. While explaining certain science concepts a teacher can take up simple experiments. And this could be associated with lecture-cum-demonstration. If this is followed by students' experiment, then the teacher will supervise, guide and give suitable directions. That is why teacher cannot be like a stagnant water rather they will be facilitator, negotiator and co-learner in different teaching-learning situations.

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Teachers in these days
   a. Confined only to the timetable
   b. Confined only to the curriculum
   c. Will be like catalyst to the changes in the universe
   d. Give much importance to the school discipline

2. Good teachers means
   a. Those who inspires learning
   b. Makers of good scorers
   c. Makers of obedient students
   d. Makers of courageous students

3. Below are given some statements, put '✓' mark for the sentences showing cognitive learning:
   a. Teacher centred approach suits very well to Indian situation
   b. Students will become passive in a teacher centred learning situation
   c. Teacher centred approach should get completely eradicated.
   d. In the context of ever changing system teachers have to become learners
   e. By making use of on-line and off-line learning aids even the teacher centred approach can be made active and dynamic
   f. If the learning is not expressed overtly means there will be no learning at all

1.6.3.2. Teacher in teaching-learning situations as facilitator

Activity 2

"Learning tasks that are designed to ensure that children will be encouraged to seek out knowledge from sites other than the textbook, in their own experience, in the experiences

of people at home and in the community, in libraries and other sites outside the school, communicate the philosophy that learning and knowledge are to be sought out, authenticated and thereby constructed, and that neither the textbook nor the teacher is an authority. In this context, heritage sites assume great significance as sites of learning. Not only the history teacher, but also teachers of all subjects need to inculcate in the children under their care a sense of respect for sites of archaeological significance and the desire to explore and understand their importance" NCF 2005.

What will you do to execute the above said suggestion/guidelines/activities with your students? For example: collecting information about medicinal plants that are available in their vicinity, how crude oil is prepared, how sugar and jiggery is prepared from sugarcane, on what all sources does sericulture products depend and manufactures in small scale industries like, matchbox, bricks and plywood sheets etc. In this way discuss variety of topics with the students, plan and execute the activities. Try to document all the activities. Observe the changed role of a teacher in such situations.

If you observe the role of teacher in all the above said activities, you can sense the change. That is "teacher as a facilitator". Let us try to understand this concept further by taking relevant examples. In olden days teachers were the only source of knowledge and they used to transfer that to their students in varieties of ways. Here the teachers will be at senders end and the learners will be at receivers end. When the teachers' role get changed as a facilitator, then they make the students to take the same source but explore themselves about their doubts, questions, curiosity and problems. Intermittent interventions of teachers' role brings more confidence among the students and they involve completely in learning process whole heartedly. In Toto we can say that in both approaches the goal remains the same that is students learning outcome that is all round development.

"You cannot teach a man anything, you can only help him discover it within himself"-Galileo

Teacher as facilitator- it has become a very attractive concept in the field of teaching-learning. It says that the teacher will not operate under the traditional concept of teaching but rather through guidance and directions assist ideas forming their own thoughts about them and viewing materials through self-exploration and dialogue. Whatever the learner gives, be it a half told or constructed ideas, the teacher will make suitable rectification and convince him about the concepts to be learnt and thus it will be in continuum. We are all accustomed to think of teachers as the leaders in the classroom. Essentially there are the

people who tell us how to think, and what to think about. They show us how to relate to the subject matter and give us examples to understand their ideas and messages. Thus everything decided by the teacher is considered quite natural.

If the students are made to learn on their own, plan their own pattern of actions, and become self-investigators, then the role of the teacher obviously will be a facilitator. However we should not forget that a teacher can be a facilitator or a traditional one according to the need of the situations. Now we shall look into the salient features of a teacher as a facilitator:

1. Active listener: the first and foremost feature of a facilitator is one has to be a good listener. By this a teacher will really able to understand about what are the problems faced by the leaners, in what level their learning has been stuck and what is the reason for this. For this, the need of attentive listening by the teacher is a must.

2. Patience and withstanding: there will be an ample scope for mismatch of what a teacher expects as learning outcome and the real results of teaching. In such situations teacher's patience and withstanding nature will become most important. Facilitators will make use of this skill very much. They listen to the entire statement made by the learners group before responding. They try to understand the learners' point of views first and afterwards try to solve their problems.

3. Non-judgemental: when a teacher becomes facilitator then one ought to be non-judgmental. That is why it is said that active listeners are often slow to jump into conclusion. Being non-judgemental means waiting with patience for the maximum proof and then taking the benefit of students' as prime basis one has to take the suitable actions. No student should treated with biased opinions. The activities done by the students will may become successful or a failure, a teacher must not be carried away by it, keeping apart he has to rectify and give feedback and corrective measures.

4. Avoidance of sudden decisions: an active teacher will ask the same questions many times, in many ways, this is just to get clarity about the problems faced by the students and also not to take any hasty decisions so that later it will not lead to any repentance.

5. Cooperation and empathy: these two are considered as the best quality of a facilitator. When a teacher keeps all his time, effort, service, intellect, rich experience and dedication to students, then automatically one can see in a teacher the qualities like, cooperation,

empathy, understanding of learners' pain and pleasures, success and failures, insults and inferiority or superiority complexes, encouragement, and intensified emotions among students. This quality in teacher helps immensely to learners.

6. As a role model for professional ethics and authenticity: a teacher has to enter the classroom with a strong belief that all the students are capable of learning. Though there will be equal educational opportunity, each one will have specific pace of learning. Hence a teacher must give importance to individual difference and make sure that everyone in the class will learn.

7. Learner centred environment: in any teaching-learning situations always learner must be the centre of the activities.

8. Scaffolding for learning among students: this is with reference to intellectual and resources for learning. No learning will be a cake walk. We do come across several hurdles. If the level of difficulty is above the understanding capacity of a learner, then the teacher make the subject matter simple and straight, while teaching. And make use of varieties of scaffolding techniques so that it facilitates the learning. This could be logical support, making use of certain learning devices and support from on-line and off-line mode.

9. Creating independent and autonomous learners: learners should be independent and take their responsibility of their learning. They should not depend upon teachers for everything. Bringing such transformation in students'' personality is the role of facilitator. This is far more significant than a teacher being just a transmitter of knowledge.

10. Building a student friendly system: a facilitator will be keen in building a student friendly educational system. In on-line learning they follow this role. Learning situations must be free from all sorts of ambiguity, should help the students to learn with all clarity and confidence.

11. Guidance and counselling: majority problems faced by the adolescents are solved at the teacher's level itself. For this students must have opportunities to speak with the teachers without any hindrances. Giving guidance and counselling will be the part and parcel of a facilitator.

12. Source of information and data: teachers must keep abreast with the day-to-day knowledge. They must be skilled enough to utilize and adapt the ever changing information and technology.

While planning to create a learning situation a teacher should have the following points in mind:
- Constructing objectives relevant to the matter to be learnt
- Planning to execute the predetermined objectives with actions
- Executing the plan
- Provision of the relevant resources and learning aids as easily available to the students
- Motivating learners to learn independently
- Supervising students' learning
- Evaluating the learning outcomes of the students.

Teacher when becomes the facilitator, he will be one among the students but make sure that students will be selecting their pattern of work. He will not indoctrinate his ideas on learners but will elicit the ideas from the students. He gives importance towards how the children are learning rather on how much they have learnt or what all they have achieved. There will be sufficient scope to listen to the students' expression. Encouraging the students for their work done and also keep them motivated for further activity is one more characteristic of a facilitator. By this every child will feel he/she is also important and also everyone will get their ego satisfaction. Summing up we can say that, facilitator enhances the awareness among the students regarding their freedom and responsibility.

Check Your Progress - 2
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:
1. If teacher becomes a facilitator
   a. Will give the notes
   b. Prepare the students for exam
   c. Facilitate learning
   d. Will give freedom to the students

2. The first and foremost feature of facilitator is
   a. Good teaching
   b. Good listener
   c. Immediate decisions
   d. Problem solving

3. Below are given some statements, put '✓' mark for the sentences showing cognitive learning:

    a. A facilitating teacher will create an independent and autonomous learners

    b. It is better to support the students for inquiry learning than mere transmitting the knowledge

    c. A teacher cannot give counselling for students' problems but can give group guidance only

    d. There will be no need of evaluation if the teachers become facilitators

    e. Learning situations must become students friendly

    f. Teachers need not store the information and data

1.6.3.3. Teacher in teaching-learning situations as negotiator

Activity 3

In one morning of winter season the teacher says to the students to draw the picture of **"morning sunrise"**. One child after drawing the scene coloured the background with black shade. Because of this almost totally sun was not at all visible! Now by looking at this drawing the teacher become annoyed at the child told "I asked you to write the rising sun in the morning, you stupid". But the child turned its face to look outside the window with a sad gesture.

You know what? Since it was winter morning sun didn't appear on the sky on that day, because he was hiding behind the thick black clouds.

If you analyse the above event, don't you think that the teacher needs a mild counselling? You will come across several events of the above type in day to day life. Many a times we fail to recognise the reality. We know that the prime aim of education is child's all-round development. And there will be none other than the teachers who can identify the needs, requirements and strengths and weaknesses of the students, so that only they can estimate and plan the learning situations with individual specificity. What guidance and counselling could be given to the teacher in the above example? Indicate your answer.

So far you have seen the teacher as a transmitter and facilitator, now we shall see the teacher as negotiator. One of the most important skills teachers need for classroom management is negotiation. Teacher and students have a very different relationship than in generation past. The challenges of 21st century are at a disturbing level to teachers. In no way the conventional teaching methods suit to today's classrooms. There is a strong need

of transformation in the mutual relationship between the teacher and the taught as well as the pattern of teaching-learning situations in which both of them will be co-existing.

The term "Negotiation" is very common in commercial field. But how come they are seen in educational field? Negotiation is a process where each party involved in negotiating tries to gain an advantage for themselves by the end of the process. In such cases negotiation is intended to aim at compromise.

Negotiation is a process by which two or more parties each with its own goals and perspectives co-ordinate areas of interest through concessions and compromise to reach an agreement and take the joint decision about areas of common concerns in a situation in which neither side has nor wants to use power. Hence negotiation is a positive process. When the demand for resources will be more but the availability of resources is less, then the process of negotiation will help in dispersal of resources or gives the opportunity of making use of resources judiciously to all the aspirants. This could be seen in education system with respect to sharing of library, laboratory, language laboratory, material as well as human resources and special/precious/valuable reference books. For this to happen the teacher's role is very important. Here the teacher's role will be like a negotiator.

Sometimes in education negotiation means, images of tense and adversarial exchanges-teachers contracts, strikes, conflict resolutions or union grievances, to name a few. Generally it is referred with solving complex problems that require the co-operation of others. Negotiation could be positive, constructive and generative. It is simply what we do when you can't achieve your goals completely on your own. Conflicts may creep in between two individuals, two group of students, student and the institutions etc. This is quite natural. Frustration, conflicts and stress are so common in adolescents. Their identity crisis, non-cooperation with the society, rebellion nature, and disobedience with the elders-all such facts will add up to the problems. In this context teachers can play a very significant role. Apart from parents, teachers are the one who can understand students comprehensively. There negotiating skill can enhance the peace, balance and self-regulation among students. Now let us look at the areas where a teacher can negotiate in the school system:

1. In solving the students' problems: When the student unrest arise, strong negotiation skills can only help. For example, positive language like "I understand you are frustrated, I'm here to help you, can you explain what is causing the biggest problem?" Don't give up, common let us join together and collectively help each other to solve this problem. Like

this it could be hostels' problem, room-mate problems, misunderstandings between two groups, the canteen which supplies the below standard food – anything could be.

2. Students' unrest: Let us take an analogy of a cricket team and compare that with our education system. Though there will be 11 players in a team all are not equal in their ability. Some are good at batting and some are in bowling and some others are good at fielding. And there will be of no guarantee that all of them will give the best performance isn't it? The same is the picture in an education system. All the members of teaching faculty are in one team but each teacher is different. Sometimes there will be no teachers for certain subjects to teach. Up to certain level nothing may happen, but after the limit students definitely will rebel. In this way for students' unrest there might be significant reason. In such situation teacher's negotiating ability will help in solving the problem.

3. Rivalry between students: This is also quite common. Rivalry could be two individuals or between two groups. Here the negotiator will listen to both parties with patience and analyses and give suggestions for the benefit of both the groups.

4. Co-existence of two groups/individuals with opposite but equal abilities: In such situation it is advised to allocate two different but responsible tasks or different activities so that there will not be any clash between them. This type of decision a negotiator will do with all ease.

5. Negotiating with parents: Usually parents come a teacher to enquire about the injustice done with their children. They do in this way because, they feel their child has been treated unjustly. When the parents come to meet, be sure with all the documents/information-provide it on hand to show them. Letting them to know that all students have equal and multiple opportunities to get information and be successful can diffuse difficult situations. Here one has to be cool, and use positive language and flexible.

6. Negotiating with professional: If the resources / infrastructures are to be used multiple times, or situations in which the classrooms need to be shared, paly-ground, labs, computers, library and assembly hall etc. to be used by many, then, negotiation becomes very much significant.

7. While taking the children to filed visits/outdoor games/cultural competitions: This type of situations will always be there in a school. Then the teacher has to convince the parents to take their children to zonal level / any other competitions or for any field activities.

To do all such activities parents cooperation and coordination is important. Heads of the department have to learn the skill of negotiation. To keep professional relationship positive learn to communicate in encouraging ways during staff meeting.

8. Flexibility and compromising: Sometimes very tough situation may come. If you lose one then only you may get other like do or die situation. In such situations compromising rules seems to be beneficial.

9. All the educationists are negotiator: Negotiating is a positive, creative and constructive process. The education system is the combination of society, community, religion and politics. Therefore there will be a high anticipation the teacher's role in negotiations.

10. Network of resource persons: One website, at least with inter relationship can help in several ways. A very good give and take policy may help in this context.

11. NCF 2005: According to NCF 2005 Peace-oriented values should be promoted in all subjects throughout the school years with the help of relevant activities. Peace education should form a component of teacher education. There is no need of a special training to develop the democratic values and orienting students towards world peace, a good teacher will have these qualities as inbuilt capacities.

12. Faculty exchange programme: For example inviting the professionals and subject experts to give guidance to students who feel difficulty in learning science and mathematics. Taking students to the "Retreat Programme", will be the novel duties of a teacher cum negotiator.

Check Your Progress - 3

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:
1.   When the friction or conflicts occurs between the teacher and the students
      a.   One should get the police protection
      b.   Strict discipline must to implemented
      c.   It indicates the need of negotiation
      d.   Let-off the classes

2. Negotiation means
   a. Thinking
   b. Positive process
   c. Negative process
   d. Passive process

3. Below are given some statements, put '✓' mark for the sentences showing cognitive learning:
   a. If the negotiation is not done in the right time then the situation will go out of control
   b. There will be no need of negotiation for adolescents because they will be intelligent
   c. Negotiation belongs to the commercial field only
   d. Students will have the capacity for self-learning
   e. There will be a scope for children to develop independently in a learner centred system
   f. Lifelong education is just a slogan and theoretical

1.6.3.4. Teacher in teaching-learning situations as Co-learner

Activity 4

Once I was going to city market by catching an auto. The auto driver was playing FM Radio so loudly, that it made me inevitably to listen the radio programme. There was a question asked by the RJ about the teachers, their role in the present day situation. It was a general question asked to the public. So many people gave varieties of answers. Some were expressing their grievances regarding the deteriorating quality of the education system, and some were giving furious responses regarding the new rule, which said that if the quality of results in a school is below the standard, then the teachers are held responsible for that and also as a penalty their increment or salary will be cut by some percentage. Many teachers were unable to digest the concept that teachers are answerable and responsible for the failure of students. However it is a hard truth whether we want it or not.

New teachers who enter the field soon after their training will be shocked by looking at the present scenario. It is high time for them to amalgamate the knowledge what they acquired with the current issues and rejuvenate themselves with enthusiasm. "Lifelong Learning" must be the *"mantra"* for them. Similarly teacher becoming a co-learner-that means that one should give up their role and sit adjacent to the students! It is like, learn, unlearn and relearn. One has to restart learning keeping apart what was learnt so far.

Just try to analyse the above discussion in your own way. And express your opinion in writing.

A teacher must be an ever student. This is not a new thing. A good teacher will always think not about how did I teach but how can I bring an improvement in the quality of learning among students. There are so many new ventures in learner centred approach now a days. Teachers must get accustomed to it. According to learner centred perspective learners will have self-learning abilities. If the thrust is transferred from teacher centred to learner centred then all the students will get an opportunity for their self-development. They become autonomous learners, so that they can evaluate their own level of learning. They will be become competent enough to construct questions, respective answers and also critical evaluation. This is far better than mere learning of facts, concepts or just collection of information.

Teachers need to become aware of novel methods and approaches of teaching and practice it. Teacher becoming a "co-learner" is one of such novel ideas. One of the major feature of a co-learner is, making students as responsible for their own learning, exploration of knowledge and evaluation. While executing this task a teacher will become automatically a co-learner. Students will participate actively, understand the concepts and express their meaningful learning. In this way the whole environment will be charged with "LEARNING" and appear as an illustration of "LIFELONG LEARNING". Summing we can say the day has come to say good bye to "Talk and Chalk" method. Teaching-learning has become a joint venture now in which both the teacher and the taught will learn. Now let us see the salient features of teacher as a co-learner:

- The learner centred approach of teaching is retained as it is and with this importance will be given about how learners will gain, understand, analyse, adopt and apply the obtained knowledge in their life.
- Because of the changed teaching-learning situation students will develop the skill of critical thinking and competence of lifelong learning. They also learn self-control and will be mentally ready to learn from the real life situations.
- It is a paradigm shift in from doing something for the sake of students' learning, to both the teacher and the taught will be executing the learning process.
- A teacher will face number of challenges while preparing the students for learning responsibilities. By solving these challenges a teacher also learns varieties of class room management skills.
- Since students themselves perform the task of construction of questions, question paper, and answering these questions, as well as learn certain problem solving

abilities the whole classroom will be beaming with intellectual activities and active participation form each and every student.

- Teachers' burden will get reduced since the students will learn to become more responsible and take judicious role in their own evaluation. They become responsible for acquisition of knowledge, process of learning and pattern of evaluation.

- As a co-learner the teachers will facilitate learning of students. This will be irrespective of rich experience of the teachers. That means even though the teachers are well experienced their learning part always will be incomplete, hence a teacher is considered as an ever learner.

- Experiments in science learning will become real in their nature. The textbook activities in terms of experiment will give all the detail including the results (for example Experiment to show oxygen is liberated during photosynthesis). Instead of this the curriculum will change in such a way where students will explore the facts/concepts or interacting variables and by conducting experiments themselves they learn.

- It brings a new horizon, with new ideas full of creativity, originality, involvement of all and enthusiastic learning where the teacher and students will move hand in hand. Such practices will completely eliminate the conventional teaching methodology and as a result a new "Learning community" will get evolved.

- Teachers' role get shifted from knowledge transmitter to co-learner and the facilitator. This will be a paradigm shift in which the teacher and students together will gain knowledge, understand and apply the obtained knowledge in novel situation in their context respectively.

- The classroom situation will be free from teacher's authoritative attitude, 'take it for granted' attitude about the student. The imbalanced power centred teachers role is totally rejected in the present scenario.

Student role: the students' folk belong to 21st century this we should not forget. They are the aspirants of knowledge and strong personality. Confidence, autonomy, independency and balanced personality are their target, and hence they get involved those activities which facilitate to achieve their agenda.

- Role of co-learner: these are nothing but the teachers only. They are the main force behind constructing of scaffolding system, support to students' learning. They will be critical observers also. Because of this there will be every chance of students' learning becoming more efficient and effective.

- What is taught and what is learnt – regarding these aspects the events will be planned, executed and evaluated and this will be followed by documentation in each stage.

Being a co-learner the teacher also collect the information regarding assignment given to the students. Knowledge collected by in this manner will be utilised in different situation with suitable modifications.

Check Your Progress - 4

The questions given below are followed by multiple answers, put `✓' mark for the correct answer:

1. In the changed societal context the role of the teacher will be
    a. Self-learner
    b. Authentic teacher
    c. Free from responsibility
    d. Less teaching hours

2. In order to solve the conflict between the two groups teacher will take the role of a
    a. Teaching
    b. Making students to learn
    c. Negotiator
    d. Disciplinarian

3. Below are given some statements, put `✓' mark for the sentences showing cognitive learning:
    a. Co-learner means teachers are supposed to sit adjacent to the students and listening to the lesson
    b. How students have learnt is more important than how I taught
    c. There must be a scope for learning about co-learner concept in teacher training programme
    d. By adopting critical analytical skill people will become lifelong learner
    e. If students accept the responsibility of heir learning it will result in enhancing their intellectual power.
    f. It is the duty of teachers to construct the community of learning

1.6.4. Let us Summarise

Teaching-learning situations will be charged by socio-emotional energy. For the sake of students' development a teacher will perform varieties of roles. These role could be, like, transforming the knowledge to the youngsters, facilitating learning and negotiator

and co-learner. Through all such intervention of the role of a teacher it is expected to get the quality improvement in the system of education. The first and foremost features of teacher as a facilitator will be like he will be a very good listener. He will be the epitome of patience and cooperation. Never will he be hasty in taking decisions. His decisions will be unbiased and free from prejudices. Because learning never ends. The teacher will be the role model for professional ethics and builder of learner centred approach system. They provide student friendly learning situation with suitable guidance and counselling. When they perform the role of a negotiator, solve most of the students' problems, bring balance between the administrators and students, take care of students' unrest and look into the judicial use of human and material resources meant for general purposes. Though the role of co-learner will be a challenging one, they will not finish their job just by explaining rather join themselves with the students for learning collectively.

1.6.5. Answers to 'Check Your Progress - 1, 2, 3 and 4'

Check Your Progress - 1
1.c 2.a 3.a- X b- " c-   d- " e- " f- X

Check Your Progress - 2
1.c 2.b 3.a- " b- " c- - X d- X e- "f- X

Check Your Progress - 3
1.c 2.b 3.a- " b- X c- X d- " e- " f- X

Check Your Progress - 4
1.a 2.c 3.a- X b- " c- " d- " e- " f- "

1.6.6. Unit end Exercises

Answer the following questions:
1. Explain the nature of teaching-learning situations in context with a teacher as a knowledge transmitter.
2. What are the salient features of a teacher when he becomes a facilitator?
3. Differentiate the role of knowledge transmitter and facilitator.
4. What is negotiation? Is there any need for a teacher to become a negotiator? Illustrate your answer.

5. How a teaching-learning situation must be designed to suit the role of a teacher as co-learner? Explain.

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Block 2 : Learning in 'Constructivist' Perspective
Unit 1 : Distinctions Between Learning As 'Construction of Knowledge' and Learning as 'Transmission and Reception of Knowledge'

Unit Structure

2.1.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Recognise learning as knowledge construction;
- Illustrate how students will construct their knowledge;
- Describe learning as transmission of knowledge;
- Give the example for learning as transmission knowledge;
- Justify learning as the process of reception of knowledge;
- Create situation for reception of knowledge; and
- bring out the differences between learning as knowledge construction, knowledge transmission and knowledge reception.

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1.2.2. Introduction

Until recent time everyone was perceiving the classroom activities from behavioural school of thought. As you know behaviourism puts thrust on stimulus-response bond. The technique of reinforcement also was analysed in classroom context. There will be plenty of exercises and repetition classes/opportunity under the application of behaviourism. According to behaviourism the observable, measurable and desirable behavioural changes are considered as learning. But the modern education system considers such type of learning as un-psychological and unscientific. According NCF 2005, education should not be just a means of making students mind to be filled with information and data. Let them not be filled with dead knowledge, instead of this let it be with real and live knowledge of life. The guidelines says that children should become skilled to acquire knowledge based on their own experiences by putting their own effort. Teachers must be competent enough to create such learning situations. All such notions make us to rethink about the teaching-learning process and also the education system as a whole. Now a days constructivism is occupying the whole education system. This is the high time to look again at learning to see as construction of knowledge, transmission of knowledge and reception of knowledge. And one must be able to see the discriminations between them also.

2.1.3. Learning Points and Learning Activities

2.1.3.1. Learning as the process of knowledge construction

Activity 1

One day in a biology class the teacher showed a magic before the students! Since it was a rainy day, the road connecting to the school was wet. While teacher and some of the students were crossing the road accidentally they saw one crab was also moving slowly from one side of the road. One of students captured that crab and brought to the class. Even the teacher is not less than the students. She started an activity with that live crab. By the help of the student she tied the crab by a twine thread (at its front appendix). When it was placed on the table it gave a sound like, as if a big stone is kept on the table. So hard was its exoskeleton. If a piece of chalk is put in between its first of pair of appendices it was immediately cut by the crab. Look at its eyes!! They were supported by the stock and when the crab was excited it was appearing like a protuberance. The most shocking was its movement. It deceived almost everyone by their assumptions. Because it could move front, back, left and right without any difficulty. And many a times children judgement was proved wrong by its actual movement. For example apparently it showed as if it is moving

towards front but actually it moved backward. May be it is its defence mechanism. The name denoted to crab is "Cancer", like cancer cells, it can move in any direction and occupy the space. Cancer cells also can grow in any directions. The teacher utilised this live situation to teach the topic on Arthropods in a very special manner. The content chosen for that particular class was "Living organism show movement", -as one of the salient features. So, locomotion of crab, snail, frog, earthworm, centipede and millipede were taken for live illustration in the class. This helped a lot for children to construct their knowledge.

The above illustration may inspire you all isn't it? Now it is your chance. Take a suitable topic from the textbook and design the learning situation in a novel way. And observe the enthusiastic outbursts of your students.

Constructivism has become everybody's favourite approach to teaching-learning in these days. John Dewey, Montessori, Piaget, Bruner and Vygotsky are few eminent people who have contributed for constructivism. According constructivism learning is a process in which children will learn by active participation. Here the learner add the current learning in to his previous learnt concepts and make it more meaningful. This will lead to the construction of new knowledge. The traditional classroom is ruled by behaviourist theories which operate on stimulus-response and reinforcement. This type of learning includes plenty of drill and practices and the learning outcome will be in observable terms, measurable through tests. Every student will learn by his own experience and this will be highly individual specific. In this way each student will learn the generalisations, principles, laws, concepts and facts. By internalising the learnt concepts they adapt to their environment more functionally. The teacher's role will be like a facilitator here. They encourage, motivate and help for their knowledge construction. And the important thing we have to note here is, all these learning events occur only in natural settings. NCF 2005 for school education pointed out that "the school should avoid filling the students mind with layers of information which is considered to be **"Dead Knowledge"** rather they should facilitate learners to construct their own **"RealKnowledge".** Such postulates triggered to have a re-look at the existing learning theories and current practices. The evaluation of learning theories in this light suggests the suitability of constructivist theories and practices.

According to constructivism learning is process in which the learner actively constructs or builds new ideas or concepts based on current and past knowledge i.e. Constructing one's own knowledge from one's own experiences. Constructive learning is therefore a very personal endeavour where by internalised concepts, rules and general principles may consequently be applied in a practical- real world context.

Teachers usually facilitate learning by suitably rectifying the mistakes and lacunae in the plan created by students regarding learning and also they make it to reach others in a classroom. By this if at all any discrepancies occur in teaching-learning situation immediately they could be identified and removed completely. Teacher can clarify and organise their ideas and can voice them to others. It gives opportunities to elaborate on what students learned. In constructivism broadly one can see three to four types, namely, Generative Learning, Discovery Learning and Knowledge Building. Whatever may be learning style, these constructions will give the students for their free and independent expression and investigations within a framework.

Learning as knowledge construction: This is a type of purposeful and incidental learning. Here it is completely depending upon how an individual learns. An individual's interest, ambitions and inner urge to gain knowledge will influence his learning. Knowing about the attributes of a thing by means of intellectual process is the basic unit of knowledge construction. 'Knowing' means understanding, which is a creative process and actually this process will give the personality features to an individual. Getting meaning also is an individualistic process which varies from person to person. Every individual will be able to construct his/her own knowledge by means of perception, experience and live illustration.

Classroom learning means it usually starts with the learning experience of a learner in teaching-learning session. In the socio-emotional set up of a classroom interactions, like, between teacher and the taught, between pupils and between the subject and the learner, learning may occur. In spite of this, knowledge construction or creation of knowledge in a formal classroom is a very tough task. For this to happen, teachers have to give opportunities to students,like, for explore, analyse, experiment and freedom to use their knowledge and do some activities. By this students will learn to acquire knowledge meaningfully. The process in which a child constructing knowledge will be very individualistic and of a cognitive structure. The same according to Jean Piaget is called schema formation. This is true according to Vygotsky's point of view also. Children learn several aspects, attitude, values and concepts by means of interactions in any social zone.

Constructivism is based on four epistemological assumptions (Fosonot 1996) and they are,
1. Knowledge is physically constructed by learners who are involved in active learning
2. Knowledge is constructed by symbolically by learners who are making their own representations of action.

3. Knowledge is socially constructed by learners who convey their meaning making to others.
4. Knowledge is theoretically constructed by learners who try to explain things they do not completely understand.

For example, using a text or a set of pictures/visuals on a transport system coupled with discussions will allow young learners to be facilitated to construct the idea of a transport system. Initial construction (mental representation) may be based on the idea of the road transport system, and a child from a remote rural setting may form the idea centred around the bullock cart. Learners construct mental representations (images) of external reality (transport system) through a given set of activities (experiences). The structuring and restructuring of ideas are essential features as the learners' progress in learning. For instance, the initial idea of a transport system built around road transport will be reconstructed to accommodate other types of transport systems—sea and air—using appropriate activities. The engagement of learners, through relevant activities, can further facilitate in the construction of mental images of the relationships (cause-effect) between a transport system and human life/economy. However, there is a social aspect in the construction process in the sensethat knowledge needed for a complex task can reside in a group situation. In this context, collaborative learning provides room for negotiation of meaning, sharing of multiple views and changing the internal representation of the external reality. Construction indicates that each learner individually and socially constructs meaning as he/she learns. Constructing meaning is learning. The constructivist perspective provides strategies for promoting learning by all.

According Eggen and Kauchak the salient features according learning according to constructivism are as follows:
1. Learners create meaning. They combine the new learning with the older one and generate a cumulative meaning once again.
2. New learning depends upon the current information and its understanding, compatibility of supportive earlier information.
3. Social interaction facilitates learning. The learning community supports the self-responsibility by the learners for their own learning. The teachers' role will be that of a facilitator.
4. Authenticated learning situations will result in meaningful learning. The construction of knowledge starts with the process of application of true meaning of knowledge in day to day life.

5. Students learn by adopting the positive features, understand and internalise the concepts. For example, if in a closed figure the total of all the three angles is 180Ë% means it must be a triangle. Likewise, if it is179Ë% or 181Ë% then it cannot be triangle.
6. Sometimes learning occurs due to correlations. The concept of 'Mother', though the love and affection is there or not, a mother is a mother always.
7. The ability to visualise mentally the events that have occurred several times, like, by closing eyes, one can imagine a cat, or anything asked.
8. Repetition of similar events will result in one generalisation. For example, several live example of dicot leaves, may lead to one generalisation that all dicot plants will have reticular venation.

Bruner advocates the following points to be kept in mind while adapting constructivism:

- Facilitate children to understand the main points.
- Give varieties of example in abundance, and let only the positive examples come first.
- Give ample scope for children to see, touch and feel as well as examine and experiment.
- Provide opportunities for quality interactions.
- Create the learning situation in such a way that it gives a plenty of hands on experiences.
- Connect the content to the day to day life.
- After children got mastery over positive example, then mingle the negative as well as positive examples in the learning situation so that they apply their knowledge and decide what is what and what is not.
- The mixing of positive and negative examples will enhance the discrimination power among the children.

All the above said experiences will make the children to construct their own knowledge. This is what **schema** in Piagetian opinion, **mental representations** according Bruner. Activities, planned projects, experiments, field visits, a visit to library, discussion and debates, brain storming sessions,-all such endeavour can enhance gaining knowledge or knowledge construction. Hence one has to encourage children to ask question, express their own opinion, individual effort in getting clarification and doubt clearance.

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Student will make use of _____ and construct knowledge
    a. Previous knowledge
    b. Environment
    c. Suggestions given by the friends
    d. Teachers' guidance

2. Product Leaning is a type of
    a. Problem solving
    b. Cooperative learning
    c. Constructive learning
    d. Memory based learning

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. Learning as knowledge construction is incidental and purposeful
    b. Children will construct their own knowledge in experience based learning situation
    c. All the students in the same class will construct the same type of knowledge
    d. By sharing meaning socially, one can construct their own knowledge
    e. Varieties of examples will help children to construct knowledge
    f. According Bruner knowledge construction is nothing but mental representation

2.1.3.2. Learning as knowledge transmission and reception of knowledge

Activity 2

Austin describes in his **"Other Minds"** (J.L.Austin – Philosophical Papers – Oxford 1961, P. No. 49-50) as follows:

If I asked "How do you know the Election is today?" Apt reply is "I read in the Times".

If I asked "How do you know the Persians were defeated in Marathon?" The answer is "Herodotus expressly states that they were".

In the above cases **"know"** is correctly used. We know at **"Second Hand",** when we can cite an authority who was in a position to know. The statement of authority makes me aware of something, enables me to know something which otherwise I shouldn't have known". It is a source of knowledge. This effect of knowledge can be transmitted down a claim of authorities-ie., knowledge is transmissible and shareable is deeply embedded in the structure of our thought. 'Knowledge' is often pursued co-operatively. Learning is constant and transmission of knowledge is a necessary process. In context with a classroom,**teacher** is the source of knowledge.

Try to cite similar examples from your day to day experiences.

Learning has been analysed from several perspectives. Learning as transmission and reception of knowledge is also one of the perspectives. One of the major aims of education is knowledge transmission. Transmission is the process by which information, knowledge, ideas and skills are taught to others through purposeful, conscious telling, demonstration and guidance. While historically this is the most traditional and currently the most predominant method of instruction. Unfortunately we are finding it as one of the most used method in schools, but it is not very effective in long term retention. Learning requires the attention of the learner. For a child to learn, he should be attentive, listen, imitate, repeat and apply. Dispersal of knowledge needs, the process to be a continuum, and wherever, the aspirant mind and urge will be there, definitely it reaches them. Modern tools and technologies have made it a smooth going process. You might have seen radio lessons, on-line courses, and other digital learning aids. Knowledge transmission is the major means of educational programme in all distant mode of education system. If knowledge becomes stagnant, then it is almost dead. When it is continuously flowing, retains its livelihood. Teachers through their good teaching and by means of several activities make the knowledge get transmitted to the students.

Knowledge transmission is a teacher centred approach and it occurs between two poles, in which teacher will be at the sending pole, to transmit the knowledge and student will be at another opposite pole as receiving end. In this system teachers alone evaluate the learning outcomes. Facts, information, concepts, ideas and skills are transmitted to the students. This is a purposeful and goal oriented activity. Explanation, demonstration, guidance, suggestions, directions and through varieties of activities learning is made to occur. Here the teacher is the dispenser of knowledge, the arbitrator of truth and finally the evaluator of learning. A teacher's job from this perspective is to supply students with a

designated body of knowledge in a predetermined order. Academic achievement is seen as students' ability to demonstrate, replicate, or transmit this designated body of knowledge back to the teacher or to some other measuring agency or entity. Hence standardised tests are considered as the apt measure of students' learning.

The transmission theory of learning has certain conditions for learning to occur. They are, students'' concentration, attention and interest as pre-requirement. Students have to listen attentively, understand and get mastery over by drill and repetition and they should apply the obtained knowledge in novel situation. This is a technique which is cost-effective and could reach maximum number of pupils. Since the teachers follow a well-designed, objective based plan, interactive teaching-learning sessions associated with formative evaluation, the probability of success in achieving the goal will be more. But there are certain demerits also, namely, assuming students as individuals with no knowledge at all, making them passive learners, and no scope for students to contribute in the teaching-learning sessions are some of them.

Learning as reception of knowledge
Activity 3
Very often teachers insist that all children must give identical answers to questions. Because teachers feel that "Students cannot find answers that are not there in the text book". Or "there will be too many types of answers, then should they all be accepted?" This shows irrational rigidity by the teachers. Isn't it? If this is seen everywhere, then how will you bring a positive change to this?

'Meaningfulness' is a very significant concept in learning. Whatever we learn, we should first understand what we are learning, otherwise, it will be meaningless learning; which is nothing but a blind learning, rote learning that is not flexible. Therefore such rote learning will be very rigid, lacks interest and it is just a literal acceptance of any information. This type of learning will be devoid of reasoning, analysis, imagination, defining, and valuing etc; this will be a less satisfactory, less interesting and less effective method. When we look into all such negative points, it gives the correct context to understand what is meant by meaningful learning. Learning of meaningful information is easier, and in such cases, the rate of learning also will be higher, it remains for a longer period in our memory; it also help in transfer of learning. So meaningfulness has all these advantages. Thornburg defines meaningfulness from a student's point of view. He says that meaningful learning is the one in which a learner finds the objectives of his learning among the familiar information integrated, inter related organized concepts".

Meaning is a symbolic form. We make use of symbols for each and every object, feeling, thought etc.; as far as the symbols are specific so specific will be the meaning. Through symbols, experiences are communicated easily. Among those symbols, the majority will be language symbols. They take a lion share; and their scope also will be more. Words, phrases, sentences – all will act or function as symbols. This doesn't mean that, meanings are embedded in words, but they are with the person who uses it. The meaning also indicates how the experiences are organized and expressed and also how these are accepted in a social context – therefore language is used meaningfully. This helps for an effective communication. Hence it is also used in reasoning and in clearing the doubts. Meaning is related to a person's internal life, it guides and control his behaviour based on the changing stimuli and motivations. Therefore it is true that, symbols represent our experiences and the meaning will not be there in symbols, but in the individual.

Anything will have meaning, like object, event or situation etc.; but this depends upon how these have influenced on us in the previous experiences and what were our responses at that time. According to Mouly the specificity and clarity of meaning comes from:

1. Intellectual development
2. Previous experience
3. Interest and motivation
4. Conceptual difficulty
5. Foreign terms used in a concept

The meaning depends upon all the above said variables. Morse and Wingo have tried to bring a link between meanings and learning. Because in learning, our understanding depends upon the meaning of what we learn. So, meaningful learning show three important salient features, they are,

- Meaning includes an inter relationship between object, feeling, and inter-related events. This could be because of a formal rationale or could be generated from social process or from nature.
- Meaning is formed based on previous experience.
- Meaning is evolved in context with the recipient.

That means, if the individual is aware of cause and effect relationship then the meaning generated will be very specific to him. That is why the meaning of an object or an event varies from person to person. In spite of these, meanings also show stability incidentally. We know that school learning usually doesn't include exploring or discovering

in its true sense. Instead of this students learn many more things in verbal form. A learner will learn by the help of teacher's lectures, he understands them and equalizes them with his cognitive structure. So that, this knowledge could be used in further learning or in problem solving situations. But one should not be under wrong conception that, this is a type of rote learning and useless. Though the learner appears to be passive in lecture method, he could be silently involved in receiving the information meaningfully. Ausubel upholds this type of learning as *meaningful reception learning.*

Majority of the time, this type of learning will be of verbal nature. But it need not exclude the activities altogether. Whenever it excludes activities, it will turn to become rote learning. But in case of meaningful reception learning this danger will not be there. Because it will have inbuilt activities. In order to register any concept in our memory, understanding that concept becomes the first step. "To Comprehend" or "To Understand" is really a dynamic activity. But these activities are entirely different from that of discovery learning activities. In this case, it is said to be a pre- determined activity. Because, it will give the content that has to be learnt, with an expected terminal behaviour by the learner. So, it involves, understanding such content, and equalizing it into the already existing cognitive structure, that's all. It is hence unlike to that of problem solving approach, where collecting of and organizing of new information, executing it in a deliberate way to find a solution etc.; these are two activities which are totally different. But one should not generalize that, in meaningful reception learning type, the students learn mechanically without any motivation. Here also, after obtaining the data (whatever may be the source), students will analyse and synthesize and accumulate that in their cognitive structure or mental images. So, meaningful reception learning is not that simple as it appears to be when conceived superficially.

Ausubel has identified four important elements in meaningful reception learning. They are:
- The learner will try to arrive at one decision about the new information and its accommodation to the already existing cognitive structure.
- Building a relationship between the new information and the already existing old information.
- Restructuring the new information with the old ones according to his own perception. This process depends upon the learner's previous experience background, vocabulary and information structure.

- The last element is a synthesizing effort by the learner. This is the product of all the three earlier elements. It shows the tendency of framing principles with broader scope.

If learning occurs without undergoing all the above said basic elements, then definitely it will result in learning mechanically or rote learning. Education system must look into it. Curriculum is a master-plan for realizing the aims and objectives of education. It prescribes the content as well as the methods of teaching. The cognitive structure formed during the foundational stage enables a student to understand and grasp the organized content of instruction. Ausubel mentions two important principles, namely, 1) progressive differentiation and 2) integrative reconciliation. Progressive differentiation is the one in which as the hierarchy increases, the content must show a progressive differentiation. Integrative reconciliation refers to the deliberate linking process of new ideas and information to the previously learned content. This is also known as sequential curriculum. Knowledge is always sequential.

Check Your Progress - 2

The questions given below are followed by multiple answers, put `✓' mark for the correct answer:

1. Knowledge transmission is a _____ system
   a. Learner centred
   b. Activity centred
   c. Teacher centred
   d. Subject centred

2. If the teacher is the dispenser of knowledge, then the students are ——
   a. Listeners
   b. Viewers
   c. Helpers
   d. Receivers

3. Below are given some statements, put `✓' mark for the correct one and X for the wrong one:
   a. There appears to be a strong need of constructing a **"Learning Community"** by the teacher and the society
   b. For teachers there is a lot to be learnt even from their students
   c. Just take care about the transmission of knowledge, it will take care of learning
   d. Since students are very young they will be not knowing anything
   e. Students will be passive participants in knowledge transmission process
   f. Knowledge transmission can reach maximum number of students at a time

2.1.3.3. Differences between Learning as construction, transmission and reception of knowledge

So far we discussed about the process of learning in context with knowledge construction, knowledge transmission and knowledge reception. In all these cases the common element is the role of a teacher. You know that eliciting everything from the students is not possible. This gives an implied meaning that, an apt amalgamation of teacher's domination in teaching-learning situation cannot be eliminated completely. Similarly, in perceiving learning as construction of knowledge, transmission knowledge and reception of knowledge, there are merits and demerits. No one type is fully satisfying. Therefore we need to have a suitable combination of all the above three perspectives so that a teacher can reach the goal at ease.

Theory of knowledge construction advocates that the process of students receiving the knowledge will not be in passive state of mind, rather they construct actively through mental processes. They add the newly learnt concepts with their older learnt concepts and this will result cumulatively in to a knowledge with new dimension. Students will utilise such newly constructed knowledge into novel situation and thus progress continuously (Santrack 2004). Here one thing we have to keep in our mind is that, every individual will their own previous knowledge and thus even though a teacher gives a common learning exposure to students, each individual will construct their own knowledge depending upon their previous knowledge. Hence knowledge construction varies with the individuals. This is due to individual difference also.

It will be unscientific to think that children are just like vacant vessel and one can pour information into it. Teachers have to become facilitators and help students learn on their own. Their role will be in creating or generating new situations, events and linking the earlier knowledge with the new one so that learning bond will become strong and meaningful. Meaningful learning makes the children to become more confident and apply the obtained knowledge into novel situations.

In case of knowledge transmission information will flow from teacher to the students. In a classroom everything happens as the teacher decides. This will be the best system from the examination point of view. But from this the student always remains as a dependent personality, they cannot become independent, autonomous learners. In case of knowledge construction, learners learn by their own experiences where as in case of knowledge transmission they will learn as it is determined by the teachers. In a completely teacher centred system, the student will learn what the teachers expects, decides and provide to the

students. Problem solving situations and project works almost will be nil in knowledge transmission approach.

Meaningful learning accepts students' passive appearance but recognise their silent learning. It will not force any learner for overt behaviour as learning outcome. Meaningful learning is a mental process. According to David Krathwohl, "Receiving" is the very basic level of behaviour in learning with respect to affective domain. For any cognitive learning the emotions such as, interest, attitude and effectiveness give a strong support. Learning outcomes need not be always expressed overtly-say meaningful learning theories. As Ausubel has rightly pointed out it, for learning reception is the first and the foremost step and not the problem solving ability or inquiry/investigations. The generalisations, rules, principles, facts and concepts will be learnt by the students as teachers present them before the students. In receptive learning you may not find experiments, hypothecation, investigations, reasoning, analysis and syntheses. Hence children will not be so sharp intellectually in receptive learning. However, whether it is knowledge construction, transmission or reception, for all these role of the teacher is very important. Students' individualistic abilities, individual differences, competence, interest and aptitude needs to be taken care of.

Check Your Progress - 3
The questions given below are followed by multiple answers, put `✓' mark for the correct answer:
1.   Learning without meaning _____
     a.   Blind learning
     b.   Occurs in classrooms
     c.   Never helps for exam
     d.   Not a mistake

2.   Meaning occurs due to
     a.   Referring dictionary
     b.   Teacher's teaching
     c.   Peer group interactions
     d.   Experiences

3. Below are given some statements, put ` ✓' mark for the correct one and X for the wrong one:

   a. During meaningful learning students will be silent

   b. Reception learning will not show overt behaviour

   c. Meaningful learning is said to be a quality learning

   d. During meaningful learning students' active participation will be visible

   e. Children will conduct experiments during reception learning

   f. Reception learning will not suit for teaching of all subjects

2.1.4. Let us Summarise

Usually in classrooms one will come across implementation of learning principles of behaviourism. Because here learning is considered only when it is observable, and measurable activity. As it is told in NCF 2005 we have to help our children to construct their own knowledge. Learning may occur in any form. In this unit learning is perceived as knowledge construction, knowledge transmission and knowledge reception. Students construct knowledge by means of four different types, namely, Knowledge is physically constructed by learners who are involved in active learning, Knowledge is constructed by symbolically by learners who are making their own representations of action, Knowledge is socially constructed by learners who convey their meaning making to others and Knowledge is theoretically constructed by learners who try explain things they do not completely understand. The facilitator role of a teacher will help the students for learning. By giving several examples and illustrations, newly created learning situations and activities teachers encourage learners for learning. In case of knowledge transmission teachers transmit the information by means of their rich experience. Here the students' role will be little bit passive. Tests, exams are considered as the determinants of learning outcomes. In case of meaningful learning the changed behaviours will not expressed externally. Meaning makes learning easy. Students will receive and learn only when they find some meaning in the teaching-learning process. The factors which influence the meaningful learning are, maturity, intellectual development, previous experiences, interest, attitude, aptitude and level of difficulty. At the end of the unit a discussion is done with respect to learning as knowledge construction, transmission and reception.

