



KENYATTA UNIVERSITY

**INSTITUTE OF OPEN DISTANCE & e-LEARNING
IN COLLABORATION WITH
SCHOOL OF EDUCATION
EARLY CHILDHOOD STUDIES DEPARTMENT**

ECE307: HUMAN LEARNING

**Target Group: Bachelor of Early Childhood Education
Students**

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INTRODUCTION

Welcome to this module on Human Learning. With this module, you are expected to study and do assignments on your own. You should spend at least two hours everyday studying with the module. In the course of the semester you will be given an assignment and sit-in Continuous Assessment Test (CAT) which will carry 30 marks, that is, 15 marks each. The end of semester exam will carry 70 marks. You must do and submit all Continuous Assessment Tests otherwise you will fail the course. I wish you all the best.

AIMS AND OBJECTIVES OF THE COURSE:



At the end of the course, you should be able to:

- Define learning
- Describe some theories of learning
- Discuss the factors that Influence learning
- Describe how transfer of learning takes place
- Discuss how remembering and forgetting occurs
- Explain how individual differences in learning take place
- Discuss the relationship between motivation and learning
- Describe attitudes in learning
- Explain what we mean by mental health in learning
- Discuss how we can fostering mental health in learning
- Describe the relationship between learning and performance
- Define punishment
- Discuss some Behaviour Modification Techniques that can be used with learners
- Describe how decision making occurs
- Discuss the stages in creative thinking

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INTRODUCTION TO LEARNING

LECTURE ONE

1.1 Introduction



In this lecture, we will define learning and also discuss the relevance of learning

1.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Define learning
- Explain the relevance of learning

1.3 Definition of Learning

1. Behaviourists define learning as an enduring or relatively permanent change in behaviour as a result of reinforced practice or experience (note that behaviourists study behaviour).
2. Cognitive psychologists define learning as the mental activity by means of which knowledge, skills, habits, attitudes and ideals are acquired, retained and utilized resulting in the progressive adaptation and modification of conduct and behaviour

Activity

Define learning

1.4 Relevance of Learning

1. All learning is intended to enable the individual develop competencies in life situations e.g. to solve problems; to fit in well in the community; to perceive the world in a realistic manner
2. most behaviour is learned therefore studying “learning” helps us understand the role of learning in behaviour
3. the topic “learning” helps teachers know the factors that promote learning

1.5 Summary

In this lecture, we have defined learning. We have also talked about the relevance of learning which helps us understand why it is important for us to study human learning.

1.8 Self-test Questions



- 1 Define learning
- 2 Discuss the relevance of studying the course “Human Learning”

1.9 Further Reading



Morris, C. (1980). Psychology and Introduction. New Jersey: Prentice Hall.

Myers, D. G. (1990). Exploring Psychology. New York: Worth Publishers Inc.

Silverman, R. E. (1982). Psychology. Englewood, New Jersey Cliffs: Prentice Hall Inc.

TYPES OF LEARNING

LECTURE TWO

2.1 Introduction



In this