2.1.5 Answers to 'Check Your Progress - 1, 2 and 3'

Check Your Progress - 1
1.a 2.c 3.a- " b- " c- X d- " e- " f- "

Check Your Progress - 2

1. c 2.d 3. a- ✓ b- ✓ c- X d- X e- ✓ f- ✓

Check Your Progress - 3

1.a 2.d 3.a- ✓ b- " c- ✓ d- X e- X f- ✓

2.1.6. Unit end Exercises

Answer the following questions:

1. How will you identify learning as knowledge construction? Explain the learning situation that suits for your answer

2. Discuss the merits and demerits when learning is considered as knowledge transmission.

3. What is the role of teacher and taught when learning is knowledge construction?

4. When knowledge reception becomes learning? What are the conditions that facilitates knowledge reception? Explain.

5. What are the differences between knowledge construction and reception?

6. Does knowledge reception is dependent on knowledge transmission? Justify your answer.

1.6.7. References

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Block 2 : Learning in 'Constructivist' Perspective
Unit 2 : Social-Constructivist Perspective (also Bruner and Ausubel's perspective) and Application of Vygotsky's Ideas in Teaching

Unit Structure

2.2.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Explain the learning process according to the perspective of social constructivism;
- Analyse learning according Bruner's perspective;
- Plan the learning situation according Ausubel's theory;
- Adopt Vygotsky's ideas in teaching; and
- Illustrate the creation of learning situations according different perspectives.

2.2.2. Introduction

Most of the people think that learning occurs within the four walls of a classroom. But in reality the process of learning has surpassed the limit of classroom, beyond the

timetable and also the curriculum and the textbook. You know that experience is the true teacher inour life. For learning social zone is equally important as we see with cognitive domain. Vygotsky opines that social factors contribute much for the development of cognitive domain. Cognitive domain develops as a result of social interactions, the directions obtained in the proximal zone, scaffolding and facilitation for learning. In this context both the parents and children will construct their knowledge. The way how children think and process the information is influenced by the environment in which they are brought up. In this unit you will come to know about how learning to be planned and imparted according to the viewpoints of Vygotsky and Bruner.

2.2.3. Learning Points and Learning Activities

2.2.3.1. Perspective of social constructivism on learning and Bruner's perspective of learning

Activity 1
Children prepared a simple balance:

Teacher was planning and preparing for the topic "Weight and Measurement". For this teacher has taken some help from the students also. Some children very enthusiastically have collected two aluminium plates (exactly same type), and a jute thread measuring almost 6 metres, and hard sticks (from dried jowar-millet plants) and prepared the balance thinking that they have done a good job with all perfection. But by looking at their product teacher started laughing almost without control! It is because, the planks made of aluminium were swinging like anything. And regarding the length of the jute thread no need question at all!! So teacher explained why she is laughing and made the children to understand how a physical balance must be prepared if at all we want to know the exact weight of the substances. She corrected the length of the threads, and the sticks also. However at the end children including the teacher came out with the so called physical balance. Now the question of weighing popped up. Because they did not have any weighing devices either in terms of grams or in kilograms.

The boy who used to be noted as intelligent in the class came out with an idea, like, by taking a fist full of tamarind seeds, weighing could be done in which a fist full of seeds was the standard unit of their measurement. Half of that will be half the weight and so on… four times of that could be considered as one kilogram. Thus the teacher gave strong forum for children to think about measuring and weighing and then she started actual mathematics lesson. This was very much like their day to day activities.

Similarly, any lesson in any subject, whether it is science, mathematics, social studies or language, a teacher has to start with children's day to day experience so that the subject matter should appear like a familiar one for them. This is one of the most famous technique in which learner's interest and previous experience will be taken into consideration as readiness to learn.

For example tell the students to observe birds which they come across usually, and ask about the relationship between the food habit and the shape of the beak of the bird. Let every student prepare a report of at least six different birds. And at the end let each one of them present their collected information before the class. Encourage the students to do this activity on their own and politely but strictly avoid copying. You can use such activities and their output to any of your lesson irrespective of subjects provided you are creative enough.

For a child to reach the maximum development cognitively, the support, interactions and communication with a skilled and experienced teacher will become utmost important. This could be anything, like, guidance or directions by the teacher or an ideal behaviour of the teacher. Vygotsky calls such processes as "co-operative/co-existing conversations". In such situations, the child, will try to understand whatever directions given by the teacher and act according to that. Other than the parents it is the teacher who plays a dominant role in child's life. Because of the first-hand information and hands on experiences, the child internalises the obtained knowledge and in the next due course of time it will be doing independently.

Language is the prime device in a civilized society by which one can get interrelated with one another. Anyone can get the knowledge of outer world by means of language. For elderly people to transfer their knowledge to their younger generation, language is the bridge. For adjustment we need the help of a language. Family is the unit of society, and hence it is the starting point of any individual, next comes, neighbours, school and school activities, and inter school competitions, participation in different cultural activities will enhance the all-round development of the child.

Bruner's Constructivism

  Jerome S. Bruner, a professor in Harvard University was fascinated by Piaget and his contributions. He laid more stress on forms of representations in cognitive development. According to him, learning is acquisition of new information, knowledge transformation and it is the process of selection, sequence and structure of the gained information. Cognitive development is the one which includes the enhancement of an individual's capacity to gain mastery over the acquired knowledge and its utilization. This process has been explained based on two theorems.

  First one states that "An individual's knowledge depends upon developing a model that represents the world's reality". The second one states that "the so formed models are extracted from the relevant culture; hence they are adapted by the individual in real life to get benefit out of it". That means, an individual will express through, his speech, or dialogue/ signals/actions about what are his experiences, or what he has done and what he would like to do. An increase in such ability itself is cognitive development.

  Representative forms are the laws or generalization formulated by an individual in order to protect and conserve all the aspects of his environment. So, an individual's reality model will include all his representative forms. Bruner has identified three different forms which represent the reality. They are ***Enacting, Iconic and Symbolic.*** These forms appear in the same sequence in child's development. Each step of development depends upon its previous step. The child tries to understand its immediate environment through three modes or systems of representations i.e. Enactive, Iconic and Symbolic representations.

Enacting: This type of representations refers to "actions" performed by a child. Basically it is non-verbal learning and here sensory motor skills are utilized. In such cases, the previous events are suitably represented with concentration by the child. It will be made up of certain action units which result in obtaining certain specific results. Learning cycle riding or any other task could be an example here. Usually this type of representations is confined to the children below three years. At this stage, knowledge acquisition and preserving occurs through sensory motor actions. This is exactly similar to the first stage of Piaget's cognitive developmental stage. Therefore conditioned learning forms a strong basis here.

Iconic: This belongs to the early childhood period i.e. between 3 to 7 years. Iconic are the representative forms of children at their early childhood days. Iconic forms depend upon internal symbols. These are formed based on perceptions and first-hand information. The

concrete experiences are used in forming iconic representations. A young child may draw the picture of sun rise, coconut tree, bird or house and butterfly. It is because; iconic forms are influenced by visual activities and other sensory organizations. These are less defined by language use or verbal forms. But knowledge is expressed and stored in concrete forms. Enacting involves the child's complete mingling whereas iconic is separation from the real world. The organization that takes place due to perception is not flexible, and hence they will be simple and self-centred. Hence Gestalt type of learning is considered as the specialty of this stage.

Symbolic: This type of representation involves transferring of experiences into verbal mode. Hence, it is said to be the most advanced one. This is more abstract and more flexible. It provides a means of going beyond what is immediately perceptible in a situation. At this stage children are able to develop abstract images because they are able to translate experience into language and use language as an instrument of thinking. Hence this ability is well used in problem solving, learning thinking skills etc.; Use of symbolic expressions will be more intensified during the onset of adolescent period. It makes possible to an individual to do a thread bear analysis of an experience, like, what all it contains, and what not and what would have been there etc.; Apart from language, the use of reasoning and mathematical skills will be more. So, it involves deducing, deriving etc.; so that a huge amount of data would be generalized with a minimum use of words and phrases. Because of this nature, symbols help in storage of more information and the ability to remember them also will be more. In the beginning the child uses the words as symbols later they will be transformed into representations. Here the representations themselves are not event or things but they are just prompts. Therefore conceptualizing becomes very important and it is a task of utmost need, it is the language of psychology.

If we try to understand, enacting, iconic and symbolic from the context of environment enacting will be nothing but interactions with the environment. Comprehending or understanding the environment constitutes the process of concretizing verbal behaviour and higher order of thought process about the environment stands for representations. The development of all these, depends upon how much the culture provides in terms of concepts, symbols and skills. Similarly, the individuals' life attitude i.e. attitude towards life and what are the expectations of society by him – all are considered as deciding factors. The other one, more important aspect is the inclination of the individual, i.e. his inclination towards obtaining knowledge through these three representative forms. This also controls the development. As it is explained by Bruner, like, children move from enacting to symbolic,

we cannot say that adults do not use the beginning forms. But only we can say is, the age and experience influence the forms.

Constructivism and learning as proposed by Bruner:

Jerome S. Bruner has put forward the constructive theory in his own way. According to him learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge. The learner selects and transforms information, constructs hypotheses, and make decisions relying on cognitive structure to do so, - which gives meaning and organisations to experiences and allows the individual to "go beyond the information given".

Teacher should try students to discover principles by themselves, better adopt Sacretic mode of learning i.e., engaging in active dialogue. Curriculum should be organised in spiral manner so that the student continually builds upon what they have already learned.

Bruner (1966) advocates that teaching or instructions should address four major aspects, they are (1) Pre-disposition towards learning (2) the way in which a body of knowledge can be structured so that it can be most readily grasped by the learner (3) the effective sequence in which – to present material (4) the nature and pacing of rewards and punishments.

Bruner insists that teaching-learning process must follow certain principles and they are as below:

- Instruction must be concerned with the experiences and contexts that make the student willing to learn (Readiness).
- Teaching must be structured so that it can be easily grasped by student (Spiral organisation).
- Instructions must be designed to facilitate extrapolation and/fill the gaps (Going beyond the information given).

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. _____ proposed that language is an important device for connection and communication among human beings.
   a. Bruner
   b. Vygotsky
   c. Piaget
   d. Skinner

2. The representations as proposed by Bruner are
    a. Assimilation, schema, accommodation
    b. Adaptation, assimilation, schema
    c. Enacting, iconic, symbolic
    d. Analysis, synthesis, evaluation

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. The representations formed during early childhood are due to concrete operations
    b. The representations are influenced by the age and experiences of an individual
    c. According to Bruner learning must be planned in a spiral manner
    d. Bruner's theory does not give scope for rewards and punishment in learning
    e. There is nothing like, for any learning there must be previous knowledge
    f. Socratic's method shows many similarity with Bruner's concept of learning

2.2.3.2. Ausbel's perspective of learning

Activity 2

It was a workshop meant for personality development. There a very famous psychologist was delivering a lecture. The topic was "Human Mind". All the audience were listening very attentively. The resource person, used power point and explained very well. The lecture was very effective because, in that everything was perfect, like, objective of the speech, examples and illustrations and last but not least very good communication also. At the end of the lecture he gave the tips about how to keep our mind calm and quite but still be active. All the participants were enjoyed the speech and showed their satisfaction by a great applaud. However their concentration was very obvious for the outward look itself.

As an educationist I observed, that the lecture by the psychologist was very effective because of the technique he used. That was deductive approach. Teachers also can use this technique in the classroom teaching also. If the concept is of a higher level of difficulty for learning, or very difficult to understand or abstract in nature, then the teachers usually use deductive approach where their role will be little bit dominant. Now you can try this technique for your daily class in which the content will be abstract or little bit difficult. Ausubel has given a model teaching which very much suits for teaching of derivations in mathematics.

About Ausubel and his contributions with respect to learning you have already studied under caption 2.1.3.2 of Unit 1. There you have seen that for learning "meaning" is very important. He was of the opinion that, students will have an innate ability in constructing their own knowledge by exploring and getting first-hand experience. Any information will be meaningful only when it is possible for experience. By this basis Ausubel says that language and language based learning becomes very important in child development. Especially when children are at 11 to 12 year of age, language becomes a prime device for their knowledge construction. At this age, learners will acquire the knowledge gradually, slowly but systematically through experience and associate the new knowledge with the previous one and store in the form of mental representations.

If the new learning has a reference of previous learning, it indicates the smooth going of the learning process. Ausubel called such type of enhancement in the learning concepts, as advanced organisers. Ausubel's theory claims that new concepts to be learned can be incorporated in to more inclusive concepts or ideas. These more inclusive concepts or ideas are advance organisers. Usually the theory proposed by Ausubel takes the support of deductive reasoning. In the classroom context, deductive reasoning takes an order of increased hierarchy and will be presented according to the pace of learning of children. This helps the learners to learn without any tension.

An advance organiser is information presented by an instructor that helps the student organise new incoming information. This is achieved by directing attention to what is important in the coming material, highlighting relationships and providing a reminder about relevant previous knowledge.

While learning children organise the information by two ways, namely, comparative organisation and expository organisation. Comparative organiser is the one in which the main goal will be activating the existing schemas. Similarly they act as reminders to bring into the working memory of what you may not realise is relevant- and this skill will be used for both, integrate and discriminate. That means, integrating new ideas with basically similar concepts in cognitive structure and as well as increases discriminability between new and existing ideas which are essentially different but confusable similar. Expository organiser is the one in which a completely new information will be learnt and this new learning will be unfamiliar to the learner. For this Ausubel mentions two important principles, namely, 1) progressive differentiation and 2) integrative reconciliation. Progressive differentiation is the one in which as the hierarchy increases, the content must show a progressive differentiation. Integrative reconciliation refers to the deliberate linking

process of new ideas and information to the previously learned content. This is also known as sequential curriculum. Knowledge is always sequential. Apart from this a learner will come across the process called generalisation and discrimination also. For example while learning the concept of a triangle, there are commonalities as well as differences among right angle triangle, isosceles triangle, obtuse angle triangle, equilateral triangle and acute angle triangle etc.

Ausubel's theory is connected with how individuals learn large amount of meaningful materials from verbal/textual presentations in a school setting. According to him, learning is based on – the kinds of (i) super ordinate (ii) representations (iii) combinatorial processes that occur during the reception of information. Primary function in learning is subsumption in which new material is related to relevant ideas in the existing cognitive structure on a substantive non verbatim bases. There are similarities with Bruner's "spiral Learning" model.

Ausubel has identified four important elements in meaningful reception learning. They are:

- The learner will try to arriving at one decision about the new information and its accommodation to the already existing cognitive structure.
- Building a relationship between the new information and the already existing old information.
- Restructuring the new information with the old ones according to his own perception. This process depends upon the learner's previous experience background, vocabulary and information structure.
- The last element is a synthesizing effort by the learner. This is the product of all the three earlier elements. It shows the tendency of framing principles with broader scope.
- If learning occurs without undergoing all the above said basic elements, then definitely it will result in learning mechanically or rote learning. Education system must look into it.

Check Your Progress - 2
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:
1.   The very important aspect of learning is
    a.   Teachers' simple way of teaching
    b.   Interesting learning situations

c. Prize and punishment
    d. Understanding

2. The process of adding the new learning with the past learning is
    a. Expository organiser
    b. Comparative organiser
    c. Meaningful learning
    d. Reception learning

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. According to Ausubel's theory, teachers are supposed to dominate in an educational system.
    b. In expository organiser students will be more active in investigation than for previous knowledge
    c. In learning only generalisations are seen
    d. Generalisation and discrimination give more meaning to learning
    e. Meaningful reception learning is the contribution of Ausubel
    f. To create meaning child's intellectual thoughts are enough

1.2.3.3. Application of Vygotsky's theory on learning

You have already studied about Vygotsky's theory on constructivism. He gave very much importance for social interaction. There will be an influence of society and community on every part of child's learning. Vygotsky says that, child learns everything in two phases. This is a very important proposition. And those two phases are (1) the experiences which the child gains during interactions with others, followed by internalisation of the learnt concepts
(2) Each child will have a potential ability for learning, and it will be functional effectively in the "Zone of Proximal Development". Since this zone of proximal development varies individual to individual learning also varies in the same manner. Community plays yet another major role in the process of "making meaning" to each and every child in its own way.

According to Vygotsky(1978) much important learning by the child occurs through social interaction with a skilful tutor. The tutor may model behaviour/and provide verbal instructions for the child. Vygotsky refers to this is like child seeks to understand the actions or instructions provided by the tutor (often the parent/teacher), then internalises the information, using it to guide or regulate their own performance. Thus the cognitive

development in children occurs through interpersonal speeches. Language develops from social interactions for communication purposes. Vygotsky viewed language as man's greatest tool, a means for communicating with outside world. Language plays two critical role in cognitive development as (i). It is the main means by which adults transmit information to children (ii) language itself becomes a powerful tool of intellectual development.

Perspectives of Vygotsky about teaching-learning

Teaching-learning is a socio-emotional situation in which "Reciprocal Teaching" will be very apt says Vygotsky. In such situation, teacher and taught will play the role of partnership and exhibit co-learning. Because of this they get a mastery over four distinct skills, namely,

1. Summarising 2. Questioning 3. Clarifying and 4. Predicting. In this way teacher's role in the process is reduced over time. Teacher or more advanced peer helps to structure or arrange a task so that a novice can work on it successfully. This process Vygotsky calls "Scaffolding". The zone in which the support and learning facilities available, and results in learning by children that is called "Zone of Proximal Development". And those who supports and nurtures learning are named as "The More Knowledgeable Other". These two elements are very essential for the cognitive development of the child.

Collaborative Learning: this is a sort of group learning. For this to function properly group members must be having different levels of ability, so that more advanced peer can help less advanced members operate within ZPD.

Vygotsky's theory became popular because of the following three reasons:
1. His emphasis on the active contribution of human to the development for their own consciousness.
2. The importance of social interactions in the development.
3. The notion of the mediational role of language in the communication process.

Through interactions a child come to learn the habits of mind of his/her culture, including speech, patterns, written language, and other symbolic knowledge through which the child derives meaning and which affected a child's construction of his/her knowledge. Vygotsky called this as "cultural mediation". He sees child's ego-centric speech as learning aid. Such external monologues in children later become internalised to form inner speech around 7 years of age and later the inner speech becomes thoughts. For him silent inner speech is crucial to development. ZPD is the distance between what children can do by themselves and the next learning that can be helped to achieve with competent assistance.

In scaffolding a more knowledgeable other provides scaffolding or supports to facilitate the learner's development. It helps a student's ability to build on prior knowledge and internalise new information. However, scaffolds are temporary-progressively withdrawn. Finally the learner is able to complete the task/master the concepts independently. The goal must be to become independent, self-regulating learner and problem solver.

According Vygotsky pedagogy is not of two separate processes of a teacher, teaching or a learner learning. Rather pedagogy, itself is a dialectic, is the reciprocal relationship between teaching and learning, creating more than the sum of two parts. Vygotsky has given some guidelines for the care givers, and they are as follows:

Caregivers, help young children learn how to link old information or familiar situations with the new knowledge through verbal and non-verbal communication and modelling behaviours. The scaffolds provided are activities and tasks that:

- Motivate or enlist the child's interest related to the task.
- Simplify the task to make it more manageable and achievable for a child.
- Provide some direction in order to help the child focus on achieving the goal.
- Clearly indicate differences between the child's work and the standard or desired solution
- Reduce frustration and risk
- Model and clearly define the expectations of the activity to be performed
- Provide freedom to converse with the peers as well as with the teachers
- By making use of good communication and language skills children can also acquire development in their language ability.
- By participating in problem solving children will learn many things as first-hand experience
- Teachers must create learning situations in such a way that there will be ample scope of interactions, experimentation, "learning by doing", and "do it yourself" type of activities.
- Teacher should give innovative challenges so that it develop problem solving skill in the learners.

Check Your Progress - 3
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:
1. According to Vygotsky the ego-centric speech of children is
    a. Meaningless

b. Not intended for any one

c. Only sounds

d. Learning aids

2. As told by Vygotsky, pedagogy is
   a. Teacher-education
   b. Learner-learning
   c. Teaching-learning
   d. Teacher-learner-learning

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
   a. Child's inner speech get expressed at 7th year
   b. Giving prompts and cues make the children dependent learners
   c. Free talking between the teacher and the students is simply a time waste
   d. Sometimes the subject not at all interested also should be taught to the children
   e. Because of teacher's help in problem solving situation learning occurs in children
   f. Internalising means receiving the information silently

2.2.4. Let us Summarise

Learning has been analysed from different perspectives. Social perspective is one among them. Now to think like, learning should happen inside the classroom is an outdated story. For learning interactions and experiences are considered as utmost important. This perception has led to many changes and reformations in the learning situations. According Bruner, learning means a process in which the real incidents and information is acquired, stored and retained in the form of mental representations. Mental representations could be in the form of generalisations, principles and rules, which actually store house of the surrounding information. As the child grows, the level of mental representation also get enhanced and this is nothing but cognitive development according Bruner. Enacting, iconic and symbolic are the three essential mental representations as identified by Bruner. This occurs quite naturally as a result of developmental process. Each and every developmental phase depends upon the previous phase. Bruner (1966) advocates that teaching or instructions should address four major aspects, they are (1) Pre-disposition towards learning (2) the way in which a body of knowledge can be structured so that it can be most readily grasped by the learner (3) the effective sequence in which – to present material (4) the nature and pacing of rewards and punishments.

Ausubel's theory claims that new concepts to be learned can be incorporated in to more inclusive concepts or ideas. These more inclusive concepts or ideas are advance organisers. Usually the theory proposed by Ausubel takes the support of deductive reasoning. In the classroom context, deductive reasoning takes an order of increased hierarchy and will be presented according to the pace of learning of children. This helps the learners to learn without any tension.

Vygotsky is of the opinion that, in the process of learning both the teacher and taught will be in the mode of co-learner. For a student to learn the zone of proximal development must be there with a more knowledgeable teacher, peer, seniors or even any resource material.
The learning environment in which "Do it yourself" or "leaning by doing"situations are adopted is said to be more effective by facilitating learning.

2.2.5 Answers to 'Check Your Progress - 1, 2 and 3'

Check Your Progress - 1
1. b 2.c 3. a- **X**   b- " c- " d- **X** e- **X** f- "

Check Your Progress - 2
1.d 2.b 3. A- " b- " c- **X** d- " e- " f- **X**

Check Your Progress - 3
1. D 2.d 3. A- " b- **X** c- **X** d- **X** e- " f- **X**

2.2.6. Unit end Exercises

1. What are mental representatives proposed by Bruner? Explain with illustrations
2. Suggest a learning situation that suits Ausubel's perspective on learning process. Explain the steps involved in it.
3. Explain the nature of learning process according to Vygotsky's contributions. Give illustrations
4. Who proposed comparative organizer? Illustrate your answer
5. Explain expository organiser. Substantiate your answer with examples.
6. Bring out the differences between comparative organiser and expository organiser.

2.2.7. References

1.   https://www.instructionaldesign.org/theories/constructivism
2.   https://www.instructionaldesign.org/theories/subsumption
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Block 2 : Learning in 'Constructivist' Perspective
Unit 3 : Process to Facilitate Construction of Knowledge

Unit Structure

2.3.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Explain how experiential learning and reflection helps in knowledge construction;
- Define experiential learning;
- Justify the rationale of reflection for experiential learning;
- Illustrate and give examples for experiential learning and reflection;
- Prove that social mediation is important for knowledge construction'
- Describe that situational learning, cognitive apprenticeship are the best opportunities for -construction of knowledge; and
- Explain the concept of metacognition and its importance

2.3.2. Introduction

You know very well that one cannot simply eliminate the relationship between learning and the experiences. Experiences give meaning for learning. Therefore, there are

several situations, events, approaches, strategies and techniques which make learning smooth going. For example, constructing situations for experiences, creating opportunities for reflection on learning process, making use of social mediation for learning, cognitive apprenticeship and enabling the students for metacognition are a few noteworthy examples. In this unit you will come to know about all the above said concepts in detail. And implementing all these in your field is the only thing that is left out!

2.3.3. Learning Points and Learning Activities

2.3.3.1. Experiential Learning, Reflection and knowledge construction

Activity 1

"Do the work as it is the only aim in your life. Do not worry about what others may think or comment. You will reap the fruit that is worth and meant for you in due course of time". Says the proverb. Sometimes it will be very hard to believe this. But it happens actually. Do you have any incident in your life to quote here? Try to explain it.

Experiential learning is not a new concept. When you add the new learning in to the already learnt then it happens to be the experiential learning. Similarly the reflective thinking also make use of intellectual skills. According to Vygotsky, usually men think and re-think the things already happened so that it will lead to corrections, modifications and constructions of knowledge. The decisions, judgements and evaluation regarding the experiences leads to experiential learning. The whole process is said to be reflection. If learning and doing combined with reflection then the resultant will be Experiential Learning. John Dewey, Jean Piaget and David Kolb are the eminent people who have contributed to experiential learning. The ample scope for experiences, practices and repetitions enhance the quality of learning. Observation, filed visits, experiments, demonstrations and performances as well as, role play, survey, drama and competitions could be examples for experiential learning-in such situations children will learn by cooperation, coordination and reflection.

Experiential learning offers a chance for students to link what they are learning in the course of their studies to experiences out in the world or specifically in a workplace setting. As students reflect on the linkage between higher education training and their worldly realities, reflection becomes a source for their own personal development. Thinking abilities are central to the process of problem solving and higher level of learning can be achieved through this. These include reasoning, hypotheses construction, inductive, deductive, judgemental abilities, enquiry, observational skills, values of honesty and cooperation, enquiry into the natural phenomena- all these are different ways in which naturally children construct their knowledge.

According UNESCO report experiential learning is the one which engages the students in critical thinking, problem solving and decision making in contexts that are personally relevant to them. This approach to learning also involves making opportunities for debriefing and consolidation of ideas and skills through feedback, reflection and the application of the ideas and skill to new situations.

We learn from our experiences. In fact there is no other way we can learn. For example, a child might learn to be wary of touching a stove after burning her fingers on a hot plate that had been used recently. As we grow older, our learning experiences become less 'concrete'. Indeed many of the experiences from which we learn can be quite abstract. For example, listening to a lecture, watching TV programmes. However, at the heart of learning is an experience of some kind. And most importantly our reflection on it.

Definitions on Experiential Learning:
- Experiential learning is the process of learning through experience and is more specifically defined as "Learning through reflection on doing". Hands-on-learning is the form of experiential learning but does not necessarily involve students reflecting on their product.
- It is a method of educating through first-hand experience, skills, knowledge and experience are acquired outside the traditional academic classroom setting may include internships, field trips, field research and service learning projects.
- Experiential learning was made popular by David.A.Kolb, according to him learning is a process whereby knowledge is created through transformation of experience (1984). It is based on four main elements which operate in a continuous cycle during the learning experience. The four elements are (1) Concrete experience (2) Reflective observation (3) Abstract conceptualisation (4) Active experimentation.
- According to Lewis and Williams (1994) experiential learning includes a rich variety of interactive practices where by participants have opportunities to learn from their own and each other's experiences being actively and personally engaged in the process. Activities may include role plays, drama activities, games and simulations, personal stories, and case studies, sharing of ideas, discussion and reflection in cooperative groups.
- Chapman and et al say "experiential learning means learning from experience or learning by doing. It must immerse learners in an experience and encourages reflection about the experience to develop new skills, new attitudes or new ways of thinking. Experiential learning is aligned with the theory of constructivism.

How we process all our experiences and for this purpose how we organise our task forms the heart of any learning process. Reflective thinking is the essence of experiential learning. In case of problems solving the ability to think and analyse is very important. Similarly these are very important for any higher order of learning. Logic, reasoning, inductive and deductive reasoning, construction of hypotheses, selecting and testing of hypothesis, experimentation, questioning, inquiry, use of observation skills, attitude and values are used in knowledge construction. All these are nothing but experiences only. Many a times experiential learning happens outside the classroom.
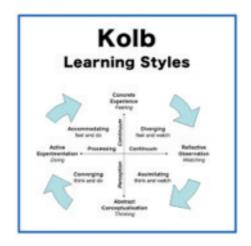
Reflection is another word associated with experiential learning. Reflection means, an individual's re-thinking process about his deeds. It happens at mental level. Reflection is the key to experiential learning because it continuously focuses our attention on what we have learnt and thus consolidates it. It helps to observe ourselves about what we have learnt, how far learnt, what are its uses and where it could be applied. In classroom teaching, at the end of the class, usually, teachers ask the students to summarise what they learnt in the class. This may include, generalisations, rules, principles, theories and conclusions.

David.A.Kolb made the concept of Experiential Learning and Reflection more popular by his contribution. According to his theory of experiential learning there are four important elements and they are
1. Concrete experience (doing/having an experience)
2. Reflective observation (Reviewing/reflecting on the experiences)
3. Abstract conceptualisation (Concluding/learning from the experiences)
4. Active experimentation (Planning/trying out what you have learned)

Kolb's Experiential Learning is typically represented by a four stage learning cycle in which the learner touches all the bases. The graphical representation of Kolb's cycle is presented below. Kolb is of the opinion that the learning style differs from learner to learner. Because it depends upon the cognitive ability of an individual. Kolb's learning theory sets four distinct learning styles-based on four stages of learning cycle. And factors like, environment, education system, experience and the basic cognitive ability possessed by the individual will influence learning.

Four Styles of Learning according Kolb:

1. **Diverging style:** these people are able to look at things from different perspectives. They are sensitive, prefer to watch rather than do, tending to gather information and use imagination to solve problems. They work very well with generating new ideas, brain storming and prefer to work groups, to listen with an open mindedness and receive personal feedback.

2. **Assimilating style:** these people use concise, logical approaches. They require good and clear explanation rather than a practical opportunity. Such people are less focused and more interested in ideas and abstract concepts, prefer readings, lectures, exploring analytical models and need time to think and things through.

3. **Converging style:** these people use their knowledge to find solutions to problems and prefer technical tasks. They are usually specialists and technicians type.

4. **Accommodating style:** these people need hands-on-experience. Practical and experimental approach.

The advantages of experiential and reflective learning situations:

- It facilitates to assimilate the new learning to the earlier learning.
- It encourages to reflect on the learning experiences and this enhances the Learner's critical thinking abilities.
- Reflection brings a balance between understanding, performance and learning of knowledge.
- Gives opportunities for complete immersion of learners into learning task.
- Gives free scope for learning beyond the textbook.
- It enables the students to be dedicated, committed, reflective and critical thinking.
- Students will learn to be responsible for their own learning. This will result in independent, autonomous and competent learner.
- Experiential learning and reflection develops metacognition among children.

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Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. John Dewey, Jean Piaget and _____ are the contributors of experiential learning
   a. Pavlov
   b. David Ausubel
   c. Robert Gagne
   d. David Kolb

2. Reflection means
   a. Image
   b. Mirror image
   c. Critical thinking
   d. Water image

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
   a. The transformation of experience in to knowledge is experiential learning
   b. Children constructing their own knowledge is simply an exaggeration
   c. Field trips and visits will not result in learning
   d. Reflection among students will result in cognitive development
   e. Critical analysis and repetition is reflection
   f. Reflection is full of prejudices

2.3.3.2. Social Mediation and knowledge construction

'Mediation' or 'social medium mediation' is usually utilised in communication process. Information is transferred from sender to the receiver through medium in a communication process. The bridge or the bond between the sender and the receiver is medium. According to Vygotsky it is the relationship and the network of an individual with his surrounding environment. He further clarifies by saying that, the relationship of an individual is not direct rather mediated by tool, here it is language and words as symbolic tools. Cole and Scribner (19778) are of the opinion that, material tools are used for mastering the external world (Environment) Symbolic tools are used for mastering internal world (the self). Without the symbolic tools of words and concepts or signs we could not initiate abstract thought.

According to Vygotsky language plays the central role in human development. Language is the principle mode of meaning making. It mediates both the communication through which thinking with others is made possible and also the inner speech through which the individual thinking is brought under conscious control. Hence encourage dialogues in all educational settings is necessary in order to enable learners of all ages to construct knowledge together and thereby to enhance their individual understanding of the world and their potential for action in it.

Vygotsky is of the opinion that learning happens mainly because of social mediation and learning is a constructive process. Because of this learning will be converted in to knowledge. One cannot consider knowledge as just comprehended or received form somebody else. Instead of this it is the process in which an individual get the knowledge by interacting with his surrounding environment. This may happen by means of individual as well as mass cooperation and coordination. Students will construct meaning based on their individual experience and for this their innate potential power with all flexibility, so that it acts as cognitive negotiation. The cognitive negotiations will be in accordance with the students' level of competencies. When compared the textbook based learning with that of hands on activities, experiences and observations of the real situations the former appears to be less effective than the latter. Hence teachers have to provide opportunities to students to learn through experiences in real situations during their negotiation.

The concept explained by Vygotsky regarding "Zone of Proximal Development" could be well adopted for language and development. According to him cognition happens in three stages and they are

1. The mediating role of cultural tools in particular language and curriculum.
2. The role of peer and teachers in the appropriation of cultural tools by minority students.
3. The mediating role of social representations in the shaping of students identities at school.

Vygotsky says that the cultural media plays an important role in knowledge construction. According to him all human psychological process originate twice, firstly, as distributed between one person and the other person (Inter-psychological) then later within a person (Intra-psychological) i.e., an individual's own perceptions and emotions. Similarly experiences do not arise internally 'inside the person' – but instead they emerge or rooted in the inter-personal interaction. Formation of experiences regardless of age-very significant

when people encounter something new and must learn how they experience and perceive it. Mediation entails organisation and not just transportation or intermediating.

In the unit 1.6.3.3- teacher as a negotiator in teaching-learning situation you have come across the role of teachers. In the same way teachers have to create cognitive and learning

Negotiation for students. And this has tolearning be compatible with the students' level and competencies. Actually the learning situations must be of encouraging nature to students.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1.   Knowledge construction occurs among students through _____
   a.   Teaching
   b.   Training
   c.   Social mediation
   d.   Negotiation

2.   Teachers conduct _____ and _____ for students
   a.   Cognitive and learning negotiation
   b.   Teaching and dictation
   c.   Training and evaluation
   d.   Examination and evaluation

3.   Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
   a.   Teachers create the apt and suitable learning situation to the students
   b.   If students are given freedom to speak with teachers, peers and elders they become just chatterbox.
   c.   Learning situation must reflect the reality
   d.   The curriculum and language construction will have mediation of society and culture
   e.   An individual will interact actively with the surrounding environment by means of social mediation
   f.   The experiences between an individual and environment will be straightforward.

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2.3.3.3. Situated Learning, Cognitive apprenticeship and metacognition - knowledge construction

Activity 2

You are all well familiar with the coaches in different sports. Usually the students will follow meticulously what the coach says and practice dailywithout fail. Practice makes man perfect. Because of dedication and sincere practice sometimes, the students will surpass the coach and achieve a higher goal also. Take any example of such that has been in a movie and prepare a critique on it. For example Hindi movie Dangal,-Ameer khan direction, Checkdey etc. This will help you to analyse the students' apprenticeship and its features critically.

Situated Learning :

Sometimes, when teacher takes the attendance in the class, you might have come across the students telling "yes Sir/mam" or "present sir/mam". And also teachers say in between their explanation asking students like "are you present? Physically or mentally?" "Have you understood?" or "Do you follow me?" -What does it mean? In the classroom students should be present both physically and mentally. It is common to see that students will be there in the class but their mind will be somewhere else. Hence the teachers usually ask the above questions. So in **situated learning** students will be present not only physically, but also, mentally, emotionally, and their three domains, namely, cognitive, affective and psychomotor domains also will actively participate. This type of learning has been perceived and explained by eminent psychologists and subject experts in different ways.

Situational learning can be defined as "A process of enculturation emphasising socio-cultural setting and the activities of the people within the setting". "Situatedness" involves people being full participants in the world and in generating meaning. Thus in situated leaning approach, knowledge and skills are learned in the contexts that reflected how knowledge is obtained and applied in everyday situation.

The theory of situated learning defines knowledge as the capacity to co-ordinate and dynamically adapt one's actions to circumstances. Contexts becomes crucial for learning and acting. Situated learning approach combines constructivism and social learning theories to propose that cognitive development occurs as learners participate in the practices of the social communities and use context to become aware of the structures and models for each social situation.

Situated learning theory is considered as the key to effective classroom teaching. This requires learning should embedded in an authentic contexts of practice which in students engage in increasingly more complex tasks within social communities. For the first time this theory was introduced and popularised by J.S.Brouwn, A.Collins and P.Duguid in the year 1989. Then it was expounded by J.Lave and E.Wenger (1991). It emphasises how understanding and knowledge is developed and organised within work place. Situated learning theory holds that knowledge should be delivered in an authentic context. Further the theory elaborates that, in the beginning the learner should be involved in authentic settings of daily practice, applying knowledge, and making use of artefacts in productive but low-risk ways. This usually requires social interaction and collaboration within the communities of practice.

Learning occurs when individuals are members of the communities in which they are acculturated and at the same time participate actively in the diffusion, reproduction, transformation of impractical knowledge about agents, activities and artefacts. Now let us see some definitions regarding situated learning:

- According to Lave and Wenger (1991) learning is an integral part of generative social practice in the lived in world.
- Sternberg and Frensch (1993) advocate that teaching should promote learning in a context that is as close as possible to the one where the acquired information will be applied.
- A situated learning space is one where learning and its application takes place in the same location. The community implies a group of people willing to work together to and prepared to support each other's coming to know.
- Situated learning is involved when learning instructions are offered in genuine living contexts with actual learning performance and effective learning outcomes.

Situated learning theory is the combination of constructivism and social learning theory. The theory asserts that knowledge and understanding are a product of the learning situation and the learning activity, being embedded in that context with an active learner and environment part of mutually constructed whole. It refers to an educational paradigm which stipulates that learning occurs in socio-cultural context. The "situated" refers not only to the immediate context of learning but also to the whole culture in which the learning situation takes place and which structures the cognitive activity of the learners. Learning takes place when the learners interact with others and with concrete and symbolic tools, artefacts and social practices in use in their cultural context.

If you adapt the above said concepts and generalisations in the classroom activities then learning becomes more meaningful. The salient features of situated learning could be listed as below:

- Knowledge and meaning is the product of learning situation and learning activities.
- Learner, learning situation, knowledge, meaning and the environment-all these are integral part of a natural whole.
- Situated learning is a type of educational system in which the process of learning takes place in the context of socio-cultural background.
- "Situated Learning" is not just occurs at the immediate situations but also, the whole learning that occurs because of culture and societal context and involves the students' knowledge construction activities.

Cognitive Apprenticeship

Brown (1989) is of the opinion that cognitive apprenticeship is the continuation of learning. Principles of cognitive apprenticeship have been constructed as an appropriate means of teaching through the use of "situated" activities as "Simulation". Simulation includes four elements as (i).content (ii).method (iii).sequence and (iv).sociology of the learning community. For example the internship which is in medical education, the last semester in a teacher training programme, micro-teaching activities.

Cognitive apprenticeship is one of the answerable and accountable processes of learning as a whole. Constructivist approaches to human learning have led to the development of the theory of cognitive apprenticeship. A student will observe, enact and practice the skill with the help of a teacher. This model is supported by Albert Bandura's Theory of Modelling. Learner must be attentive, access and retain the information presented, be motivated to learn and be able to accurately reproduce the desired skill. Cognitive apprenticeship is the offshoot of situated cognition.

Observation learning makes the student to get trained by following the trainer or the teacher's directions and guidance. By modelling and coaching masters in cognitive apprenticeship also supports the stages of the skill acquisition with three stages as (1) Cognitive stage (2) Associative stage (3) Autonomous stage. In cognitive stage learners understand the skill, in associative stage mistakes and miss-understandings learnt in the previous stage will get rectified, deleted or eliminated also. In autonomous stage learner will attain a perfect mastery over the learnt concepts. That means, in the fourth stage the learner's skill become honed and perfected until it reaches mastery level.

For cognitive apprenticeship masters should show model behaviour in a real world context with cognitive modelling. After listening the master's explanation, what they are thinking and the learner identifies relevant behaviour and develops a conceptual model of the process involved. Here the student attempts to imitate those behaviours as the master observes and coaches. Coaching provides assistance at the most critical level-just beyond the apprentice could accomplish by self. Vygotsky called it as Zone of Proximal Development. This involves providing additional modelling as necessary, giving corrective feedback, reminders that intended to bring the programme of the student close to the performs of the coach. The main aim of cognitive apprenticeship lies in repetition and practice until the mastery is obtained.

While designing the "Imitations" in the class a teacher must have the following points in the mind, they are, content, method, sequence and social behaviours of the learning community. Here the content means, the subject to be taught, knowledge, level of cognitive ability, the skills required for problem solving and the strategies that are essential for the day to day applications. Method means several ways and means of presenting the content. Teachers make the students to be self-motivated for learning. They also provide ample support and scaffolding measures to the students.

Metacognition

Metacognition is the cognition about cognition; thinking about thinking; knowing about the knowing. It is becoming aware of one's awareness and higher order of thinking skills. The term comes from the root word "Meta" meaning beyond / on top of Metacognition can take any form including, knowledge about when and how to use particular strategies/learning/problem solving skills. The two important component of metacognition is (i) Knowledge about Cognition and (ii) Regulation about Cognition.

Flavel defined metacognition as "knowledge about cognition and control of cognition". For example, the comparative perspective we do have with day to day events. A student may feel that learning of 'A' is difficult than learning of 'B'. Students will have awareness regarding the easy scoring subject, difficult to study etc. While you are applying for a post that is most wanted by you, then you will take care of everything so that there should not be any lapses in the data furnished. Even participating in self-learning activities is also an example for metacognition. The awareness about one's strengths and weaknesses, self-regulation, self-critical analysis and knowledge about the strategies to be used- all will be illustrations of metacognition. It also includes thinking about one's study skills, memory

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capabilities, ability to monitor learning. It is considered as a critical component of successful learning.

It is necessary foundation in culturally intelligent leadership deals with how you think though a problem/simulation/ and the strategies you create to address situation/problem. Metacognition includes three important components,namely, metacognitive knowledge, metacognitive experiences, and metacognitive strategies. Metacognitive knowledge involves, learning process and one's belief about how one thinks, and also think about others, like, the task of learning, how the information is processed, the strategies development, how and when it will be used. Metacognitive experiences include, emotions and feeling with respect to goals and tasks of learning. It always give feedback regarding progress and expectations. Individual's feelings, emotions, beliefs, values and attitudes and the way how these have to be adapted for learning achievement. Metacognitive strategies include the mechanisms that monitor progress and learning. This ensures learning or achievement.

Metacognition allows people to take charge of their own learning. It involves awareness of how they learn, an evaluation of their learning needs, generating strategies to meet these needs and the implementing strategies (Hacker 2009). It foster self-reflection during and after learning experiences. Encourage learner to critically analyse their own assumptions and how this may have influenced their learning.

Teachers in classroom should encourage the development of metacognition among children. Motivate for self-learning, become independent and autonomous learner. They must be nurtured for free-thinking, creative, brave enough to carry out constructive work. There must be scope for the development of leadership quality. Sometimes, the teacher allows the students to commit mistakes, so that while rectifying their own mistakes children will learn lot many things. This could be an example for lateral thinking. In this way metacognition is a set of skills that enable learners to become aware of how they learn and to evaluate and adopt these skills to become increasingly effective at learning.

Check Your Progress - 3
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:
1.   Situated learning means
      a.   To be present in the classroom
      b.   Participating in learning situation
      c.   Answering to teacher's questions
      d.   The situation in which learning process really occurs

2. The Situated Learning Theory was popularised by
    a. J.S. Brown
    b. A. Collins
    c. Lave and Wenger
    d. P. Duguid

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. Knowledge and meaning are the product of learning situation and the learning activities
    b. In cognitive apprenticeship the student will be very obedient to the teacher
    c. Prompts and cues are not sufficiently seen in cognitive apprenticeship
    d. Cognitive apprenticeship is the continuation of situated learning
    e. Microteaching is an example for cognitive apprenticeship
    f. A student should have self-motivation under cognitive apprenticeship

2.3.4. Let us Summarise

In this unit we discussed about experienced learning, reflection, social mediation and teacher's role in negotiation. Situated learning, Cognitive apprenticeship and Metacognition were also discussed. According to Kolb's theory of experiential learning there are four important elements, namely, Concrete experience (doing/having an experience), Reflective observation (Reviewing/reflecting on the experiences), Abstract conceptualisation (Concluding/learning from the experiences) and Active experimentation (Planning/trying out what you have learned). The application of Vygotsky's concept, namely Zone of Proximal Development could be seen social mediation in learning. According to him cognition happens in three stages and they are, the mediating role of cultural tools in particular language and curriculum, the role of peer and teachers in the appropriation of cultural tools by minority students and the mediating role of social representations in the shaping of students identities at school.

Situated learning theory is the combination of constructivism and social learning theory. The theory asserts that knowledge and understanding are a product of the learning situation and the learning activity, being embedded in that context with an active learner and environment part of mutually constructed whole. It refers to an educational paradigm which stipulates that learning occurs in socio-cultural context. Learning takes place when the learners interact with others and with concrete and symbolic tools, artefacts and social practices in use in their cultural context. Cognitive apprenticeship is one of the answerable

and accountable processes of learning as a whole. Cognitive apprenticeship is the offshoot of situated cognition.

Flavel defined metacognition as "knowledge about cognition and control of cognition".

Metacognition includes three important components and they are metacognitive knowledge, metacognitive experiences, and metacognitive strategies. Metacognitive knowledge involves, learning process and one's belief about how one thinks, and also think about others, like, the task of learning, how the information is processed, the strategies development, how and when it will be used. Metacognitive experiences include, emotions and feeling with respect to goals and tasks of learning. It always give feedback regarding progress and expectations. Individual's feelings, emotions, beliefs, values and attitudes and the way how these have to be adapted for learning achievement. Metacognitive strategies include the mechanisms that monitor progress and learning. This ensures learning or achievement.

2.3.5. Answers to 'Check Your Progress - 1, 2 and 3'

Check Your Progress - 1
1. d 2. c 3. a- ✓ b- X c- X d- ✓ e- ✓ f- X

Check Your Progress - 2
1. c 2.a 3.a- ✓ b- **X** c- ✓ d- ✓ e- ✓ f- **X**

Check Your Progress - 3
1. d 2. c 3. a- ✓ b- X c- X d- ✓ e- ✓ f- ✓

2.3.6. Unit end Exercises

Answer the following questions:
1. What is experiential learning? Explain its salient features.
2. What is reflection? Justify the role of reflection in learning.
3. How experiential learning and reflection help in knowledge construction? Describe.
4. What is situated learning? Give illustrations.
5. Explain the characteristic features of cognitive apprenticeship. What are its merits and demerits?
6. Explain Metacognition. Give examples and illustration to it.

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Block 2 : Learning in 'Constructivist' Perspective
Unit 4 : Creating Facilitative Learning Environment, Teacher's Attitudes, Expectations-Enhancing Motivation, Positive Emotions, Self-efficacy, Collaborative and Self -regulated Learning

Unit Structure

2.4.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain teachers' attitudes and expectations as the causal factors increating situation that facilitate learning;
- Express the differences between perspectives of traditional system and to be changed system of education;
- Identify the expectations that a teacher should have while facilitating learning;
- Describe the importance of motivating and showing positive attitude towards students'
- Decide about the self-efficacy, collaboration and self-regulation that are ought to be present in teachers and the students; and
- Explain the significance of self-regulation and collaboration in facilitating learning

2.4.2. Introduction

You have already learnt about the situations that facilitate learning. In that you also have come across about the teachers' role, the importance of resources and also about the role of the students. It is almost unanimously proven factor that nobody/nothing can substitute the role of a teacher. The absence of a teacher will be very obvious when compared with that of a learning situation in which teacher is there. Because a teacher can influence the learning situation immensely. For this a teacher should have some special characteristic features, namely, good attitude towards teaching, self-motivation, self-regulation and an ability to motivate children, and also a positive attitude towards learners. You know that a teacher will become as he was trained in the pre-service period. Nothing is permanent in this world. Everything will change, society will change, individuals will change, and the expectations also will change. Hence unlike to traditional system we are having child/ learner centred system of education now. Earlier it was teacher centred. According to the learner centred system the corresponding changes have also occurred in curriculum, teaching-learning design and evaluation measures. The present situation demands the learner should be an autonomous, independent, responsible individual. Students have to explore the taste of happiness in dedicated learning, joy of learning and should learn complete involvement in learning. These paradigm shifts should get associated with teachers' changed attitude, belief, faith and perspectives. There is a strong need of creating novel learning situations. This unit will bring some of the above said aspects in detail.

2.4.3. Learning Points and Learning Activities

2.4.3.1 Teachers attitudes and expectations

Activity 1

Once upon a time animals decided that they must do something to meet the increasing complexity of their society. They all arrived at one conclusion, that it would be better to start with a school representing the whole education system meant for animals. Curriculum consisted of running, climbing, swimming and flying-because these were the basic behaviours of most of the animals. And it was unanimously decided that all students should learn all subjects.

Now let us see what the outcome is:

1. Duck: proved to be an excellent swimmer (better than the teacher!!), but in flying ok,ok, but in running he was very poor; so he was made to stay after school hours and practice. Because of this, he had to drop swimming-until his webbed feet got badly damaged. At the

end he became an average swimmer (of course, this was ok for the school. No body worried except Duck).

2. Rabbit: topper in running, but nervous for swimming. Teacher insisted to fly from tree to tree. He was almost blank. However at the end of the exam he got 'C' grade for climbing and 'D' grade for running and failed in Flying.

3. Eagle: worst with discipline and was branded as problematic in class. In climbing she beat all other and raised to the top of the tree (the task which was asked during examination). But she insisted in her own way of getting everything done.

4. Gophers: of course stayed out of school and fought the tax levied for education, because, digging was not included in the curriculum. They apprenticed their children to the badger and later joined the groundhogs and eventually started a private school offering alternative education.
(Courtesy: NFG on Teacher Education-NCERT-2006).

Write the critique for the above script

Attitudes are formed based on experiences. They do vary from individual to individual thus causing individual differences. In fact attitudes are one of the major causal factors for individual difference. Attitude will act like a remote control for any individual's behaviour. It could be regarding a thing/object/person/place or organisation etc. Everyone will have their own attitude for everything in this world. A child during developmental process undergoes the influence of several attitudes. Whatever it may be, like, learning the subjects, development of hobbies, acquisition of skills or developing interest-all these are influenced by attitudes. For this students are no exception. Hence teachers should know about attitudes, their nature, and how these will affect the teaching-learning situation and also learning outcomes. Not only this, a teacher should also know about how attitudes could be developed, to be measured and rectified if the necessity arises.

Several attitudes join together, and form one complex. Later these will be expressed as values. According to Peter Garett attitudes contain affective, cognitive and behavioural components. He defines attitudes as "the positive or negative responses shown by an individual towards the social or individual values".

Allport (1935) defined an attitude as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon an individual's response to all objects and situations with which it is related".

If you look at the above definitions it becomes clear that an attitude is an individual's likes/dislikes regarding to substances/person/place/event/organisation/movement etc. Usually the positive or the negative responses shown by individual are considered as attitude. Sometimes there may be incidents that the response could be neither positive nor negative also but ambiguous. Attitudes, most of the time are developed by the direct experiences, and /or observation of events. The positive or negative attitudes are stronger than the ambiguous attitudes. And once formed attitudes are very hard to change or modify. An attitude will contain biological, intellectual, social and emotional factors also. It is the cumulative output of all these factors. It varies from individual to individual. For example, attitudes with respect to health, life, birth-death, population, living style, arts, music, literature, sports, games, work and profession, our government, ruling and opposite political parties, religion and hobbies –in all these areas each individual will have his/her own attitudes.

Do you think teachers will have no attitudes? Definitely not, isn't it? They too have attitudes, may be with teaching profession, students, the education system, there are plenty to say about. Now we shall try to understand the attitudes of teachers with respect to the changing role of a teacher, paradigm shift in curriculum and new techniques and measures of evaluation.

A teacher must and should have the subject hold, good teaching skill and effective communication skill. They must be skilled enough to capture students' mind and make them to be attentive in the class. They should also help the students to apply whatever they learn in the classroom in to day to day life situations. By taking students' previous knowledge, experience, level of learning and interest into consideration, a teacher has to create relevant learning environment. For a student the acceptance from a teacher will be very important, hence teacher should not be prejudiced about the students, may be dull/intelligent has to accept them as they are. By this a good teaching-learning situation could be organised and one can make whatever the teaching-learning activities that go on in a classroom will become reachable to one and all. You know that due to individual difference no two of your students will be alike. Everyone will learn in their own way but a teacher can make everyone to learn by creating varieties of learning experiences. For this the very important requirement is teacher's positive attitude.

Inclusive education, integrated education and special education – all these have become the pulse rate in today's environment, so if a teacher has positive attitude for such transformation then the process will go in a smooth way. Attitudes are generated in an

individual by his/her faith, belief, confidence, opinion, likes and dislikes. To be a successful teacher the following points in terms of attitudes definitely will help:

- Belief that each and every student will have the potential ability to learn
- Commitment to the learning and intellectual growth of all learners.
- Dedication of the whole profession for the all-round development of the students
- A positive attitude, like, effective teaching will result in quality learning outcome
- Accepting every student with his/her strengths and weaknesses and giving individual respect
- Selecting the appropriate teaching approaches and strategies based on a threadbare analysis of the students' previous knowledge and interest.
- Providing the learning challenges that are possible to solve by the students and not expecting the learning outcomes in a threatened/scared situation.
- View all children as capable and independent learners
- To give-up the frightening and scaring strategies and adopting creative, constructive and dynamic teaching strategies.
- Pin drop silence in the class is not an indication of the best teaching-learning process. Instead of this let the children make noise by asking questions, queries, conduct experiments, discuss among themselves-and this shall be considered as the best feature of a classroom
- **"To err is human; to correct is divine"**- mistakes are natural, but it could be rectified- inculcate this among students and encourage them for learning.
- Apt time maintenance, regularity and punctuality in conducting tests, exams and assessments on time is very important. Similarly, it also important to give feedback to students, diagnosing students' learning difficulties, adapting remedial measures so that each and every student will reach his maximum achievement. For this a teacher should have more patience and withstanding nature.
- Skills of listening and attending to each other carefully.
- Arranging group discussion with cooperation and coordination for students' active participation, and exhibiting a very enthusiastic role model to students.
- Optimistic, positive thinking, adjustment, adaptability and skills to identify and mobilize resources for common good.
- Recognise, acknowledge and appreciate differences of opinion.
- Optimism and hope to stay calm and poised in the face of difficulties and crisis of different kinds.
- A teacher should be competent enough in solving the problems of generation gaps.
- Identifying and respecting individual opinions.
- Ability to distinguish facts, opinions and beliefs.

- Able to solve the problems without any prejudices whenever students' unrest, protests arises.
- Recognise bias and prejudices to identify issues and problems as well as the assumption in an argument and to reason correctly.
- Attitude of respect and trust for all others irrespective of age, class, caste religion and status.

Teacher's Expectations :

Activity 2

In the following table, you will observe two teachers of 5ᵗʰ standard conducting their daily
Classroom teaching on the topic "SOIL-A NATURAL RESOURCE"

Teacher A	Teacher B
Explained the concept "soil" as it is in the text book.	The teacher along with the students collected different types of soil in their surrounding area
Showed the three types of soil to students	Children classified the soil according its external features, and textures.
Gave the important points on Blackboard	Now the teacher helped the students to associate the learning points (from the textbook) with their explorations.
Directed students to take it down in their notebook	One of the students wrote the major points of their findings and all other students helped him.
Made the students to answer the questions on the explained topic "soil"	Teacher divided the class into two groups, and each group asked questions mutually, and it was like a healthy competition. All the time the winning group received a big applause from the participants.

Activity 3

In the following table you will find a comparison between the two classroom teachings on the topic "Parts of a Plant"

Teacher A	Teacher B
Used a live plant to explain the parts of a plant.	Every student in the class had one matured plant in their hand.
Wrote the major points on the board.	Teacher used one plant, showed how to identify the parts and made the students to identify the different parts of the plant in their sample.
Drew the diagram of the plant and labelled the parts	Teacher drew the diagram on the board and children also did the same thing in their notebook. Teacher and students collectively identified the parts, labelled respectively in their diagram.
Directed the students to take down the major points and the diagram	Teacher encouraged the children to write the major points in their own words.
The classroom was very clean as it was earlier to the teaching.	Since all the children have brought the plant, the class was looking dirty, untidy and benches were haphazardly disturbed. It was full of leaves, sticks, mud, soil, flowers and flower buds. But soon after the learning process all the children very enthusiastically cleaned the classroom and arranged the benches very fast. Here also one could have noticed their everlasting, energetic participation.

In the above illustration you could see two types of teachers and classroom environment. In both the type there are merits and demerits. Now, you list the respective merits and demerits of both the type.

Teacher's expectations means, the transformation that may occur among students due to learning. The anticipated level of leaning and learning outcomes are the so called

teacher's expectations. Teachers will have different expectations with different students. They may have some expectations about how their classroom must be, like, some may like a silence environment. Similarly they expect that, students will learn everything what is taught to them. And also they reproduce the answer what was dictated to them. The teachers expect a good performance from their students. These teacher's expectations will influence the process of learning facilitation. It is the teacher's estimate of a learner's probability of academic performance within the classroom.

Teachers develop different expectations for their children. They form expectations for performance and tend to treat students differently depending on these expectations. However, the importance of teacher expectations in facilitating student learning has long been recognised. All teachers have expectations for their students. This can facilitate the setting of achievable yet challenging targets for students. Apart from this one can see a degree of expectation also. For our convenience we can consider only two, as high and low expectations. Some of the very interesting points found by researchers regarding teacher expectation are given below, observe:

- Teachers give more wait-time to high expectation than to low as far as students' performance is concerned.
- Criticised low expectation students more frequently than high expectation students.
- Praised high expectation students more than low expectation students.

Teacher expectations can translate into behaviours that affect student performance and contribute to a classroom climate in which equality can be significantly compromised. Because of this students may feel a sort of tension within themselves. If the teachers' expectation is more or less when compared with the students' abilities, either of the way may become problematic only. It may result in un-interestedness or passive participation among students. Teachers may develop a sort of not-withstanding nature gradually towards low expectation students. This will again add up to the problem, and may cause lack of confidence among students. Segregating the slow learners/low scorers at the back bench and encouraging good scoring students to sit in the first bench, neglecting the individual difference, partiality and inappropriate teaching approaches may sidle in. In spite of this the change which recommended for classroom environment by NCF 2005 is more worthy to consider it again. So let us see the paradigm shift suggested by this national report:

Major Shifts

From	To
• Teacher centric, stable designs	• Learner centric, flexible process
• Teacher direction and decisions	• Learner autonomy
• Teacher guidance and monitoring	• Facilitates, supports and encourages learning
• Passive reception in learning	• Active participation in learning
• Learning within the four walls of the class room	• Learning in the wider social context
• Knowledge as "given" and fixed	• Knowledge as it evolves and is created
• Disciplinary focus	• Multidisciplinary, educational focus
• Linear exposure	• Multiple and divergent exposure
• Appraisal, short, few	• Multifarious, continuous

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Attitudes are formed by _____
   a. Heredity
   b. Training
   c. Imitation
   d. Experiences

2. Teachers should have _____ with respect to students learning
   a. Positive attitude
   b. Negative attitude
   c. Neutral attitude
   d. Interest

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong
   one:
   a. Students are not alike because of individual difference
   b. All the students will have potential abilities for learning
   c. Threatening students will actually help in making them to learn
   d. Teachers will have a uniform expectations with all students
   e. It is good to have well answering students in the first bench
   f. Silence in the classroom is the best sign of good teaching

2.4.3.2. Motivation and Positive Emotions

Motivation is the dynamic force behind all our activities. It indicated as a causal factor for all of our behaviour. Why a person behaves in a particular way, a question like this will get an answer as motivation. The concept of motivation is of utmost important to psychologists. Because motivation is regarded as something which prompts, compels and energizes an individual to act or behave in a particular manner at a particular time for attaining some specific goal or purpose. Motivation not only prompts an individual to behave in a particular way, but also strengthens that particular behaviour. Now let us look in to some definitions given by the eminent psychologists to understand it better:

The word 'motivation' originates from the Latin root "movers" which means to move. So, we can say that, literally, motivation means, the process of arousing movement in the organism. It has biological background also. Because the movement is generated and regulated through the release of energy within the tissues. Now let us see some of the definitions given by eminent psychologists:

1. According to **H.W. Bernand** "Motivation refers to all those phenomena which are involved in the stimulation of action towards particular objectives where previously there was little or no movement towards those goals".
2. **Atkinson** defined motivation as "The term motivation refers to the arousal of tendency to act to produce one or more effects".
3. According to **Maslow** "Motivation is constant, never ending fluctuating and complex and that it is an almost universal characteristic of particularly every organismic state of affairs".
4. **D.O. Hebb** opines that " The term motivation refers to i) to existence of an organized phase sequences ii) to its direction and context, and ii) to its persistence in given direction or stability of content".

Motivation is a very complex process which is resultant of the influence of several variables. Motivation is influenced by the organism's physiological and emotional status, habits, values, attitude and environmental factors. Because of this complex nature, it becomes very difficult to point out specifically, which behaviour is caused by which motivation. It is said to be goal oriented also, therefore we cannot use drives, ambitions, desired or wants as equal to motivation. According to Newcomb motivation has both external and internal state. Motives not only energize the behaviour but they sustain our interest and behaviour for longer period in the activity.

Types of motivation:

               Motivations are classified by more than one type. This is quite natural says Hilgard, because, according to him man's motivation and its expression varies from culture to culture i.e., variations are seen at intercultural level as well as intra-cultural level; and also it varies from person to person. Usually motives are classified broadly into two categories, namely, **internal motivation** and **external motivation.** This is the most popular type of classification. Internal motivation will be generated from inside the personality of an individual. For example, learning for learning sake, if this state of mind exists in a person himself, it is said to be internal motivation. Internal or intrinsic motivation will be seen in certain activities in which individuals themselves will be interesting and absorbing. It will be usually long – lasting and really satisfying. Interest, dedication, commitment and sincerity – all will be inherent in the activities itself. Intrinsic motivation therefore stands for quality performance. No special rewards for good performance are needed here. Here the learning and the learning outcome show an intrinsic relationship. An individual will be involving in the tasks with all concentration, because of his inner urge. And due to this he will get self-satisfaction.

               Contrary to the above point, if an individual does the work, because of some external factors, then it is said to be external motivation. Here it will not be like, learning for the sake of learning or knowledge for knowledge sake. In such cases, the performances will be there in order to satisfy certain external conditions or norms or the criteria. For example, studying well to get good marks in the examination, studying well to get good marks in the examination, studying hard because, otherwise elders and parents will scold, doing the work, because somebody else will check it, etc.,   such type of actions are said to be done because of extrinsic motivation. It is an artificial stimulus. External motivation will be less effective compared to internal motivation, as far as learning is concerned. Most of the time external motivations bring about adverse effect on the learner, like he may start to hate learning. Because of this he will be deprived of satisfaction. In turn this will result as barriers for good achievement, and ultimately the individual will suffer from grief.

               However, during the primary stage of education, it becomes necessary to provide some rewards, prizes or incentives to children for completing learning – task, i.e. extrinsic motivations are necessary for young children. But gradually, they must be guided to understand about the intrinsic motivations. In course of time children should be able to develop a liking for the learning activity and pursue learning even in the absence of any prize, reward or incentive.

Extrinsic motivation cannot be discarded altogether. Up to certain level, everyone will love to have rewards, prizes and incentives. For adults their promotion, increments, awards and recognition acts as extrinsic motivation. If these are not there means, many people will lose their interest in the job. These incentives are means to the ends, not ends in themselves. Prizes and rewards make a person to be happy and satisfied, and this will reinforce the person, so that it develops an urge in him to improve his performance. Extrinsic motivations could be materials, to start with, but may become symbolic later. Verbal praise also is rewarding. Appreciation helps in Ego maximization, and develops interest in a person.

Usually rewards are preferable than punishments. Rewards confirms an individual as what he has done is right and has to keep it up ; where as punishment indicates, that he has to stop (whatever he has done). Corporal punishment, fines, apology, reproof by the teacher, dismissal and removal from the posts of responsibility etc., are examples of punishments. But punishment is un-psychological. Progressive Educational Opinion is generally against punishment. The very nature of punishment is negative and is based on fear. The results of punishment are said to be less permanent than the results of reward. A teacher's corrections on a student's paper may act as a 'punishing factor', because it reduces his scoring, but these are not actually punishments, but they are informative in their nature.

Corrections by the teacher will be informative about erroneous answers and there by provide an opportunity for learning if the student understands and corrects his errors. So, punishment in a different perspective may be useful also, and may act as an extrinsic motivation. For example an affectionate teacher is always welcomed by his pupils for his meaningful criticism. A teacher should not punish the whole class for the misbehaviour of a few individual. The school rules of discipline must be clear and specific – this may result in a very little occasion for punishment.

Achievement Motivation :

David McClelland (1951) and his friends did a lot of research on achievement motivation. According to him, motivation is re-establishment of certain process through environmental events, which also contains elements that indicate the future changes. Everyone will have an inner urge to show that he is not an ordinary one, and has his own special features, and aspires to achieve higher. The type of motivation produced by such desire for achievement is called the achievement motivation.

Atkinson and Feather (1966) defines achievement motivation as "The achievement motive is conceived as a latest disposition which is manifested in overt striving only when

the individual perceives performance as instrumental to a sense of personal accomplishments".

In general, children usually acquire the achievement motive from their parent's life style. It is found through research studies, that, children whose independent training starts at an early age and who get more autonomy within a co-operative, encouraging and less authoritarian family, usually develop an achievement-oriented attitude.

According to **David Ausubel**, there are three components in achievement motivation; they are,

1. **Cognitive urge:** This motivational element is task oriented. The individual attempts to satisfy his need to know and understand. The reward of exploring new knowledge lies in the carrying out of the task.
2. **Self-enhancement:** This is ego-oriented, and is represented in a desire for increased prestige and status gained by doing well scholarly or otherwise. It leads to the feeling of self-esteem.
3. **Affiliation:** It is a dependence on others for approval. The individual uses his academic success, as a means of recognition. Parents at the younger level, and at the later stage, the peer group, teachers and higher authorities are considered as approval agents.

David McClelland defined achievement motivation as "A reintegration of a change in fact by a cue and anticipation of a future change in affect contingent upon certain actions". The term reintegration, in this definition, means, reinstatement of physiological process in the conscious as a result of the stimulation by an environmental event. And the other important term in this definition is cue, meaning the cause of affect in arousal in an individual. Thus for motivation two factors become important, i.e. environmental cues and affective arousal in the individual. According to him, all human motives are learned in the environment irrespective of their nature. Therefore one can learn achievement motives also. Therefore its development in education becomes very important. For this to happen teachers have to take some measures, they are:

1. Teachers must develop awareness about the need of developing an achievement motivation among students through, telling the stories of great personalities and their achievements.
2. The school must provide a conducive environment that facilitates achievement. The teachers' attitude and enthusiasm will create better environment for achievement motive in children.

3. Teacher should take care about, keeping the goals and objectives of teaching at a particular level so that, it are real, reachable and achievable from students. Students must be convinced that the motives which they are going to have are realistic and reasonable.

4. The teacher should relate the motive with future life of the students and assign independent responsibilities to them.

5. The teacher should make clear to the students that the new motive will improve their self-image.

6. Teacher should nurture the habit of self-study among the students and encourage them to keep the record of their progress towards their goal.

Aspiration Motivation :

The concept of aspiration motivation is much used in cognitive theories. The level of aspiration was first used by a German psychologist by name Hoppe. The term aspiration means, the performances which one aspires for future. We know that, every individual has one or the other goal and he aspires to achieve this goal. In the course of this goal achievement, he will be having some expectations. Psychologists use the term 'Level of Aspiration' to denote an individual's standards that he wants to achieve in any task. It is closely related to his self-esteem. Level of aspiration refers to the expectations or goal that one sets to achieve in future keeping a view on his past performance. Unless behaviour is goal oriented learning and performance could not improve. A person may have the ability to learn, but if his aspirations are not set up according to his evaluation of himself, he fails to achieve a particular level of performance. Success increases level of aspiration and failure weakens it. Therefore it is said that, level of aspiration is determined by success and failure of life. The goal in level of aspiration acts as a strong motivation force for learning, performing and achieving anything. According to Barrow (1956), level of aspiration depends upon several factors like intelligence, socio-economic status, parental relation and their expectation from children. Level of aspiration varies from person to person and also varies from time to time in the same person; it also varies from task to task.

Ego Involvement:

Everyone wants grow to and reach a higher level in life, so that, they try to increase their level of performance with quality improvement. Because of their quality work, society will recognize them. This will give them a satisfaction. In order to get this, he will involve in his task completely, without getting distracted at any cost. This is called **Ego Involvement.** This is closely related with achievement motivation. Therefore, Hilgard defines it as, "It is a commitment to the task by a person, the success of which will bring

him respect". Every individual will formulate a special need in him to protect his self-respect. Ego involvement is one among them. Based on this level of aspiration also will get formulated.

Many empirical studies have shown that, ego involvement has a direct influence on perception and learning of an individual. It also develops the suitable interest and curiosity that are needed for learning. As it involves a person's complete commitment, it results in bringing enthusiasm and satisfaction through systematic activities. But however too much is too bad. So, identifying oneself in a task too much or no identification at all – both the extremes are not good. It affects the personality. Therefore ego involvement should be there, but with a proper balance. Investigatory method of teaching and project methods give an ample scope of ego involvement to students.

Thornburg has given some instructions that help a teacher in motivating the students. They are as follows:
1. Drag the attention of the students towards the desirable objectives.
2. Students' needs will give a very good forum for motivating students.
3. Extending cooperation to the students to formulate objectives, and their achievement that are in accordance with the school educational planning.
4. Giving justifying information.
5. Giving the models of real life, discussions on social values, making a judicial use of the rewards and punishments
6. Elimination of situations and methods that create tension and anxiety.

Class Mayer is yet another person who has given certain   principles to motivate the students. They are as follows:
1. Attracting students mind towards desirable learning outcome.
2. Developing, sustaining and maintaining interest.
3. Utilizing the interests that are already present and also developing other interests.
4. Making use of concrete encouraging factors, and also if needed, symbolic encouraging could be used.
5. Constructing the learning situations and sequencing them according to the students' abilities.
6. Constructing real objectives that are attainable.
7. Extending help to the students in goal achievement tasks and also to evaluate their performance.
8. An intensified stress will result in disorganization, this point must be noted.

Positive Emotions:

Educational settings are of specific importance for shaping human self-regulation and development. It is assumed that the education system will bring up each individual with the abilities, like, self-regulating, and self-responsibilities for developing themselves as autonomous, independent person. And collectively this will be generating a free, independent and self-sustainable society. Students' and teachers' positive emotions can assumed to be central in attaining the above said educational goals. Positive emotions are one among achievement motivation. They are important for both teachers and students. Positive emotions facilitate the self-regulating and achievement among students. Intrinsic motivation is almost equal to positive emotions, with many common qualities, like both are related in regulating behaviour; pleasant experience. However emotions are mental states with limited duration. One cannot chose emotions but modify interpret and vary their implications. Based on the emotions one can select the apt motivation out of many. Especially during puberty, students are very much disturbed by unstable emotions. In this direction teacher's role will be very significant, crucial and sensitive. Following points could help a teacher in this aspect:

- Adolescents will be having overwhelming physical strength and stamina. This physical power has to be properly channelized. Therefore schools can provide work experiences that could make use of such physical power

- Students should get educated as far as their foster growth rate, and also giving guidance about adolescent phase. This will avoid unnecessary confusion ambiguity and anxiety.

- Periodical medical checkup must be there. And, health and physical education should be the integral part of curriculum.

- Students coming from economically backward and socially deprived communities must get proper nourishment. Therefore, school must make an arrangement for providing free balanced diet, so, that one of their basic needs will get fulfilled.

- Whether to give sex education to secondary school children or not is a debatable matter. Adolescents get varieties of problems, just due to ignorance. So, they need knowledge about this. But some people argue that it is against to our culture and ethics. Therefore they strongly oppose this. But in order to fulfill the need, sex education could be imparted through infusion technique. The concepts of sex education could be integrated in the subjects like, biology, physiology, health education, sociology, civics, and literature. In order to overcome the emotional resistance, it could be labeled as ***"Family life"*** or ***"Individual relationship"-*** says. Blare and Jhones. Adequate information with reference sexuality must be provided to the school going adolescents; so that it facilitates a good education system. School

must provide a conducive environment to enhance a harmonious relationship and good adjustment with opposite genders, Teachers must give proper guidance and counseling to the students and solve their sex related problems.

- School must provide adequate resources for the intellectual development of the adolescents. A good library; academic environment; discussions and debates; conferences- are the essential aspects for their cognitive development. All such activities must get a significant place in curriculum itself. Students should be encouraged for their creativity, and ample opportunities must be designed for their creative expressions.

- They must be given freedom, for doing certain activities, and for self expressions. School should organize a variety of co-curricular activities, in which students will learn courage, boldness, and confidence and leadership qualities. In this context, NCC; Girl Guide; Red Cross; and NSS- organizations give them a golden opportunity. Field visits, excursions and conferences, symposiums also can help. In order to introduce the adult's role, a school can have "School Government Activity".

- Arranging camp activities will help the students to learn co-ordination; co-operation, and understanding each other.

- Moral education should get a due weight- age in school education. Teachers must create interest in spirituality, and help them for value development. Teachers must be role models for the students, to inculcate ideals and values. Periodically, a forum should be created for discussion and debates on morals, and values; film shows and books also help in this direction.

- They should get education which will have the scope for vacations also. School system must provide an opportunity for vocational training. There must be ample scope for choice of different jobs and for this, school must have flexible programs. Adolescent period in more vulnerable than any other phase to the influence of socio-cultural aspects, therefore, whatever changes that are seen in society, has to be reciprocated in the education system also.

- A democratic environment with love and affection can help in recognizing the interest of adolescents, and thereby, their interest could be nurtured for further development.

- It is better that, students understand the need of discipline, and follow it on their own rather they are forcibly practiced. Meanwhile, these rules and regulations must be universal; objective; justifiable; impartial and honest.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Intrinsic motivations are
   a. Potential
   b. General
   c. Of low quality
   d. Of good quality

2. Prize and appreciation used in primary schools are
   a. Intrinsic motivation
   b. Extrinsic motivation
   c. Encouragement
   d. Ineffective for learning

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
   a. Prizes and rewards give good results than punishments and condemn
   b. The corrections by the teacher in students' notebook must be in dark-red ink and eye striking
   c. The autobiographies of great personalities motivate the children
   d. Success and failure enhance the level of aspirations
   e. There is no correlation between interest and motivation
   f. Intensive pressure on students will bring adverse effects on their activities

2.4.3.3. Self-efficacy collaborative and self-regulated learning

Self-efficacy:

Cooperative learning, self-regulation and self-efficacy are interrelated. Self-regulation help us to understand the concept self-efficacy. In cooperative learning a group of students are involved and hence directly or indirectly each one will learn to regulate themselves. The more advantage one can see here is, the students will be free from fear of failure, anxiety and stress. Therefore it will help to achieve any goal very positively (Cooper 2015). Self-efficacy can help students to overcome their at-risk conditions and have a positive impact on their academics. Learning to organize information, to engage in goal directed tasks, to focus and maintain attention, to reflect on information and experience, to regulate emotions and to engage in positive social interactions have been shown instrumental to prevent school failure.

Self-efficacy in the classroom (how your students believe in themselves):

In his pioneering work Albert Bandura (1997) characterized self-efficacy as the individual's belief in his capacity to execute behaviors necessary to produce specific performance attainments. It reflects confidence in the ability to extend control over one's own motivation, behavior and social environment. To teachers this is an important element of human behavior that can be harnessed to optimize students' learning experiences.

Factors that teachers should bear in mind to ensure that self-efficacy flourishes in the classroom:

- **Learning from other's experiences:** Through observation of their role models. For example, a teacher (their hurdles in life), peers (their perseverance), like, if they can do it; then you also can.

- **Previous performances:** "Nothing breeds success like success (If a student is successful and been rewarded for a particular skill in the past, develop belief in them for developing in future also).

- **Social persuasion:** The society responses any task/work done by an individual. Sometimes it will be encouraging and sometimes it will be discouraging. The negative reactions are more intensive and effective in damaging self-efficacy. Therefore bot the parents and teachers should collaborate in providing effective feedback to students.

- **Psychological factors:** In situations such as exams, tests, competitions and competitive performances, students will suffer from stress and anxiety. This affects their self-efficacy. So, this could be treated by making students to perform in group, two together or collectively doing the task/work, coordinating pair/groups of students during classroom activities.

Collaborative Learning :

"Learning to learn" and "Learning to cooperate" are the mantras today. This hold good for each and everyone. Collaborative learning and cooperative learning take the lion share in pedagogy. Today's education system is impregnated with psychological principles and modern technology. And also philosophy forms the basic foundation as it is with any educational programme. Collaborative and cooperation learning enhances the cognitive development, metacognition, self-motivation and self-regulation among students. There will be give and take system among students as far as the knowledge is concerned. As it is told by Johnson and Johnson (2014) one's success depends upon the success of somebody else.

It refers to the idea that students must help each other to learn, because one's success is dependent on other's success. Collaborative learning has many inbuilt advantages like, students will come to know about themselves, their strengths and weaknesses, and also about others without any prejudices. According to Le inonen et al (2003) have identified four types of co-operative learning and they are,

1. **Active co-constructor:** these are individuals who frequently bring the information to the group. Actively co-construct with others.
2. **Non-active co-constructor:** these will bring information often frequently, but then access other's information.
3. **Comment receiver:** these will receive information form others providing feedback.
4. **Isolate receiver:** these will receive little information form others, with no reciprocal interaction.

Because of the above said probable set of students, in co-operative and collaborative learning, the group will play a very important roles to regulate and other's knowledge. Moreover, in these groups self-efficacy can significantly impact their feelings of collective efficacy, influencing the groups functioning and achievements. The learning tasks, namely, projects, problem solving, and other group activities, will make cooperative and collaborative learning a smooth going. The advantages of having such type of approach could be as follows:

- Each and every individual in the group will learn effectively and show good educational achievement.
- The members of the group will show an enhancement in cognitive skills, namely, cognitive strategies, comprehension, problem solving and other logical techniques.
- It helps in developing social skills among children.
- Each one will learn to respect others and will learn to identify, recognise and respect other's culture and customs and also learn to celebrate it.

Self-regulation:

It is the self-directive process by which learners transform their mental abilities into academic skills. Expert learners manage their learning at every stage. They recognise when they have failed, focus on how they can fix what went wrong. There is a relationship between self-regulation and perceived efficacy and intrinsic interest. Learner have to believe they can learn. In self-regulation and learning one can find three phases and they are,

- Before learning the task is tackled, analysed set goals and develop a plan of approach.

- Utilising the maximum self-learning strategies during learning process. And also self-evaluating about how far the learning is effective.
- Self-criticism about one's own learning tasks.
  Few teachers effectively prepare students to learn on their own.

Check Your Progress - 3

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Self-efficacy help in reducing the stress and anxiety among students- this was proposed by
    a. Cooper
    b. Abraham Maslow
    c. Albert Bandura
    d. Johnson and Johnson

2. In cooperative learning
    a. All children will learn
    b. No learning will take place
    c. One's success depends upon other's success
    d. Team spirit will be there

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. In modern pedagogy, cooperative learning and collaborative learning forms the major parts
    b. It is enough if the teacher has self-regulation, self-motivation and self-efficacy
    c. Teachers can prepare the students as self-learners very well
    d. In collaborative learning every student will be showing different behaviour resulting in no learning
    e. Those who are isolate receiver are the good leaders
    f. Expert learners manage their learning at every stage

2.4.4. Let us Summarise

Attitude is one of the causes for individual difference. And these attitudes are formed based on experiences. A teacher's positive attitude regarding collaborative and cooperative learning will make the process smooth going. Beliefs, faiths, opinions and confidence will influence the attitude formation in an individual. Teacher's expectations

means, expectations regarding the learning outcomes from students and anticipations. When there will be no compatibility between the teacher's expectation and the level of learning among students, it may affect and negatively influence the learning process.

Motivation and positive emotions enhances the quality of learning outcome in students. There are two types in motivation, namely, extrinsic motivation and intrinsic motivation. Recognition, prize and appreciation are extrinsic motivations and interest, and curiosity with a subject are the example for intrinsic motivation. Self-regulation, self-control, self-efficacy, collaborative and cooperative learning enhance the learning outcomes.

2.4.5. Answers to 'Check Your Progress - 1, 2 and 3'

Check Your Progress - 1
1.d 2.a 3. a- ✓ b- ✓ c- X d- X e- X f- X

Check Your Progress - 2
1. d 2.b 3. a- ✓ b- X c- ✓ d- X e- X f-✓

Check Your Progress - 3
1.a 2.c 3.a- ✓ b- X c- ✓ d- X e- X f- ✓

2.4.6. Unit end Exercises

Answer the following questions :

1. What are teacher's attitude and expectations? How these will influence the students' learning? Explain.

2. Define motivation. Bring out the salient features of external and internal motivation.

3. What is self-efficacy? Justify the inter relationship between self-efficacy and learning.

4. What is collaborative learning? Where do you see this? Illustration your answers

5. Discuss the strategies that help in developing self-regulation among students.

2.4.7. References

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Block 2 : Learning in 'Constructivist' Perspective

Unit 5 : Utilizing Learners' Experiences (in and outside school) in Classroom Process

Unit Structure

2.5.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Recognise the learning experiences inside the classroom;
- Design varieties of learning experiences inside the classroom;
- Identify the learning experiences outside the classroom;
- Pattern varieties of learning experiences outside the classroom;
- Justify the importance of learning experiences outside the classroom; and
- Distinguish between the learning experiences of inside and outside the classroom.

2.5.2. Introduction

Learning is a born gift to human beings. So an individual will learn plenty of things in life. In these days you might have come across the concept "Lifelong learning". Formal learning, informal learning and situational learning-in this way there are so many types of learning. Similarly students will learn both inside and outside the classroom. Sometimes it will happen knowingly and sometimes unknowingly. Learning occurs in cognitive domain,

affective domain and psychomotor domain. Intellectual learning like, reasoning, justifications, calculations, estimations, analysis and synthesis are coming under cognitive domain. Patriotism, values, belief, faith, interest and attitude based learning will come under affective domain. Usually during sports and games, children learn cooperation, coordination, patience, team spirit and putting collective efforts to achieve the goals.

Similarly during outside the classroom time children will learn cognitive skills, affective learning and skill learning. If the learning outside the classroom has the basis of learning of inside the classroom then it will be very good application. In this unit you will come across how these experiences both inside and the outside of the classroom could be utilized by teacher for better achievement by the students.

2.5.3. Learning Points and Learning Activities

2.5.3.1. Utilizing learners' experiences (inside classroom)

Activity 1
- The concept matrix in mathematics could be taught by taking the materials that are available inside the classroom only. For example, the rows and columns found in windows, chalk boxes, the neatly arranged books in a rack and benches and desks etc. This could be later followed by taking whatever things are available and handy randomly, and trying to arrange them in rows and columns. This activity help a teacher to introduce the topic like, what are matrix, types of matrix and other related information. So gradually teacher can take the students to the concepts like, order of the matrix, addition and multiplication of matrices.
- Make use of "Radio Lessons" in the classroom and observe how it influences the students' learning.

We have already discussed about what learning is, and all the experiences one gets during learning are said to be learning experiences. Usually learning occurs wherever, a social interaction takes place. This could happen equally in both a traditional as well as non-traditional classes. The experiences that occur in the classroom will be according to the educational goals and objectives. But to get the same thing outside the classroom will be little bit difficult. However, in the present situation, how children are learning, what are they learning and also where are they learning – all becomes very important.

The students will be listening to their teachers inside the classroom and they are assigned some homework, and when children do this, one can easily say that teacher is

making use of their learning experiences. And if we take learning outside the class, students under apprenticeship, internship are the examples. Learning experiences may also be used to underscore or reinforce the goal of an educational interaction learning rather than its location. It reflects larger pedagogical and technological shifts that have occurred in design and delivery of education to students.

While listening to a lecture, reading a book, or completing homework – all are learning experiences only. Students are learning in different ways than they have in the past. Learning can occur even in the absence of teaching but teaching never occurs without some form of learning. Learners can learn without teachers, but students are only students when they have teachers. A classroom is the one where the students spend most of their day time. Classroom environment may make or break learning experiences. Interactive classroom always maintain space for activities which engage the students and teachers resulting in effective learning. Identifying objects, classification, listing features based on their keen observations and experimentation are the activities which are usually adopted by the teachers. Such activities actually encourage students for their active participation. The question-answer sessions, making the students to write the summary on the board, writing the scientific diagrams, asking them to solve the mathematics problems- all these are illustrations for using students' learning experiences for teaching. "Do it yourself" is another type in which a very good learning challenge is created for students. All the above said activities hold good irrespective of subjects and standards. Apart from these there are few more suggestions which are given below, observe:

Ice breakers: these are innovative activities used to help students meet and get to know each other. May be sports meet, fun-fair, sitting in a circle and talk etc. Such activities help in socialisation. This will be very much fascinating, interesting and humorous, it will instantly boost up energy and make everyone happy. Gradually it will be followed by presenting good, academic and interesting events and based on that analysis, discussion and sportive argument may also takes place. All such activities make a child to become intellectually sharp.

Debate: "Honest disagreement is often a good sign of progress"-Mahatma Gandhi. This explains about how a debate should be, like, "discussion should result in light not heat". Debate instils lasting effect on the participants. It includes, like giving topic for debate, participants are divided into two groups. One in for- favour of and the other will be for against it. Debate could be conducted in school buses as well- critical thinking, independent research, skilful communication; learn to think in a different perspective; helps developing knowledge and provides an active environment.

Quiz: this also fascinates children much. By participating in quiz programmes, students will acquire knowledge, understand the power of team work, it helps to stimulate students' memory.

Role play: by converting the topic to be learnt in to a drama. Dramatization is an activity in which introvert students will also get an opportunity to express themselves. Students with flair of acting can showcase their talent. Both the spectators and the actors enjoy the lesson.

Students' presentation: a teacher will give certain chosen topics to the students and allow some time for them to get prepared. Then these students will present the same topic to the whole class. By this students will attain public speaking skills; evaluate deeply the given topic. Modern presentation skills can be used to enhance the relationship with technology.

The Fish Bowl: this is one of most popular games inside the classroom. Teacher gives a chosen topic to the whole class. And students are asked to write the questions that comes to their mind, and put that paper slip in a bowl. It could be started on the last period of the previous day also. And the continuation could be in the next day. In the class the teacher will pick up the paper chits one after the other, and teacher including the students will try to answer the questions. Here students can ask the questions without any hesitations. This offers an opportunity for varieties of questions. Because of this every student will be active and participate whole heartedly.

Students as teachers: in this activity students actually prepare themselves, starting from lesson plan writing and teach their classmates. Thus students will assume the role of a teacher. This will be very novel experience to the students. It enhances their confidence and generate a dynamic creativity in them. In some cases two or more will share the role of teachers and feel more confident with a team. Such young teachers make the classroom booming with energy and creativity.

Case Study: this could be the study of an institution also. You know that the autobiography of great personalities are included in the syllabus. This will be very interesting. Real life stories are described to integrate with classroom knowledge. Somehow this will help the children to get the knowledge of the outside world also. Through this students are made aware of the real world outside. A comparison of what has studied with real life experience is of great worth.

Problem Based Learning: a problem is presented to a group of students on an authentic situation. It will be in such a way that, participants could actually encounter, should analyse the cause of the problem and find the most effective solution.

Class Discussion: this type of activity allows ample time for students to respond. They become active, confident with their points. To make discussion evident and more effective evidence could be asked. It is an easy as well as an effective learning activity. The teacher is passive here but students will be active participants. In such activities, different perspectives of a single issue be discussed. Active participation makes it interesting to students. They will learn to present their points effectively.

Advantages of having Inside the Classroom Learning Experiences
- Boost up learning experiences and shape the children' behaviour
- Help to deepen their understanding of the concepts they have learned in the classroom
- Teacher can get feedback about students' potential and learning capabilities.
- Interesting learning activities can revitalize both the mind and body of the students.

Check Your Progress - 1
The questions given below are followed by multiple answers, put '✓' mark for the correct answer:
1. Inside the classroom learning experiences
    a. Teachers teaching
    b. Students noise
    c. Dictation
    d. Social interactions

2. Inside the classroom learning experiences means
    a. Always provided by the teacher
    b. Provided by Teacher, students, material resources and teaching
    c. Are provided by friends
    d. Are acquired by the to be learnt subject

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. Instead of learning children will learn more about quarrelling in group discussion
    b. Quiz is just a competition that could be arranged for students
    c. Role play will give a good opportunity for expressions from introverts

d. Though students performing the role of a teacher apparently appears to be ridiculous it gives some good results also.

e. In problem based learning, only the teachers give the problem and the respective solutions to students.

f. Interesting learning activities give energy and enthusiasm for both mind and body of the students.

2.5.3.2. Utilizing learners' experiences (outside classroom)

Activity 2

* Give certain home work to students, like, it becomes for them to go round for the collection of information. For example, ask them to collect the information about Tole Gate. After giving sufficient time, elicit the details, like, what is the meaning of that term, where it is used and what are its uses. What is the role of each and every person as far as Tole Gate is concerned.

* In day to day life, people will come across many folk stories, true events and legendary stories. Ask the students to collect the details of such stories with evidences/documents as far as possible.

* Conduct "Treasure Hunt" activity to students. But regarding the preparation to be done prior to the game, execution of the game and until the winning of game – let everything will be done by students themselves. Give the proper and optimum guidelines to the students while these activities are going on.

In the above activities students are getting outside the classroom experiences. How do you link this **with their daily classroom activities? Explain.**

Learning is a continuum. Children will construct their own knowledge by experiences. It will be beyond the classroom boundary also. It will be beyond the classroom but brings desirable and positive behavioural changes. For example, small visits, taking children to do the survey of plant and animals in the parks nearby, plant nursery, zoo and dog canal centres, giving an opportunity to children to explore the different communities with their special skills, studying the paddy ground, visiting horticultural department, the industry of their area, primary health centres, banks, LIC offices, Post Office, the forest area, or the sea shore etc. All these experiences are exterior to the school and the classroom. And a teacher can make use of this option very well for developing varieties of skills among the students. Children definitely will be fascinated by such experiences and because of this they develop a positive attitude towards their studies also.

Albert Einstein once famously said "I never teach any pupils, I only provide the conditions in which they can learn". If teachers plan the learning situation outside the classroom means it will be **outside classroom learning.** This may include activities under broadened canopy, such as, outdoor play, school based projects, environmental education, recreational and adventure activities etc. Teacher has to provide such events to students which generate happiness among them and he has to check intermittently about the guarantee of learning suitably. However, children will love the field trips and field visits like anything, and for them these memories will be everlasting. But some teachers may consider this as an extra burden on them.

Characteristic features of outside the classroom learning experiences:
- Usually the learning experiences outside the classroom will be inter-disciplinary only. Similarly the field-experiences are not on par with anything. They have immense value in learning process.
- They introduce the meaning of real life and real learning to the students.
- Taking classroom outside is often authentic, hands-on, and interactive and build on classroom learning.
- Encourage students for critical thinking, problem solving, and decision making skills.
- Helps for deeper understanding of challenging concepts-it can also provide a context for learning in many areas.

The field visits and field trips, living with community activities, and learning certain skills form the community, following give and take policy with the community, running a learning magazine, and for this going in search of information- all such activities cumulatively help in the all-round development of the child. The sports, zonal sports competitions, and other outside the classroom activities facilitates socialization. Environmental studies, cultural activities, and adventures games-all such outdoor games help the students to learn social values. These influence as well as motivate strongly. But whenever one takes the children outside the classroom has to be doubly cautious.

Here are some learning activities that are seem to be very effective:
- Asking meaningful and effective questions
- Conducting case studies
- Active participation in collaborative and co-operative learning
- **Think-Pair-Share:** the teacher may ask a key question to two of the students. Let them sit separately and quietly first, write down some notes on their own, then

associate them for discussion with another student. This shall be followed by a few groups or all groups, depending on the class size, share their thoughts with the larger groups.

- **Keep it interesting:** the activities must be in such a way that the interest shall be developed in the beginning, sustained throughout the interactions. Strategies, like, debates, games, group activities, sportive competitions, simulations that are creative, jeopardy or crossword puzzle can be of fun and effective.

- **Gauge where your students are:** children will learn by experiences, creating new things, by doing themselves, conducting experiments, reading, discussing, questioning, thinking and alternative thoughts, interacting, expressing through write-up etc. – all are very fertile areas. So teacher has to give ample scope for the above said activities.

- **Reflection paper:** asking students to reflect on the learnt concept and develop a reflective paper.

- **Let them walk in your shoes:** ask a small group of students to read and synthesise material to teach their peers in class.

- **Student led review session:** students shall create the review questions. Each student should ask at least one question. Each one should be ready to give answer or put question. Students generating exam question.

- **Learning happens** inside as well as outside the classroom. If both of them are blended together it would be very supportive for learning.

- Games within groups of children to find hidden treasure by providing clues in spatial terms like, top of the table but below the book, fish inside the jar etc.

- Children let conclude that some objects roll, some slide, some have corners and some do not have edge. Let them justify why a straw always have the shape of hollow and cylindrical.

- Organising selling-buying activity in the school campus where a lot of addition and subtraction of money involved using play currency up to Rs.1000/=.

- Giving opportunities to children for exploring ways of recording and presenting data and draw inferences form the data.

- **Alternative method of multiplying:** in computing there are so many amazing and interesting ways and means. For example while multiplying 257 X 34 a child may do it, like, 100X34+100X34 + 34X50 + 34X7.

- **Group activity** needs a special type of evaluation technique. There are already so many varieties of evaluation technique available which helps in deciding the quality of the learning process in groups.

- Participating with elders and knowledgeable persons will encourage the children to be very active and when participating in big projects, every student will do his level of best so that output will be a collective representation of quality.
- Ask the students to observe the surrounding environment for natural events, like, a bird building its nest, the locomotion of different animals, sprouting seeds, growing of young seedlings, pasteurisation technique in milk-dairy, and the same thing done in home etc.
- Give options to children so that they will reflect on the already acquired knowledge, encouraging them to prepare low-cost and no-cost materials, like, making use of waste bottles, lids, and plastic materials and reusing for the preparation of flower-vases, pen stands, making use of pulley-mechanisms etc.
- The tasks should be followed by discussion, presentations, preparing the final write-ups, and final documentations etc.
- Teachers can organise workshops on topics beyond the textbook and syllabus so that it will enhance students' knowledge.
- Make use of folk songs, heritage stories, any TV programmes, radio programmes and art and drawings to group discussions, and reflection on it. Then collectively it could be synthesised to form a resource unit or knowledge bank.
- The occupational tasks, like, weaving, carpentry, sewing and embroidery could be entertained in the classroom. Visits to centres, like, pottery, carpentry, handicrafts, place where raw jaggery is prepared, all are different representation of knowledge. Let the children get an exposure to it.
- Allow the students to understand the workmanship behind the products like, wooden wall pieces, showcase items and hosiery products, the material required to prepare those items, expenditure to be met with it, and the real cost of that item and also what will be the market value for it.
- Conducting friendly match between different intra-school groups, inter-schools with the sports like, kabbaddi, through ball, basketball and kho-kho etc. Here, these activities make the children learn withstanding nature, commitment to the rules, team spirit, unity and also a chance to know their strengths and weaknesses. By knowing the strengths and weaknesses of the opposite party how one has to be prepared for the next session-all will be continuously happening in the students.

All the above said suggestions are the best avenue for the utilisation of the students' experiences both inside and the outside the classroom.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. "I never teach any pupils, I only provide the conditions in which they can learn" – this was told by
    a. Albert Bandura
    b. Albert Einstein
    c. Alfred Binet
    d. Erickson

2. Usually the learning experiences outside the classroom are
    a. Disciplinary
    b. Subject based
    c. Inter-disciplinary
    d. According to the teachers' teaching

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. To take the children outside just for the sake of learning is a dangerous thing
    b. Field visits bring a dynamic nature and creativity among children
    c. A strict environment is the only correct system for learning
    d. Quiz, debate and other cultural activities will demotivate students for learning
    e. Learning occurs both inside as well as outside the school
    f. The community occupational skills not only need to be observed but could be included in the learning experiences also

2.5.4. Let us Summarise

Now learning has crossed the classroom limits and transformed into lifelong learning. Formal, informal, incidental, inside and outside the class room – in such varieties learning has shown its new existence.

So far we were familiar with conventional and traditional teaching-learning process. In this unit new concepts about learning have been discussed. For example, ice breakers, quiz, debate, role play, fish-bowl, students' presentation, students becoming teachers, reading reflection in class rooms, problem based learning. Similarly in the school playground, many sports and games activities are conducted. The internship activities that we see in higher education are learning experiences outside the classroom only. A teacher can utilize the child's inherent talents and the respective community's contribution in the classroom

activities. They can conduct workshops relevant to the textbook-topics and beyond the textbooks also. Such knowledge representations are practical and have immense value. Allowing the students to understand the workmanship behind the products like, wooden wall pieces, showcase items and hosiery products, the material required to prepare those items, expenditure to be met with it, and the real cost of that item and also what will be the market value for it- all these are education for life. Conducting friendly match between different intra-school groups, inter-schools with the sports like, kabbaddi, through ball, basketball and kho-kho etc. Here, these activities make the children learn withstanding nature, commitment to the rules, team spirit, unity and also a chance to know their strengths and weaknesses. By knowing the strengths and weaknesses of the opposite party how one has to be prepared for the next session-all will be continuously happening in the students.

2.5.5. Answers to 'Check Your Progress - 1and 2'

Check Your Progress - 1
1.d 2.b 3.a- **X** b- **X** c- ✓ d- ✓ e- **X** f- ✓

Check Your Progress - 2
1. b 2.c 3.a- **X** b- ✓ c- **X** d- **X** e- ✓ f- ✓

2.5.6. Unit end Exercises

1. What are learning experiences? Give illustrations.
2. Explain the characteristic features of learning experiences inside the classroom. How
   Can a teacher create this? Justify your answer.
3. What are the learning experiences outside the classroom? Give examples for it.
4. How can a teacher utilize the learning experiences outside the classroom? Explain.
5. What is the importance of learning experiences inside and outside the classroom? Illustrate their role in learning.

2.5.7. References

1. https://www.edysis.in/10classroomactivities
2. https://www.facultyfocus.com/aritcles/effectiveteachingstrategies
3. https://www.unesco.org/education/tlst/mods/theme-mod26html
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Block 2 : Learning in 'Constructivist' Perspective
Unit 6 : Implications of Constructive Perspective to Teachers

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Unit Structure

2.6.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Explain learning from constructive perspective;
- Recall the main features of constructive perspective;
- Apply the implications of constructive perspective on teachers; and
- Identify the correlation between the educational aims, objectives and constructive perspective.

2.6.2. Introduction

We have discussed about constructivism in education for several times. In the previous units also references were made regarding constructivism. Basically this perspective is originated from social psychology and it is very popular now a days. Mainly Vygotsky's contribution which is recognised as social constructivism, is having its continuation in terms of implementation in learning situation, the reciprocating changed role of students and teachers and innovative ways of evaluation. In this unit you will come

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to know about the implication of social constructivism over teachers and teaching-learning methodology. Now no body accepts that teachers are the source of knowledge and if they transmit it to the students, automatically it will result in learning. For students it has to be in the form of constructing knowledge not transmission of knowledge. And teachers has to become, facilitator, co-learner, a negotiator for the judicious use of time and resources. In this way there is a great anticipation about teachers form the society. Teaching-learning, student and teacher are the three vertices of a triangle. The interactions that takes place in these three will be socio-emotional in its nature. In this unit you will come to know about the role of a teacher under the perspective of social constructivism.

As it is told by one of the eminent educationist, learning is the process of knowledge construction. Children will learn based on the activities that are provided to them. They combine the new knowledge with the already acquired knowledge and thus every time the knowledge in terms of schema will be changing and evolving. Hence a teacher must be beyond of just being telling, explaining or giving notes for the 'to be learnt' concepts. Students learning based on their own experience and becoming independent learner is what universally accepted.

2.6.3. Learning Points and Learning Activities

2.6.3.1. Salient Features of Constructive Perspective

When social constructivism is applied on a learning situation, then it will show some outstanding characteristic features. For example, the role of a teacher, he has to be a facilitator, guide and counsellor. A teacher has to accept each and every student with his/ her own strengths and weaknesses. For success as well as failure of a student a teacher must be responsible. Constructivism resembles a multifaceted trapezium. According to Johnson's (1991) opinion, many constructivists and psychologists have already adapted constructive perspective in learning. And the feedback is positive, like, many have found it is worth to have in the education system. Johnson has listed the salient features of constructive perspective as follows:

- The classroom situations will have the creation of real experience based learning activities, and providing opportunities for learning to each students
- Learning is focused towards finding the solution to real life problems
- Utilizing the strategies that help in solving the problems
- Giving more stress on multi-representations and multi-perspectives to the textual information

- Instead of forcing the instructional objectives and educational goals, making the education system in a negotiable context.
- Utilizing devices of evaluation for self-analysis
- Providing the environment and opportunities that suit the multiplicity of the universe
- Enabling the students to develop self-control and to come out with leadership if the need arises
- Enabling the students to develop self-motivation, self-regulation and becoming responsible for his/her own achievement

Wilson and Cole (1991) have explained the concept of constructivism in their cognitive teaching models. According to them the major features of constructive perspective are as follows:
- Designing learning under authenticated problem solving environment.
- Giving opportunities to learning under authentic and educational framework.
- Providing situations for developing self-control among learners.
- Not considering the mistakes as a negative but as feedback and utilizing that in a constructive manner for further learning.

According to Ernest the constructivism is derived from logical and sociological perspectives. Hence it shows the following characteristic features:
- Giving importance to the previous knowledge acquired by the learners and utilizing that for knowledge construction and also being sensitive with the learners.
- Planning diagnosis and remedial measures for learners mistakes and misconceptions.
- Giving importance to develop the skill of self-regulation so that it facilitates to develop metacognition among students.
- Presenting the concepts of mathematics by means of multi-representations.
- Developing awareness about learning objectives and goals among learners.
- Understanding the difference of opinions regarding learning goals and objectives between the teachers and students.
- Understanding the seriousness of the differences between school-mathematics and societal-mathematics.

If teachers make the students' activities as the means of knowledge construction by their active participation, then, definitely the intellectual abilities among students also will get enhanced. Teachers have to put efforts to make the learning inside the classroom will have relevancy with the outside world. They should encourage children to ask questions. Rote learning, stereotype answers should not get nurtured. Students must be encouraged to

answer in their own words and original thoughts. One has to consider that intellectual hypotheses are good devices for cognitive growth. There may be some reluctance among the children to express freely, though they have strong experience based knowledge in them. You know that, the knowledge is created between the two zone, namely, 'what I know' and 'what I can know'. This knowledge later get strengthen by the home, outside the classroom, and community experiences. Hence knowledge and skills must get recognised and respected. A sensitive teacher knows all these better and will make it very effectively through deliberately designed programme of work.

Check Your Progress - 1

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. Learning means
    a. Training
    b. Behaviour modification
    c. Knowledge
    d. The process of knowledge construction

2. According to Ernest _____ is one of the features of knowledge construction
    a. Metacognition
    b. Re-construction of knowledge
    c. Explanation by the teacher
    d. Reading and writing

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. Awareness should be provided to the learners about the goals and objectives of learning
    b. Knowledge construction requires new situations, for this no need of previous knowledge
    c. Through rote learning children get good marks and that specifies their learning also
    d. Teachers' role in knowledge construction by learners is very significant
    e. Using strategies for problem solving enhances and facilitates learning
    f. Evaluation tools help for self-criticism among students

2.6.3.2. Implications of Constructive Perspective to teachers

You can see that the postulations of constructivism is very well suit to any teacher and any educational institutions. Let it be, language teaching, mathematics teaching, science teaching, and social science teaching, and any teacher for that matter, the features of constructivism will be like, universal in their applicability. For this, only we need is, the clear expression of learning situation under constructive perspective. Curriculum design, syllabus framing, lesson planning, and planning for teaching-learning situations, - in all these aspects, a teacher should possess certain characteristic features as the steering faculty. Hence we shall look into what are those characteristic features:

Honebein says (1996) according to constructive perspective, a teacher has to design her/his lesson that is suitable to the following objectives:

1. Provide the experiences to the children that facilitate the knowledge construction.
2. Create situation so that it helps the children to learn appreciate and experience the situation with multiple perspectives.
3. Make learning in a real and true forum.
4. Learning situation should give ample scope for social expression.
5. The learning situations should be in such a way that learners can easily and without any hesitation can show their originality and express their voice.
6. Students should become independent and autonomous learners.
7. There must be sufficient scope for using varieties of models of teaching and innovative practices in teaching.
8. Proper motivation measures must be there for developing self-regulation and self-awareness among students.

As it is told by Vygotsky a teacher helps the child to learn by scaffolding. Here the child will be in between the zone of what it knows and what it should know. According to him there are three types of students' learning and they are,

1. The skills/tasks which cannot be done by the students.
2. The skills/tasks which can be done by the students.
3. The skills/tasks which could be done by the help of others.

The tasks or the skills which could be done by a student when he/she gets the help by the teacher will not occur if the teacher's help is withdrawn. It is just because, the task will be of higher level of difficulty when compared with the ability of the student. Hence the teachers' help is considered as very significant. Similarly, real situations, analyses based on multiple perspective and authentic activities are the important features of constructivism.

NCF 2005 has noted that our educational practice is still based on limited 'lesson plans' aimed at achieving measurable 'behaviours'; according to this view, the child is akin to a creature that can be trained, or a computer that can be programmed. Hence, there is too much focus on 'outcomes', and presenting knowledge divided into bits of information to be memorised directly from the text or through activities after 'motivating' children, and finally on evaluating to see if children remember what they have learnt. Instead, we need to view the child as 'constructing knowledge' all the time. This is true not only of 'cognitive subjects' such as mathematics and science, language and social science, but equally of values, skills and attitudes. This perspective on the learner may sound 'obvious', but, in fact, many teachers, evaluators, and textbook writers still lack the conviction that this can become a reality. The term 'activity' is now a part of the register of most elementary schoolteachers, but in many cases this has just been grafted onto the 'Herbartian' lesson plan, still driven by 'outcomes' at the end of each lesson. There is now more talk of competencies, but these competencies are still pegged onto lessons much in the manner of 'outcomes'. Instead, teachers need to develop the ability to plan 'units' of four or five sessions for each topic. The development of understanding and of competencies is also possible only through repeated opportunities to use the competencies in different situation, and in a variety of ways. While the development of knowledge, understanding and skills can be assessed both at organising experiences, observing something happen, say, the process of seed germination, in a real situation or observing different stages of milk collection, processing and packaging different kinds of products in a dairy farm. Participating in an exercise involving body and mind such as planning a role play around a theme and presenting it. Talking about and reflecting on something the child has experience of (e.g. dialogue on gender-differentiated practices in the family and society or participating in a mental game of numbers).

Making something, say, a system of gear wheels or trying out an experiment to lift a load using a system of pulleys. After the experience, teachers could organise a discussion, an exercise involving, writing, drawing and display. She could identify along with the children questions to be thought about and answered. She could connect the experience with textbook knowledge and other references and deepen the experience. Such experiences and post - experience activities would be valuable at any level of schooling. Only the nature and complexity of the experience would need to change over the years. Language is key to organising experiences. Hence, there should be a proper coordination between the kind of experience and the level of language development.

Teachers need to understand how to plan lessons so that children are challenged to think and to try out what they are learning, and not simply repeat what is told to them. A

new problem is that in the name of 'activities' and 'play way' methods, a lot of learning is being diluted by giving children things to do that are far below their capability. A lesson plan or unit plan for an inclusive class should indicate how the teacher alters the ongoing activity to meet the different needs of children. Failure to learn is currently being mechanically addressed through 'remediation', which usually means simply repeating lessons. Many teachers are also looking for 'cures' to set right the problems that some children may experience. They still find it difficult to individualise learning for children by building upon the strengths that children may have.

Teachers need to understand how to plan lessons so that children are challenged to think and to try out what they are learning, and not simply repeat what is told to them. Planning with the support of appropriate material resources for individualised, small group and whole group work is the key to effective management of instruction in a multi-grade, multi-ability or vertically grouped classroom. Instead of finding ways of juggling lesson plans based on mono-grade textbooks, teachers would need to devise, in advance, thematic topic plans in order to engage learners with exercises created for their level. The practices of teachers in classrooms, the materials they use, and the evaluation techniques employed must be internally consistent with each other.

Teachers need to be prepared to
- Care for children, and should love to be with them.
- Understand children within social, cultural and political contexts.
- Be receptive and be constantly learning.
- View learning as a search for meaning out of personal experience, and knowledge generation as a continuously evolving process of reflective learning.
- View knowledge not as an external reality embedded in textbooks, but as constructed in the shared context of teaching-learning and personal experience.
- Own responsibility towards society, and work to build a better world.
- Appreciate the potential of productive work and hands-on experience as a pedagogic medium both inside and outside the classroom.
- Analyse the curricular framework, policy implications and texts.

As Johnson opines teachers prepare their instructional design and lesson plans well in advance. So he advocates that it is better to prepare the lesson plan according to the constructive perspective. For that one has to follow the below given points:
1. There must be a scope for the expression of reality in different ways
2. Importance should be given towards construction of knowledge and not for reproducing the knowledge.

3. Should give the opportunities to learning by means of authenticated tasks and not through abstract statements.
4. Instead of teaching with all limitations to satisfy the pre-determined objectives, it is better to give more thrust on real experiences, day to day events based learning situations and a fertile environment for learning.
5. Nurture the ability for critical analyses and reflective thinking among students.
6. If the real life experiences based frame work is adapted for subject teaching-learning then it will result in knowledge construction.
7. In cooperative and collaborative learning, teachers facilitate knowledge construction by their negotiating competence.

By observing all the above said points, we can collectively put the educational implications of constructive perspective for teachers as follows:

Teachers are supposed to perform the role of a facilitator for learning. Now learning has to be looked in to as a type of mental readiness for new and novel experiences. A lesson has to be developed based on slightly complicated situations rather than on developing a lesson based on already learnt but simple concepts. Even children must have the knowledge of how and on what basis the evaluation is done for their performances. Children interest and efforts are more important than the information in textbook. A teacher may decide the varieties of learning activities and it may be right from the teacher's point of view also, but, you cannot decide that it will be the same from the students' point of view also. Rote learning system should get substituted by learning by experiments. You know that teaching is a complex process and will get flourished in a free and independent environment. It is important to make students should be aware that intrinsic motivation is far better than extrinsic motivation. Inner urge is the best for progress. Even children express their knowledge in very special way very often. This has to be recognised then and there itself. In the beginning it is better to make use of the belief, faith and emotions of children and gradually later, it should be subjected to discussion, deliberate analyses and further these have to be used for developing scientific attitude and positive development and definitely not as a proof of mistakes. Learning must get transferred as transfer of learning. Teachers have to consider students as explorers who learn by their own investigations, inquiries, problem solving and hands on experiences. Discoveries, experiments, analyses, guided and self-discoveries and investigations, active participation in learning and decision making skills are very significant in knowledge construction process. Teachers should encourage students not only for self-learning but also for cooperative and collaborative learning, team spirit, and group project work. Higher order of thinking are also important. All these aspects will make a single classroom as a forum for a varieties of learning with different dimensions and with different level of difficulties.

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It is better if the teachers consult the students before deciding the instructional objectives and goals of classroom teaching. Similarly teachers are supposed to be accepting the role of a mentor, guide, coach and facilitator as well as negotiator. They have to balance their role according to the demands of students' folk. And they have to create activities that promote metacognition, self-criticism, self-analysis, self-regulation and intrinsic motivation among students. Learning situations, environment, skills, content and tasks-all these must get interrelated in the provisions given to the students for learning. It is very important to consider previous knowledge, previous knowledge construction, experiences and belief of students because, these will play a very significant role in knowledge construction by students. The misconceptions and the mistakes committed by the students actually throw light on their previous knowledge constructions. Students should become responsible for their own learning. In case of apprenticeship and training programme, the tasks and skills that are ought to be learnt must be arranged in an ascending order with respect to level of difficulty. Therefore it will be possible for children to move in a progressive manner form one standard to another.

Check Your Progress - 2

The questions given below are followed by multiple answers, put '✓' mark for the correct answer:

1. One of the implications of constructivism for teachers is
    a. Explaining well by making use of black board
    b. Classroom teaching restricted within the four walls of the classroom
    c. Giving opportunity for the construction of knowledge
    d. Lesson plan based on five steps of Herbart

2. According to Vygotsky _____ is an important feature of constructivism
    a. Use of Audio-visual aids
    b. Black board summary
    c. Reading and model reading
    d. Scaffolding techniques by the teachers

3. Below are given some statements, put '✓' mark for the correct one and X for the wrong one:
    a. Real situations will become means for quality learning
    b. It is inevitable to focus on learning outcomes
    c. Activities help teachers to give individual attention to students
    d. There must be an indication of suitable modifications to be made for special children in a lesson plan

e. If whatever the teachers tell is repeated then, there will be no mistakes in learning

f. A teacher must and should have interest to get abreast with the new information

2.6.4. Let us Summarise

In this unit the role of teachers under constructive perspective is discussed in detail. While planning for teaching-learning process, lesson plan writing, constructing the instructional objectives and evaluation- for all these aspects there are educational implications. Now it is advised that, a teacher has to include students while framing aims and objectives for a lesson. The major shift regarding the teaching-learning will be making it learner centred. As it is told by Ernest, Giving importance to the previous knowledge acquired by the learners and utilizing that for knowledge construction and also being sensitive with the learners, Planning diagnosis and remedial measures for learners mistakes and misconceptions, Giving importance to develop the skill of self-regulation so that it facilitates to develop metacognition among students, Presenting the concepts of mathematics by means of multi-representations, Developing awareness about learning objectives and goals among learners, Understanding the difference of opinions regarding learning goals and objectives between the teachers and students,Understanding the seriousness of the differences between school-mathematics and societal-mathematics are also considered as the implications for teachers.

Honebein says (1996)a teacher has to design her/his lesson that is suitable to the following objectives:

1. Provide the experiences to the children that facilitate the knowledge construction.
2. Create situation so that it helps the children to learn appreciate and experience the situation with multiple perspectives.
3. Make learning in a real and true forum.
4. Learning situation should give ample scope for social expression.
5. The learning situations should be in such a way that learners can easily and without any hesitation can show their originality and express their voice.
6. Students should become independent and autonomous learners.
7. There must be sufficient scope for using varieties of models of teaching and innovative practices in teaching.
8. Proper motivation measures must be there for developing self-regulation and self-awareness among students.

Apart from the above points, a nut shell of contributions by many others have been collectively given and all that is evidently about implications for teachers.

2.6.5. Answers to 'Check Your Progress - 1and 2'

Check Your Progress - 1

1.d 2.a 3. a- ✓ b- X c- X d- ✓ e- " f- ✓

Check Your Progress - 2

1.c 2.d 3. a- ✓ b- X c- ✓ d- ✓ e- X f- ✓

2.6.6. Unit end Exercises

1. Explain the salient features of constructive perspective.
2. What are the implications of constructive perspective to teachers? What are its importance?
3. What are the points to be born in mind by a teacher while planning a lesson?
4. What are the implications of constructivism to teachers as proposed by Vygotsky?

2.6.7. References

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Block 3 : Understanding Teaching
Unit 1 : Concept of Teaching: Teaching as Practice, Activity and Achievement

Unit Structure

3.1.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Explain the concept of teaching;
- Compare practice with the concept of teaching;
- Clarify the relationship between teaching and activities;
- Identify the common characteristics of teaching and management;
- Identify the differences between teaching and management;
- Equate teaching with practice, activity and management

3.1.2. Introduction

Teaching profession is recognized as a noble profession. Teachers are the leaders who lead the education system by holding its reign. Although it is true that even in the absence of teachers learning can happen by the use of modern technology, nothing or nobody

can replace or alter the place of a living teacher who is enthusiastic and who has affectionate relationship with the students. That is why there is a saying of saints that ' Teacher is greater than God". We witness the subtle expression of the above feeling in our schools and colleges. Here, teachers would carry out/ manage many functions like making them understand things, teaching and making them learn. The function of teacher is nothing but teaching. So, what do we mean by 'teaching'?, is it telling some ideas? Is it explaining them? Or is it explaining them by adopting certain activities? Thus a series of questions arise in our mind. Since long teaching process is being analysed in many ways, as for example, teaching means imparting training, giving instructions and guidance, transferring knowledge, ensuring that children will follow punctually what ever they are told to follow and communicating what ever is known to one. But, till now, it has not been possible to define exactly what is teaching. Although this fact is true, we must bear in mind that teaching is a very complex process. Teaching is multi faceted and multi dimensional. In this Unit, teaching is analysed in a comparative manner as a practice, activity and management.

3.1.3. Learning Objectives and Learning Activities

3.1.3.1. Analysis of the Concept of Teaching-Practice

Activity 1
- Do you remember what all you have experienced while learning cycle riding or riding a moped? What did you feel you first started learning? Later, how it changed?
- Similarly, what is the difference do you see between what it was when you first started to sing a new song in a very slow pace and when you sing after learning the song?
- Individuals who want to learn sewing, are first told to practice the peddling the peddle of the Sewing Machine.If possible you can also try this. Making the wheel to turn in only direction by peddling in the same direction would become a practice.
- Like this, explain your experience when you learn any new skill.

Whenever we undertake an activity repeatedly it becomes practice. Practice is nothing put repetition. But, repetition is not practice. Because there is subtle difference between these two. Activities which are repeated would not be the same every time it is repeated. When we practice many doubts and confusions would automatically be resolved by themselves. Mistakes that occur during learning would gradually reduce while practice is being continued uninterruptedly and finally are completely eliminated. Practice will lay the foundation for learning. Normally, functions carried out physically would also be skills by nature. For example, bicycle riding, swimming, writing, reading, communication, singing,

dancing and physical exercises. Teaching is also called as a skill. We must remember that which is done skilfully is known as skill. That which is acquired by learning is also known as skill. This fact is also important. When we super impose practice, it appears as repetition of teaching skills. Many academic programmes in which teaching skills could be practiced by trainees inside teacher education classes has been included in the curriculum. It could be micro-teaching or seminars which have to be presented by the students compulsorily or teaching activities during practice teaching. Teaching is a cognitive skill.

There are three important characteristics of skills. They are as follows:
1. Skills are made up of series of responses
2. Skills involve coordinated movements.
3. Skills are formed by the design of serialised and complex responses.

Thus, skills are formed by many skill units. Guilford has provided a meaningful theoretical structure for the cognitive abilities. As mentioned in that structure, in the management of skilful behaviour movement of parts of the body and along with them their speed, strength, steadiness, coordination and elasticity are also included. The quality of any skill depends upon the factors mentioned above. Skill learning occurs having a purpose in mind. Some skills are learnt contextually also. In revising the movement already acquired process and in using that skill design in another situation many sub-skills are also learnt contextually. In the learning of sensory-motor skills one can generally see a systematic progressive design. In the early stage of skill learning motor activities are more and at that stage differentiation is completely secondary and it is only like a flow of different motor responses. But, gradually these movements become free from errors and they acquire specificity in movement. We have to give attention to one aspect i.e. the primary motor movements and their execution have to be correct always. If proper strategies are not used it become impossible to learn a skill and acquiring expertise in that skill. Comprehending information about the skill provides an important basis for this. Sensory comprehension provides a good foundation for skill learning.

Learning experts have identified three important phases or stages in skill learning, but there is no clear difference between them. They come one after the other continuously. These stages are cognitive stage, determining stage and autonomous stage. During cognitive stage the learner intellectually accepts the task to be learned as a skill and analyses that skill and depending upon that knowledge the student mentally prepares a systematic plan for his learning. During determining stage he uses correct responses and practices the skill by repeating those responses. This stage is prolonged process. Ultimately, the student

continues his practice till he does not find any error or wrong movement. Finally, all errors will vanish and the skill becomes a permanent and firm learning. During autonomous stage effort will be taken to increase the speed of the management of this stage and during this stage any errors if at all remaining will also vanish. If any error is there it will be removed through further practice of the skill. The important characteristic of this stage is continuing the management of the skill smoothly with out any obstacles.

When we consider the above mentioned points comparing teaching with practice teaching becomes an endeavour to help the learners to acquire a skill with systematic practice. Good teaching practice is like a key for qualitative learning by trainees. Hence, some points have to be remembered to conduct practice teaching in an appropriate manner.

These points are:
- Encouraging good communication between teachers and students.
- Encouraging interaction between students.
- Providing ample opportunities for active participation.
- Responding to students appropriately and providing feed back.
- Conducting the activities with time sense and suitability for the task on hand.
- Providing motivation for learning.
- Recognizing and rewarding varieties in learning and in talents.

In creating qualitative teaching-learning situations teachers also have their responsibility. This may relate to preparing properly for teaching in the class room or preparing for proper structured practices or it may be practices and it may be any additional activities related to the learning of skill.
- **Structured practices:** These are the lesson plans prepared by the teachers. Lesson plans include formulating general and specific objectives, creating learning situations, using different teaching or sub teaching skills while teaching, use of teaching methods and strategies, use of teaching aids, creating supportive learning materials, planning various types of evaluation methods and applying them, summarizing what the teacher has taught, giving home work for children and revising the lesson meaningfully, asking questions to test what note the students have taken. It is essential that both pre-service and in-service teachers to acquire the above mentioned skills in preparing the lesson plans.
- **Structured Practices for Students:** These include the short term and long term (for fifteen days). Teaching practice periods conducted for student-teachers. They include learning activities related to science and social sciences experiments in

Chemistry which can be demonstrated by the teachers to students, experiments and activities which can be done by single student or by a small group of students, small scale surveys and activities which can be done by the whole class. Practices and skills such as teaching self-evaluation, keeping the entire class and school environment clean, help students to acquire expertise in them.

- **Additional Practices:** These activities include project activities which can be planned by single students or by small groups of students, solutions to a problem to be discovered collectively, activities- short term or long term -which can be undertaken in small groups, creating models, preparing aids which can be operated through batteries, planning activities like debates, essay writing, impromptu speech and so on and preparing students for them. Undertaking such activities and practicing them the student teachers acquire expertise and grip over learning.

Practicing the below mentioned points have been shown to be useful through educational research.

- **Clarity Expected from Teachers:** Teachers should have clarity about the aims and objectives of what they are teaching and clarify these things to students also.
- **Discussions in the Classroom:** Discussions and criticism in the classroom help students to be active.
- **Feedback:** Feedback provides information about the effectiveness of teaching and provides information to the students about their achievements. Teachers can know from their students about the effectiveness of their teaching. Hence, there should be a system to evaluate teaching effectiveness by students. Such evaluation may be in the form of using questionnaires and rating scales. Taking video graphs of teaching also provides a good means for the analysis of teaching.
- **Formal Evaluation:** This includes monthly tests, half-yearly examinations, yearly examinations and oral examinations. For these activities, a balanced question paper has to be prepared and evaluation has to be done without partiality. All these are practiced in formal evaluation.
- **Conscious Awareness:** Providing learning experiences in the classroom to encourage conscious awareness in students.
- **Maintaining Cordial Relationship with Fellow Teachers:** As class room activities are social-emotional activities it is essential that all fellow teachers should have cooperation and cordiality among them. A good teacher is always a learning student in himself.
- Maintaining intellectual balance and emphasizing meaningful learning.
- Increasing situations for active reading, analysis and synthesis abilities and problem solving among students.

- Providing learning support which are strong and effective for students' learning.
- Preparing autonomous students who can learn through self directions.
- Having good class room management skills, setting apart some time for cultural activities and participating actively with students.
- Providing time and opportunities repetitively to impart productive learning experiences.
- Teachers and Students and all the staff of school should show mutual respect for individuals.
- Creating a community of students.
- Becoming responsible for expecting positive qualitative behaviour from students.
- Solving any dilemmas and conflicts skillfully.

Check Your Progress - 1

Multiple choice questions are given below. Indicate the alternative that you feel correct by '✓' symbol.

1. Teaching is _____.
   a. Training based profession
   b. Teaching profession
   c. Skill based profession
   d. Service profession

2. Example for considering Teaching as practice_____.
   a. Home work
   b. Solving problems in Mathematics
   c. Getting revision work done by students
   d. Learning of skills in micro teaching.

3. Some statements are given below. Put a tick mark '✓' for True statement and a cross mark X for the statement which is false.
   a. Doing a task revising it many times is "practice".
   b. Skills include coordinated movement of graded responses.
   c. Acquiring proficiency is the last stage in skill learning.
   d. There is no need of sense based comprehension in skill learning.
   e. Teachers have to do the experiments to be done in the class room in front of the students.
   f. Criticisms, discussions and group activities help students to become active.

3.1.3.2. Relationship between Teaching and Activities

Teaching is co-response and active process which is concerned with needs of the students. It is also a process of teaching which gives full support to students feelings and experiences. Ultimately, it is a creative process which makes the students to get more than what they get from their teachers. In traditional view teaching means giving knowledge to some body or instructing how to do a particular task or providing what results in learning or facilitating through example or experience the learning of some thing. Creating a suitable environment for learning and making students to involve completely in it is one of the qualities of good teaching.

Children learn better through activities than learning through listening. This is according to Dewy's principle of Learning by Doing. When activities are provided children involve in them completely by body, mind and speech. Teaching and activities are intertwined to such an extent as though it is impossible to differentiate between them. Teaching and activities are like two faces of a coin. Teaching activities are process designs prepared by teachers for students. It is a complete truth that learning occurs when students participate themselves in such activities. Children learn effectively through their experiences they get when they participate actively in such teaching-learning situations which are designed keeping students in mind. Thus, the situation of teaching-activity becomes a student c entered system. When students learn through activities, according to the principle of Learning by Doing they utilize all their sense organs at the maximum level. Thus, learning through using more than one sense organ becomes not only effective learning but also results in long ranged learning outcome.

According to Pink G (1989), in activities based teaching learners by participating with self-will and enthusiasm not only internalize learnt ideas but also use these ideas in their day to day works according to their needs. That is why, activity based learning is defined as " activity based learning is that learning which results from purposeful physical and mental actions in the social context resulting in the creative action and expression".

What is the need of learning activities?

Information processing theory identifies learning as a discovery a child makes with its interaction with the environment. In learning process children get experience, understand and remember what they learn. Hence, teachers have to use such aids and equipments which provide justification for the facts and information they provide in teaching process. Teachers have to provide ample guidance and instructions to make students to get involved in the analysis of learnt content. It is possible for students to know the content and information

from their self-experience in problem solving technique. By participating actively in such intellectual activities continuously students not only learn textual information but also learn many skills. Such participation -

1. Provides a creative dimension for the experience of students.
2. Brings reality for their learning.
3. Develops ability to utilize all available resources.
4. Provides varied situations to students which facilitate learning of knowledge, skill learning and learning of values and getting experience.
5. Results in development of self confidence in students as they participate in activities in their group.
6. Provides opportunities to get experience in study to develop verbal articulation and discovery of new experiences.
7. Provides opportunity to foster good relationships between students and students and also student and teachers.
8. Activity can be considered as the language of a child. A child which does not have language ability can also express its thoughts through activities.
9. It is possible to teach by incorporating activities in all subjects.
10. Activities are like social opportunities for students to mix with every one.

Many kinds of activities for teaching one can have depending upon one's convenience. Activities can be classified in three groups for their better understanding.

1. Discovery Activities- Tasks for getting knowledge, learning concepts and skills.
2. Constructive Activities:- Getting experience through creative tasks.
3. Expressive Activities:- All kinds of presentations.

The activities the teachers can organize in class rooms are:

- **Experiential activities:** Observation, comparison, describing, illustrating, discussing, discovering/ inventing, preparing a report, arriving at conclusions, estimating, collection, choices, imitation, dramatizing, becoming a model, preparing a model, role playing, explaining with the help of pictures and scenery, giving pictorial form for their words or sentences, conducting an experiment, imagining, writing a poem and so on.

- **Activities for understanding:** Constructing, sequencing, classifying, equating, transferring, applying acquired knowledge, problem solving, planning, intellectual imagination, summarizing, judging, taking decisions, evaluating, justifying and explaining.

- **Memory Activities:** Sequencing ideas mentally, identifying frequency of events in situations, adjusting acquired facts and their designs with knowledge and trying for this to retain them with the help of varied strategies.

Organization of Activities: Teachers have to plan suitable and appropriate possible activities depending upon the aims and objectives of curriculum, the need, interest, cognitive abilities, skills and experiences of students and implement them in the class room. Such activities act like strong social-emotional bonds between students and students and teachers and students.

The following stages help in organizing activities effectively:
- Preparing a good plan along with children.
- Making every child as an active learner.
- Specifying for every activity what to be done, why it is done, how and when it is done, who and to whom it is done and how long it is done.
- Before starting an activity, a teacher should give clear instruction so that no confusion is there among students.

While adopting activities in teaching, a teacher should play the role as a planner, as an organizer, as a facilitator, as a person taking decisions, as a transferor of knowledge, as an evaluator and also as a manager of discipline. Basically, a teacher's task is to involve students in learning activities and as a result developing intended learning outcomes in them. One point has to be remembered- "many times what ever a student does is more important than what ever the teacher is doing"(Sewall, 1986). At the same time activities should be meaningful, they should depend upon previous experiences and they should not be unnecessary repetitions. They should be such that they develop the ability of understanding their varied thoughts, the tasks of knowledge construction and understanding a subject in several ways. Meaningful activities provide an opportunity, a unique enthusiasm and spirit in them to internalize learnt ideas deeply and making them one's own and also provide an opportunity to participate positively in cooperative learning. Those learning activities which develop abilities in students and help to apply that knowledge in new contexts and new situations are really very useful activities.

Check Your Progress - 2

Some multiple choice questions are given below. Mark the correct answer according to you with '✓' symbol.

1. Teaching and activities are _____
   a. They are not essential for each other
   b. They are supplementary to each other
   c. They are left to the decision of teachers
   d. They demand more time

2. The nature of activities is like child's _____
   a. Language
   b. Skill
   c. Knowledge
   d. Understanding

3. Some statements are given below. Put a '✓' symbol for the statement which is "True" and X for statements which is "False".
   a. It is possible to include activities in teaching of all subjects.
   b. Expressing one's feeling/ideas in pictorial form is an experiential activity.
   c. There is no need to involve even students while preparing a plan for activities.
   d. Teachers should give clear instruction to children before starting activities.
   e. Activities should be meaningful and they should not be unnecessary repetitions.
   f. Children learn blindly imitating in group activities.

3.1.3.3. Analysis of the Concept of Teaching as a Management

It is a well accepted fact that teaching is a skill. Here, there is communication, activities, experiments and there are many more functions including problem solving that are present in the teaching learning situations. The fact that "skills are managed" is a common characteristic of all skills. Teachers exhibit management by body, mind and speech. While explaining to students, demonstrating an experiment, using black board, not only that, while asking questions, teaching, eliciting answers from children, remaining silent for few seconds, giving feed back when children do not show appropriate behaviour and while evaluating students' learning by oral, written examinations, teachers manage physically, mentally, socially, emotionally and cognitively. Which ever class it may be, active participation of students is most important. In spite of this, we can not deny the fact that teaching is management and presentation by teachers. Management by teachers is a strong

foundation for effective teaching. The moment education becomes a process of complete absorption it will become a managing skill. The moment teacher steps inside the class a kind of environment will be generated. Children would be watching what the teacher is going to do with a sense of expectation. Once teacher takes control over the class, he would lead the entire class towards learning. A teacher who teaches a particular subject becomes a symbol of the subject. Therefore, teaching is said to be management.

Even though there is view point that teaching is a practice, activity and management, practice itself is not teaching, activity in itself is not teaching. Similarly, management it self is not teaching. All these are the integral parts teaching which are intertwined together. All these are included in teaching, but each of them taken separately can not be equated as teaching. When we consider teaching as management then it would be possible to provide feed back and to bring qualitative transformation and improvement. So, how should we look at management of teaching.?NCERT has developed a questionnaire for the purpose of qualitative evaluation of management by teachers. Based, on this, we have listed the points that should be present in the management by teachers.

Designing learning experiences for Children:
To accomplish this task we have to make use of documents and resources in addition to content in the text books in the preparation of lesson plan and we have to collect and prepare appropriate teaching-learning aids.

- ✓ Knowledge of subject and deep understanding
- ✓ Giving clear demonstration along with suitable and appropriate examples and illustrations in order to ensure knowledge is made to reach students.
- ✓ Teacher should have firm grasp of the subject they are teaching and they should have excellent communication skills.
- ✓ Knowledge should be effectively communicated according to the individual differences of students.
- ✓ One should complete the one's teaching duty in a qualitative manner with in the time stipulated for activities in the school curriculum. Mistake by students must be corrected then and there.

Use of Techniques to facilitate learning:
- ✓ Using available place in the school and class in an appropriate manner.
- ✓ Maintaining the safety of children in the class and cleanliness
- ✓ Ensuring that teaching-learning aids are always in good condition.
- ✓ Exhibiting works of children inside the class and in the school.

- ✓ Arranging the various furnitures of the class according to different activities in diverse manner.
- ✓ Encouraging self-discipline, punctuality and other good qualities. Solving any dispute or scolding immediately when such situation is encountered.
- ✓ Considering all children equally and not showing partiality to anybody.
- ✓ Not punishing children physically or mentally.
- ✓ Identifying children who are irregular to the class and offering suitable solution to that problem and putting forth effort to bring improvement in their daily attendance.
- ✓ Identifying at proper time those children who are about to drop out of the school and making an effort to retain them in the school.
- ✓ Employing child-centered teaching methods.
- ✓ Providing equal opportunity to every children to discover, to solve problems and to conduct experiments.
- ✓ Encouraging students by observing the answers and responses given by them and encourage them to ask questions.
- ✓ For transferring better curriculum, utilizing not only the text book but also things like teacher's handbook, resource book, ICT etc.

Listening with patience to the statements made by children:

- ➢ Using simple language
- ➢ If necessary teaching in their own spoken language
- ➢ When needed, using suitable language so that subject content is made to reach the students.
- ➢ Interacting with personal respect and concern to the oral or non-oral communications of students

Evaluation and getting feedback

- ➢ Evaluating management by students with in suitable time frame.
- ➢ Providing feedback and providing help and guidance to improve their management.

Keeping the documents related to students' learning performance in an orderly manner.

- ➢ Keeping the documents safely related to examinations such as tests, half-yearly examinations conducted by teachers, other planned activities as well as academic and cultural activities in a systematic and in a consolidated manner.

Informing parents about the progress made by students

➢ Regularly conducting parent-teachers meeting and exchanging ideas of one another.

➢ Maintaining cordiality and cooperation with resource persons of the community.

Maintaining better interrelationship between individuals

➢ Identifying and respecting the personality of students and having concern about them.

➢ Paving the way for the students to approach teachers easily so that they can clarify their doubts.

➢ Identifying the intelligence and contribution of students and expressing appreciation openly.

➢ Maintaining cordiality with fellow teachers.

Achieving professional growth

➢ Making one's teaching better

➢ Participating in in-service training

➢ Undertaking sponsored programmes and action research

➢ Contributing creatively to teaching-learning aids

➢ Cooperating with school development

All the above points are included in the management by teachers. When teaching is viewed as management then it would be expressed as a process which is vast and complex.

Check Your Progress - 3

Multiple choice questions are given below. Indicate the answer that you feel correct by the symbol '✓'.

1. The method of expressing skills_____.

   a. Reading

   b. Writing

   c. Understanding

   d. Management

2. Teaching skill means _____.

   a. Grip on the subject

   b. Better communication

   c. Grip over the subject and communication

   d. Giving good explanation

3. Some sentence are given below. Indicate the sentences that you feel correct or wrong by the symbol '✓' or X respectively.

   a. It is not the duty of teachers to ensure the safety of children in the class or to maintain cleanliness.

   b. Teaching in the class room should be textual.

   c. Evaluating learning of students within stipulated time and providing feedback is one of the management functions of teachers.

   d. Progress can be witnessed in the management by teachers when they participate in in-service training.

   e. When teaching happens to be management then it becomes complex.

   f. Once an individual becomes a teacher there is no need for professional growth.

3.1.4. Let us Summarise

- Practice, activities and management are intertwined with teaching.
- When teaching is considered as practice, it would be repetitive functions undertaken by teachers with the purpose of making their profession more efficient and effective.
- Since teaching is skill practising could be complementary to better teaching.
- Structured practice, practice exclusives planned for students and additional activities etc. are found in practice.
- Teaching activities is a process design which is prepared by teachers exclusively for students. It is a complete truth that only by participating in these activities learning occurs in students.
- Students learn effectively by their own experience by way of active participation in the teaching-learning situations prepared by keeping students in view. Then it issues out as student-centred system.When students learn according to the principle "Learning by Doing" then they make use of all their sensory organs. Thus, learning by using more than one sense organs would not only be effective but also get transformed into long term learning outcome.
- When we consider learning as management the concept of learning becomes complex. In that consideration many functions teachers have to do are exposed with varies dimensions.
- Only explaining the text in the class room is not teaching. Instead, giving to children designed learning experiences, knowledge of subject content and deep understanding that content, using strategies that facilitate learning, listening to the statements with patience, evaluating and getting feedback and so on are together included in the management of learning.

3.1.5 . Answers to 'Check Your Progress - 1, 2 and 3'

Check Your Progress - 1

1)-c, 2) -d , 3) a-☒ b-☑ c- ☑ d-☑   e-☑   f-

Check Your Progress - 2

1)-b, 2) -a, 3) a-☑   b-☑ c-☒ d- ☑   e-☑ f-☒

Check Your Progress - 3

1)-d, 2) - c, 3) a-☒   b- ☒ c-☑ d-☑   e-☑ f-☒

3.1.6. Unit end Exercises

Analyse concept of teaching as practice, activity and performance

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Block 3 : Understanding Teaching
Unit 2 : Teaching as a Complex Activity

Unit Structure

3.2.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain teaching as a complex process;
- Identify the characteristics of the complexity of teaching;
- Identify the effect of teaching being a complex activity;
- Explain the factors which have made teaching as a complex activity; and
- Apply the complexity of teaching in the educational context

3.2.2. Introduction

Teaching is a competency which is acquired through learning. It is not possible to get that ability naturally or through heredity. Many strategies, skills, practices and methods are involved in teaching more than what we have considered. So, naturally teaching is an intellectual and logical activity. Teaching is conceptualized in the form of answers to questions like what and how and whom to teach, where and when and why to teach. Teachers have to do many functions for the sake of their schools and their profession. Hence , there is need for both pre-service and in-service training for teachers. During the training period the pedagogical competencies are taught in class rooms and professional experiences are

given. There is need for teachers to follow their professional codes selflessly and firmly. Teaching effectiveness does not depend only on presentation by them but also on how they are understood by their students. Teacher effectiveness affects many factors. Now a days teaching has not remained only in explaining well in the class rooms, giving notes to students and preparing them for the examinations. But, teaching has become a complex activity of coordinating many aspects. Let us discuss how and why teaching has become a complex activity.

3.2.3. Learning Points and Learning Activities

3.2.3.1. Teaching as Complex Activity

Do you believe in the statement that if at all we have to bring complete changes in the learning of students, that is only possible by teachers? Why have you chosen teaching profession only? What do you want to achieve through teaching profession?
Answer these questions.

We always remember farmers and soldiers as the main sculptors of the nation. Similarly, the teachers' task is also the task of building the nation. What ever may be the profession, be it profession of a lawyer, engineer, doctor and so on, there also you find the role of teachers. Elders, youngsters have to learn through their Gurus or teachers. This is an eternal truth. Teachers have to play a complex role in this changing society. Teachers have to become the medium for the desired transformations in the next generation. They only are responsible for the growth of nation and qualitative education (Chaurasia,1967). As Chaurasia states a quality of a nation depends on the quality of people in the nation. In the same way, the quality of education depends on many factors. As for example, the level of life of people, the socio-economic situations, heredity, attitude of parents, the teaching and infrastructure in the school, curriculum, teaching methods and so on. Still, there is one more factor which is important ie. the quality of teachers.

In the true sense teachers are the sculptors who build the nation. Because, it is said that the children of today are future citizens of the nation. Those who formulate the personality of children are teachers. Even the future of a nation is in the hands of teachers. Teaching is the function of these teachers. In the general sense teaching is considered as the instructions the student gets from teachers, explanations and guidance from teachers.

- As H.C. Morrison says "teaching is a cordial bondage between an adult individual and an individual of lesser maturity"
- In the opinion of Jackson " teaching is face to face interaction and this is a process which takes place between two or more individuals. Among them one is a teacher and others are learners. The transformations occur in students as a result of teacher's functions"

- As J.B. Hugg and James K. Dunckon define teaching thus-"teaching is a process which takes place in four phases. It includes curriculum, planning of syllabus, transfer of syllabus, and in the end evaluation."
- As N.L. Green states " Teaching being a process influencing interactive individuals, is a process of transforming possible behaviours in another individual".
- In the opinion of Clark " Teaching means implementing designed activity situations which are carefully planned in order to produce desired behaviours in students"

Now, it becomes clear from the above definitions as to what are all included in teaching. That is the reason why teaching is a complex process. It can be said that the administrative policies that are implemented now and then in the country, researches and innovative teaching methods have kept alive the qualitative teaching activities of teachers. That is why, the best learning and their life achievements become possible. The effectiveness of teachers is mainly responsible for all these. It is a difficult task to talk about teachers effectiveness in simple terms. As Biddle and Elna(1964) state " Teachers' effectiveness has to be found out from formal experiences, decisions of teachers, teachers' behaviours and their immediate and long term result".

We know about the teachers from their students or disciples. The disciples or students are the true judges of teachers. It is customary to determine the efficiency and effectiveness of teachers on the basis of the results of students. Teacher effectiveness also includes still other determining factors like the competency they show in teaching, formulating teaching objectives, determining aims and goals, activities which enthuse students and the interest they create in students in the teaching subjects and so on. All these factors have to be considered to determine teacher effectiveness. If teachers with such determining characteristic produce similar best dynamism among students then there is no doubt in students proceeding in the path of success.

As a guide, identifying students with their strengths and weaknesses, formulating clear teaching and aims and objectives are presenting new challenges to teacher's function. Learners not having interest in subject matters is not accidental. But, teachers have necessary responsibility of creating the interest in the students which is absent and sustaining that interest throughout the academic year. In a class room students are not like one another. So, this individual difference is a reality. Teachers have to give attention to these individual differences, construct teaching aids, select audio-visual media appropriately, use computer aids, e-learning and also arrangement of on-line and off-line resource system. As we continue to consider these factors definitely the complexity of teaching comes to our mind. Along with this, there are other tasks like the work of census assigned to teachers, programmes of

school community relations, mid-day meal programme are also aspects which are to be attended by teachers.

Teachers have to facilitate learning of students and have to solve students problems. They have to inculcate the value of hard work and a challenging attitude among them. They have to undertake teaching activities by mobilizing all strategies and competencies of pedagogy. Above all these things teachers have to give attention to problems with open mind, finding one or the other solutions, maintain the important documents of the school, undertake action research based on teaching process and become good communicators. Thus, they have to present a model personality to students and society. All the above explanations show the complexity of teaching. Teaching is not at all the instruction given in the class room. With confidence he has on teaching learning process, Smith equates (2015)teaching with learning consisting of respect and honour and knowledge which can be shared throughout life. That is why, teaching has become as the best profession and has provided a golden opportunity for teachers to influence thoroughly the youngsters of future generation. Thus, teaching has become a complex process which can achieve many things at a time depending upon the situations.

Check Your Progress - 1

Multiple choice questions are given below. Indicate the correct alternative by the symbol '✓'.

1. Teachers' success is known by _____.
   a. By the result of students
   b. By the teaching methods they have adopted
   c. The discipline they follow in class room
   d. The popularity they enjoy among students.

2. "A cordial bond or relationship between a matured individual and less matured individual is known as teaching" .This statement was given by_____.
   a. John Dewey
   b. Jackson
   c. J.B. Hugg and Duncun
   d. H.C. Morrison

3. Some sentences are given below. Indicate those sentences that you feel correct by '✓' mark and that you feel incorrect by X mark.
   a. Once the teacher identifies and rectifies the defects of students there ends the duty of teacher.
   b. One can know the effectiveness of teachers through action research

c.   Teaching is nothing but learning with discrimination, respect and cordiality.

d.   There is no interrelationship between the problem of mid-day meal and teaching becoming complex.

e.   In the class room individual difference is one factor that makes teaching complex.

f.   Students not showing interest in learning is a great offence committed by them.

3.2.3.2. Reasons for Teaching to become a Complex Activity

Activity-2

A child has drawn a picture of his mother as it imagined. As child was of 6 years of age, picture was fairly good but for one thing. Child's mother herself will tell about that, listen:

" Puttu, how good have you drawn the picture. But why so many hands for amma? I have only two hands". The answer the child gave to this brought a smile on the face of mother. " Amma. Although you have two hands you do so many work at the same time. That is why I drew the picture like that"

There are so many similarities between role of a mother and that of a teacher.

Identify those similarities and list them.

We saw the description of how teaching is a complex process in the subheading 3.2.3.1 of this Unit. Now let us understand the reasons for this complexity. Teacher's teaching process is not merely an ordinary journey. Instead, quite often it is a journey wherein mountains, hillocks, rivers, ponds, and ocean are encountered to make the journey dangerous. The policy of Education for All is alright. But, is it possible to take all to the same level of learning? It is not as easy to teach the curriculum as it is in preparing curriculum. Because, the curriculum is already determined. While teacher teaches the curriculum it is same for all. But, the children to whom it is being taught are of various types. So, to tackle this challenge, the need of text and teaching method, selection of techniques, the inevitability of teachers to create some activities besides the available facilities using their creativity-all these are responsible for this complexity.

In the present context, the fast changing society which acquiring fast paced complexity, has been presenting new demands to education system and to teachers. Student community with its diverse personality must be properly observed on an individual basis and then teaching has to be done. To do this teachers need to adopt diverse teaching methods. Teaching has to be adopted in accordance with children's needs. Teaching needs to be

undertaken keeping in view the learning level of students, their abilities, their background, interests, attitudes and aptitudes. Every student has his own learning style, learning pace. Teacher can not neglect this fact. The culture and community in which a student has grown up would also influence his learning. One can not set aside this fact and continue teaching process. Now, let us analyse some factors which have rendered teaching process complex.

Various abilities with various levels present in children: It has been found out from various research studies that students who possess better learning ability exhibit better learning performance in the absence of teacher directed instructions. Similarly, students possessing mediocre or poor learning ability exhibit better learning performance with the assistance of teacher directed instructions. Situation being this, teachers have to be ready with learning situations, learning materials and strategies which are flexible suitable for both types of group of students. In this direction teaching techniques are of great help to achieve wonders. Thus, the synergy between teacher's teaching style and students' abilities would have a tremendous influence on attitude, motivation and achievement of students.

Learning Styles of Students: Every student is endowed with his own learning style. These could be reading, reflective learning, reflective thinking, dependence on learning field, autonomy and self reliance and self decision etc. In the same way student has his own priorities in learning. While some students learn better through listening or through audio medium , other students have a priority for visual medium. Besides, every student process, symbolize and decode the information that they get in their own method. This method would vary from one student to another.

Characteristics of students' personality: Here, by characteristics personality we mean every student's attitude, self confidence, independent interests and abilities as also their anxiety, despondency, dilemma or conflicts, emotional balance. All these would affect learning. However may be the teacher's teaching, since these factors are going to affect student's learning the attributes of quality teaching may not be expressed in terms of learning of students only.

Complexity of classrooms: Earlier, there was a notion that becoming teacher is easy job. Because, it was believed that telling the information known to the teacher to the students inside the class room became teaching. In reality, teaching is the most difficult among all professions. Teaching becoming a difficult job is partly due to complexity of classroom(Douglas 2009, Doyole 1986). It would be really astonishing if all the roles that teacher has to play inside the class room is revealed. If need arises, then teacher has to play a number of roles as that of a lawyer, teacher, observer, sports coach, director of activities, guide, personal counsellor etc(Kaplan 2003). Teachers have to under take numerous

decisions in a single day.(Danielson, 1996).One has to keep in mind learning, safety, health, mental health and other needs of students.

As the National Professional Teaching Adarsha Committee has identified in 2002, best teaching would not be simple. Since learning activities are numerous in side the class room and they need to be achieved in quicker pace, this has rendered teaching even more complex. Teachers need to take their decisions in such a quicker pace with appropriateness that there is neither adequate time nor opportunity for consultation. This kind of stress arises during teaching situation.

Variety in learning environment: Learning contexts are normal in class room, learning situations are of various types. The entire class room is influenced by learning style, experiences, needs and personality of every individual student. In the same way, physical, socio-cultural and historical background of the class room are also different. Some progress in learning by listening. Their processing of information is based on listening. Lecturing, lecturing and demonstrating would help in learning in this case. Some other progress in learning by seeing. They need visual medium for their learning. Still others learn by sense of touch. That is the learning of these students would be experience based. Although we categorize learning styles as mentioned above, all these affect learning acting together. This kind of multifariousness of media of learning makes classroom teaching complex.

Indefiniteness: As Jackson(1986) puts it, one can not say in definite terms that classroom is always like this. On account of this indefiniteness even teachers find it difficult to decide exactly and plan their teaching objectives and aims. Hence, they are unable to figure out long term learning outcomes. As Eysner (2006) opines, there always exists an element of indefiniteness regarding teachers' effort and outcomes. Nobody knows what students are going to become once they complete their school learning. What did they learn from us? Are we responsible for their learning? Or is there some thing else? All these can not be identified.

In totality, teaching becomes complex. Because, there needs to be complete preparation. Reflective reading, thinking and repetition must be there. Some times teachers feel that work is not going to finish in spite of so much of effort (Lindquist and Noredanger, 2006).Due to the complexity of class room, it takes years to achieve proficiency in the art of teaching(Berliner, 2004, Cuban,2010). For this there is a need for deep study and critical experience.

Many factors beyond what is mentioned above have made teaching complex. They are as follows:

Disturbing environment: Some times the environment out side the class room presents such hindrances as to influence the learning process negatively leading to disruptive consequences. By ignoring such obstacles, even if one tries to continue with teaching, it would not be possible. Similarly, problems inside the class room like 'indiscipline of students', adolescent problems, and lack of synergy between extracurricular activities and academic programmes may create problems. Not only this, the mike used by the public functions taking place in a building adjacent to the school is also a source of disturbance. This list is endless.

Expectations amidst relentless changes: Changes are taking place in education field continuously with a rapid pace. Same is the case as far as policies and regulations of governments are concerned. They are also witnessing changes. All these are for good. But, if it becomes too much it is not good. It should happen in a gradual manner. Otherwise it would become an obstacle. All of us are living in a constantly changing situation. There is a need for teachers to find out some solution in this direction to make their teaching more effective.

Maintaining balance: It is a common occurrence that teachers come to school early and return home lately. It is so because the responsibilities they shoulder in schools. There are other works apart from daily work. For example, special days, community meeting, census work etc. Maintaining cleanliness of school premises and class rooms, consultation with parents, examinations to be conducted mechanically, tests and evaluation of these and some times some other tasks take away the time to be spent at home. If this is the case then the harmony between the profession life and personal life would become nothing short of a dream. They would be under intense stress due to the conflict between professional life and personal life. Good teachers are ready to spend their valuable time beyond that is needed for curriculum transaction. Although it influences students' learning teachers should remember that maintaining harmony in their life is equally important.

Individual differences and uniqueness among students: Every student is different from another student. At the same time each student is unique in himself or herself. The interests, attitudes, abilities and needs of each learner are special in themselves. It is a very difficult task to estimate these individual differences. Generally, as they are under the pressure of more work, teachers manage their teaching keeping students of average range in mind. As a result, it is possible to neglect gifted students and students who are of below average abilities. But, according to the educational principle every student should come to the consideration of teachers. This principle seems to be good theoretically, But it becomes difficult to practically implementing this.

Lack of resources: Economic factor influences student learning in several ways. It is a common reality that such schools that are not economically sound have more number of students and the environment of such schools is not suitable in any way for present times. In such schools obsolete technologies, outdated books and other obsolete resources are usually found. The class rooms are so small that they are not adequate for children to sit. In such situations effectiveness of teacher would be lost.

Lack of time: You ask any teachers. The answer would be the same- "We want to do many things. But time is not enough". Syllabus to be taught and available time for teaching the syllabus are poles apart. As a result, teaching ends with the feeling that the content is more than what has to be taught from the examination point of view.

Cooperation of parents: School functions would not be successful from teachers only. If we want that what ever functions teachers undertake including class room teaching to be successful the co operations of parents is needed. But, all parents do not cooperate with the school. There may be several reasons behind this. We have to remember that for the success of education of children, parents' contribution is also very important. The probability of learning success of such children would be more who come from such homes in which parents impress the significance of learning upon children from the beginning. Although many parents have aim and desire to get good education for their children they do not know how to reach that goal. Such situations are really a big challenge for teachers. Hence, teachers should consult with parents and make them active in that direction. He should make them realize the role of parents in the education of children. Parents have to be actively involved continuously in all the activities of the school.

So far, we have discussed the multi facets and complexity of teaching.

Check Your Progress - 2

Some multiple choice questions are given below. Select the best answer according to your choice and put a '✓' mark.

1.   The suitable technique for students having better learning abilities_____.
    a.   Technique with out any direction
    b.   Technique with direction
    c.   Self-learning aids
    d.   Group activities

2. The person who advocated that reason for teaching becoming complex is due to complexity of class rooms- _____.

    a.   John Dewey

    b.   Jerome S.Bruner

    c.   Jackson

    d.   Douglas and Doyle

3. Some statements are given below. Some of them are true and others are false. Put a '✓' mark for the true item and Xmark for the false item.

    a.   Presenting ideas which are known before children is teaching

    b.   'Teachers take many decisions or judgements with in a day

    c.   Class room situations are always in indefinite state

    d.   Complex environment facilitates learning

    e.   Lack of proper procedures creates anxiety in teachers and students.

    f.   Harmony takes place naturally between professional life and personal life of teachers.

3.2.4. Let us Summarise

- Teaching is not an ability that comes from heredity. It comes from learning and training. It is also true that in some teachers teaching qualities appear to be in born. But, it is very rare. Teaching includes several techniques and skills and practices. Naturally, teaching is an intellectual and logical activity.
- Teaching is a complicated process.
- Many factors make teaching as a complex process. In the present context society which is quickly changing and becoming complex is influencing education system and expecting many new demands from teachers.
- Every teacher has to teach keeping in mind the individual differences among students. In order to do this, teachers have to adopt varied teaching methods suitable for varied situations.
- There is need to understand the fact that teaching is a complex process.

3.2.5. Answers to 'Check Your Progress - 1 and 2'

Check Your Progress - 1

1)-a, 2)-d, 3) a-X, b-✓, c-✓, d-X, e-✓, f- ✓

Check Your Progress - 2

1) - a, 2) - d, 3) a - X, b-✓, c-✓, d-X, e-✓, f-✓

3.2.6. Unit end Exercises

Explain how teaching is a complex process and the factors responsible for this.

3.2.7. References

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Block 3 : Understanding Teaching
Unit 3 : Reflective Teaching to Enhance Learning

Unit Structure

3.3.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain the meaning of Reflective Teaching;
- Clarify relationship between reflective Teaching and Learning;
- Justify the significance of Reflective Teaching;
- Identify the evaluation tools and techniques which help Reflective Teaching; and
- Adopt the standards helpful for Reflective Teaching.

3.3.2. Introduction

Many a time after the work is completed or writing of an examination is completed, it occurs to our mind, "Oh! I should have done still better. When I turned the page I found that I should have to answer two more questions. But, I did not turn the page at all!" Thus, what should we do when a mistake is committed? Then, we have to analyse the situation impartially and without any prejudice leaving every thing aside. If we tackle such situations, then such situations would arise less frequently. Thus, it is hoped that the development of individual who makes self-criticism will continue smoothly. Further, if such confusions or

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mistakes occur one can take proper measures or one can take precautions so that such situations do not occur. Is it not so?.Thus, the process of analysing our actions introspectively is known as Reflection or Reflective Thinking. It is a kind of introspective action. In this Unit, you are going to learn about the introspection teachers make about their teaching. When we analyse already occurred incidents based on our memory there are chances of natural errors creeping in. Therefore, to make this process more scientific as for as possible, many tools and techniques were discovered. In this Unit, we will discuss various points such as their nature, significance and use of Reflective Teaching

3.3.3. Learning Points and Learning Activities

3.3.3.1. Broadening Learning and Reflective Teaching

Activity-1

Below are given certain statements made by trainees.Notice

- "I used to take decisions about students unnecessarily in the beginning itself. I myself used to call them by names like naughty, mischief monger etc."
- " One student used to play mischieves, play pranks or ask non-sense questions- thus he used to create one or the other trouble. I felt my class room teaching and lecturing is being spoiled by him. Often I thought if this fellow becomes alright, the class room situation would become fine. Once, my senior teacher gave me some advice. According to his advice I talked to that student. Then , I realized that the student knows many things. In fact, he was more intelligent than others. After this meeting my view about him changed entirely. I used to prepare some challenging tasks exclusively for him. He liked them very much. Gradually, he began to participate actively in all the class room activities. Where ever he saw me, he used to greet me with respect. Once, when I was waiting for an autorikshaw, he got down from the autorikshaw and told the driver " Give a drop to madam. I will go later". I could not say anything"

Among the above mentioned incidents, what does the first incident indicate and what do you make out from the second one? Make a comment. Cite the reasons.

You have learned considerably about the meaning of learning, its characteristics and nature in the previous Units till now. Learning has been defined as the desirable, positive changes that are brought about in the behaviour of students. Learning has its impression in the cognitive, affective and mental zones of students. Most of the times the learning of students would be limited to knowledge zone. Implementation or adaptation of knowledge

in any field that the learners acquire is a rare phenomenon. But the educational aims and objectives reiterate growth in knowledge zone. Since our education system glorifies examinations. At the end, what ever children write in the examinations that itself becomes important. Hence, students some how remember the information, write them as answers and get good marks. Not only that they feel a sense of great accomplishment. But, real learning is not just getting marks. There are many more types of competencies other than the learning in the form of writing answers by way of remembering information. Learning those abilities will lead the child towards all round development. We should consider the growth in learning in these terms. If we consider knowledge zone answers given by students after understanding rather from rote memorization are more coherent. Teachers can bring growth in learning in many ways- analysis, synthesis, problem solving, creativity, constructivity and undertaking social activities, free interaction with others, inculcating democratic values. Similarly, when acquiring knowledge is transformed into knowledge building, better educational outcomes can be expected. Instead of becoming information giving machines, teachers need to become counsellors facilitating learning. Therefore, despite the fact that no one is going to make criticism of the profession one is following, there is an urgent need for self examination. This kind of urge has paved the way for "Reflective Teaching".

Normally, all professionals undertake this kind of Reflective Thinking. Reflective Thinking means critical thinking. Thinking about the performance while teaching or after teaching is known as Reflective or Critical Thinking. In the same way, when we think of already occurred incidents we may find some mistakes and some positive aspects. By using feedback thus obtained, one gets an opportunity to plan the future teaching process even more effectively and to implement it even better. In a way this Reflective Teaching is not a new idea in educational field. The source of this would take us many years back in time. We can safely aver that since time immemorial, educationalists and professionals have employed this skill and have handed down that skill to the future generation as a gift. About 50 years back itself as Richardson(1990) says, educationist John Dewey has put this idea into practice.

If a teacher is to become a Reflective teacher he should possess certain characteristics. For instance, while accepting teaching profession one should have understood oneself deeply, broadly and should have self-awareness. They should have clear social and moral stand. When it is felt that work is not being accomplished as desired or a subtle sense of certain mistake is experienced, immediately one should stop the work in a gradual manner,

and then one should undertake close observation, examination, analysis and enquiry of the situation at hand.

Reflective Thinking paves the way for Reflective Teaching. Teachers engage themselves in Reflective Thinking with regard to their teaching practice. Reflective Thinking is a process. Here, teachers think about analysis, criticism and explanation as regards to the teaching they did in the class room. How effective the teaching was? How did it motivate children? To what extent our teaching influenced learning level of students? How can the teaching methods be improved still further? How can growth in learning be brought about even more? Reflective teaching is a personal tool of a teacher. This tool is used to find answers to questions like how did I teach this? How did I behave? How did children learn? and to test and evaluate effectiveness of teaching. It is not just a summary of what happened in the classroom. Instead, it is a process of inquiry made with calmness and structured fashion. This demands infinite patience, impartial observation with a total grasp of class room transaction. Let us see various definitions of Reflective Teaching put forth by different educationalists:

'Jack Ricards(1990) has defined thus: "After experiencing any activity or process, the process of evaluating it with a broader perspective by creating once again a mental map by recalling it consciously is known as Reflective/Critical thinking". It being a response to the past phenomena, the design of future course of action and their planning based on assessment of past experience is formed.

Bartlet (1990) opines that to become critical teacher one has to think beyond class room teaching. One should have clear answers to all the questions like what?why?how?where?when? and to whom with reference to the subject content to be taught. Teacher should not become just a supervisor of the classroom. Instead, he has to transform himself/herself into a model for the modern aim of education. Teacher becoming accountable for his own work and responsibilities is the hall mark of a Reflective Teacher. There in no doubt that Reflective Thinking would be main stream in transforming of daily classroom life(Barlet 1990).Reflective Thinking and Reflective Teaching would sustain and protect professional experiences.

Reflective Teaching is a process where in teachers not only come to know about the quality of their teaching practice and curriculum teaching by analysing them but also a thinking process where in the way of improvement or modification is thought of to get still better learning outcomes of students' still in a better manner.

Reflective Teaching is a self-assessment tool and through this teachers are enabled to take decisions regarding implementation of pedagogical rules adopted in teaching, identifying teaching strategies, becoming clearly aware of merits and demerits and identifying fields where reforms are needed.

Reflective Teaching functions in such a manner that the confidence, belief teachers have with respect to teaching profession and rules and procedure they follow inside the classroom as well as the values of their professional life in its entirety are put to test. To do this certain tools need to be employed. They are check lists, Inventories, Rating Scales, questionnaires, observation, and electronic and digital documents, feedback from co-teachers and students etc. In addition to self-assessment, evaluation made by students is also collected. Teachers assess their teaching critically on the basis of information obtained from all the tools and solve frequently encountered problems.

According to Brookfield (2017), mainly four methods or procedure would help teachers in knowing the quality of their teaching. They are evaluation of students, viewpoint of fellow teachers, one's own experiences and experiments and researches that are under way in the field of education and their outcomes.

Check Your Progress - 1
Multiple choice questions are given below. Indicate the answer that you feel correct by '✓' symbol.

1.   Reflective Thinking means _____
    a.   Reflection
    b.   Critical thinking
    c.   Reverse thinking
    d.   Imitative/Simulative thinking

2.   Reflective thinking paves the way for _____
    a.   Logic
    b.   Sharp intellect
    c.   Analysis
    d.   Reflective Teaching

3. Certain sentences are given below. Indicate those which according to you is 'True' or 'False' using '✓' or X respectively.
a. Reflective Teaching is self-assessment of teachers.
b. Reflective Teaching does not need feedback
c. Reflective Teaching sustains professional experiences.
d. Assessment of teachers made by students does not have much meaning.
e. Reflective Teaching is full of improvements.
f. Teachers' teaching becomes better by Reflective Teaching.

3.3.3.2. Assessment Tools helping Reflective Teaching

Teachers' schema of teaching concept would become better in case they undertake Reflective teaching activities. Due to this, they not only adopt pedagogical rules systematically, but also they use maturity and plan logical skills in the daily class room transactions. Besides progressing along the path of development, they also lead their students on the path of progress. In summary, teachers becoming Reflective teachers in every sense of the term indicates nothing else but development. When teachers question themselves, they are analysing their own teaching in several ways. Such questions are given below. Notice them:

1. What is the purpose of our teaching? Did the purposes that I identified in my teaching succeed?
2. To what extent the resources and strategies that I employed were proved to be effective?
3. In what manner students were categorized into groups?
4. Did teaching transact as I planned? Or was it different?
5. What kind of philosophy came forth from my teaching?
6. Did all the students in the class benefit from my teaching?
7. Did students respond actively during teaching?

Thus, while answering the questions teachers get a clear picture of their teaching. Based on this, action research can be undertaken for further improvement. Reflection makes the meaning of the factors to be considered while planning for future and modified clearly (Gibbs 1996). Reflection means review. As John Dewey puts it Reflection is the heart of intellectual organization and it includes mental discipline. For professional growth Reflective teaching is like a high way. Reflection based discovery provides flexibility to teaching system. On account of this, teaching practitioners get mental courage to accept the success and failure of their work with out any prejudice. Reflective teaching creates a platform, environment and ambience that are constructive for the sake of real development. Creating

a self-awareness in teachers Reflective teaching paves the way for experience based improvements. Normally, all teachers, in the beginning, feel teaching profession as a hard nut to crack. But, as the time passes, becoming matured through their experiences they achieve success in their profession.

Shoven(1983) further refined the concept of Reflective teaching and presented it to the educational field. According to him, Reflective can occur in two ways: 1)Reflection when activity is going on and (2) Reflection that occurs after the activity. While teaching is under way, reflection is undertaken by using certain techniques. For instance, Flaunder's Interactive Analysis. Likewise, reflection done after the completion of activity. For example, documenting the teaching practice classes assigned to training teachers through observation and then analysing them later.

When a teacher engages himself, sitting at leisure, after the completion of class room teaching in recalling, analysing and criticizing the transactions that took place in the class room, then we say that he is undertaking Reflective action. This is an immediate process. If reflection takes place long after completion of teaching its effectiveness would be diminished. Both in-service and pre-service teachers have the opportunity to take up reflect teaching.

Polgaurd(2008) has provided elaborate explanation about the various dimensions of Reflective Teaching. He has put forth positive changes that result from it. Teaching procedures change qualitatively because of Reflective teaching and from this results growth in the learning of students and better learning outcomes are secured. Reflective teaching is an ability that could be developed by any body, it being a simple process. Having said all these, it need not be imagined that there are no obstacles to Reflective Teaching. Certain obstacles that surface incidentally can be listed as follows:

- Negative past experiences.
- Lack of motivation
- Lack of time
- Self-expectations
- Expectations of others
- Fear of failure

If the above mentioned obstacles are identified and removed one can take up excellent Reflective Thinking. It would bring success to both teacher and student community (Casilla and Lariala 2012). National Teacher Education Curriculum Framework has recommended

that Reflective Teaching should be the central point of all teacher education. There are numerous standards acting as foundation and support to Reflective Teaching. It has variety. For instance,

- Self assessment
- Observation and Teaching Check list
- Self-Review and Review by others
- Team teaching
- Writing feedback about his own teaching
- Documents containing one's experience
- Self-report
- Contributing to Daily Newspapers and Monthly Magazines
- Writing consolidated routine together with fellow teachers

a. Self-assessment: Teachers put these questions to themselves-
- What went fine in today's class?
- How else could it have been done?
- What other modifications need to be brought for my next class?

b. Teaching Check list: This is a performance questionnaire consisting of multiple choice questions. To answer all the questions in this questionnaire 10-15 minutes are sufficient. These questions are framed based on diverse dimensions of pedagogy. It may contain questions related to student centred system and teacher centred system.

c. Video Recording of Teaching Practice: This can be done both formally and informally. If observation check list tool is also used then, more systematic evaluation becomes possible. Later, there is lot of chances of getting feedback on subjecting to analysis.

d. Using a small recording studio for class room teaching-learning situation:
When a class consisting of small group is conducted in a small recording studio itself, then in short span of time every thing becomes available in the form digital document. Not even an iota is left out. At a later stage, analysing this document reflection can be done.

a) External Evaluation System:

Evaluation by Students:
Teachers can get feedback about their teaching from their students. Normally, this feedback is collected from the students when half-yearly and yearly examination or semester

end examination is conducted. But, it is quite natural that there is some defect in this. While Students answer the questionnaire, there is all possibilities of they being prejudiced and immature and hence their statements can not be considered in Toto. But, it can be considered with some discrimination from our side(Baso 1995,Wachell 1998, and Huston 2005).

b) Observation, Evaluation by Fellow Teachers and the Department and Feedback:
By allowing fellow-teachers and department officials to observe the class room teaching one can get a feedback which is more accurate. They might suggest some modifications in teacher's behaviour.

What are the benefits obtained by Reflective Teaching?
- It becomes possible to keep the techniques used in teaching firmly in memory, to think and to evaluate.
- It turns out to be the foundation to prepare and design the future plans and to take decisions.
- Teachers who are Reflective are able to understand the procedures and methods of their teaching. Besides, it is possible to understand the ideas still more clearly- use of theories concerning teaching, directing experiments for qualitative outcomes, foundation of teaching, size of the class, language used by students, their learning level, abilities, sources of teaching, textbooks and other resources etc, knowledge acquisition, development of view points internalizing values, finding better solutions to classroom challenges, understanding about the organization one is working for and about the background of culture of community etc.

Check Your Progress - 2
Multiple choice questions are given below. Indicate the alternative that you feel correct by the symbol '✓'.
1. Reflection creates _____ in teachers
    a. Confusion
    b. Self-awareness
    c. Attitudes
    d. Interests

2. Because of Reflective Teaching the teaching methods are transformed _____.
    a. Qualitatively
    b. Into complexity
    c. Into simplicity
    d. Negatively

3.	Some sentences are given below. Indicate those you feel "True" or "False" by the symbols ✓ or X respectively:

a.	Negative past experiences turn out to be obstacles for Reflective Thinking

b.	Although Self-review leads to reflection it is not true.

c.	When digital recording is available there is no need of other evaluations

d.	Observation by fellow teachers helps in Reflection.

e.	Reflective Teaching helps in finding out solutions to class room problems.

f.	Time is a severe constraint for Reflective Teaching activity.

3.3.4. Let us Summarise

- When teachers question themselves about their teaching, then they are doing analysis of their own teaching. Questions would be like these: What is the purpose of my teaching? Is the purpose achieved? In what manner students were categorized into groups? Did the teaching occurred as planned? Or was it different? This kind of Reflection is known as Reflective Teaching.

- When a teacher engages himself, sitting at leisure, after the completion of class room teaching in recalling, analysing and criticizing the transactions that took place in the class room, then we say that he/she is undertaking Reflective action. This is an immediate process.

- There are number of standards that can become foundations and basis for Reflective Teaching. It has got variety. For instance, observation and Observation check list, Self-assessment and assessment by others, group teaching etc.

3.3.5. Answers to 'Check Your Progress - 1 and 2'

Check Your Progress - 1

1)-b, 2)-d, 3) a-✓, b-X, c-✓, d-X, e-✓, f-✓.

Check Your Progress - 2

1)-b, 2)-a, 3) a- ✓, b-X, c-X, d-✓, e-✓, f-✓.

3.3.6. Unit end Exercises

Explain the meaning, nature and advantages of Reflective Teaching.

3.3.7. References

1.   https://www.ncert.nic.in/publications/journals/pdf

2.   https://www.researchgate.net/publication/228509033/reflectiveteaching

3.   https://www.edu/eli/edue647/reflectiveteaching/pdf

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Block 3 : Understanding Teaching

Unit 4 : Teaching in Various types of Classrooms(Cognitive Abilities, Learning Styles, Differing Socio-Cultural Contexts, Language Differences, Gender Differences, Students at risk) -types resuling from these factors

Unit Structure

3.4.1. Learning Objectives

After going through this Unit, the student teachers will be able to

• Identify differences in cognitive abilities;

• Analyse the relationship between difference in cognitive abilities and learning styles;

• Explain the basis of Socio-Cultural differences as well as teaching activities;

• Critically analyse the effect of Language differences;

• Determine how to adopt teaching for children with the problem of learning disabilities; and

• Undertake procedures to teach children in at-risk situations.

3.4.2. Introduction

This Unit is about the topic of differences among individuals and learning process which have been discussed several times. The cognitive abilities of interpretation, analysing, taking decisions, comparing, and logic- all these are the behaviours of cognitive domains. Although these abilities are present in every individual their level will be different. Hence, facing such differences in class rooms is an unavoidable and natural situations for all teachers. Similarly, children coming from different Socio-cultural background have different language and cultural background. The education of all children occurs in only one language. That language may be the mother tongue of children or it may not be.The context in which the language spoken at home and language in class rooms are not the same is a challenge for teachers.

Another problem which troubles teachers is the problem of gender and along with this the special challenges of special children. Another challenge in rural schools is of children who drop out of the school, that too girl children. Apart from parents the person with whom children interact is the teacher. It is only possible for teachers to bring about development of children with responsibility. In this Unit, you will understand the role of teachers who take the children in spite of many differences towards the goal of development.

3.4.3. Learning Points and Learning Activities

3.4.3.1. Types of Cognitive Abilities and Learning Styles

Activity-1

It said that milk is a complete food. Concentrated milk is very nutritious food. But, all can not be provided with thick milk. Milk as concentrated as it could be is so much good for pailwan, wrestlers who practice wrestling in Gymnasium. But, if infants given such milk it would lead to indigestion problem. So, water is mixed to make the milk less concentrated and then given to the child. Similarly, milk, cream of milk, clarified butter are all prohibited for person suffering from Jaundice. Even after the patient has recovered he can only consume butter milk for few days. Make a comparison of this with learning style of students in the class room and observe. In your class room with what kind of style the students are learning, make an observation. Among them you may find children who learn by rote memory or you may even find children who may learn Mathematics problem by heart. Learning style of children will be according to their cognitive level. Teacher needs to teach children in a way that suits both these factors. Conduct a short survey in this regard and prepare a report.

Whatever may be the class room, there would definitely be students with different learning styles and of various types. This is a universal truth. Teaching by balancing the personality differences of children is not an ordinary thing. Difference among children that normally found in a classroom is as follows:

- Exceptional (Talented) children
- Children with special learning abilities
- Children with specific learning disabilities
- Deaf and Dumb children
- Children with a probability of dropping out of the school
- Children with dyslexia
- Children with defect of lacking concentration, etc.

Different learning styles that we find in children are impression learning, visual learning, audio learning, kinesthetic learning etc. The difference we find in children in classroom is what is known as cognitive difference. It seems right naturally to us that teacher would concentrate more on and with greater observation teach those children with average intelligence who are found to be more in number in a class room. From the curriculum stand point all children achieving highest level of learning should be the primary goal of teaching. This goal needs to be reached making appropriate modification according to personality differences. It is possible only when school, teachers, school management and parents put forth effort together.

Multiple intelligence and various learning styles is known as cognitive differences. On account of this fact children exhibit ability of possessing proficiency in more than one field. Language ability of students, knowledge idioms, logic, analysis, spatial relations concepts, auditory intelligence, coordination of and control over bodily movements, innate observation ability, inter and intra personality skills- all these are responsible for differences in cognitive ability. The level of these abilities would be different from individual to individual. Teaching in unitary manner without employing teaching methods suitable to these differences and with out taking note of priority of learning styles in students is not going to result in best outcomes. It is also quite natural that interest and motivation of children are also different for different subject to learned. In the same way, mode of learning of various subjects would be different. Mathematics and Science seem to be a hard nut to crack for those who learn language with ease. When this is the case, by transacting learning activities suited to curriculum, students' ability and learning styles to the extent possible, better outcome could be expected.

Learning Styles: The process of learning in a specific, prioritized way is known as learning style. It is important for teachers to take note of learning styles of every student. Planning and implementing teaching suitable for their learning style results in greater possibility of better learning in children and in achievement of goals. Although childrens' learning styles have been classified in many ways, broadly they are classified as follows:

1. Visual learning style
2. Auditory learning style
3. Tactile learning style
4. Verbal learning style
5. Logical learning style (Mathematics)
6. Social learning style (Intra personal)
7. Solitary learning style (Introvertial learning)

Cognitive Style: This is also another concept of learning style. It is concerned with how students process and retain learning content in their memory. It has been classified as field dependent learning and field independent learning. In field dependent learning style, ideas like concept of universe, concept of completeness are learned well. Students show more interest in subjects like Social sciences, Humanities, Literature, History etc. In field independent learning style, children exhibit intellectual functions of analysis, logic, comparison, generalization. They excel in Physics, Chemistry, Graphics and in project planning. Similarly, some children have Reflective learning style. These children observe things with patience and tranquility. The response from them is also slow paced. Assessing pros and cons is their nature. Unlike these, there are also children who do things with out a second thought what they feel right.

Understanding learning challenges and procedures to overcome them :

Normally, learning challenges and learning difficulties arise due to bodily, cognitive, language related and behavioural defects. These kind of difficulties stifle learning level. Certain specific defects have been identified. They are, (1) Intellectual disabilities (2) Learning disabilities (3) Learning disabilities due to visual defect (4) Learning disabilities due to speech and hearing defects. Apart from these, learning disabilities occurring due to partial paralysis of brain (Cerebral Palsy), Autistic spectrum disorder, learning disability due to lack of attention, Epilepsy and Hyperactivity defects etc.- These too stifle the learning level.

Intellectual Disabilities: Characteristics such as limitations in understanding, lack of logical thinking capacity, low level of intelligence are expressed in terms of intellectual disabilities.

When such is the situation, teachers by teaching children with certain strategies enable them to create opportunities wherein they adapt themselves to their own learning levels and learning difficulties. Similarly, if there are children with behavioural problems, they should be taught self-control skills and meta cognition ie. Strategies to know oneself, this in turn would be a solution for their problem.

Students with Exceptional Ability and Multiple Abilities: Children belonging to this category are talented and show unparalleled performance and achievement in many intellectual abilities. But, children with multiple abilities exhibit their excellent abilities along with certain learning challenges. Many a times, only defects draw our attention and therefore their unique ability will not come to light or sometimes only ability catches our attention while defects go unnoticed. Thus, either of these might come to pass. With regards to such children one needs to identify their strength and abilities, at the same time encouraging and motivating them and problem solving, creativity and analytical skills need to be developed in them. It should be possible for us to create an environment suited to their interests and to the subjects commensurate with the curriculum in which they show good performance according to their personality differences. It should also be possible for us to develop in them skills like self-control and group discussion, cooperative learning, self-evaluation and to develop ideas.

Main stream and ability based grouping: While taking the decision whether children with special ability are to be merged with main stream class room or are they to be formed into a special group, teachers have to arrive at a decision only after analysing in various ways. For this, it becomes extremely important for teachers to undergo special professional training and to maintain cordial relationship with parents. Teaching children with less intelligence and facing learning challenges and such similar experiences would be causes of teachers' professional growth. In comparison with this, accelerated learning opportunities that become available for talented children provide many academic advantages to them. This is also applicable to children with multiple disabilities. For instance,

- Obtaining opportunities at classes above the general class
- Receiving instruction and training to a maximum extent from subject specialists.
- Getting learning opportunities even outside school. Because of this they can enhance their special knowledge/ talent even further.
- Instead of completing the class grades in a normal course, finishing learning satisfactorily and undertake learning of next stage quickly. Because of this, one can reach higher level of education and learn successfully at an younger age. But, this kind of situation is not present in our country. Governments need to take note of this and create opportunities.

- Grouping based on abilities offer excellent academic advantages to talented students. But, there is a possibility of children with multiple abilities getting affected negatively.
- School should not prevent opportunities for children with accelerated learning. While learning along with senior students their social, emotional development needs to be observed.

Implications for Evaluation: When teachers become aware of different learning styles and multiple intelligence of students they have to adjust their evaluation considerably. They have to bring variety in both in their teaching and evaluation method. According to personality difference of students it is necessary to observe each and every one. Formative evaluation, direct instructions, guidance based on performance feedback, cooperative learning and along with this creating a school environment consisting of inclusive education system- all these act as effective tools to lend help in managing various cognitive styles and learning styles of students.

Inclusiveness and Equality: Many a times learning abilities are so much concealed that they go unnoticed. Therefore, the total accurate number of children with learning disabilities is not obtained. Further, because children with severe learning disabilities are noticed easily and quickly, situations where in learning disabilities of children go undetected likely to be more.

Technical help that can be managed with less cost for Schools with financial difficulties: Providing carbon copies for children lagging behind in writing , giving text lines printed in fluorescent colour for children lagging in reading skills which can be prepared so as to suit those with visual defects. Communication board and knowledge chain (containing a message) can be used for children with speech and language problem. Inclined boards and grip imparting instruments are not only useful for special children but also useful for ordinary children.

Inculcating leadership qualities in talented children: It is one among several programmes arranged for talented children. This programme has four important parts. They are awareness, problem solving, inter-personal communication and decision making. Awareness- This programme is a programme to create awareness. It includes identifying, discovering and learning facts. In problem solving, identifying problems accurately and finding appropriate, creative solutions is taught. It is, in fact, developing cognitive development in a student when he is made aware of the level of achievement he can attain and a clear awareness about the goals, there by making his decisions appropriate and relevant. The task of inculcating skill in a student needs to be done through which he keeps on self-assessing and to make the decision he takes in future stages still more accurately.

Check Your Progress - 1

Multiple choice questions are given below. Indicate the alternative that you feel correct by the symbol '✓'.

1. Cognitive diversity means _____.
    a. Multiple Intelligence
    b. Different types of learning styles
    c. Intelligence
    d. Emotional Intelligence

2. Field independent learning style is _____.
    a. Social Science
    b. Humanities
    c. Physics
    d. Literature

3. Some sentences are given below. Indicate those you feel 'True' or 'False' by the symbols '✓' or X respectively.
    a. Learning challenges suppress learning level
    b. Learning defects are found in children having exceptional ability and multiple abilities.
    c. Children with special ability should be assimilated in the mainstream.
    d. There is no need of supervision when children are involved in learning along with senior students.
    e. Learning disabilities many times remain so much concealed as not to recognized.
    f. There is a need to inculcate leadership qualities in talented students.

3.4.3.2. Social-Cultural Diversity and Language Diversity

Activity-2

Individual is influenced by myriad social factors. Among them, we can cite the examples of television, cinema, mobile phones, internet etc. Few years back some children who watched 'Shaktiman serial, assuming themselves to be as Shaktiman in the serial, jumped from multi storied building only to loose their lives. This incident is an evidence for this kind of influence.

Following may be or may not be with you. How does their presence or absence would affect you? Think for a moment and register your feeling.

1. TV
2. Music System
3. Your own personal room
4. Balance between your professional life and domestic life.

Socio-cultural diversity and language diversity have been amply discussed in Course 1,Course 2 and in many other contexts. In this subsection these very things need to be analysed once more. Hence, let us leave aside the discussed ideas and try to understand the rest of the ideas. While in some cultures individual good is of paramount importance, while in other cultures universal good is of Paramount importance. If the former depends on Utilitarianism known also as Pragmatism and later, known as Idealism, rests on ideal. Generally we see utilitarian system in Western cultures and society. Giving importance only to that from which there is certain utility is the prime attribute of western culture. Discarding or relinquishing unhesitatingly those which are of no use is the hallmark of utilitarianism. Hence, the concept of "use and throw" is the gift of westerners. Be it fibre cups, ball pens, or whatever it be, once its utility is over, it is discarded and place is given to those which are of some use. This concept, in a way, is a sign of progress too. But, in Idealism, feelings and values have a prominent place.

Not discarding an antique wooden box as a memoir of forefathers of the family and keeping it and maintaining it with a sense of respect and devotion is the characteristic handed down as contribution by Idealism. Indians are experts in this kind of Idealism. That is why, things fit to be discarded or relinquished or behaviours, rituals do not easily leave us. These days things like globalization, modernization, industrialization and commercialization are casting their influence over our indigenous culture also. In the back drop of changing society and culture education system is also undergoing changes. On analysing the attributes of society and culture , we find that it being a bundle of special behaviour of a group, it is the sum total of all the characteristics transferred from one generation to the next generation in succession. Teacher is well advised to follow the below cited strategies to manage this kind of class room diversity.

1. Jigsaw Classroom Design: The method of categorizing children in the class room into small groups in a special way and making them to engage in active pursuits is known as Jigsaw class room design. The point to be noticed here is this: Encouraging children coming from diverse cultural backgrounds to get involved in planned activities or any other group

activities and to make them to work together. When there are various stages in a planned activity, then the task is completed only if every student cooperates with every other. Thus, children learn cooperation, tolerance and cordiality. Then, diversity of classroom turns out to be a boon.

1. Children from various cultural backgrounds mix with one another participating in positive task, it is possible for them to exchange their special information, tradition, customs. When this happens the division such as 'We, ours, of our group/ they are different from us, there is a separate group' would be obliterated.

2. Understanding the viewpoint of others with patience is also a good tool.It is in the hands of teachers to plan such a learning environment of classroom as to facilitate receiving the experience and view point of others. Teachers have the responsibility to devise a creative, constructive and active learning environment.

3. Learning situations fostering critical thinking and emotional intelligence should be adopted in classrooms. Due to this it becomes possible to filter out in essentials from inter cultural relations and to build a strong bond. Only then, the saying 'Unity in Diversity' would become meaningful.

4. For a classroom devoid of prejudice and partiality it is possible to become a best learning platform. For this, teachers need to adopt certain strategies.For instance, wall posters exhibition depicting harmony, tolerance, cordiality, brotherhood and cooperative attitude, study of books, practice of drama, music, telefilms depicting traditions of diverse culture, film shows etc.

5. Observing with interest the customs and traditions of other cultures, respecting them and celebrating together with pomp- all these should be performed as a part of curriculum.

6. All parents have an expectation of their children becoming educated, and best citizens. There is a common desire of all parents irrespective of culture. Education system must take note of this. What ever may be the cultural background of a child, its goal is always will be to become educated.

7. Student must be taught to recognize and respect the culture of every other child. Children should be made aware of culture and strengths of children of that community which are historically has not been represented in a good measure and also of their contribution to society.

8. Every child enters school as a sum total of its own experience and culture. Hence, their prior knowledge and experience should be utilized in the class room. By employing different strategies like role play, story telling, dramatization and opera (Dance drama), children express their respective background well,besides gaining self confidence to participate actively in the classroom.

Language Diversity

The influence of language on human behaviour is profound. Language does not just function as a tool of communication. But, it enhances the special existence of an individual. The reality of society is expressed through language. Language is expressed form of very methodical organization of experiences. Similarly, language has a lion share in our all kinds of organization (Britton,1970).

A child ,while coming to school, brings its own language spoken at home, experiences and attributes of its culture along with it.Child makes out the meaning of any word used in the background of its prior use. In Indian educational system multilingual culture has superimposed some complexity. In our country, every 10 km distance we find a change in terms of language. We are proud to be a nation with approximately 1652 mother tongue. But, it is unfortunate that primary education is being provided only in 33 mother tongue languages(according to 1961 census).It is a very special thing that many of us, on a daily basis, speak trans language composed of many language!! Indians have developed an innate multilingual ability to communicate with others in many languages. This might be a characteristic of our culture.

A child entering into a classroom has to face the difference between the language spoken at home and the language at school. The fact that on all accounts, language used at school and for teaching lessons and for activity is not similar to the language used at home is continuously reaches child. Teaching-learning situation where knowledge transfer takes place is not an exception to this. As it is hard to swallow, so also it is a challenge for teachers to reach the child ideologically. In spite of three language formula is in vogue as recommended by Kothari Commission (1960-64), National Education Policy (1986,Programme of Action, 1992) and National Curriculum Framework, 2005, in the absence of mother tongue, if the classroom communication and teaching-learning activities take place, children would be in a position of not getting any benefit. It would not be wrong if we call it a pathetic condition.

Sustaining and developing bilingualism and multilingualism is one of the goals of language teaching. In order to create awareness about more than one language in children, domestic language of child needs to be gradually, slowly changed into language of school by the teacher in the school. When facilitating learning about this shift, the first thing teacher have to do is to teach ideas associating domestic language with those ideas. At times, translating into their domestic language is also helpful for this. It has been brought to light by many research studies that when children studying in their own mother tongue

are compared with those studying in English medium, with regards to knowledge acquisition no deficiency in language or academics. was found (Segal 1983).Same idea has also been proposed in Nome chomski's Universal Grammar Concept. A child has the ability to learn as many languages as it encounters in its socio-cultural environment (Chomsky, 1986).

One more thing has been proved by research studies. Switching over to English medium only enhances their learning level,that too in Mathematics and Science subjects. Similarly, level of academic achievement of children who learn three languages is also greater than that of those who learn only two languages (Huge,2013).

As Agnihotri puts it " Multilingualism grounded in pedagogy would facilitate English teaching and results in the rise of peaceful, cordial society. Not only that, it creates informed society with attributes like social justice, equality, freedom and mutual concern. This type of society needs to inculcate love and respect for diversity by nurturing logic and intellectual thinking (Agnihotri,2010).Further, he adds " Nation with multilingualism as its prime attribute has its development included in when learning more than one language instead of one is made as an excellent source."

What teacher can do when language diversity becomes a challenge

Understand your students. On many occasions class room teaching activity is transacted without any concern to diversity in the classroom. Teaching would be limited to few students who listen with interest.

Become good listener: If one wants to remove differences, sense of high and low, one should allow them to talk freely. By creating opportunity to speak in their own language. By doing this, at least they can articulate their feeling in terms of language.

Start your teaching-learning process from what they know: This not only makes further learning effortless, but also instils self-confidence.

Follow multilingualism: By providing opportunities in the classroom to express multi lingually boredom, loneliness can be removed. Similarly, knowledge is not limited to any language. The awareness that it is beyond all language is essential.

Check Your Progress - 2

Below are given multiple choice questions. Indicate the alternative that you feel right by '✓' symbol:

    1.   Important characteristic of utilitarianism is _____

a. Cultural good

b. Individual good

c. National good

d. Good of powerless

2. Children exposed to languages in a socio-cultural environment have the ability to learn all those languages. This was proposed by _____

a. Noam Chomsky

b. Vygotsky

c. Albert Bandura

d. Jerome Bruner

3. Some sentences are given below. Indicate sentences that you feel 'True' or 'False' by '✓' or X respectively.

a. Development is included in using multilingualism as best source.

b. Many of us speak trans language by mixing many languages.

c. To inculcate in children to identify and respect culture of others is a futile effort.

d. Utilitarianism proposes ideal values.

e. It is not possible to develop critical thinking in small children

f. A classroom without prejudice and partiality can become a better learning platform.

3.4.3.3. Diversity in Classroom Due to Learning Disabilities, Gender Difference and At-risk Situations As far as Students are Concerned

Learning Disability is one among several causes for school failure which is grave in nature. Reasons for this might be defect in cognitive process including many other factors. Defective knowledge acquisition, failure to understand, weak retention and memory power, paucity of content processing and lack of organizing capacity and lack of skills in using verbal and non verbal content- all these have been universally accepted as learning disabilities. What ever may be the difference between students, be it big or small, teachers need to understand that this is a universal phenomenon. If the diversity is in terms exceptional talent, then it is positive. But, sometimes dissimilarities pose themselves as a challenge both to the teachers and students. To give an example, when in a situation where in children are supposed to grasp content of a text if a child is paying attention to pages, its colour, pictures in it, then it is negative to the expectation of the classroom. But, this very ability is very much necessary for drawing sketches, graphics, maps. Situations like these are also felt as challenges both by teachers and students. Although child can understand the content,

it is not open as to dive deep into the process and the concepts. In such a case, teachers have to adopt diverse strategies and teaching methods and manage. Despite the fact that every student is unique and dissimilar is considered as true, it is inevitable to recognize certain differences and then based on those, children have to grouped. This is not to label children and a keep them away. Instead, with a hope that they would be able to exchange common ideas they have. Children with visual defects, hearing defect and lack of concentration, dyslexia could be cited as examples. All these realities present diversity and challenges inside the classroom.

Children with Visual Defects: The following learning disabilities are found in children suffering from visual defect- failure to read printed matter, and to differentiate colours, hypersensitive to light, lagging behind in learning caused by partial or complete blindness. Teachers are required to identify the level of defect of each children suffering from those defects and to adopt appropriate teaching strategies, skills and methods. Schools, rejuvenation centers can help more in this direction. Technology has also offered help in the form of screen readers and Braile books etc. Huge pictures and big models too can help teachers in teaching subjects.

Children with hearing defect: Deaf children and children with partial hearing defect come in this grouping. As a gift of technology, we can cite the examples of hearing aids, cochlear implant and sign language for teaching-learning. While teaching such students teacher should look straight at them. Because of this, children try to understand some more from the lip movement of teacher and it is possible too. Instruction provided should be simple, easy and unambiguous. Use of abundant visual aids, pictures the probability of contents taught reaching them will increase.

Children with lack of concentration defect: These children have very short attention span and hence can not do the work or listen for an extended period of time. Additionally, they exhibit the attribute of hyperactivity too. As far as possible opportunity should be provided for them to remain near teacher. Making them to engage in group teaching, to engage in cooperative learning, keeping them away from source of distraction ,giving structured instructions and statements calmly and slowly, repeating instructions- these kinds of measures can help these children immensely. It is better if teachers do not exhibit behaviours that test their ability to concentrate or to pay attention. Teachers and parents can cooperate to achieve children's progress by way of meeting parents, getting progress card signed by parents, offering suggestions and advice. Since these children loose control over themselves rather quickly, it is appropriate for teachers to know this fact. When they show

appropriate/ good achievement or performance, be it big or small, immediately recognizing them, encouraging, showing appreciation would act as foundation for future behaviour.

Children with Dyslexia: These children have to put great effort to read and write, and to learn. Teaching techniques suitable to their level of learning should be employed. Through activities prior to reading and activities post reading, teaching needs to be undertaken for these children. To accomplish this, special training for teachers is offered. It is better to first receive guidance and then attempt to teach these children.

Teachers must have the knowledge about the interests, learning levels of children and also about the socio-cultural background of learners. When it so happens, it would be possible for teachers to create learning situations in accordance with demands and needs of all students.

Gender difference

Gender is a societal structure. Gender will influence attitudes, roles, responsibility and behavioural patterns. Thus, there are differences between behaviours between boys and girls. There exist differences between the behaviour of male and female. It is a universal phenomenon. The social structure that is clearly visible in men and women in the form of various roles and behaviours and relations composed of traditional structure is recognised as gender (Craiger,2003). Gender based differences would differ from society to society. This too would influence the learning environment. But, on many occasions influence of gender is very subtle. Since long, the attitude apparent in the society was that Science and Technology were only for boys. But, now times have changed. Men and women- both are achieving success in the field of Science and Technology. The influence of gender upon learning and individual achievement has its roots in the culture of individual itself. In our country, traditionalists do not agree females being more extrovert than males. Society has the expectation that boys should be courageous and brave at the same time be active, doing activities and also has sanction that it is quite natural and spontaneous (Shram and Gysler, 2003).In Indian culture, males are considered to be aggressive, self respectful and as having fortitude to face any kind of difficulty.

In most of the cases the attitude that is expressed would be that educational degree like technical, engineering, science, mechanical, civil engineering degrees should be acquired by boys and degrees in the fields like interior decoration, human nutrition, home science etc. are exclusively for girl children. According to research studies, it is found that to get

control over nature boy students study technical and science subjects while girl students pursue technical and science subjects to possess better communication and co-operation.

Just as cultural differences cast their influences, gender difference has also its influence and specific influence. In spite of physical differences, there is no grave influence upon students' innate learning ability and cognitive skills. Teachers can solve this diversity natural to a classroom by adopting following measures:

Organizing multiple activities, providing equal opportunities to all children, giving opportunity to participate in debates for both boy and girl students, ensure equal opportunity to students of both genders to express their feelings and opinion. In summary, providing opportunities for " Gender Inclusive Activities" is the best measure.

Making students aware of well known personalities such as Scientists, women achievers, mathematicians, poetess', women writers, adventurers, mountaineers, social reformers, empire builders.

To every cultural programmes, science experiments and planned activities groups consisting of both boys and girls students are to be assigned.

Basic unit of life (cell), natural resources, reforms in food production, biological processes, heredity and evolution and our environment- all these being concepts equally applicable to one and all, more debates over these issues should be organized.

Critically analysing roles of men and women in animal husbandry and undertaking discriminative debate about their alternative roles.

While explaining chemical reactions experiences at home like preparation of pickles and fruit jams, pasteurization of milk and fermentation of Dosa batter, colour change in copper vessels need to be applied to classroom environment.

Girl students should never be addressed by using adjectives like pretty, handsome and its synonyms, words like obedient student, one who follows other instructions etc..Similarly, addressing boy students by words like brave, courageous very powerful and handsome should be avoided to the extent possible.

While appreciating any work accomplished works like excellent, good, well done should be used for both boy and girl students alike.

When teachers facilitate learning of children physical and cultural environment of class should by devised so that healthy relationship is developed in both boys and girl children.

Seating arrangement in the classroom should be planned in such a way that group formed should be a combination of students of both genders. It should be implemented beyond their gender, caste, religion or any other identities.

One should ensure equal opportunities to children of both genders to take part in role playing, activities requiring lively participation, problem solving, quiz and other cultural programmes.

It is to be ensured that both boy and girl children are considered equally in all teaching learning situations.

Students in Risky Situations:

Students lagging behind in learning, students who might drop out of school permanently any time would be the students who are in risky situations. It is more pronounced in high school stage. The phrase "Students at Risk" is of American origin. Students who need immediate intervention from elders or teachers or constant guidance from elders have been recognized as "Students At Risk". These students are generally would be of adolescent stage. Imbalanced feelings, behavioural problems, bunking classes, running away, no academic achievement, loosing interest in academic pursuits and remaining entirely aloof from school- all these are the attributes of this type of children. As research studies have revealed, these children are below expected level specifically in Mathematics, reading, language skills . Because source of their problem is their own home teachers do not have complete freedom to do anything.

Reasons for Students getting into risky situations
- Poverty and lowest level of socio-economic condition
- Structurally infirm and irresponsible domestic conditions
- Addiction to alcohol and substance abuse
- Long term behavioural problems
- School environment and community environment
- Society exploiting children
- Atrocities on children and gender exploitation
- Parents themselves involving in anti social activities

- Lack of good relationship between children and parents
- Watching violent actions in social media and in surrounding environment

This type of students can be easily recognized in schools. These children are quite different from rest of the children in terms of characteristics such as long term absence at school, quarrelsome behaviour, falling behind in studies, showing risky behaviours, aggressiveness, restlessness accompanied by hyperactivity, weak interpersonal relationships, practising anti social behaviours, negative attitudes, intolerance/impatience, inferiority complex etc.

Remedial Measures

1. Sooner children at risk are recognized the better. Suggesting remedies is good. But, it is still better to prevent such risky situations.

2. Organizing rejuvenation programmes

3. Conducting additional curricular activities.

4. Running children service centres

5. Convincing them about the dangers of substance abuse and use of alcohol

6. By employing two language formula in the class room communicating in a language understandable by children

7. Providing vocational training

8. Offering counselling and guidance at schools

9. It is better if teachers do not put academic pressure upon this type of children

10. 'Every student must be specially observed and short term and long term activities appropriate for them needs to be planned.

11. Children should have aims and objectives that are attainable by them

12. Use of visual medium to the extent possible, simple explanation and examples of real things- all these enhance interest in learning.

13. Motivating them for self improvement, convince them about the importance self improvement

14. Teachers should help students in examining them selves periodically.

Check Your Progress - 3

Multiple choice questions are given below. Indicate the alternative that you feel correct by the symbol '✓'

1. Children who put greater effort to read,write and over all to learn have _____
   a. Learning disability
   b. Specially abled
   c. Talented
   d. Children with Dyslexia

2. Gender is _____
   a. Biological truth
   b. Social Structure
   c. Logical concept
   d. Special Characteristic

3. Some sentences are given below. Indicate the sentence that you feel "True" or "False" by the symbols '✓' and 'X' respectively.
   a. Gender relationships would differ from society to society.
   b. Male and female children both can not achieve success equally in science and technology.
   c. Students in risky situations means children who would slip away from school system.
   d. It is not possible to identify children in risky situation
   e. Parents themselves involving in anti social activities would push their children into risky situations
   f. There should not be one seating arrangement for both male and female students.

3.4.4. Let us Summarise

- Diversity inside the classroom arises due to different learning styles and cognitive level of children
- Cognitive difference means multiple intelligence and various learning styles. Because of this, children will have the capacity to attain proficiency in more than one field.
- Language ability of students, knowledge idioms, logic, analysis, spatial relations concepts, auditory intelligence, co-ordination of and control over bodily movements, innate observation ability, inter and intra personality skills- all these are responsible for differences in cognitive ability.

- We can see various learning styles such as visual learning style, auditory learning style, tactile learning style, verbal learning, logical learning style (Mathematics subject),Social learning style (Inter personal) and solitary learning style (Introvertial learning)

- As a rule, learning challenges and problems in learning are found in children due to physical, cognitive, lingual, and behavioural defects. They are (1) Intellectual disability (2) Learning disabilities (3) Learning disabilities resulting from visual defects (4) Learning disabilities resulting from speech and hearing defects. Apart from these, there are learning disabilities arising due to partial paralysis of brain (Cerebral Palsy), Autistic Spectrum Disorder, Learning defects due lack of concentration power, Epilepsy and defects like hyperactivity etc.

- The diversity in the classroom is special because of learning disabilities, gender difference and children is risky situations.

- Children with visual and hearing defects, children with lack of concentration power, children suffering from Dyslexia, gender difference and children in risky situation are also responsible for diversity in class room. Teacher should find out suitable remedies for all these challenges so as to transact the class room in a balanced manner.

3.4.5. Answers to 'Check Your Progress - 1, 2 and 3'

Check your progress - 1

1)-a, (2)-c. (3) a-✓ b-✓ c -✓ d- X e- ✓ f- ✓

Check Your Progress - 2

1) b (2) a (3) a-✓ b-✓ c-X d-X e-X f-✓

Check Your Progress - 3

1)d (2) b (3) a-✓ b- X c- ✓ d- X e- ✓ f-X

3.4.6. Unit end Exercises

Explain the various situations faced and measures that can be taken by teachers to tackle them.

3.4.7. References

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Block 3 : Understanding Teaching
Unit 5 : Teacher as a Critical Teacher

Unit Structure

3.5.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain the characteristics of Critical Pedagogy;
- Justify the significance of Critical Pedagogy;
- Identify the differences between traditional teaching and critical teaching;
- Explain the need for changes in the role of a teacher as critical teacher; and
- Narrate characteristics and functions of critical teacher.

3.5.2. Introduction

Generally, the voice in classroom that we hear mostly is that of teacher. Although talking, creating noise by the students is always present the opportunity to control the class with authority always rests with teacher. In a traditional classroom all activities are transacted according to wish of teacher. In the present changing days, contexts are undergoing considerable transformation. Among them, the concept of "Teacher as a critical teacher" is also one. Even though this concept seems to of recent origin, one can say that this emerged

at around 1960-70s. This concept has emerged as a new method which has to be brought into practice by teachers, students and school joined together so that classrooms can face the challenges and conflicts between community customs, blind rituals and modern intellectual thinking. Hence, in this Unit, you are going to know meaningful ideas about how the students who are exposed to present Government policies, rules and regulations, politics, rights and duties of citizens have to be nurtured, how their growth should be, what kind of citizens they should become and in what manner they need to build the nation.

3.5.3. Learning Points and Learning Activities

3.5.3.1. Meaning, Scope and Significance of Critical Pedagogy

Critical Pedagogy emerged as a new concept in western countries during 19602-70s. It can be identified as social revolution against the imperial system. As a result, it assumed many dimensions such as Citizen Right Revolution and Women Revolution after some time. In those days when the heat of this revolution reached School / Classrooms it was a matter of surprise to many people. When we a take deep look into it, Critical Pedagogy in Western world would take us to the theory proposed by well known Brazilian critical educationist Paulo Freire. We can see the first expression of this theory at "The Institute of Social Research" located in Frankfurt am Main, a city in Germany. Usually, in this organization which is intellectual in nature, thoughts of movements and revolutions which were social, political and philosophical in nature used to be produced. The implications of Marxism when expressed in social and educational terms it took the shape of " Critical Pedagogy".

According to Paulo Freire, "the method of teaching-learning by which students gain the ability to understand the interrelationship between their problems, difficulties and social grounding is known as Critical Teaching and it is also development of Critical Consciousness". Henry A Girox, Bellhooks, Peter, MacLawren and others advocated this theory and have been doing remedial service regarding issues like institutional organization and social structure, globalization, mass media. caste struggle etc. This theory and the supporters of this theory are identifying fields where probable opposition and observing with special care and the transformation that needs to come about and are studying about them.

Critical Pedagogy is teaching approach which has taken shape based on critical theories. The central point of this is student themselves and it is an effort to make the students to rise against any kind of domination, dominant myths and audacious practices,

oppressions or to develop an ability to face such challenges. To put it simple in terms, Critical Pedagogy is a theory and practice to develop "Critical Consciousness" in students.

According to the definition given by well known Pedagogist Ira Shor "It is a creative process which involves habits of thought, reading, writing and speaking which go beneath surface meaning, first impressions, dominant myths, official pronouncements, traditional clichés, received wisdom, and mere opinions, to understand the deep meaning, root causes, social context, ideology, and personal consequences of any action, event, object, process, organization, experience, text, subject matter, policy, mass media or discourse." In a class rooms having this kind of teaching-learning situation, students show courage to question ideals practices and rituals which are based on blind faith. Teachers to give guidance students with out loosing track. Critical teaching encourage students so that they become motivated to have commitment to be free as for as their personal and community life are concerned and to take up the responsibility of protecting good of community.

Roger Simon defines critical teaching as follows : "All other processes including a specific curriculum design, teaching skill and evaluation, teaching objectives and teaching methods in a classroom teaching situation are combined then it becomes critical teaching. In a specific class room situation overall thought process regarding which learning subject matter is important, what is the meaning of "understanding" an idea, similarly how do we build ourselves, others as well as our physical and social environment is known as critical teaching".

McLaren has said like this; " Critical teaching is pedagogy itself and it is a process of understanding ourselves and others and it is a process that can be undertaken by all of us together. Therefore, teaching can not be done without speaking about the condition of states and nation, political situations. This is a natural process in a classroom". In a way,Critical Pedagogy is thinking about conflicting realities and it undertakes analysis of paradox of society. Basically, it is a science which studies the conflict between knowledge and authority in society."

Critical Pedagogy is a progressive pedagogy and it has the aim of developing students so that they become a challenge for existing power structure and effects of inequalities in a society 'and to make them examine critically such social systems. By developing this kind of abilities students learn to take responsibility for their own growth and education. Teachers by developing critical consciousness in students so that they will be able to analyse reality and to know and discriminate what is oppression and suppression, and who is going

to benefit from all these. Hence, it is imperative that teachers should have clear knowledge of realism (*aadarsha vaada)* and politics and inculcating the same in children is essential for their success.

Since critical teaching is a new idea its characteristics can be enumerated as below:

1. It is a process of examining presently available education system, teaching and learning practices, teaching methods and evaluation methods adopted by teachers.

2. It is uninterrupted study and evaluation of teaching-learning situations which can bring about changes.

3. Being educational philosophy it has critical theory as its foundation. It is a social movement to take a critical outlook at traditional teaching methods, culture and learning of education system.

4. According to Critical Pedagogists internally teaching is a political process. They do not agree with the argument that knowledge is free from any kind of prejudice. They vehemently argue that the social justice in democracy and democracy itself are not different from the process of teaching-learning

5. 5.Achieving liberation from the dominance over children through inculcating critical consciousness among students is the main aim of critical pedagogy. Critical pedagogy inculcates capacity in students for social criticism and involving in political processes.

6. Critical pedagogy draws out the teaching-learning relationship between teacher and students in the form of mutual conversation. It being a continuous learning process it shows the characteristic of the cyclical processes of " continuously learning", "learning" and "relearning", "criticism" and "evaluation" and it discovers always its effectiveness on students.

7. At the same time the critical pedagogy breaks the traditional belief that school alone is the source of knowledge and knowledge has to be obtained from teachers alone. It shows the commitment of achieving in reality the statements that knowledge is for all and all have equal opportunity for learning.

8. As Paulo Frerie says, "the teaching practices in the current classroom are developing " Culture of Silence" in children(1973).This is not a sign of evolution. Therefore, if the teaching practices in the classroom needs to become critical, students instead of merely listening to the words of teachers, should involve in conversations, debates, analysis. This is the argument of Paulo Freire.

9. Critical Pedagogy adopts education to life by incorporating socio-cultural problems and challenges in teaching.

10. It helps students to have multiple view points so far as diversities that exist in a classroom are concerned.

11. Whether the Critical Teaching for educationalists, citizens of a country and students is according to the existing curriculum, teaching strategies, society of our country with diverse culture or not?- Critical teaching indicates that Critical Teaching has to be accepted as a challenge.

12. The teaching skills used in critical pedagogy makes the students to express their subtle sensitivities among students about the issues of caste and gender and other socio-economic situations in the society and also politics. Thus, it becomes responsible for the real existence of democracy.

13. Critical pedagogy gives education suitable to learning inside and outside school.

14. Critical pedagogy provides opportunities for self-criticism about political social, economic and moral issues. This enables students for accepting different views about social problems and facilitates mutual exchange of ideas of democratic nature.

15. This kind of self criticism helps to study how their life is intertwined with social problems.

16. Critical pedagogy through providing scope for self criticism and thinking provides opportunities for understanding democratic system as the mode of their life and to know how people chose their activities, place, friends and profession and how they take decisions.

17. Critical pedagogy helps students to critically think how human rights , ideas of caste, religion and gender are related to their daily experiences and how they continue without change becoming more and more complex inequalities in society.

18. Critical pedagogy helps to consider different view points and respecting them and taking moral decisions through open discussions.

Check Your Progress - 1

Some multiple choice questions are given below. Put a tick for your choice of answer which is correct according to you.

1. The philosophical basis of critical pedagogy is _____

a. Marxism

b. Idealism

c. Utilitarianism

d. Naturalism

2. Critical Pedagogy _____ in children.

   a. Increases logical thinking

   b. Inculcates critical consciousness

   c. Teachers computation

   d. Fills courage

3. Some statements are given below. Indicate the sentence that you feel "True" or "False" by symbols ☑ or ☒ respectively.

   a. Teaching is an internal political process.

   b. Democracy is not different from teaching -learning process in education.

   c. School alone is the source of knowledge and knowledge should be obtained from teachers only.

   d. Teaching learning process is inculcating "Culture of Silence".

   e. Learning with in school and learning out side school should be different.

   f. There should be conversations which are more than silence.

3.5.3.2. Role of Teacher as a Critical Teacher

There is a similar opinion in India about children belonging to communities which are cut off from the main stream society including those children who are deprived from traditional schooling and learning and Scheduled Caste and Scheduled Tribes. Historically, certain children are considered as ineligible for education , and as fit for getting lower level of education, as slow learners and fear learning. Similarly, there is a common opinion about girl children that they are uninterested in play, are unable to learn Mathematics and Science. All these opinions gives out an attitude that inferiority complex and inequality are rooted in gender difference, caste and physical and intellectual abilities. If teachers make every one to look upon every other as equal then values of equality enshrined in the Constitution can realized. Teachers need to learn to understand cultural, social and economical diversity that children bring to the school along with them.

If we intend to change society through education, we have to allow considerable freedom to students. Only then, children would be able to question freely and they learn to view the society critically. Due to this process they become representatives of social changes,

social transformation and participate actively in society building. It is entirely different from the state of being in a passive silence and accepting what ever changes that occur silently.

The following factors result in teachers becoming critical pedagogists:

1. Teachers should be ready to face any new challenges and become able to manage systematically the consequences resulting from them.
2. Change over to newer learning methods from traditional teaching methods.
3. One should have the ability to identify and analyse the needs of students.
4. It is not sufficient to provide knowledge to students. Instead, teacher should facilitate students in building their own knowledge
5. Children should be taught critical observation and critical management skills.
6. In order to become critical teacher, there is a need for continuous evaluation of teaching-learning opportunities. Here, learning opportunities should be in such a way that children will be able to speak with enhanced self-confidence in the class room.
7. In this teaching method teachers seem to be pose problems. By posing problems to children in this way, children's learning will happen autonomously while finding out solution to the problems posed.
8. Teachers should elicit opinions of students regarding curriculum and other school programmes and prepare the class so as to facilitate dialogue. Save the class room from dialogue digression or becoming stagnant.
9. Encourage children to undertake self thinking and self evaluation about their own motivation, intentions, ideals and practices.
10. As Dejner(2001) has said, Critical Education helps in finding out inner meaning of many aspects and reality.
11. As Harton and Frerie say, teachers should have cognitive grasp over the subject they teach. Similarly, they should make room for interaction with children by adjusting themselves to the knowledge the children already know and by being open.
12. Teachers should have communication skills which help students to view myriad dimensions of society and community in critical manner.Teacher should create awareness in children as regards to what they are going to become in society after completing their education.
13. Both teachers and students must be able to question the resources of knowledge and teachers should help students to discover their next critical step.
14. As Frire says " Here, no one teaches any one. There is no one who is self taught. But, in the presence of every one is a teacher to every other"(1970)

When children and teachers exchange their personal and community experiences, and when they think about them and at the same time when they are free from right and wrong, then they find opportunity to know about them who are not a part of realities of society. If one wants to bring social experiences of children to the classroom, thinking should be done over issues producing conflicts. Conflicts are inseparable part of life of children. They face diverse situations which include moral gauging and performance. These could be experiences involving violent movements that may take place in their own family, society or contemporary world. Educational techniques will be of help in creating awareness in children about them and to make them understand the nature and role of such conflicts in one's life.

Learning should help one to make a note of what is read, to take critical view of assimilated knowledge, to encourage criticism and to think about issue pertaining to one's environment. Women and Dalit activists have used songs as a medium of debate, criticism and analysis. Teachers can make use of Television programmes, advertisements, songs, art etc. as a source of knowledge to allow and facilitate students to exchange their active opinions.

Education method that responds to gender, caste and global inequalities will not just authorize personal and community experiences. Instead, it includes these into wider structure. Through this who is talking for whom, whose knowledge is more valuable? This becomes possible when different methods are followed for different students.For instance, while encouraging one to speak in classroom becomes important for some students, others may find listening to what is spoken may become learning.

Teacher's role is in providing a safe place for students to give voice to their own opinions. Come out from a role of "Moral Authorities", teachers should listen patiently to their words. Just as they make the knowledge of learners concrete and widen them constructively, they should also observe carefully how they give expression to diversities. Once an environment of confidence is created, then children consider classroom as safer place to exchange their experiences, to accept and question them constructively, to arrive at a solution through mutual thinking, (even if it is temporary). Especially, school and classroom should become appropriate places for girl children and children coming from poor social communities to debate, process of taking decisions and making policies, to question the basis of such decisions and to make better choices.

Check Your Progress – 2

Multiple choice questions are given below. Indicate the answer that you feel correct by the symbol '✓'.

1. Critical teachers should give opportunity to children in classroom to _____
    a. Learn with concentration
    b. Write in good hand writing
    c. Speak with self confidence
    d. Learn numerical sum properly

2. An inseparable part of children is _____
    a. Learning
    b. Sports
    c. Conflicts
    d. Curiosity

3. Certain sentences are given below. Indicate those sentences you feel "True" or "False" by '✓' or 'X' respectively.
    a. If encouraging one to speak in classroom is important, it may be learning for others to listen that is spoken
    b. There is no opportunity for children to learn in critical teaching.
    c. Teachers should have the ability to identify and analyse needs of learners.
    d. It is possible to change society through education.
    e. Learning level of children is decided by physical handicap.
    f. Class room should have appropriate environment for children to question the basis for decisions taken by teachers and to make better choices.

3.5.4. Let us Summarise

- According to Paulo Friere " the method of teaching-learning by which students gain the ability to understand the interrelationship between their problems, difficulties and social grounding is known as Critical Teaching and it is also development of Critical Consciousness".

- Critical Pedagogy is teaching approach which has taken shape based on critical theories. The central point of this is student themselves and it is an effort to make the students to rise against any kind of domination, dominant myths and audacious practices, oppressions or to develop an ability to face such challenges. To put it in simple terms, Critical Pedagogy is a theory and practice to develop "Critical Consciousness" in students.

- Critical Pedagogy is a progressive pedagogy and it has the aim of developing students so that they become a challenge for existing power structure and effects of inequalities in a society 'and to make them examine critically such social systems.
- Teachers by developing critical consciousness in students will be able to analyse reality and to know and discriminate what is oppression and suppression, and who is going to benefit from all these.
- It is inevitable for academic success for teachers to have a clear awareness about idealisms and politics and inculcating the same in children.

3.5.5. Answers to 'Check Your Progress - 1 and 2

Check Your Progress - 1
1)-a, 2)-b, 3) a-☑, b-☑, c-☒, d-☒, e-☒, f- ☑.

Check Your Progress - 2
1)-c, 2)-c, 3) a-☑ , b-☒, c-☑, d- ☑ ,e- ☒, f-☑.

3.5.6. Unit end Exercises

Explain the characteristics of Critical Pedagogy and the role of teachers in it.

3.5.7. References

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Block 3 : Understanding Teaching

Unit 6 : Contemporary Ideas About Teaching: Teaching as Varied Function, as shared Function, Teaching of Challenging Content

Unit Structure

3.6.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain contemporary ideas about teaching;
- Explain the role and influence of the contemporary ideas about teaching;
- Identify the varied function which could be included in teaching;
- Give instances for the function of teaching as a shared task;
- Present necessity of cooperation for the functions of teaching;
- Identify issues which could be challenging; and
- Use varied strategies for teaching challenging issues.

3.6.2. Introduction

Teaching now a days is becoming a complex task. The present day children have more awareness than the children of the past. They are familiar with the sources of awareness.

You listen frequently such statements that teaching skilfully suitable to these children is indeed a challenge. What is the meaning of this common statement? When we question about this, naturally many ideas emerge from our mind. Because, there is a difference of a generation between the teachers teaching children today and teachers who were teaching earlier. Demands of the society, the changes that have to be made in curriculum suitable to the changes that are occurring in society, the necessity of teaching newer ideas to children- these are the reasons for this. The syllabus contents which were present when the teachers were in their students period and were getting training have thoroughly changed. New ideas are being included. As a result, teachers have to become learners themselves to teach new ideas to students. When we consider the nature of class rooms, the individual differences present among students, classes with groups, the new ideas to be taught and available resources and period of teaching— all these issues are becoming challenges to teachers. In this Unit, let us discuss more about the scope and dimensions regarding teaching.

3.6.3. Learning Points and Learning Activities

3.6.3.1. Contemporary Ideas in Teaching - Teaching As a Varied Functions

Teaching being a complex process, has a characteristic of undergoing modifications. Every time, teaching process has been changing with decisive factors of evolution. In Indian society we are witnessing necessity of improvement at various stages and phases. Teaching is a facilitating process. If there is any service that can be dedicated to nation making use of knowledge skills and best attitudes planned so that these can reach every student and every society/culture, that is teaching. Teaching which is called as a service include many more functions. Let us see those functions:

- Teaching is a profession which is in demand. The basic abilities required are deep knowledge of subject content, command over pedagogy to be employed to according to age of students. Besides, many more other abilities including more tolerance, leadership qualities and creativity are also required.

- Teachers to whom teaching is an interesting profession which creates interest in learning in children. A good teacher imparts inspiration, supports creativity and filling heart felt inclination to learning(Broad Henry).Hence, on many occasions when a teacher attempts to inspire students, similar inspiration gets filled in teacher himself. This is strange yet true.

- Teaching profession is not just about imparting education. If you take a look little deep into it, it is the best profession which teaches ethics and morality to the society. Hence, on many occasions, parents ask teachers not just to impart education to their children, but also place a demand before them to make them to follow discipline and behaviour.

- Teachers have certain inseparable functions which are like integrated organs of teachers. They are continuous knowledge acquisition, learning new ideas and skills, knowing about novel teaching methods and employing them and adopting novel evaluation methods etc.

- The role of teachers in understanding the role of students in society and preparing them to adjust to their society, to make their life according to social restrictions and to become better citizens.

- In order to understand children properly, teachers need to have good relationship with parents, identify and seek solutions to the problems that may arise due to generations gap, understand environment in which children have grown in a still better way. All these are to be managed by teachers. While these functions are being carried out teaching element always exists in subtle way.

- Along with all the tasks mentioned above, to achieve their professional growth teachers should engage in self-evaluation and get involved in research work, get involved in short term and long term academic activities. All these have to be undertaken by teachers.

- Teachers have to play role of a good leader in making students participate actively in excursions, place visits, and many other awareness programmes. It is also the work of teachers to prepare students for zonal level, state level and national level competitions and representation as well as to take the responsibility to ensure their attendance at those events.

- Being committed to the code of conduct of institution or University for which they are working, accepting the responsibility of the profession, responding to the adjustments needs of the profession, showing social concern, maintaining relationship between individual by cooperation, cordiality, becoming creative, being duty conscious, firm towards the goal, having a constant urge for growth, being resourceful, moving forward learning new ideas and undertaking action research as well as rendering service to community- all these are variety of functions that teachers do.

We can add some more functions in addition to the above mentioned tasks. They are:
1. Becoming a guide and a counsellor. Generally, we can say that this is an additional choice which is applicable to all teachers.
2. School management: At primary, secondary and high school level school teachers have to extend their cooperation to the school management too.
3. For many academic functions one needs to undertake activities as coordinator
4. As an academic counsellor, he/she needs to give solutions to many problems.

5.	Since libraries at school level do not have a librarian, teacher has to take up this responsibility also.

6.	In many schools the probability of having separate physical education teacher is very less. So, teachers in the school have to take up this responsibility also.

7.	Teachers have to do the job of census, elections process assigned to them with out fail.

8.	They have to widen their knowledge wealth by participating frequently in rejuvenation programmes.

9.	By maintaining cordiality with the community, teachers should lead school towards community.

Teachers should be ready to take up the work mentioned below according to the National Curriculum Frame Work, 2005.

1.	Teachers should look after the well fare of children and should be eager to spend time with them.

2.	They should understand children in social, cultural and economic contexts.

3.	They should be receptive to ideas and be always in a learning mode.

4.	They should consider learning as process of understanding personal experiences and knowledge building as a continuous process which is learnt through introspection.

5.	Knowledge should not be considered as a reality included in text books.Instead, it should be looked upon as one constructed during exchange of personal experiences of teaching-learning.

6.	Teachers should be responsible towards society and strive to build a better society and world.

7.	They should appreciate ability of productive work and consider the experience of physical work (kai kelasa) inside and outside classroom as a medium of education.

8.	Curriculum Framework, effects of rules and regulations and texts must be analysed.

Check Your Progress - 1

Multiple choice questions are given below: Indicate the choice that you feel correct using '✓' symbol:

1. Teaching profession not only imparts education to children but also inculcates _____
   a. Discipline
   b. Skills
   c. Obedience
   d. Ethics in society

2. At school level there is no separate librarian. This work should also be taken up by _____
   a. Head master
   b. Teachers
   c. Students
   d. School clerk

3. Some sentences are given below. Indicate the sentences that you feel "True" or "False" by '✓' or 'X' respectively:
   a. School administration system is not the work of teachers
   b. Teachers should establish cordial relationship between school and community.
   c. Teachers should accept the responsibility of their profession.
   d. If one is able to explain prescribe text clearly, it is sufficient for teaching.
   e. Teaching is a profession dedicated to world
   f. A teacher who fills inspiration in children is the best teacher.

3.6.3.2. Contemporary Ideas Regarding Teaching - Teaching As a Shared Function

Teaching that can be done by sharing can be called as collaborative learning or cooperative learning. In team teaching and group assigned tasks also we can see the attributes of shared teaching. In this kind of sub way two or more teachers/resource persons/ resource institutions-organization join together and take up the task of teaching. Normally, two or more teachers work together and teach to same group of students. In this way, preparation of lesson plan, preparing teaching aids, arranging equipments for conducting experiments, class room teaching and evaluation- all these responsibilities and many more works are accomplished by two or more teachers by sharing and working together. It not only facilitates

to solve myriad unavoidable academic challenges successfully, but also instils self confidence to solve many more challenges yet to be faced. We have to keep five important points in mind while undertaking shared teaching task. They are, (1) Face to face interactions, (2) Positive mutual dependence, (3) Interpersonal skills, (4) Supervision of progress of co-teachers and (5) Individual responsibility.

Merlin Friend and Linne Cook (1996) have given many strategies for such a shared teaching. For example, if two teachers are undertaking shared teaching-learning process, then the strategies that they can follow will be the following:

1. One teach and one assist
2. Parallel Teaching
3. Alternative Teaching
4. Station teaching
5. Team Teaching

1. One will teach and other will support: Among two teachers, if one takes up the responsibility of preparing lesson plan and teaching, the other will supervise the classroom and observe whether learning process is going on properly. Likewise, they will support teaching-learning process in terms of arranging learning aids and equipments, distributing resources, observing, conducting experiments etc. In this way, children will get proximity and protections of teachers, there by facilitating better learning. Due to this, it becomes possible for giving attention to every individual student.

2. Parallel Teaching: Here, while preparing plan students are also taken into consideration along with teacher. Dividing a single classroom into two and at the same time same text content or different text content is managed at both the places simultaneously and this is the characteristic of this strategy. When teaching a different text content next time, this will be done by so planning that it is made available to first group or to the group that did not get the opportunity. The result of this is time saving, judicious use of resources, completion of the syllabus with in the prescribed time, preparation for examination.

3. Alternative Teaching: While one teacher keeps most of the students inside the classroom for teaching, the other teacher take children to conduct some other skill, experiment or to make preparation for cultural programme. Taking some children to assigned task (study of herbal plants, bird watching, rain harvesting etc.) or if the children are backward conducting alternative remedial teaching, arranging for self learning through learning activities etc.-all these functions are undertaken.

4. Station Teaching: This is a novel concept. Here, in a classroom many "stations" are built artificially and children are provided with variety of teaching-learning experiences. While moving from one station to the other station there is clear picture in the minds of children about already learnt, to be learned in future and this brings a new enthusiasm. Making many learning centres active in a classroom is a special characteristic of Station Teaching. Science experiments can be conducted in three or more such centres one after the other. Senior students and other teachers can also participate in this.

5. Team Teaching: A team of teachers teaching for a class room sharing many parts of a subject among themselves is known as team teaching. It may take the shape of debate. The fundamental demand of team teaching is that every member of the team should know the lesson plan and design of the task. Entire team will be awaiting to receive questions from students and for discussion. Here, ample opportunities are available for children to give expression to their doubts and critical views without reserve. This kind of team teaching has to be carried out with the democratic principles..As Shwab puts it (1976), if we want at any time to build a "Community of Learners" it is only possible through teaching-learning process conducted by teacher and students together in a shared manner. Like wise, collaborative learning, team teaching and supplementary learning too can support in creating a community of learners.

Just as it is with Team Teaching, concepts like Team Learning, Collaboration Learning and Mutual Supplementary Learning are also gaining popularity in the field of education. They are as below:

Collaborative Learning: This is a very wide learning concept. Collaborative learning is secondary way. Here, students learn from each other. It is a successful procedure, its foundation being social interdependence. Slavin(1990) says that in co—learning positive dependence should be there between individuals and everybody should have personal responsibility.

Team Learning: Team Learning has many attributes. According to Senge(1990) Team Learning is learning process and it is a creative effort to develop intended learning outcomes in a group with similar aptitudes, interests, learning levels and abilities

Mutual Supplementary Learning: When teaching is considered as a process that takes place on a shared basis, mutual supplementary learning too is expressed as an integral part of it. For instance, in language teaching, both students and teacher together understand the

conversation that comes in the lesson by way of speaking and try to grasp it through variation in the sound. Four important strategies that teacher imparts to the students are as follows: 1) Intellectual imagination 2)Questioning 3)Summarization 4) Grasping the clear meaning of difficult portion of the text or if there are any incorrect understanding , correcting it and try to grasp it clearly (Brown and Polinsker, 1989). This strategy gives effective learning outcomes in the case of backward/ disabled and in solving problems of second language learners (normally English) and also in Jig-Saw technique (Brown and Campeon,1996).

Check Your Progress - 2

Multiple choice questions are given below. Indicate the alternative that you feel correct by '✓' symbol:

1.   The person who proposed that in co-teaching there should be positive dependence between individuals is _____
   a.   Slawin
   b.   Senge
   c.   Brown
   d.   Campion

2   Teaching that can be done by sharing is _____
   a.   Group activity
   b.   Assigned Work
   c.   Collaborative Teaching
   d.   Collaborative Learning

3.   Some sentences are given below. Indicate the sentences that you feel "True" or "False" by symbols '✓' or 'X' respectively.
   a.   In Parallel Teaching students are not considered.
   b.   In Alternative Teaching children lagging behind in learning should be considered.
   c.   Station Teaching means teaching done at a vehicle parking places.
   d.   Opportunities are available to correct wrong understanding are found in Mutual Supplementary Learning.
   e.   Team Learning is similar to Team Teaching.
   f.   Community of learners is self imagined concept.

3.6.3.3. Contemporary ideas regarding teaching- Teaching of subjects with challenges

Educational principles say that in the present age children are to be considered as architects who build their own knowledge and teachers should facilitate them in building that knowledge. Although it is true that children should learn themselves, role of teacher has not ceased. Because, teachers and their teaching has not vanished completely from the field of education. Teachers have many strategies for the sake of students. Starting from repetition, practice and mugging to problems solving, taking decisions, inculcating the attitude of owning responsibility, as well as collaborative learning and inclusive learning are included in these strategies. Thus, when teachers make use of many strategies available to them, they not only use the resources on hand but also if need arises, they have to acquaint children with historical monuments and means. This kind of situation is truly challenging to teachers. All these are totally different from the attributes of general classroom. These kinds of situations turns out be challenges to teachers which is true fact. When teaching a curriculum content for which new method of teaching has been prescribed, that too is a challenge for teachers.

Reading text books, giving oral explanation are not considered as teaching. At least some teachers turn their classroom into a laboratory and respond positively to diverse challenges. Numbers of such teachers may be meagre. Some others may need training and guidance. Teaching theory of Kho-Kho, Throwball, Kabbadi and other sports is not teaching how to play those sports. Is it not?. For this, children should be left freely in the playing field. These are not the abilities that can be acquired by listening to a lesson. Like wise, subjects like History, Science, Literature and Mathematics and others demand different set of methods and techniques. With out being aware of this reality, if one ventures into teaching activity, not only they get into trouble but also children face learning difficulties. In the normal classroom too contextually learning level of children along with many other obstacles might become a challenge. In such a situation, teachers by modifying the environment of classroom into a cordial learning situations and by adopting the universal maxim of Learning like "Known to Unknown", "Open Discussion, Collaborative Learning" etc. learning of children can be facilitated. Situations like this provide opportunities for teachers to learn. Thus, when two hands join together, best "Learning Community" can be created.

Real conditions of schools and classrooms are telling a different story. In recent days, teaching is being seen to be a difficult task. Perhaps, following may be the reasons for this perception:

1. There is no team spirit between students, management committees and policies and regulation of Governments and there is no sympathy and empathy or mutual help between individuals.
2. Teachers have to play many roles simultaneously and this is creating obstacles in performing their duty.
3. Too much work has been putting pressure on their health.
4. The responsibility entrusted to them is beyond necessity.
5. No time is available to plan any thing systematically.
6. In addition to teaching many other work are being assigned to teachers. Information collection, census work, Mid day meal responsibility etc. are making it difficult for teachers to strike a balance in their profession.
7. The expectations of school, difficult classroom functions and necessity of preparing children for examination- facing all these problems is really a challenge for teachers.
8. The necessity of teaching the same curriculum to such classes which have students with different kinds of individual differences.

Every student has his/her own level of learning ability. They remember in their mind the lessons taught in the class understanding in a way suitable for them. As soon as teacher starts teaching the same prescribe syllabus to students with varied demands and expectations a chain of problems crops up.It takes enough time for teachers to prepare themselves to teach the same curriculum adjusting to the level and needs of students. So, much of time is rarely available for teachers. Some times many teachers feel, if they get along with the available resources some more technology and computers many problems can be solved. But, that is also a distant reality. In case, if teachers get the response to their demands and if they get resources systematically at least some problems can be easily resolved. These facts highlight many problems that exist in the classroom and teachers have to face them.

It is not enough if teachers are demonstrated how the problem of children can be resolved. Instead, they should be made aware of the need of solving these problems and why they have to learn to solve such problems. If one continues to fail many times in a task ultimately a day will come when children develop an attitude of frustration about that task and they tend to move away from it. It is possible for teachers to identify which learning points are difficult or easy in the content being taught. This is present clearly in the overt behaviour of children. Children usually say- " This is very difficult for me", " Today I did not understand anything", " It was not possible to understand the lesson in the beginning"

From such statements we can easily understand which learning points are difficult for children in the content taught.

- Teachers have found some solution in their own way for the problems stated above. For example, if they feel that some points are difficult for learning that point can be retaught several times which bring good changes in their comprehension. Dividing children thus facilitating for their learning practices also in a way helps in the solution of the problem. If some students have advanced in their learning help from such students can be taken to encourage children for Team Learning.
- Leave to the choice of students—Show to the students the existence of varied strategies for learning and allow them to chose from which strategy they have to learn. From this it is possible for them to become aware about what they know and the decision of how to solve the problems will be theirs. This develops responsibility in students.
- Cultivate the practice of using technology in your teaching. Learning CDs, LCD, use of projectors, Smart Board and so on would help solve the problem effectively.
- Team Teaching and Team Learning have to be encouraged among students. This being a new experience will attract the students towards learning.
- Responding to the pace of learning of students they have to be encouraged and facilitated for learning.
- Prior to teaching any new content teachers should have previous knowledge about that content.
- Encourage students to decide their own goals of learning.
- Let your teaching be creative.
- If students come forward to take up their own project, identify and encourage them.
- By assigning more interesting and challenging tasks to intelligent and gifted children their intellect will be sharpened and their interest in subject will increase.
- Interest in literature can be developed by introducing them to good books in literature.
- Asking such questions which stimulate thinking, it is possible to inculcate critical thinking.
- Develop scientific process skills by assigning small projects which are useful for their science learning.

Check Your Progress - 3

Some multiple choice questions below. Indicate the alternative that you feel correct using the symbol '✓'.

1.   The statement "From Know to Unknown"
    a.   A proverbial statement
    b.   An endless journey
    c.   A universal teaching maxim
    d.   A meaning less statement

    2.   Teachers have to do simultaneously _____
    a.   Do the same task
    b.   Do two tasks
    c.   Not possible to be on either side
    d.   Play a different roles

3.   Some statements are given below. Indicate the statements that you feel "True" or "False" by symbols '✓' or 'X' respectively.
    a.   Teachers responsibilities are assigned beyond what is necessary.
    b.   There is enough time for teachers to plan any task leisurely and to implement it .
    c.   Teaching the same curriculum to all children is an easy task.
    d.   Interest in literature in children can be inculcated by providing opportunity for them to read good books in literature.
    e.   If there are more opportunities for creativity in teaching it will not be helpful for the examination.
    f.   Learning will not improve by using technology in teaching-learning.

3.6.4. Let us Summarise

- As a result of rapid changes in the field of education teaching is also becoming complex.
- Teachers have to manage many functions. Some tasks have the nature of teaching. But, some other are totally different. For instance, one has to look after administrative work or it might be supervision of a classroom etc.
- If there is any service that can be dedicated to nation making use of knowledge skills and best attitudes planned so that these can reach every student and every society/culture, that is teaching.

- Teaching is profession in demand. The basic abilities required are deep knowledge of subject content, command over pedagogy to be employed according to age of students.
- Teaching that can be done by sharing is called as collaborative learning or cooperative learning. It has some special characteristics.

3.6.5. Answers to 'Check Your Progress -1, 2 and 3'

Check Your Progress - 1

1)-d ,2)-b 3) a-☒, b-☑ , c-☑ , d- ☒ , e—☑ , f— .

Check Your Progress - 2

1) a ,2) d 3) a-☒, b- , c-☒ , d-☑   , e-☑ , f-☒ .

Check Your Progress - 3

1) c, 2) d 3) a—☑, b-☒ , c-☒ , d-☑   , e-☒ , f-☒

3.6.6. Unit end Exercises

Explain the teaching that can be accomplished by collaboration and nature of teaching of subjects with challenges and strategies.

3.6.7. References

1. https://www.legit.ng/115611-what-teaching-profession-about-html

2. https://www.anderson5.net/cms/lib/c0-teaching models

3. https://www.classcraft.com/blog/8teaching challenges 2018

4. National Curriculum Framework 2005

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Block 4 : Teaching as a Profession
Unit 1 : Characteristics of Teaching as a Profession

Unit Structure

4.1.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Identify the main characteristic of Teaching;
- Justify the characteristic which make teaching a profession;
- Explain how teaching as a profession affects teaching-learning in class room; and
- Explain how teaching as a profession considers students.

4.1.2. Introduction

We have already discussed that teaching is a skill based process. Normally, teachers consider teaching as transference of knowledge or present knowledge to reach students. But, when teaching is considered as a profession, then it is not just transference of knowledge. It develops into a profession only when some more characteristics are integrated with the process of teaching. Whenever a work or a process is termed as a profession then it poetesses certain special characteristics. Similarly, when teaching becomes a profession, then it includes not only the class room teaching of lessons but also it is transformed into a resource work which can contribute all those things that are necessary for holistic development of

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children. Teaching is an extended and continuous active work which goes beyond the school time table, curriculum framework. In this Unit, you will come to know those character that are necessary for teaching to become a profession.

4.1.3. Learning Points and Learning Activities

4.1.3.1. Meaning and Concept of Teaching as a Profession

Scenario 1

Two individuals were conversing among themselves at a bus stop. (It was learned that those two were workers in factory).

First one: I thought my period of duty is about to be over. But, alas, my machine broke down.

Second one: Then, did you return after fixing it?

First one: No, it was only 5 minutes for my duty to end. So, I did not venture to fix it.

Second one: Then, who is supposed to fix it?

First one: Let anybody fix it. It is not my responsibility. Because, my duty is over. It is the responsibility of next worker on duty. It is his headache. Let him repair it and proceed with the work.

Scenario 2

A teacher was preparing for her next day class till 12-30 in the night.It was her intention to teach Geometry using paper cutting activity to every student. She has witnessed other teachers teaching this subject by drawing figures on the Black-board. Still it was her desire to let children turn this into an entertaining activity. Do you know why?. She liked students very much. Students' development was her everyday dream. To realize this dream she used to prepare for the class with great care. It was not for a day, for a week or even for a month. It was a continuous process. This was a special characteristic that was apparent ceaselessly.

In the above scenario you are witnessing two different kinds behaviour.If any work raises to the level of profession which one you would consider? Which one do you support?

Teaching is a cognitive process that takes place between individuals. This is an interaction that takes place between three points -teachers, students and subject. These are the three concepts namely teacher, student and subject. A triangle bond is formed between apex of these points. Therefore, teaching which is an integral part of Education has been defined in

various ways. Teaching has been defined from different viewpoints. For example, Teaching is defined as mere instruction, knowledge transmission, deeksha prakriye (initiation process), training and communication- thus Teaching is considered in various ways.

According to Burton, "Teaching is a motivation, guidance, direction and encouragement for learning".

According to H.C. Morrison "Teaching means an intimate relationship and educational process between more matured individual and less matured individual" (1934).

Clark states that " Teaching means activities designed to bring about desired changes in the behaviour of Students" (1970).

Thomas F Green opines that " Teaching is an endeavour undertaken by teachers for the development of a child".

Joice and Whyle (1985) have defined teaching thus "Teaching is cordial environment create jointly by Teaching , Teacher and Students. Here, reality is viewed in the context of values and beliefs".

Generally, Teaching is construed as distribution of knowledge platform for experiences limiting it to school/ classes. From the children's psychological and intellectual development stand point the process of nurturing undertaken by senior teachers is termed as teaching. Teaching is a process that results in meaningful learning outcomes. This kind of teaching has morality and pedagogy as its firm foundation. Teaching is a process where in learning content is transferred to children with great care which is in the form of teacher, students, truths, information and skills and that process has children's learning as its objective. Adopting a teaching method that respects learner's autonomy and existence is an integrated component of this process.

Although the generalization that teaching is facilitating learning is very simple, it is very meaningful. The process of applying diligently the specialized knowledge and skills to achieve the two fold goal of educational demand and individual development is called teaching. Providing learning experience to children and achieving curriculum goals and objectives along with development of values in children, guiding their social interrelationships are also included. Teachers make use of diverse techniques to inculcate positive consciousness in children. Teachers are a repository of knowledge who stand apart from the rest.

Teaching has got a solid sociological objective. Teacher undertakes preparations for teaching in myriad ways even before the class teaching period. Teaching is a process

that demands continuous evolutionary development. Teaching calls for self dependence and autonomy. We can see educational criteria, enrolment, professional growth, moral and professional values as well as professional discipline as included in teaching process. Besides, graduation and post graduation teacher's training (DEd and B.Ed.) have been stipulated as educational qualification needed for teaching. Individuals possessing this qualification would become teachers. Classes are conducted in accordance with curriculum and children are able to learn ideas and are able to become successful in the examination only after teachers complete the prescribed syllabus within the stipulated period. This is alright from the teacher's point of view. But, from student's point of view, since every child has its own pace of learning, it is foolish to believe that all students have the ability to learn to the same level within the stipulated time. There always exists a possibility of at least a few students not responding properly to curriculum activities in the class, thereby falling behind or still not be prepared for learning. As teachers, each one is expected to wait till the time when even such children make up their mind to learn, show interest in learning. When such a time comes it is possible to learn any thing.

The characteristics of a good teacher/teachers can be explained as below:

1. Excellent Communication Skill: The need for adopting audio, non-audio, audio-visual and multimedia to teach so that students understanding is fulfilled by excellent communication skills. Teaching-Learning process would be fruitful by the use of language and conversation understandable by the students in the class, writing on the black board, creativity and well planned, structured subject matter to be taught.

2. Excellent Listener: Teachers should first become superior listeners. Because, teaching is a two-way communication. Teachers speaking about the learning content won't suffice. But, it must reach children and it is guaranteed only when children have opportunity to speak. Their learning inabilities would be expressed in various ways. Teacher should have the capability to understand those inabilities.

3. Knowledge of and interest in the subject one teaches: When interest is generated in any learning subject, desire to acquire more knowledge about it would also be generated by itself. When one has interest in certain subject that interest would enable the individual with an intensity and inspiration to learn even more deeply. Across the world, teachers who have tremendous interest in the subject of teaching they have been recognized as the best teachers and such teachers would enlighten their students to show interest in the subject

they learn. If teachers bring about this much of transformation, then naturally avenues would open automatically by themselves for their future ahead.

4. The ability to develop intimate relationship with students: Liking the subject one teaches is not sufficient. But, teachers should also show affection towards children to whom they are teaching. Abilities and inabilities, strengths and weaknesses as well as learning inabilities- all these not only belong to the teachers themselves, but also to students. Hence, this kind of inclusive attitude must be present in the teachers. This type of concern would endow them with energy even to overcome the obstacles related to their profession, if there are any. This ability will help to better communication, affective response, sharper ability to revise as also inculcation of similar determination in children to learn.

5. Friendliness and Personality approachable by students: Facilitating children's learning itself is the prominent duty of teachers. Hence, in order to lend a helping hand to resolve learning difficulties in learning and difficulties in learning concepts, teachers and school environment should create and sustain teacher - student relationship that enables children to approach teachers, express their problems before them without any hesitation.

6. Preparation for daily work and organizing skills: Novel lesson planning, Lecture-plans, design of project work assigned to children, continuous preparation and improvement of these are included in the daily routine of best teachers. This task helps in reaching students educationally, facilitating their learning, understanding their learning inabilities and planning suitable solutions- All these are achieved effortlessly by this practice.

7. Strong professional moral stability: Teacher is another name for moral values. Values specific to a profession and teacher's moral conduct should be the model for students.

8. Organizing ability to build learning community: Support and nourishment from the environment are very much necessary for growth and development of an individual student.

9. Model Personality with principles: Society considers teachers with respect. Desires and expectations of teachers are concerned with children's progress. They express this through all of their activities. As found in many research reports the expectations teachers have from their students have a strong influence on them.

Check your Progress - 1

Multiple choice questions are given below. Indicate right answer which you feel right with (✓) mark.

1.   The components included symbolically in teaching are _____.
     a.   Teacher, Student, Parents
     b.   Subject, Student, Society
     c.   Teacher, Student, Learning Content
     d.   Training, Interaction, Subject.

2.   "Teaching is the motivation, guidance, direction and encouragement for learning" - this was proposed by _____.
     a.   H.C. Morrison
     b.   Clark
     c.   Thomas F. Green
     d.   Burton

3.   Certain sentences are given below. Indicate those you feel "True" or "False" with (✓) and 'X' symbols respectively.
     a.   In teaching it is not possible to create an atmosphere "only by teacher and students.
     b.   The process providing meaningful outcomes is termed as teaching.
     c.   Teachers are also common individuals just like any other.
     d.   When teachers complete the syllabus prescribed in the curriculum with in the stipulated time only then children will be able to face the ideas and to be successful in the examination.
     e.   In the class teacher's say should be paramount. Because, teacher has nothing worth listening from the students.
     f.   Facilitating children's learning is the main duty.

4.1.3.2. Characteristics of Teaching as a Profession

Teaching is termed as a profession. In English the word "Profession' is derived from "Proffiteor" meaning profess. From this the word profession is derived. An individual possesses with a specialized knowledge commits himself to a specified, value based activities related to that knowledge field, then it is said that he professes. Teaching also belongs to one of many such fields. Teaching is social process. Similarly, it is a strong factor in learning. Some times teaching seems to be an art, while at other times it seems to be a science. Hence, teaching is both an art and a science. Ultimately, it is an affective interaction

that takes place between individuals. This being a three point professional activity, communication plays an important role in it. Imparting guidance, direction and encouragement to learner is an integral part of teaching.

The important characteristic of teaching is that it is a science. The scientific characteristics included in teaching have made it systematic. One can see many techniques in teaching which considers how children learn as a very important idea. On account of this, teaching is termed as a profession. Complete development of child is possible only through teaching. The development of physical, psychological, intellectual, affective, social, moral and aesthetic sense of the child is achieved successfully by teaching. Therefore, teaching has come to be called as a profession. A work/activity could be termed as a profession only when it possesses a stable knowledge base. This knowledge should be adaptable to practice. It should be trainable. It should be such that a person after acquiring knowledge and training should be able to practice it independently and be able to carry out it forward independently. It should be such that it can be practised at an institution already established or it can be practiced independently by an individual. What ever may be the profession, it needs revitalization often. This need is met by professional training courses. In every profession, there are ethical principles/ ethcicl codes associations, group of members of the organization.

The characteristics that make teaching a profession are given below:

1. **Teaching is an intellectual process:** Since it is an activity arousing interest in the learners, teaching requires intellectual ability. Teachers, in order to prepare a lesson plan, concentrating all their intellectual ideas, put forth efforts to create a teaching-learning environment. Likewise, lesson plan will also be formed in a manner where in the learning environment helps, encourages and supports work skills of students. When it is implemented, it becomes the basis for achieving already laid down teaching objectives.

2. **Many scientific characteristics are included in teaching:** Teaching is both an art and a science. As an art it imparts teachers various skills while as a science it has armed them with so many teaching techniques, teaching sub techniques. Here, opportunity is provided to revise and practice teaching skills. Teaching process is fulfilled scientifically in stages. Hence, teaching, not being erratic, is a systematically implemented process. For this to happen proper planning and programme of action are essential. This is an object oriented task.

3. **Teaching may be termed as an art of transforming a raw material into a finished product:** In this context , children are like raw material. When expectations of society are being met through education of children, teachers conduct an efficient, effective teaching-learning process. They are trained for this task. In this training process, they are familiarized with relevant pedagogical knowledge, practice of pedagogical skills and other pedagogical work skills.

4. **It comprises educationally communicable techniques:** It can be safely said that education acquired scientific characteristic only due to the adoption of educational technology. Teaching techniques being intellectual programme of action are implemented in stages. At every stage test are there to examine the correctness of progress in learning. So, whatever is supplied in the supplementary stage would have a relationship with the process stage while process stage is connected with the outcome stage. Hence, if any failures surface during teaching there are lot of opportunities to follow procedures to resolve the problems.

5. **Self-Organizing tendency of teaching:** Since sensitivity, commitment and responsibilities towards student's advancement and learning progress are expected from the individual dedicated to educational field, professional teachers should possess such characteristics and should have self-organizing capacity.

6. **Fundamentally teaching is social service:** If a nation or a society is to traverse the path of progress, teachers must have strength and abilities to positively guide the various changes that are encountered in the current context towards progress. Since, teaching is felt as a social service by teachers, it brings self-satisfaction to them. Self-interst paving the way for societal interest, motivates one to make teaching an honest and selfless work.

7. **Long term study and training are the reasons for teaching to be a profession:** Graduation or Post graduation and teacher's training are very essential for one to become a teacher. Anybody who desires to become a teacher must be ready for long-term study and training. Command over subject content, assimilation of communication skills and respectful adoration of ones profession- all these are complementary factors.

8. **Teaching profession is a noble profession with highest autonomy:** An independent system free from all kinds of meditations, interventions and influences is what is

known as autonomy. It is found in teaching profession at different levels. For example, one can witness autonomy in teaching profession during the course of planning teaching activities, designing curriculum, examining students, evaluating their learning outcomes, framing rules to be followed while enrolling and promoting to next grade, and organizing co-curricular activities.

9. **Teaching profession has evolved from a systematic knowledge base:** Knowledge springs from various sources of life. For example, knowledge flows by itself from social, political, historical, psychological, economical, cultural and religious sources. Teaching profession like any profession has a firm foundation of a particular area of knowledge/subject of content.

10. **Teaching has universal ethical codes:** These ethical codes act as torch lights guiding teachers along a right path. Teachers, whether inside an educational institution or outside of it, would be watched constantly by the society. Hence, teachers are supposed to conduct themselves within an ethical framework. Ethical codes comprise of clearly stipulated rules about do's and dont's of the profession and thereby help teachers to reflect upon their rights and duties. This is known as Professional Ethical Code.

11. **Opportunities for in-service promotion in teaching:** The fact that teachers are fundamentally learners is an important characteristic of a teacher. Learning in their life is not like stagnant water. Since it is imperative that they should keep themselves informed about current affairs, self-study, self-learning are always undertaken by teachers on a continuous basis. Otherwise, they would become obsolete in the teaching field. Therefore, pedagogy admits professional growth of teachers.

12. **Characteristics of teachers:** Teachers identify student's needs and necessities and prepare their teaching-learning plans , conduct the processes by carefully preparing projects. To achieve this , better teaching method and evaluation techniques are adopted. It ensures children's smooth progress.

13. **Pedagogy and ethics in social context:** 1) Humanity 2) Better social interaction 3) positive interpersonal relationships 4) Positive attitude towards life 5) Interest in undertaking social service 6) Qualitative transactional knowledge 7) Firm commitment to nation and profession 8) Adherence to democratic values 9)Pledging for social

justice - possessing all these attributes in the social context is termed as professional conduct.

14. **Professional Ideals:** 1) Better relationship and communication with scholars, subject specialist, colleagues and students 2) Proficiency in subjects taught 3) Awareness about one's duty 4)Awareness about recent developments in pedagogy, better teaching skills and with out much digression concentrated teaching 5)Systematic evaluation and collection of updated information 6) Unmoving commitment to teaching profession; relentless effort towards the goal and conduct according to universal truth and values- all these are considered as professional ideals.

Check your Progress - 2
Below are given multiple choice questions. Indicate the answer you consider correct by ✓ mark.

1.   The reason for education to be systematic _____
      a.   Its positive
      b.   Its negativity
      c.   Social background
      d.   Scientific characteristics.

2.   When teaching is termed as a science _____
      a.   Providing support in the form of many skills
      b.   Providing many strategies
      c.   Facilitating lecture
      d.   Helping children in understanding

3.   Some sentences are given below. Indicate those you feel are "True" with a '✓' and those you feel are 'False' with a X symbol.

      a.   Ethical codes of teaching are the torch lights which guide teachers along the right path.
      b.   After becoming a teacher there is no need to learn.
      c.   Students must also be kept in mind while preparing lesson plan.
      d.   Students' progress is the responsibility of teachers.
      e.   Teaching is only a process of work based manual skills.
      f.   Teaching profession often needs revitalization.

4.1.4. Let us Summarise

- Teaching is skill based process. This is an extended and relentless process that goes beyond the school schedule, curriculum framework.

- Teaching is cognitive process that takes place between individuals. It is an interactive process that takes place between teachers ,students and subject content. These are nothing but the concepts of teacher, student and subject. A triangle is formed between these apex points.

- Joyce and Whyle have defined Teaching thus: (1985) "Teaching is cordial environment that is created jointly by teacher and students" Here, reality is seen in the context values and beliefs".

- Along with graduation and post graduation teacher's training (DEd and BEd) have been stipulated as qualification for any one to become teacher.

- Better communication skills, better listening, deep knowledge about the subject they teach, interest in the subject they teach, ability to develop a cordial relationship, friendship and a personality approachable by students, preparation for their daily school work and organizing ability, strong professional ethical stability and a model personality filled with principles- These are the characteristics of a teacher.

- Teaching is intellectual process and it includes many scientific characteristics. It comprises many techniques that can be utilized to educationally communicable, self- organizing trait, consideration of teaching as a social service, long term study and training as defining criteria, opportunity for autonomy and in-service.

4.1.5. Answers to 'Check Your Progress - 1 and 2'

Check Your Progress - 1

1. c   2. d   3. a -✕ b-   c- ✕ d-✕ e-✕ f-

Check Your Progress - 2

1- d   2-b   3. a-" b-✕ c-   d-"   e-✕ f-"

4.1.6. Unit end Exercises

1. Explain the characteristics of teaching as a profession.

4.1.7. References

1. https://www.preservearticles.com/education/characteristics of a profession
2. https://www.shodhganga.com/slide share.net/teaching profession
3. https://www.teachhub.com/teaching-profession
4. https://www.oecd.org/education/school/349232pdt
5. National Curriculum Framework 2005

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Block 4 : Teaching as a Profession
Unit 2 : Professional Growth of Teachers: Need and Importance

Unit Structure

4.2.1. Learning Objectives

After going through this Unit, the student teachers will be able to
- Make out the meaning of Professional Growth;
- Explain the need and importance of Professional Growth;
- Identify the influence of professional development upon teachers' teaching skills;
- Identify the institutions that provide opportunities for Professional Growth; and
- Exemplify schemes and actions taken to encourage Professional Growth.

4.2.2. Introduction

Generally, we say that no work should become like a stagnant water. What do you understand by this? Life becoming full of activity is the sign of aliveness. If this is so, what to speak of profession? Efforts are on to change the education system in accordance with the ceaseless changes occurring in the society. Education system is also undergoing fundamental changes in terms of curriculum change, modification in teaching methods, modification in evaluation methods etc. This is ever true that new ideas are being added to

the curriculum. On observing teachers we find that many concepts existing during their education are no longer needed and hence are dropped from the curriculum of the present day. For example, about 60-70 years ago Dalton's Theory proposed that atom is the most fundamental particle of matter. Later, development in Science made it possible to divide the atom further. Thus, many concepts included in the present curriculum are not studied by the teachers or ideas they learnt then, would not be helpful in teaching children. In this kind of situation, what should in-service teachers do? To quote an example, recently concepts about environment have been included in the curriculum of all classes. Similarly, computer education is widespread in the education field. This being the case, if teachers develop aversion towards computer or refuse to use computers it is harmful for them. Therefore, the idea of professional growth has come to stay. Now, we are witnessing many opportunities to improve one's knowledge, to acquire newer skills while remaining in active service. In this Unit, you are going to know about ideas like what is professional growth, what is its need.

4.2.3. Learning Points and Learning Activities

4.2.3.1. Professional Growth: Its Need and Importance

In a very broad sense, engaging oneself in a lifelong learning process, attaining all round development and using newer knowledge acquired in classroom teaching all these together is known as professional growth. Having said that, defining professional growth is not easy. Generally speaking, professional growth can be defined as sponsoring educational programmes by schools or government or organization which are helpful to the teachers in their profession, improving oneself continuously in teaching process by way of deriving benefit from such programmes and employing those skills in everyday class room teaching to help in better learning by students. Professional growth has three importance objectives namely:

1. Imparting sustainable professional abilities in a more holistic way.
2. Providing teachers with more intense , efficient teaching approaches.
3. Helping their students in achieving their learning goals even more effectively.

In the field of education professional development is a more broader concept. Teaching-learning methods, especially bringing qualitative changes and providing help to teachers engaged in administrative tasks by way of formal education or by way of continuous professional learning, making professional knowledge, abilities, skills of teachers more effective- these are some of the outcomes of professional growth. Professional growth is also helping teachers in preparing their plans with more relevance, being more organized in their conduct. Due to this, teachers learn to carry out their work efficiently and witness

more effectiveness in their teaching. Achieving teaching objective in the stipulated time means more time available to observe children with extra commitment and care. It prevents the possibility of teaching becoming just a transfer of "bookish knowledge". Children who are influenced by teachers would consider teacher himself as a resource person,and as a model to emulate.

Professional growth could be secured by diverse ways. Some of these are mentioned below. Notice them:

1. Work shops/ work seminars and degree courses.
2. Educational seminars and conferences.
3. Courses providing educational qualification
4. Visits to other schools/ resource centers providing accumulation of information and materials.
5. Participating in internet activity exclusively dedicated to teachers.
6. Undertaking personal or group research.
7. Responding to team observation and playing the role of a coach or mentor.

In this modern era, various professional skill growth oppotunities concerning professional growth have been intimated officially. There is a need for teachers to be thoroughly acquainted with the following skills. When this happens a foundation is laid for professional growth.

1. **Professional development and adaptation:** Everybody desires characteristics of adaptability and flexibility in teachers. Children are going to learn whatever is taught in which ever manner. Similarly, professional growth is also positive relating to the factors like expectations of management, adaptation to such expectations, learning standards.

2. **Development of self- confidence:** Self confidence is necessary for every teacher. Confidence not only in oneself but also in one's students and colleagues is essential. An individual having self confidence is able to in still confidence in others.

3. **Communication:** The role of communication in professional growth is very important. Communication between individuals, teachers and students must be clear, pure, effective and efficient and it is of first priority.

4. **Team spirit -teacher is like a player in the team:** Having cordial relationship and intercommunication resolving problems faced together would lead to success. A teacher has to work with his/her team.

5. **Uninterrupted learning:** Teaching is a lifelong process. Any teacher who wishes to traverse this long way on account one's love for subject taught will exert influence, be effective and successful teacher.

6. **Creativity and imaginative ability:** Teacher should have the ability to make the students to stand on their own feet, expressing themselves creatively.

7. **Leadership Quality:** Teachers are masters of themselves in the class. Therefore, children would be watching all their activities. Teachers should be like a leader and instilling leadership qualities in their students becomes their duty.

8. **Organizing ability:** Teachers should have the organizing ability to conduct programmes which can arouse interest in children to innovate and discover something new.

9. **Programmes / works showcasing novelty:** When you put questions to children there are chances that they might tell you many things unknown to you. Teachers should make efforts to include daily experiences to class room teaching, there by utilizing opportunities which make learning more meaningful.

10. **Professional commitment:** In the face any difficulties in their life teachers should remain committed to their profession, respect one's profession and tread on the path of principles.

11. **Dealing with online popularity:** In the present day computer age it is imperative on the part of teaches to have online communication. It is better if one has this kind of communication only for the purpose of exchanging ideas and information. There exists a lot of such websites. One should decide upon a safe and useful website and then should make use of it. For, example a website known as 'Linkedin' has the capacity to help in professional development. Through this website one can establish and maintain communication with fellow professional teachers at the social, national and international level.

12. **Maintaining children by keeping them active:** It is a herculean task without doubt. Knowledge about recently discovered ideas, use of modern technology, use of newer apps, acquaintance with educational websites,- with the help of all these, keeping in touch with other teacher has also considered as in important professional growth.

13. **Use of Technology:** Whatever technologies that are available for the good of students, for their education and learning have to be utilized by the teachers and hence they should have a working knowledge about them. By employing things like smart boards, LCD projectors learning by children can be made even more easy.

14. **Discrimination when to relinquish social media:** Today's teachers should have the discrimination about how and when to escape the grip of social media.

15. **Rejuvenating ability:** Teachers should possess the ability to rejuvenate children so that they can think discriminatively, become inventors, discoverers, become creative, have interest in educational programmes, resolve problems, be self directed and introspect as well as conduct their life with a quality of leadership.

All the ideas described above reflect various fields related to which teachers should grow so far as their profession is concerned. Just as modern technology has influenced our life, it has also cast its strong influence upon the learning of children. Due to the modern technology, children's learning as well as teacher's teaching have undergone significant changes. Teachers have no option but to become well versed in all these new developments.

Check Your Progress - 1

Multiple choice questions are given below. Indicate the answer that you feel right by '✓'.

1. Professional growth _____
   a. Starts at a particular stage
   b. Stops at certain stage
   c. Is possible only when opportunities are available
   d. Is a life long process.

2. The factor that has been influenced by modern technology as it has been with teacher's profession is _____
   a. Society
   b. Institutions
   c. Children's learning
   d. Life of people

3. Certain sentences are given below. Indicate those sentences that you feel are 'True' by ✓ and by X which you feel are 'False'.
   a. All should have the discrimination of the time when it is necessary to come out of social media.
   b. Smart boards and projectors will make learning even more decentralized.
   c. Use of apps available in today's technology and communication with teachers through internet are important for professional growth.
   d. Doing one's job with selflessness is also a part of professional growth.

e.   Teachers should have the same kind of confidence in fellow teachers as they would have in themselves.

f.   Improving educational qualification is not a characteristic of professional growth.

4.2.3.2. Opportunities for Professional Growth for Teachers

In fact there are myriad opportunities for professional growth extending over a wide range. Various types of opportunities for professional growth have been identified and the same are being made to reach the interested. Such opportunities are at various levels. For example at district level, at Taluk level, school level as well as state level and national level abundant opportunities are made available for teachers' professional growth as a part of benefit from the Government. Likewise private organization and institutions are also involved in creating such opportunities. These are organized ranging from a one-day conference to two-week workshops. Further, orientation workshops, refresher courses which are mandatory at the time of joining the service are also lead to professional growth. In this context , mention could be made of long term higher degree programmes, study opportunities and courses offered by open and distance education agencies (Karnataka State Open University degree courses, Mangalore University courses, opportunities to study many subjects offered by Indira Gandhi National Open University), Online courses for learning are offered which can be taken up conveniently after school hours. Apart from above mentioned opportunities various other special courses are responsible for teachers' professional growth.

Myriad opportunities are offered which could be selected for Post Graduate degrees. Notice some of them which are given below:

1.   Undertaking higher studies in the field of subject one is teaching. For, example studying scientific theories, undertaking extensive study about historical phenomena and discovering effective methods of teaching that are more interesting to children.

2.   Exclusively studying a specific teaching technique or a skill and making an effort to employ those in teaching of all subjects. For instance, we have Advanced Organizer Model proposed by Ausubel. While employing this technique, adopting it to children's learning level and to their interest or employing techniques of teaching literature (critical teaching, critical teaching and structural criticism) in language teaching.

3.   Studying a specific degree or course and acquiring a certificate validating the same. This would be a professional growth improving their educational level. Generally, Universities or other autonomous institutions, organizations provide opportunities

to study many courses many small courses are doing the job of offering certificates by attracting learners.

4. Teachers have to learn exclusively various technical qualitative analysis and analytical skills that are to be employed while evaluating students' learning outcome. Thus, by analyzing the grades obtained by learners greater concern can be shown towards their learning.

5. It is the norm of the Government that evaluation of student must be continuous and holistic. Participation of teachers in programmes will help in estimating the progress made by each child. This technique is being taught to in-service teachers in phases. Conducting diagnostic tests, knowledge of how to take remedial measures, adopting refresher programmes. During all these teachers achieve professional growth.

6. Employing modern technology, learning situations motivating interaction which is possible when teachers are deputed to learn how to employ such technology, learning the use of smart boards, projectors etc.- teachers attain professional growth while acquainting themselves with all these ideas.

7. Getting intellectual support and acquisition of self confidence by teachers is facilitated by participating in 4-5 day workshops on class room management, preparing question papers based on blue print, asking effective questions inside the class constructing thought provoking questions etc.

8. While working with fellow teachers, observing their professional skills and adopt those which are appropriate, participating actively whenever an opportunity for collaborative learning is available, carrying out or learning interdisciplinary along with fellow teachers who have similar goals, forming a team and learning new ideas, learning something new by the members of the team formed by the teachers by way of exchanging ideas while learning and acquiring new skills-various types of activities such as these offer abundant opportunities for teachers to grow professionally. This calls for better team spirit.

9. Conducting special classes for children with learning disabilities, facing difficulties in English language learning and mathematics learning, showing responses to problems of children with team spirit.

10. Embarking on social service by assuming the role of community leadership, establishing affectionate give and take between school and community, teachers together carry out efforts to the progress of school.

11. Making entry level teachers to work with senior and experienced teachers would help junior teachers in receiving easily the guidance and directions from senior teachers which leads to success in profession.

12. By doing research find out suitable ways of solving the problems faced by children, put forth efforts to improve the quality of education by embarking on action research.

13. Undergoing courses offering certificates conducted at the national level. For this , some amount of time has to be kept apart and formal examinations to be passed. For example, advanced courses offered at state level. These are one year courses and hence are not a burden to teachers, when it is necessary for non-kannadigas to learn Kannada, then one year/ six months courses conducted by Central Institute of Indian Language will be of help to many teachers.

14. Those who have started their career acquiring their degree can select masters degree which would be a continuation of their degree course. Similarly, those with Masters Degree can opt for Ph.D. Moreover, at the college level, two dearness allowances have been given to those showing progress as incentives.

15. In recent days both central and state Governments are seriously concerned with quality of teachers and education institutions. When every teacher has better qualification he can influence students in a greater degree and then it would be possible to witness better learning outcomes.

Check Your Progress - 2

Below are given some multiple choice questions. Indicate the answer you feel right or wrong by the symbol ✓ or X respectively.

1. The appropriate way to solve the problem of learning difficulties of children is _____
   a. Diagnostics tests and remedial measures
   b. Better teaching-learning situations
   c. Giving the summary of taught material in written form.
   d. Activities

2. Evaluation of students' learning should be conducted_____
   a. Quite often
   b. Holistically and continuously
   c. Half-yearly and annually
   d. At the end of the year

3. Below are given some sentences. Indicate the sentences that you feel are 'True' or 'False' by the symbols ✓ and X respectively.

   a. Refresher courses facilitate professional growth.
   b. Preparation of question papers should have the blue print as its basis.
   c. Participation of school in the community work seems to be political in nature.
   d. Action research helps in improving the quality of teaching- learning process.
   e. Associating junior teachers with senior teachers has the greater possibility of creating nuisance.
   f. Open Universities are offering support to the professional development

4.2.4. Let us Summarise

- Changes are also taking place in the educational system in response to the continuous changes occurring in the society. Changes in curriculum, changes in teaching methods, changes in evaluation methods- thus education system is undergoing fundamental changes.

- In-service teachers are facing lot of challenges. Many things that they have not studied have been included in the present day curriculum taught to children. At least to teach these concepts to children teachers have to continue their education. Newer teaching skills and evaluation skills have to be mastered. All these factors only show the dire necessity of professional growth of teachers

- Activities like refresher courses, orientation programmes, special training courses, relevant certificate courses, advance studies, graduate and post graduate courses will help teachers in their professional growth. Diverse activities such as workshops, educational conferences and seminars, courses that enable one to acquire additional qualification, visits made to other school/ resources with purpose of information gathering and receiving new ideas, participating in internet activities dedicated exclusively for teachers, undertaking personal or group research, responding to team visit and playing role of a coach or mentor.

4.2.5. Answers for 'Check Your Progress - 1 and 2'

Check Your Progress - 1
1-d , 2-c, 3- a-✓, b-X, c-✓, d-✓, e-✓, f-X

Check Your Progress - 2
1-a, 2-b, 3. a-✓, b-✓, c-X, d-✓, e-X, f- ✓

4.2.6. Unit end Exercises

1. Explain the meaning, need of professional growth and the opportunities available for it.

4.2.7. References

1.   https://www.edglossary.org/professional devt.
2.   https://www.teachhub.com/15-professional-development-skills-modern teaher
3.   The National Curriculum Frame Work 2005

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Block 4 Teaching as a Profession
Unit 3 : Stages of Professional Growth of Teachers (Pre-service and In-service)

Unit Structure

4.3.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain professional growth as related to education field;
- Identify the stages of professorial growth;
- Explain the features of ore-service professional growth;
- Explain the features of In-Service professional growth; and
- Compare and contrast the features of Pre-service and In-service professional growth.

4.3.2. Introduction

In unit 1 and 2 of the block, you have learned meaning , purpose and nature of professional growth. When we consider professional growth in relation to the teaching profession, we can think of two stages of professional growth of teachers. Stage of professional growth of pre-service teachers and stage of professional growth of In-service teachers. Professional growth like programme of teacher training appear as professional growth of In-service teachers appear as part of teacher training after teachers have entered

the teaching profession. In order to bring about qualitative improvement in teacher functions varieties of professional growth programmes are organized by government grants and by several voluntary societies and institutions. Although the aims and objectives of professional growth programmes are similar in both the stages, but their nature and features are different. In this unit, you are going to learn about the nature,types and advantages of professional growth programmes in these two stages.

4.3.3. Learning Points and Learning Activities

4.3.3.1. Professional Growth of Pre-service Teachers

Stage-1

As stated in the Kothari Commission Report, teachers are not like common people. Because a teacher is an artist, a scientist and a critical analyst. He / She is a master to teach society and more than these he/she is a powerful motivator to spurt the spirit to a vitality in all. Only a teacher knows what all magic can be done in teaching profession. Some are teachers by birth. But, others have to be prepared as teachers through training and continuous practice as teachers. Because, in managing any field of knowledge, if a situation of absence of teachers arises, the system of that branch of knowledge crumbles down. Therefore to avoid such a situation teachers have to be prepared. As a result of this inevitability teacher teacher training centres came into existence. Even after entering teaching service it becomes essential for teachers to continue their efforts for the acquisition of knowledge in one way or the other. A teacher is always a student. In this way professional growth is a process which should go on during pre-serivce training period and in-service period.

Pre-service training stage means stage of training prospective teachers.

Just before they enter teaching profession. During pre-service training of roles. Firstly, they learn about the theoretical aspects about pedagogy and secondly during their practice-teaching period, they learn the practical aspects of what they have learned in class room context. Their are many modes of teacher training.

1. **Pre-primary Teacher training stage:** This is also called Nursery Training. In many states government itself organizes this training. As for example, Jabbalpur and Baroda Universities are conducting certificate course in pre-primary Teacher Training. But, mostly pre-primary teacher training is given by voluntary non-governmental agencies which are recognized by Governments.

2. **Primary Teacher Training Stage:** This training is meant for primary school teachers. Teacher are trained to teach primary school children. Prior to some decade this training was called Teacher Certificate Higher or TCH. But, now it is called as Diploma in Education(D.Ed).Earlier one had to pass SSLC examination. But, now pre-university (PUC) is the required qualification for the course.

3. **Teacher Training to acquire expertise in a language:** This is a training programme for learning and acquiring expertise in any language like Hindi, Samskrita, Telugu, Tamil or any other Indian language. The Central Institute of Indian Language situated in Mysuru (Karnataka State) is offering such training courses.

4. **High school Teacher Training:** This training is given in the Colleges of Teacher Education(CTE). In these colleges of teacher education teacher training for upper primary, Middle School and Secondary School Teachers can be found. Students with degree and Post-Graduate Degrees are the aspirants for getting training.

5. **Centers of Regional Teacher-Training Institutions:** As autonomous body the National Council of Research and Training (NCERT) situated in New Delhi is managing 4 regional Colleges of Education (RCE) in 4 places in India-they are Ajmer, Bhopal, Bubhaneswar and Mysore. These colleges are conducting courses such as 4-years Integrated B.ScEd, 2-year B.Ed; 2-years B.Ed; 2-years M.Ed courses in teacher training along with Research Degree course, Ph.D and also some developmental research programmes are undertaken.

6. **Teacher Training in Special Education for Special Children:** Some Government and Non-Governmental Institutions and organizations are giving training for teachers who are desiring to teach and train disabled children (now called as challenged children) like Blind and Deaf children and children with speech defect, cerebral palsy, mentally retarded. The All India Speech and Hearing situated in Mysore is giving such specialized training to teach and train mentally retarded, deaf and speech handicapped children.

7. **Teacher Training for Teachers of Specialize Subjects:** Many teacher training courses conducted by government and non-government voluntary organization for prospective teachers who want to teach specialized subjects like Music, Dramatics, Painting and Drawing, Fine Arts and Home Science and also Hospitality in Hotel Management.

Karnataka Government is offering certificate courses in Music, Dance and Painting. Rangayana in Mysore is conducting a course in Dramatics.

8. **Teacher-Training at the Post-Graduate level:** Many recognized Educational Institutions and Universities conduct two years Master of Education for those persons who have completed 2 years teacher-training after getting a University Degree. M.Ed. courses of universities, MA Education course in some universities and M.Sc. Education are some examples of teacher-training course at the Post-Graduate level.

All the above explained courses are different aspects of teacher-training. At the pre-service stage, these courses teach and give training in knowledge and skills to persons who want to become teachers. In these course student-teachers that is trainees learn comprehensively about knowledge areas, analytics of subject content, formulation of learning aims, objectives, creating good learning situations, acquiring expertise in teaching practicing teaching skills, learning various models/strategies of teaching, evaluating students achievements accurately using computers, applying statistical techniques to analyse data of action research and studying subjects like Sociology of Education, Educational Psychology, Philosophical Foundations of Education, Educational Administration in the social context.

The National Curriculum Framework-2005 (NCF-2005) of the NCERT, New Delhi has approved the following points with reference to professional growth of teachers in Pre-Service Teacher education.
- Creating appropriate learning situation after clearly understanding the learning process.
- Keeping in mind the fact that knowledge takes forms through its individual experience and not through external realities of text books.
- Responding sensibly to social, professional and administrative contexts of the work they are doing.
- Developing not only the ability to have awareness about above said situations but also to create such situations.
- Acquiring fundamental knowledge in languages and acquiring expertise in using them.
- Recognizing personal aspirations, cognitions, abilities, interests, attitudes and inclinations.
- As a teacher, trying to formulate one's thinking relating to one's profession in specific situations.

- Considering critical thinking as a continuous process of education.
- Developing interest in fine arts and aesthetic sense in children studying fine arts.
- Satisfying all the needs of children including disabled (Challenged) children and socially marginalize children.
- Following an integrated model in bringing about professionalism among teachers in the changing contexts of society.
- Developing required counselor's skills and competencies in teachers so that they can suggest and advise about solution for the educational (learning), personal and social problems of children in their daily life to utilize productivities as a medium for acquisition of knowledge, development of values and skills.

Check Your Progress - 1

Some multiple choice questions are given below. Mark the correct choice according to you by putting ✓ mark.

1. Pre-service training candidates
   a. Learn only theories
   b. Learn only about practical experiences
   c. Practice in the class rooms what they learn theoretically
   d. Learn teaching skills at micro level.

2. Some statements are given below. Some are true and some are false. Put a (✓) mark for statements which are true and put a (X) mark for statements which are False.
   a. Critical thinking is a continuous process of education.
   b. Regional Institutes of Education help in the professional growth of teachers.
   c. Training in specialized subjects and training in teaching special children are same.
   d. Teachers have to create learning situations after knowing the abilities of children.
   e. Some are teachers by birth.
   f. There is not much of difference between pre-service and In-service teacher training.

4.3.3.2. Professional Growth of In-service Teachers

Stage-2

Even though pre-service training gives the required qualification to a person entering teaching profession, after joining that profession there will be a need to continue one's learning. Therefore, it is possible to become for a teacher who continues the practice of continued learning and his/her professional growth also.

As an educationist Lawrence has said- "In-service education means the education a teacher gets after joining the teaching profession. It includes several comprehensive programmes. This is a programme that is provided to in-service teachers which includes orientation or directions to modes which includes educational, social, philosophical, instructional and technological and implementation of many practical activities which brings professional growth in teachers' profession. It is a p programme of visiting related to professional growth, participating in conferences, seminars, forums symposium of experts and such other things which bring about qualitative changes in teachers resulting improvement in their profession."

In-service teacher-education which started in India before independence still is continuing and it has transformed in many work. As it is quite natural as it is the practice of this programme is responsive to social demands. Many government rules and regulations, policies relating to education are now in force. In-service education and training has an important place in them. National level education commissions also have recommended in-service education of teachers and have approved many suggestions. Hartag committee and Sargent commission have named such programmes as orientation programmes and have suggested that it should be a continuous active programme organization.

Need for professional growth of In-service teachers:

A variety of teacher-training programme are present in our country. In the same way provision is required for teachers after joining service to learn new ideas and subject contents which are included in curriculum every now and then. From this view point enough programmes of professional growth are required for teachers working in several kinds of educational institutions. Such need can be explained as below:

1.   Any teacher who does not continue his /her study can not be considered as a good teacher. As respected Gurudev Rabindranath Tagore has says- " A light which is burning to give light can only light another light".
2   The very nature of teaching profession is growth with out stagnation. Hence, this profession of teaching requires guidance and help from other scholars and resource persons and experts.
3.   The field of education which is always active can not afford to become like stagnant water. Schools and colleges which are like reflections of society, in other words, the entire education system depends on society. Whatever changes occur in society find their place in education field. Hence teachers should have professional growth at least for learning new ideas and new skills about education.

4.   Developments occurring in Science and Technology have their impact on education field also. Curricula and syllabi are not exception to this. As these changes are happening with rapid pace there is no leisure in teaching profession. As there is need to incorporate such knowledge and skills in teaching work and in assessing them, in evaluation continuous training is required for in-service teachers.

5.   Training of in-service teachers prepares every teacher as suited to democracy. A teacher grows professionally through mixing with all types of individuals, experts and experienced people to share his experiences with them.

Some kinds of programmes for professional growth of in-service teachers are explained below. Rich experience can be got through participation in these programmes actively and can have professional growth.

1.   **Professional conferences:** Professional conferences are organized relating to burning problems/issues in the educational field and about inclusion of new subjects, ideas and skills. Prominent persons facing a similar problem join together and try to suggest a solution to that problem. are given. Meticulous discussion, criticism will be undertaken about the selected main problem or theme. Many individual present their ideas in the form of theoretical or research papers which will be discussed. At the end of the conference opinions and suggestions of the conference will be consolidated and they are printed in the form of a book(Conference Souvenir). Such opinions and suggestions and recommendations give guidance to governments about possible future policies, rules and implementations procedures.

2.   **Orientation programmes:** This is also an educational programme which is mainly organized for in-service teachers only. Knowledge and skill level of teachers improves through participating in such programmes. Many national educational commissions, committees and policies have emphasized orientation programmes.

3.   **Workshops:** Workshops are mainly conducted for practical skills or practical writings, as for example, development of skills, using computers(Laptops). Workshops can also be conducted for teaching new subjects like computer course in curriculum, life skills, new economic policies, new education policies, new curriculum design and so on. During the workshop the participants work cooperatively with concerned experts/ experienced persons in related skills/ subjects who give guidance to the participants. Usually, workshop will be of 2 to 6-7 days duration. At the end of the workshop a Teacher Handbook, Teacher's Guidance or Teacher's Manual will be printed or

distributed to the participants in digital form. Workshops may take more time duration than conferences. As the number of participants is usually limited in workshops, authoritative outcomes can be expected from a workshop.

4. **Seminars:** It is not if we say that Seminar is a broad form of Discussion to discuss current burning problems, debatable ideas or proposals from various view points. It is a programme in which several sub-themes related to a selected main theme are discussed. There will be opportunity for participants for participants to write papers, theoretical or research based, on any sub-theme of their interest and to read(present) the paper in the seminar. Such papers are discussed among participants with direction of chairman of a session. At the end of the seminar a prominent person as chairman consolidates the proposals or new ideas or procedures based on the presented papers. These papers are edited once again and are brought out in the form of a book. (Seminar Souvenir).

5. **Study Groups:** Teachers teaching same subjects along with one or two subject specialist can come together to form a study group. New innovative ideas or new discoveries or new concepts in that subject will be discussed by mutually exchanging their views/ ideas and doubts. If they have any problem in teaching their subject pros and cons of that problem will also be discussed. If the idea/ concept is completely new the concerned expert will be invited and discussed with the expert. Thus, teachers can continue their learning from the monthly or fortnightly meetings of the Study Groups.

6. **Study Centres of Professional Writings:** Colleges of Education and Universities and famous institutions like AIISH. CFTRI, Regional Institute of Education and Central Institute of Indian Languages situated in Mysuru provide books, Research Journals, Journals, Monographs and Periodicals which are not easily available for teachers to study and to read are made available for teachers. For example, publications of NCERT (New Delhi),Publications of NCTE, NUPEA and Publication Division (New Delhi) are not available easily in book shops. Similarly, digital resources are also not easily available. Such reference materials are provided in institutions mentioned above. This practice of providing reference materials and other references for teachers helps the growth of professional experience of teachers immensely.

7. **Practical/Project Schools:** This is a novel idea in relation to teacher-training. Demonstration schools, Practical schools and Project schools are there as adjuncts to

Centres / Colleges of teacher-education. Such school are the most fruitful farms for the professional growth of in-service teachers. New teaching strategies and methods are firstly implements and tried in these project school and then only communicated to other teachers if they are found to be effective positively. Even in practical schools any new method/strategy of teaching is modified if necessary during its trial period and then only it is permitted for inclusion in the curriculum.

8. **Continuing education provided in open universities:** Some Universities and especially open universities have added a new dimension for the dream of higher education for the aspirants of knowledge by offering courses in certificate Diploma, Degree and Post-Graduate Degree courses through Open and Distance Education mode. Karnataka State Open University, Mangalore and Kuvempu Universities, Indira Gandhi National Open University, Central Institute of English and Foreign Languages (Hyderabad) can be mentioned in this context.

9. **Other programmes supporting and providing professional growth of teachers:** **(1)** Educational excursions (2) Radio Lessons (3) Educational and other good films (4) TV Programmes (5) Exhibitions (6) Science Festivals (7) Guest Lectures (8) Extension Programmes (9) Teacher Exchange programmes (10) Book Exhibitions

Governmental and many non-governmental voluntary organizations organize varieties of programmes for the professional growth of in-service teachers. Some of them are mentioned below.

1. **Government Educational Institutions:** These institutions organize conferences, Seminars and Workshops.

2. **State Level Science Organizations:** In some states special science programmes are organized specially for in-service science teachers. Such programmes undertake the objective of developing scientific attitude, scientific methods and scientific process skills in teachers.

3. **Regional English Language Centres:** These centres under the aegis of Central Institute of English and Foreign Languages, Hyderabad conduct programmes specially for English teachers, as for example a package of 4 months training which are very useful for in-service language teachers.

4. **Induction or Orientation Programmes:** The programmes designed for introducing teachers who have just entered teaching profession are called induction or orientation programmes. These programmes familiarize the new entrant teachers about the nature, professional ethics of teaching profession, duties, responsibilities and roles of a teacher. Usually Induction Programmes are organized by Academic Staff College (ASC) of Universities, NCERT,NCTE,DSERT and SCERTs.

The New Educational Policy (NEP) 1986 has stated that pre-service and in-service training programmes should be continuously conducted. For this purpose the NPE-1986 recommended establishment of District Institutes of Education and Training (DIET) of district levels, 250 Colleges of Education, 50 Higher Study Centres (IIAC). In 1990 Acharya Ramamurthy Committee recommended that training programmes suitable for the specific needs of teachers have to be organized and their implementation and evaluation should be part of the plan.

In places where multiple levels primary schools are established there is special need of training for teachers working in such schools. Such schools have to be managed only by teachers who have undergone such special training with out suitable instructional materials and equipments and in the absence of suitable guidance and help in planning units of teaching and class-room teaching nothing fruitful can be done. Because usually the experience of teachers are based on teaching and managing single-stage schools. For such teachers training in preparing unit plan in multistage school, teaching procedure currently followed in multistage schools, is necessary. As direct experience is given in such training and showing films of such teaching procedure during training period such multistage training will be very helpful for teachers for developing their self-confidence.

Check Your Progress - 2

Some multiple choice questions are given below. Put a '✓' mark against the alternative which you feel correct.

1. In-service teacher education means _____
    a. Training of teachers who are in-service
    b. Training of those who have not yet joined service.
    c. Training given to those who aspire to become teachers
    d. Training for a particular type of job.

2. Which of the following first suggested the term Orientation programme of teachers?
    a. New Education Policy (NPE) 1986
    b. Hartage committee and Sargent Report
    c. National Curriculum Framework-2005
    d. Programme of Action (POA) 1992

3. Some statements are given below. Put '✓' mark for those statements which are true and put a (X) mark for those which are false.
    1. In-service teacher training was first presented in India.
    2. Active education is static as stagnant water.
    3. There is no relationship between changes in science and technology and education field.
    4. There is nothing like leisure in teaching profession.
    5. Orientation programmes mean reinforcement techniques.
    6. There is need for training for teaching processes in multi-stage schools.

4.3.4. Let us Summarise

- Training programmes of professional growth of In-service teachers are there just like training for pre-service teachers.
- Government and many voluntary organizations conduct professional growth training programmes for qualitative improvement of teachers.
- There are many kinds of teacher trainings, as for example, performance training, primary school level training, secondary school level training, training for language proficiency, —————, regional teacher-education Centres, special teacher training for education of special children, educational training for teachers of special subjects and educational institutions and universities imparting post graduate teacher education.
- There are various types of teacher education programmes currently running in our country. Similarly, those who are trained under various programmes after joining the service they need opportunities to learn many newer ideas that continue to be added in the curriculum .Professional Conferences, Orientation Programmes, Workshops, Seminars, Group Studies, Centre for Study of Professional Writings, Practical/Project Schools and continuing education of Open Universities- all these are means to realize professional growth of teachers.

4.3.5 . Answers to 'Check Your Progress - 1 and 2'

Check Your Progress -1

1-c, 2-d, 3 a-", b-", c-× d-", e-× , f-"

Check Your Progress - 2

1-a, 2-b, 3 a-", b-×, c-×, d-", e-×, f-"

4.3.6. Unit end Exercises

Explain the need and opportunities for professional development of teachers during the Pre-service and in-service stages.

4.3.7. References

1. https://www.educational systemblogspot.com/pre-service and in-service training
2. The National Curriculum Frame Work 2005

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Block 4 : Teaching as a Profession
Unit 4 : Approaches to Professional Growth

Unit Structure

4.4.1 . Learning Objectives

After going through this Unit, the student teachers will be able to

- Identify the approaches to Pre-service Professional Growth of Teachers;

- List the merits and demerits of the approaches to Pre-service Professional Growth of Teachers;

- Mention the Approaches to In-service Professional Growth of Teachers;

- Explain the Approaches to In-service Professional Growth of Teachers; and

- Compare the various Approaches to Professional Growth of Pre-service and In-service Professional Growth of Teachers and identify similarities and differences between them.

4.4.2. Introduction

As teaching is a profession, it has its own characteristics, ethical rules and systematic methods. Along with acquisition of knowledge, training of skills is the main characteristic of any profession, for which some time is reserved compulsorily. When teaching is

considered as a profession, the rule that learning and practice of theories and skills should have been acquired in the form of basic training should be followed. At present, we are observing this in the training courses for teachers that are being given in the Colleges of Teacher Education. It is a well known fact that if any individual wants to join teacher profession one can become an authoritative teacher only after he/she gets the training. At present , Nursery Training, Primary Teachers training, and Secondary Teachers Training are in vogue. With respect to Professional growth of teachers, several opportunities are there with various approaches which have different features and different aims and objectives. In this Unit you are going to learn about different approaches to Pre-service and In-service Professional Growth of teachers, their nature and merits and limitations.

4.4.3. Learning Points and Learning a Activities

4.4.3.1. Approaches of Pre-service Professional Growth of Teachers

Usually, before joining teachers' training an individual should have prescribed minimum level of educational qualifications. Later on training will be given in their selected optional subjects by conducting specially designed theory and training (Practical) classes. Although, there are some subtle differences between the teacher training at the primary and the secondary stages broad similarities between these two stages of training is a strong point in that comparison, that too as the approaches to professional growth is common in these two stages of training. Without giving much emphasis to differences between the two stages of training , general ideas about the approaches to professional growth are explained.

The approaches to professional growth can be conceptualized like teaching methods as education-teacher cantered, learner centred, activity-centred, and self-learning approaches, Knowledge and skills are imparted/developed to those who are interested in teaching profession through lectures, lecture-cum-demonstration, workshops, interaction with resource persons, conferences and seminars.

Lectures: In Pre-service training period some courses are prescribed to teach theoretical content about education. Mainly Philosophical Foundations of Education, Educational Sociology, Educational Psychology, Social Psychology, Statistics, Research Methods and Subject based Teaching Methods and some practical courses are taught in the class to teacher-trainees according to prescribed time-table through lecture method (teacher centred method). In the new 2 year B.Ed. Curriculum these subjects have been included under the course Perspectives of Education under the titles of Childhood and Growing-up, Education in Contemporary India, Language Across the Curriculum.

Lecture-cum-Demonstration

During Pre-service Training Period some aspects of education are taught through lecture-cum-Demonstration method, for example while teaching about Micro-Teaching skills demonstrations are given through Lecture-cum-Demonstration method. During their training period student-teachers give demonstration of their teaching by taking the classes themselves.

Field Visits

In the programmes of teacher-training many field-visits are purposefully organized. For example, student-teachers are taken out by their lecturers to visit administrative offices of Public Instruction like DDPI/BEO office, Government Colleges of Education and different types of schools like Navodaya Schools, Ashram Schools and so on. In addition to such Field-visits, Educational Excursion once an academic year to places of educational importance is undertaken. Every Field-Visit and Educational Excursion will have its own specific purposes. During visits to educational institutions some body concerned with that institution gives a clear picture of the aims, activities and salient features of that institution to the visitors. The student-teachers are instructed prior to their visits to take some notes and write a report about their visits. Some marks are allotted to such report in the scheme of internal evaluation. All such programmes form an integrated part of successfully completed compulsorily. Field-Visits and Educational excursions are student centred approaches.

Professional Guidance and Directions and Lectures on Subjects by Resource Person

Arrangement will be made to invite to the college some expert resource persons who have rich subject expertise and professional experience to deliver lectures through lecture and lecture-cum-demonstration method on various educational topics/skills which will be useful for the professional growth of student-teachers. During such lecture sessions student-teachers actively participate themselves and interact with the expert and get their doubts cleared and thus they learn many new ideas. The student-teachers are expected to take notes and prepare a brief report which will be useful for them to express their ideas.

Community-Life Camp

All national policies are emphasizing the necessity and inevitability of close relationship between community and school as it is very essential that society and educational institutions (schools and colleges) have to go hand-in-hand in any society Community-Life Camps help the student-teachers to learn directly about the meaning, purpose and modality of conducting community based activities like school, towards community; Midday meal

programmes and so on. Such camps also help student-teacher to realized and imbibe in themselves their responsibilities. In the curriculum of Pre-service training course Community Camp is a compulsory component. Such Community Camps during the training period are organized deliberately and meaningfully to develop some essential life-skills. Usually, in such Community Camps observation of special characteristics in the community studying many social concepts like community life, rural life, festivities and occupations, arts and crafts(dolls making, basket making etc.), familiarizing locally available medicinal plants and herbs, visit to locally existing small factories become salient features of any Community-Camp.

Experience based Learning

As parts of Experience-based Learning Sessions training is given about writing of lesson plans, construction of Unit Plan, Preparation of Annual Plan and Resource Plan, Preparation of a balanced Question Paper, Comprehensive and Continuous Evaluation Scheme will be taught through participation experience based sessions. All these skills are essential for student-teachers.

Check Your Progress - 1

1. During Pre-service training period getting experience of Micro-Teaching the nature of approach is _____
    a. Workshop
    b. Teacher-centred
    c. Student-centred
    d. Subject-centred

    2. The required qualification to become a teacher is _____
    a. PUC or Degree and Teacher Training
    b. Degree
    c. Post-graduate Degree
    d. SSLC

3. Some statements are given below. Mark (✓) if the statement is true and mark (X) if the statement is False.
    a. Anybody can become a teacher but he/she should have teacher-training.
    b. There is no need of training for the professional growth of In-Service Teacher.
    c. Education Excursion is also an approach for professional growth.

d. There should be some opportunities in the school / curriculum to learn special skills of art crafts present in the community.

e. Educational factors are weak during Field-risks.

f. There is opportunity to learn about many social skills in community-life camp.

4.4.3.2. Approaches for In-service Professional Growth of Teachers

The professional growth of Pre-Service and In-Service teachers can occur formally, but it can also occur sometimes informally. So, a teacher can profession growth individually promoted by his interest or can get professional growth utilizing several professional growth programmes organized with the help of government grants. Basically, such programmes improve and enhance the quality of the process skills, leadership qualities and action or activity skills. Such programmes can be conducted as only one workshop and it can spread over series of workshops throughout a semester. Such programmes imbibe or create new energy individuals and help to face his profession with increased self confidence and learn what teachers have to learn, learn how to learn and learn how to apply what they have learned.

Subject-based Programme

Most of the professional growth programmes are subject-centred. Such programmes provide opportunities for the student- teacher to contact prominent subject experts related to teaching of different subjects. At the same time such programmes help to come in contact with lectures/readers/ professors working in other colleges of Teacher Education. Projects undertaken in the muti-disciplined. Departments of Universities, application of pedagogical principle to pure science/ social sciences, details about research studies and initiation programmes for newly joined teachers- such programmes can be seen. As a Research Report on "Best Practices and in Teaching practical and Professional Growth" can be judged as best if it has five aspects. They are 1) It must be subject-based 2) must have opportunities for active learning 3) it should have coherence 4) It should have the quality for sustainable and 5) and it must be participatory in action.

Those programmes which help teachers to acquire deep knowledge in subjects like Mathematics, Science, Social and Language are known as Subject -based programmes. Varieties of professional growth programmes about application of strategies of pedagogy, about understanding children's learning from psychological view point and also from social and emotional view point can be seen .Not only in our country but also in the countries world-over governments have been providing lots of money for organizing many seminars, conferences, workshops, for the professional growth of teachers in which resource persons

give scholarly lectures, for doing research relating to professional growth, for preparing handbooks and guidance books which help teaches to improve their teaching skills. In spite of this gesture of government, when we analyse critically the outcomes of these programmes of professional growth we find that in the absence of a mechanism of bridging the gap between the programmes and their beneficiaries these programmes appear as separate units without a continuous link between them.

As a report of the NCERT, New Delhi has mentioned professional growth programmes for in-service teachers are being organized in several models. Some of these models of programme organization are explained below:

Cascaded Model

This model has a centralized decision. While communicating knowledge, information and skills to large numbers of in-service teachers the model is useful to a great extent. Workshops and periods of imparting training are included in the main decision. Discovery of new concepts, learning of skills and teaching models through demonstrations, are communicated to teachers. For the systematic training is given firstly to a group of selected teachers. The purpose of this is teachers who get initial training give the same training to their colleagues when they go back to their schools. Thus, senior teachers who get training transfer knowledge and skill they have acquired to their junior colleagues. These junior teachers can train other junior teachers in their school or in other schools. Thus, the chain programme can continue. Teachers who participate in the initial training session are called as " Champion Teachers" or "Master Teachers". Such training session are organized only once in selected places. In cascade model. It becomes difficult convey the results of programmes to other places. In cascade model has a design to reach stage by stage downwards to other teachers. Even in this model there is a limitation. While training proceeds downwards to other technique the main theme of the programmes is likely to be diluted in its content and strength.

Reflective Model: '

As a model is developed with teachers in view this model includes several strategies to bring improvement in the teaching process. Reflective model has structuralism as its basis. According to this model, as professional growth is continuous and essential process it provides opportunities to both teaching and reflective thinking in it. Reflective model initially will have two selected persons who, to begin with, demonstrate practice of a skill to improve teaching as a model. Among these two persons one can be a regular teacher and another may be a student-teacher (trainee teacher). One or both together demonstrate how to

implement a lesson plan prepared by them. Critically evaluating themselves the teaching skills presented by them is an important quality of this model. For such self-evalutaion there is need of deep reflective and critical thinking . This helps to find creative solutions to the problems that may arise, Such reflective thinking can be found in increasing measure at the planning stage and stage of expanding this model.

Distributed Model: This is mostly similar like Reflective model. Initially the programme of professional growth will be for a training session of six to eight days duration. To begin with this programme starts at District or Block level in which participating teachers get some learning experiences. The they will apply their learning experiences and teaching skills in their daily class-room teaching for a period of 2 to 3 months. After that during a follow-up programmes feedback will be given to teachers. Based on the outcome of this feedback a small workshop and training session of 2 to 3 days will be conducted, where teachers mutually exchange the problems and successes faced by them. There will be opportunities in these session for mutual discussion , reflective thinking, suggestions, and critical thinking, suggestions and directions. In such workshops one can find an attempt to coordinate theory and practice and also subject and pedagogy.

Professional Growth of In-service Teachers based on locality

This model is related to to the effort on the part of teachers working in a school or schools in an area to work actively and mutually to bring about long ranged modification in teaching methods. One can find many varieties of this modes. Some varieties of this model are explained below**.**

1.   **Observation/Evaluation:** Lecturers of subject methods of colleges of Education or senior/experienced teachers or subject given by teachers in their class room, make an observation note and critically evaluate the merits and limitations of teaching and provide useful feedback to the teachers. Such observation and evaluation records can become basis for and can help in the design, aims and objectives which will be organized in future. Teachers can thus get professional growth through Educational Meeting of teachers in their area organized once in a month where teachers can give lesson and can get useful feedback. The concerned teacher can make use of such feedback positively.

2.   **Open Lessons:** Teachers can invite their co-teachers to observe their teaching. Invited co-teaches are requested by the teacher to observe his/her lesson meticulously and critically and to give feedback based on their observation. The teacher accepts such

feed-back openly and positively. Here observation will be keeping the teaching behaviour of the teacher factually not influenced by any prejudice or misconception on the part of co-teachers.

3.   **Lesson study:** In this type some teachers together select a lesson of a particular subject and prepare the lesson-plans of already taught content, while re-teaching that lesson try to modify teaching strategy and evaluation strategy. They study comparatively to what extent the modified strategy of teaching activities have positively influence students' learning and get feed back from students' learning outcome is important in this type.

4.   **Study Group:** This is also one of the approaches for professional growth. A group of teachers (such group may be Small or big in number) discuss about some problem faced by one or more teachers to find a solution to the problems. The teachers in the group discuss some problems or problem with team spirit to seek a solution. All teachers join together try to find and reach the goal and fine new methods to solve the problems. In a group study co-operation, whole heartedness and mutual courtesy emerge easily. Team spirit is the main characteristic of study group. This approach can give direction to action research.

5.   **Research and Action Research:** Research and Action Research are tasks which can be done by a group of teachers. A common interest and goal; are the binding factor which prompt teachers to undertake Action Research. A problem is taken for seeking a solution for it and prepare a research or action research plan and proceed to arrive at a solution by systematically implementing that plan. They collect required data, analyse them statistically and reach the solution. A record of the task is also maintained. As a systematic procedure is involved in action research, it leads to meaningful profession growth.

6.   **Mentoring, Guidance and Training;** In this procedure teachers who are senior in age and experience to take the role of a Mentor and do the task of mentoring which is popular in advanced countries. They give suggestions and guidance to junior teachers or teachers joined recently to their school. Guidance is given both in theory and practice relating to all aspects of teaching.

7.   **Self-directed professional growth of Teachers:** Self-learning, depending on their personal interests and areas of interest trying to expand the sphere of knowledge by

creating suitable learning situations is the chief attribute of this approach. Sometimes it is also possible for a teacher to start self learning with the encouragement of a colleague or friend. Later on a teacher continues his/her self-learning efforts . One can,now-a-days make use of websites and internet also. Along with self-learning a teacher can share his doubts, ideas with other teachers and can discuss with them. Applying one's own novel ideas and strategies to test their effects can also possible in this approach.

8. **Certificate based Courses and On-line Courses:** Many authorized institutions, educational organizations, now-a-days are offering many certificate based courses through correspondence mode and on-line courses. Such courses are quite popular in learning languages like Sanskrit and Hindi and Foreign languages. Many on-line courses are also available on the internet sites. For example, event to learn music and to learn to Samskrita lessons are available on-line. Lessons of the courses of open universities are also available on-line. Such lessons can be accessed within a minute by a click of a button on your computer/ Laptop irrespective of any distance. Some universities are offering courses on-line in Engineering and Research Methodology.

Check Your Progress - 2

Some multiple-choice questions are given below. Check the correct answer by putting '✓' mark on it.

1. Professional Growth training for In-service teachers develops in teachers-
    a.   Teaching Skills
    b.   Enhances knowledge
    c.   Develops Critical thinking ability
    d.   Enhances process skills, teaching skills and knowledge

2. Most of the professional growth programmes are mainly _____.
    a.   Subject-centred
    b.   Teaching-method centred
    c.   Give attention to Continuous Comprehensive Evaluation (CCE)
    d.   Related Curriculum.

3. Some sentences are given below. Some of them are 'True' and some of them are 'False'. Put a '✓' mark in front of the sentence which is 'True' and a (X) mark for the sentence which is 'False'.

a. Cascade Model of professional growth is the mirror image of teaching-learning process.
b. Reflective Model is the mirror image of teaching-learning process.
c. Subject Inspectors mostly tend to find fault in teaching activity of teachers than finding good points.
d. A teacher requesting his /her co-teacher to observe his/her lesson and to provide feedback is good feature of professional growth.
e. Teachers' Study Group works with team spirit.
f. Action Research activities help in professional Growth.

4.4.4. Let us Summarise

- Before joining teacher-training course a teacher should have minimum educational qualifications Later on training will be given according to trainee's optional subject.

- When entering teaching profession the rule that a person have undergone practice of theory and practice of teaching in the form of training.

- Approaches of professional growth programmes like methods of teaching are classified as student-teacher centred ,subject-centred, activity-centred and self-learning centered knowledge and skills are taught to teachers interested in their profession through lectures, lecture-cum-demonstration, workshops, interaction with resource persons, seminars and conferences.

- Professional growth of pre-service and In-service teachers takes place formally and informally.

- A teacher can get professional-Growth prompted by self-interest or through several programmes professional growth financed by government grants.Basically, such programmes and activity skills.

- For gauging a professional growth programme as good it should satisfy five factors-

- It should be subject-centred 2. provides opportunity for active learning 3. It is coherent

- It has sustainable quality of development 5. provides opportunities for co-operative participation.

- As mentioned by a Report by NCERT committee professional growth programmes can be organized through various models and approaches.For example, Cascade model, Reflective model, Distributed Model, Professional Growth based on locality of teachers.

4.4.5. Answers to 'Check Your Progress - 1 and 2'

Check Your Progress - 1

1(a), 2(a), (B) a)- ✓, b)- X, c)-✓, d)- ✓, e)- X, f)- ✓

Check Your Progress - 2

1(d), 2 (a); (B) (a)-X, (b)-X, (c)-✓, (d)- ✓, (e)-✓, (f)- ✓.

4.4.6. Unit end Exercises

1. Compare and contrast the approaches of professional growth of pre-service and in-service teachers.

4.4.7. References

1.   https://www.researchgate.net/publication/contemporary approaches to teacher professional development
2.   https://www.ncert.nic.in/departments/nic/dse/deptt/pdf
3.   The National Curriculum Frame Work 2005

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Block 4 : Teaching as a Profession

Unit 5 : Autonomy of Teachers

Unit Structure

4.5.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain the meaning of Autonomy;
- Identify the important characteristics of teachers' autonomy;
- Analyse the zones of teachers' autonomy;
- Identify the influence of teachers' autonomy on learners; and
- Explain the measures to develop teachers' autonomy.

4.5.2. Introduction

You already know that teaching is an art as well as science. When teachers adopt the characteristics of both of these, then they will be able to design teaching-learning process in variety of ways. It is the foremost objective of teachers that their teaching should result in the form children's learning. Teachers employ many processes for the sake of students that are beyond the scope of curriculum syllabus, textbooks. When subject matter to be

learnt is difficult or much in quantity, in order to teach these content teachers adopt myriad types of strategies. By doing so the result that is the learning outcomes are very clear. Some times a situation may arise wherein activities have to be repeated. Similarly, teachers have to undertake certain remedial measures they think appropriate. All the above mentioned activities will vary according to the changing circumstances. Therefore, teachers should have sufficient freedom to take appropriate measures. With all these assertions one should not draw the conclusion in a haste that teachers' freedom means independence of teachers or ego of teachers. The question of freedom of teaching refers to the concept which results from teachers is a recent concept. Concept resulting from the integration of independence and responsibility. This is known as teachers' autonomy. In this Unit you are going to learn about the concept of teachers' autonomy.

4.5.3. Learning Points and Learning Activities

4.5.3.1. Teachers' Autonomy - Meaning, Nature and Characteristics

The academic independence teachers have in the schools can be generally called as Teachers' Autonomy. Especially, when what is taught and how it is taught become entirely the choice of teachers, then it represents teachers' autonomy. Whenever there is freedom to undertake any task, then it is obvious that one has to be ready to shoulder the consequences and responsibility also. Let us take a look at the various view points and definitions of teachers' autonomy put forth by some of the experts in the field of education.

It is generally identified as "The controlling ability of teachers over their teaching can be called as teachers' autonomy". When we analyse this statement it can be taken to mean the independence regarding teachers' study, learning, teaching. This is teachers' autonomy . There should not be intervention from the higher authorities to greater degree in the matter of teachers' teaching. Only then teachers can carry out their task wholeheartedly without any hesitation and fear.

- According to Richard Smith(2000) Teachers' autonomy is nothing but " the ability needed to develop an attitude needed to acquire appropriate skills, to gain knowledge and to identify oneself as a teacher with the help of cooperation of others".
- Benson (2000)has defined autonomy as, " a state of independence free from any kind of control or the ability to exercise their rights, and freedom resulting from these can be called as teachers' autonomy"

- According to Hong (2005), "Teachers' autonomy is the independence the teachers' have in the matter of their teaching and learning and the mind set to accept it"
- According to Mcgrath (2000) teachers' autonomy can be identified in three dimension. They are, (1) Self-directed professional work (2) Self-directed professional growth (3) Independence free from any institution or individuals.
- Smith opines that one can identify three important characteristics in teachers' autonomy. They are, (1) Teachers' self-directed professional work (2) Ability to undertake self-directed professional work (3) Freedom to do any work without any control. (4) Self-directed professional growth (5) Freedom for professional growth without any kind of control , knowledge of pedagogy and awareness of to whom, what, how and when are we teaching and finding answer to all these questions during teaching in the class room- all these characteristics will decide teacher autonomy.
- Tart and Melony opine that " teachers' autonomy is a creative tool for creating students' autonomy." Constructive production of which has arisen from a need of professional growth and personal improvement. Due to this, there is a possibility of undertaking many pre planned programmes on their own for their professional development .
- In the past two decades there has been an increase in tendency to show more interest and attention towards autonomy in the educational field. As Ederlaf (1984:89) opines, " If there is no trace of autonomy for professional development and if there is no ability of autonomous learning practices in teachers then it would be futile to think that they can develop such abilities in students".

Further, many research studies have been done concerning teachers' autonomy and they have also been successful in discerning the meaning, nature and characteristics of the concept of autonomy. The essence of those research studies can be mentioned as under:
- Teachers' autonomy means academic independence. In the same way, autonomy is the ability to take up the responsibility for a task and stand in support of certain process. Similarly, the control or mastery one has over one's learning is also termed as autonomy.
- It is a process in the form of a touch stone employed by teachers to test their own ability to contribute for the progress of children.
- It is the ability to internalize the skills needed by a teacher.
- It is the attitude of self-criticism

- Self-development and plans and programmes to that end.
- Introspection, self observation and self-awareness.
- Relentless reflective- thinking and adoption of sustainable programmes.
- Responsible conduct followed for the good of one's students.
- To be in cordial relation with others and accepting the changes with an open mind when need arises.

Characteristics of Teachers' Autonomy

Educationist, Ramose (2006), has identified some important characteristics of Teachers' autonomy as follows:

1. Consulting ability of teachers, ability to analyse one's own teaching process in a critical manner, readiness to be a life long learner and commitment to the task of inculcating autonomy in students.
2. Since there is a lot of similarities between teachers' autonomy and research undertaken and action research for the sake of qualitative change in teaching process.
3. Ever engaging in providing learning experiences to students.
4. Be well informed about the institution one is offering service, and in the event of any social conflicts in school the ability to tackle such eventualities in very skillful manner.
5. When faced by any kind of obstacles removing them very skillfully and converting the same into a golden opportunity as if they are presented for a positive change.
6. Characteristics such as careful observation, watch fullness,reflective thoughts, prior analysis of content, understanding, experience and evaluation of alternatives will make a teacher as an autonomous teacher.
7. Mere absence of higher officers or authority can not be autonomy.

Strategies of Pedagogical Autonomy

- Encouraging students to prepare themselves independently
- Providing opportunities which would expose them to experience the out-of-the classroom environment and encouraging children to write comments on their experiences
- Use of "authoritative" resources and use of "true" language.
- Independent discovery.
- Ensure participation of children in work design.
- Encouraging interaction between students

- Employing group teaching and learning.
- Motivating children for variety of produces
- Self-evaluation and getting evaluated by colleagues.
- In spite of the clarity regarding above mentioned factors, to dispel doubts.

Wilchess (2007) has explained the idea of "what is not teachers autonomy?" in the following words:

1. Teachers autonomy does not mean that teachers are entirely free or that they are lone individuals with doing whatever they feel like doing. Instead, it is a commitment of teachers to professional decisions and academic community along with their responsibilities, mutual support systems.

2. Autonomy does not mean mere accountability to one's own work or the process of reducing the responsibility of the Government. It is their right when they need to assume initial leadership that can be called as autonomy. Similarly, it is an inevitable process that one has to undertake professionally to fulfil the needs of school, parents and society.

3. Teachers autonomy is not a variable which one might have or another might not have. This is commitment that can change and show many characteristics in accordance with personal, contextual and external factors.

4. Teachers' autonomy does not mean a state of independence free from all hindrances. Instead, it is the dynamism of being active to fulfil the demands of schools and of society concerned with school with a sense of accountability and responsibility.

Check Your Progress - 1

Below are given some multiple choice questions. Indicate with symbol '✓' the right alternative.

1. Teachers autonomy means _____
   a. Independence
   b. Self-respect
   c. Self-confidence
   d. freedom and accountability.

2. Teachers' autonomy _____
   a. Has better teaching practices.
   b. Is the control that teachers have over the subject.

c.   Is a tool to develop students' autonomy

d.   Is a teaching skill to impart better communications.

3.   Some sentences are given below. Indicate the sentences that you feel True or False by '✓' or 'X' respectively.

a.   Teachers' autonomy means their academic freedom.

b.   Autonomy means self-respect of an individual.

c.   Mere absence of higher ups or authority does not become autonomy.

d.   If autonomy is allowed to develop in students they would become autonomous learners.

e.   Teachers' accountability itself being autonomy, it would lower the responsibility of the Government.

f.   Introspection, self-awareness and self-observation are the best means of teachers' autonomy.

4.5.3.2. Zones of Teachers' Autonomy

Teachers' autonomy and freedom have been discussed in the National Curriculum Framework 2005 as follows:

Teachers' need autonomy to create an atmosphere of learning in addition to fulfilling different types of needs of children. He / She who makes one to learn needs as much freedom of place, adjustment and respect as the learner needs. It is not the job of teacher just to follow orders or receive information. Higher officers should also lend their ears to the voice of teachers. Because the decisions teachers take have a great influence on the very life and culture of the class room. The relationship between teachers and Headmaster or principal must be of equality and one-to-one understand ability. Time must be given to staff consultation regarding review of annual, monthly and weekly their plannig activity calender and. Different methods and means must be devised to solve any problems relating to school functions.

Time for Introspection and Planning

- Daily review (at least for 45 minutes), preparing a note about the work to be done next day, review of the content for the next day lesson (Excluding time for correcting the home work).Keep track of how much learning has occurred on weekly basis (for 2 to 3 hours).Listing of planned activities, making a note of the details of plans and lesson plans.

- Review the work of children on monthly/ term basis (at least for one day). Preparing annual plan for the school. Entire school should be involved for these activities. Granting local holiday, annual activities, sports activities, cultural programmes, calling meeting of teachers, arranging meeting for parents, excursions and visits to places of academic interest, planning for activities that can be undertaken by two or more classes together- these are the activities in which one should engage with. Putting up boards or replacing them, systematize work of children, make children to remain in the school (retention), make arrangements for children's attendance and review the relation between the community and the school etc.
- Conducting meeting of teachers in a school complex where one subject is taught in one class, share the lessons to be taught in the next month among themselves.

Zones of Teachers' Autonomy:

As Wilches (2007) found out there are certain professional zones that exclusively belong to teachers. In those zones no body can question their autonomy. Some of them are mentioned below:

a.   Teaching and Evaluation

In the class environment teacher has the ultimate authority. Teaching objectives and aims, content and selection of content, teaching methodology, skills and employable resources, outcomes of children's learning and their evaluation methods, punctuality and observation of students' behaviour- these are the factors belonging to the exclusive zone of teachers' autonomy.

b.   Curriculum Preparation

Demands put forth by teachers for framing curriculum, responsibilities of initial stages, adopting curriculum to the realities of class room, criticism and evaluation of merits and demerits of curriculum- these are the autonomy of teachers have in the zone of curriculum. Research studies have brought to light the fact that the curriculum based novel activities and the way of putting them into practice would vary from teacher to teacher. There being many reasons for this, religious practices influenced by culture, external facilitating factors, beliefs and confidence teachers have so far as teaching-learning is concerned are some of them. These factors will also influence the acceptance

or rejection of new ideas included in the curriculum, cooperation by assuming leadership.

c.   **School Work Activities**

Generally, as can be seen by every one teachers have autonomy in this zone. For example, school administrative issues, school budget, preparing a budget based on income and spending, financial planning and school time table preparation etc. It is true that all teachers are engaged in such activities, but what is more significant is that teachers' status and level in the institution are the deciding factors. In a school in such matters the head master has greater autonomy than all other teachers.

d.   **Professional Growth:**

To what ever extent possible the teachers are committed to their professional growth has to be decided by teachers themselves. To this end, based on what opportunities or permission from the school they are working, one has to select , for their professional growth, the subject, method , place and directions.

Factors hindering teachers' autonomy

If one is to go by the outcomes of research studies, the following factors would hinder the professional growth of teachers.

1.   **Professional Ability and Support:** The schools and institutions where teachers are offering their service should allow them to take their decisions while shouldering some responsibility if they happen to encounter some difficulties. This fact would vary from school to school. Absence of this would hinder autonomy.

2.   Teachers will get an experience of autonomy about their academic ability when newer academic needs are satisfactorily fulfilled, when success is tasted in them and when practical opportunities based on newer theories are obtained. When these issues do not materialize then teachers' autonomy will not result.

3.   **Personal belief of teachers and value system:** According Pajaras(1992) the following factors would affect teachers' autonomy in a greater measure- personal beliefs, value systems, knowledge repository of teachers, attitudes and convictions they have in themselves, their self-confidence, self respect, view points already they have in specific issues and academic issues.

4.   **Internal and external motivation of teachers:** Professional satisfaction, ambitions, concern they have towards the attainment of goals by their students- all these together

will have a positive influence on autonomy of teachers.All these will be facilitators in having an effect of internal motivation. Promotion in profession, increment, identification with society and the like will act as external facilitators. Internal motivation are stronger than external motivation. But, teachers' autonomy would be impaired by external pressure, negative attitude of officers, anxiety and hasty operations.

Steps to develop autonomy :

The suggestions about changes that have to brought about in the present educational field to develop ability in teachers to improve their autonomy are given by Ramose(2006) as follows:

Self awareness: Teachers should be aware of their weaknesses as they are with their strengths, should have a longing to learn things which they have to know yet. This kind of self awareness would make way to understand themselves as well as their students. What is happening around, how are our students, how is the condition of school that we are serving, how is our community around us, how is our country, what more, teacher should be well aware of entire world. No one can understand the self needs and students' needs and demands better than teachers. By understanding the abilities of students, their dreams, necessities and needs, age related changes, their ambitions, teachers can transform themselves in a responsible way which would lead to autonomy, professional growth and better learning progress in students.

Accountability: Without accountability no teacher can attain autonomy. They need freedom, support and revitalization. Along with these they should show commitment, sincerity, student oriented work skills, concern about welfare of students, managing classes systematically, investment, moving forward fearlessly amidst challenges, commitment of not withdrawing from sponsored work and assumed responsibilities.

Challenges: Always considering challenges by teachers not as difficulties but as stepping stones to success is necessary. Challenges are daunting and hence demand intellectual ability, skills. Discovering newer fields, undertaking research etc. are some of the educational challenges.

Participation and stake holding: Participation and stake holding are the strategies that would bring autonomy in teachers. Growing together, engage together in constructive work,

actively participating in sponsored work with a team spirit, utilizing students constructively, actively and creatively and by developing professionally teachers' autonomy would come to life.

Changed roles: There is a need for teachers to come out from a role of controlling the class environment and instructing students and to assume a new role. When teachers come out from the job of giving instruction, start offering guidance and transferring knowledge to become a better listener, observer and a teacher who takes decision based on research the autonomy will come automatically.

Constructing websites for professional growth of teachers: Teachers can seek professional growth either individually or in group. At other research institutions opportunities for professional growth can be sought by participation and collaboration. Teachers can obtain professional growth through action research, self-observation, observation from fellow teachers etc.

Reading professional literature and magazine:

From this teachers will become aware of current trends in their professional fields. They can incorporate those new ideas in their teaching there by trying to elicit some more ideas from students and motivating students to study and practice such things.

Participation in conferences and use of internet:

This is also a supplementary practice to the professional growth of teachers. Proficiency in the subject taught would bring autonomy in teachers.

The influence of professional growth and autonomy of teachers over students:

Better professional growth and effective autonomy would certainly cast their positive influence on students. For example,
- Involving all the students encouraging them with proper support to learn.
- Employing teaching strategies and responding positively to the needs and necessities of students.
- Providing learning experiences, interaction and choices which can develop autonomy in students.
- Utilizing the students participation in problem solving, critical thinking and other conceptual and skill based activities and also providing opportunities. Due to this, children will develop interest in the subject and understand it well.

- Encourage all students to adopt self-directed, reflective learning and thus to become autonomous learners.

Check Your Progress - 2

Multiple choice questions are given below. Indicate the answer you feel correct by indicating '✓' :

1. The task teachers need to do on a daily basis is _____
    a. Preparation
    b. Introspection
    c. Follow discipline
    d. Planning

2. In the zone of teachers' autonomy comes _____
    a. Framing education policy
    b. School politics
    c. Finance of the school
    d. Teaching and evaluation.

3. Some sentences are given below. Indicate the sentences that you feel 'True' or 'False' by '✓' or X respectively.
    a. School activities belong to the zone of teachers' autonomy.
    b. Personal beliefs and values of teachers will affect their autonomy.
    c. If teachers undertake research their salary will not increase.
    d. Autonomy will not be realize without responsibility.
    e. Internet instead of being a helpful tool to the professional growth of teachers would become rather an obstacle.
    f. Teachers have to develop autonomy in students.

4.5.4. Let us Summarise

- Academic freedom that teachers have in the school could be termed as teachers' autonomy in a general sense. Especially, if what they are teaching and how they are teaching are entirely left to the discretion of teachers, then this fact represents teachers' autonomy.
- When an opportunity is got to do any job independently, then this means the consequences and accountability should also be accepted.

- When some factors present obstacles to teachers' autonomy, then if teachers remove those obstacles by some more measures and at the same time engage themselves in professional growth, then automatically autonomy will develop in them.

4.5.5. Answers to ' Check Your Progress - 1 and 2'

Check Your Progress - 1
1-d , 2-c, 3- a-✓, b- ✗, c- ✓, d- X, e-X, f-✓.

Check Your Progress - 2
1-b, 2-d, 3,a- ✓, b-✓, c-✗, d-✓, e-X, f-✓.

4.5.6. Unit end Exercises

1. What is autonomy? Explain clearly its important characteristics, various measures to develop zones of autonomy of teachers.

4.5.7. References

1.   https://www.researchgate.net/publication/contemporary approaches to teacher professional development
2.   https://www.ncert.nic.in/departments/nic/dse/deptt/pdf
3.   The National Curriculum Frame Work 2005

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Block 4 : Teaching as a Profession
Unit 6 : Responsibility of Teachers

Unit Structure

4.6.1. Learning Objectives

After going through this Unit, the student teachers will be able to

- Explain meaning and scope of responsibility of teachers;
- Explain the nature of responsibility of teachers;
- Explain some situations of responsibility of teachers as examples;
- Identify the relationship between autonomy of teachers and responsibility of teachers; and
- Explain the functions of responsibility of teachers.

4.6.2. Introduction

You might have heard of the word comprehensibility in several contexts. For example, if the government has started some new scheme means all those who concerned with scheme have to take the responsibility of that scheme. Similarly, the underground drainage system, telephone and electric wires, submerged under the Earth, the pipes put under the Earth to supply Cauvey water and the peculiar style of forest department who have dug pits for the plants they have to plant- in all these situations you might have seen

or heard general public questioning with force the comprehensibility of concerned departments. Similarly, you have heard the functions of Consumer Forum. There also when you purchase some thing from a shop or a mall and later there is some fraud concerning the purchase, you can draw that shop keeper to the court of law with the help of Consumer Forum. In this way, the consumer forum has done tremendous work to control fraud in the form of selling adulterated things. In the same way, doctors who give wrong treatment can not also escape from their responsibility. Similarly, teachers also have their responsibility regarding education they impart, their students and learning of students. In this Unit, you will study about the responsibility of teachers, what do we mean by responsibility of teachers? Its characteristics and advantages.

4.6.3. Learning Points and Learning Activities

4.6.3.1. Responsibility of Teachers: Meaning, Nature and Kinds

Actvity-1

Identify some institutions in your environment which are functioning with responsibility and explain their nature and style of functioning. In the same way, identify some institutions/ systems which are not functioning with responsibility and explain their nature of functioning. Analyse how does the society react to these two types of institutions.

There is some close relationship between the concept of autonomy of teachers you studied in the previous Unit and the concept of responsibility you are going to study in this Unit. With out responsibility there is no meaning for autonomy. Teachers have the responsibility about students' progress in learning. What ever activities teachers undertake for the development of children, what ever may be the teaching progress and whatever may its out come, it is all these are teachers' responsibility. Till recently, and even now lot of discussions are going on about the responsibility of teachers.This implies that the teachers themselves have to take the responsibility about teaching process also. However good teaching of teacher may be it is possible that some students may not learn well. Even in such situations teachers responsibility makes them accountable. As a result, it is a part of teachers' responsibility to see that even such students achieve progress.

According to Hyme (1995) " Responsibility is another aspect of authority an individual possesses to do any work". This statement expresses the justifiable use and belief about the authority an individual possesses. According to Hyme, responsibility is a concept which has multiple dimensions, among these dimensions responsibility, authority, evaluation and control are included. Continuing what Hymes states is that responsibility is a mutual and

reciprocal relation between two individuals. Among these two, one individual works using his authority. This work is the work one individual does with belief and confidence for the progress of another individual. A responsible individual may use control strategies suitable to the contexts or may not use any strategy. This depends on the confident management of the task.

The concept of responsibility is analysed in the context of a particular process (How does a process is going on?) or based on the outcome or the product resulting from that process. When we consider responsibility of teachers as a process, we consider the responsibility in relation to the teaching-learning process teachers under take in the class rooms. This process may be positive or negative, it may be purposeful or it may not be even devoid of purpose.

Being a complex concept, responsibility has different meaning, nature and scope depending up on different contexts. Hence, to begin with first it is better to know the general characteristics and types of responsibility. Later on let us try to understand as to how these characteristics of responsibility applied to the education field.

Kinds of Responsibility

Levit, Jaunta and Wegrich (2008) have explained the concept of responsibility of teachers in varied contexts. These are explained below:

Organizational Responsibility: Organizational responsibility is the process of that exists between higher authorities and sub ordinate officers.The relationship between the Principal/ Headmaster and other staff members can be taken as an example of this. In this context, on one side there is the authority and responsibility of the principal and headmaster on one side and on whom these are executed are on the other side. Hence, this includes publicly accepted rules and regulations. As a result, even though an individual has authority, it become essential that this authority is exercised subject to certain restrictions.

Political Responsibility: Political responsibility can be analysed on the basis of the functions and achievements of mainly elected politicians with in the frame work of their authority and democratic values. There are three dimensions for the activities under this:

1. The functions of people representatives of political parties
2. Ministries and their Departments- The authority and responsibility rests on the concerned members.
3. Legal functions- The functions that are executed according to constitutional or any authoritative documents.

Legal Responsibility: We see legal responsibility in the context of functions and responsibility of Courts, Lawyers of Advocates and other legal officials. Under this type of responsibility we can see that responsibility is assumed to give legal protection to the society and controlling anti social elements with authority.

Professional Responsibility: Like teachers, even other professionals like doctors, advocates engineers and auditors have professional responsibilities. In all these fields, these professionals have their own professional code relating to ethics and morality in the form of definite rules, conduct and regulations. These rules are idealized rules and it becomes essential that every member should be committed to these rules. They have to follow the rules during their professional practice.

Ethical and Moral Responsibility: Any profession has provision for ethical and moral responsibility. It becomes essential to internalize these ethical and professional values voluntarily that are inherent in the profession. The distinction a professional brings between ethical and moral responsibility depends upon to what extent such subtle differentiation is internalized by the individual. With reference to education field, teachers' responsibility is stipulated in the form of their concern and commitment to their work and at the same time working with commitment for the progress and development of children and their parents and the society at large.

Check Your Progress - 1

Multiple Choice Questions are given below. Indicate the answer with a '✓' that you feel correct:

1.   Responsibility has the complementary relationship with _____
     a.   Government
     b.   Autonomy
     c.   Society
     d.   Education

2.   Responsibility means _____
     a.   Use of judicious authority and belief
     b.   Use of suppression
     c.   Use of Dictatorial Authority
     d.   Belief

3.   Some sentences are given below. Indicate those sentences that you feel correct or incorrect with '✓' or X respectively.
   a.   Responsibility is defined based on process and outcome.
   b.   Responsibility has multiple dimensions.
   c.   Responsibility is limited only to moral aspects
   d.   Just as in the case of teachers, doctors, lawyers and engineers have the binding of responsibility.
   e.   Legal responsibility is debated in the court.
   f.   People representatives elected by the people during elections have the political responsibility.

4.6.3.2. Functions of Responsibility of Teachers

   Because of responsibility many functions take place automatically on a right track. If so, now let us understand what are those functions of responsible individual.

Political Control: In the society that is made up of citizens political control is expressed as their responsibility. Here, we can compare the role of teachers also. Normally, public control, questioning their mode of functioning, struggle for judicious outcome and making effective and efficient programmes to happen- these are some of the responsibilities in this field.

System for Protecting the Interests of Public: In the public domain, maintaining peace, honesty and social system in the society is one of the functions of responsibility. Responsibility will takes upon itself the function of controlling the anti-social behaviours and promoting the behaviours acceptable to society.

Support for Improvement of Management: Supporting improvement of any management activity by any organization and preventing unwanted products in the process as well as encouraging credible products.

Managing and Improving Public Welfare: Responsibility works as a means in managing public welfare and its improvement. Here also one can see transparency and giving answers to any query compulsorily. This implies teachers being active and participative with students, parents and society, and managing responsibly the need of giving suitable solutions to any problem. This also implies if some injustice has been meted out by any individual from any associations or institutions that association or institutions should take its responsibility and doing whatever necessary to redress that injustice.

As a Forum of Suppressed Feeling/ Ideas: Finally, responsibility creates a forum to express one's feelings/ideas about any unjust event or occurrence , any atrocities or exploitation, any job being done neglecting all moral rules and any event which disturbs beliefs. Responsibility prompts an individual to go deep into such events intensely searching what is wrong, anti-social and disruptive to the society and what action can be taken to prevent all these.

Can Autonomy and Responsibility go together: As teachers are professionals they certainly need autonomy to some extent. This includes teaching and to whom to teach and how to teach. Along with these, teachers have to take responsibility of the academic progress of children. Decisions of teachers, curriculum transaction, evaluation and use of resources and particularly in school community, all these are mutually related with students progress. Therefore, it has been proved through research that such schools show great progress which use resources with autonomy. In the same manner, in some contexts the results and students learning outcomes of such schools which had only autonomy but not responsibility, were mostly negative. This has been proved in some countries. As this present students are future citizens, teachers as well as the elders of the society have social responsibility. Hence, it is essential that even autonomous institutions have to manage their functions with in the framework of responsibility. Autonomy is a system which consists of autonomy and responsibility together and these two should be mutually supplementary to each other.

Check Your Progress - 2

Multiple choice questions are given below. Indicate the alternative that you feel correct by '✓' :

1. What we see in the civilized society is _____
   a. Control of dictators
   b. Democratic control
   c. Control of capitalists
   d. Political control

2. Maintaining peace and cordiality in the society is the _____
   a. Responsibility of Government
   b. Responsibility of politicians
   c. Responsibility of Judges
   d. Responsibility of all the citizens in the society

3   Some sentences are given below. Indicate the sentences that you feel correct or incorrect by the symbols ✓ or X respectively:

  a.   Responsibility is the continued expression of the effect of a process.

  b.   Responsibility is a decision taken impartially with great care.

  c.   There is no relationship between Autonomy and Responsibility.

  d.   No positive work can take place because of Responsibility.It is only an intellectual thought.

  e.   It is possible to control anti-social occurrences by social responsibility.

  f.   Every body has an obligation towards the universal welfare.

4.6.4. Let us Summarise

- In all professional fields the concept of responsibility is in vogue with greater intensity. For example, like doctors, advocates, those who dispense justice and engineers teachers also have their responsibility.

- According to Hyme (1995) " Responsibility is another aspect of authority in whatever an individual does. This statement implies judicious use of responsibility and belief

- According to Hyme, the concept of responsibility is a multidimensional concept in which responsibility ,authority, evaluation and control are included. Responsibility is analyzed on the basis of how a particular process is under taken or how it results in its outcomes or products.

- In relation to teachers responsibility is considered on the basis of teaching-learning process and in relation to outcomes on the basis of analysis of learning outcomes of children and to what extent teachers are responsible for such outcomes.

- Several kinds of responsibilities are identified. Some are organizational, responsibility, political responsibility, professional responsibility and ethical and moral responsibility.

- As a result of teachers' responsibility, many functions are done in the proper manner. Democratic control, protecting public welfare systems, support for improvement of management, managing public welfare and improving it and providing as forum to express the suppressed feeling and ideas on the part of the public.

- As teachers are also professionals they need autonomy to certain extent. This autonomy includes their teaching, to whom and how to teach. Hence, accordingly teachers have to accept the responsibility for the academic progress of children.

4.6.5. Answers to 'Check Your Progress – 1 and 2'

Check Your Progress - 1

1. b, 2. a, 3. a- ✓, b- ✓, c- ×, d- ✓, e- ✓, f- ✓

Check Your Progress - 2

1. c, 2. d, 3. a- ✓, b- ✓, c-X, d-X, e- ✓, f- ✓

4.6.6. Unit end Exercises

1.   Explain the meaning, scope, nature and types of responsibility of teachers.

4.6.7. References

1.   https://www.researchgate.net/publication/contemporary approaches to teacher professional development

2.   https://www.ncert.nic.in/departments/nic/dse/deptt/pdf

3.   The National Curriculum Frame Work 2005

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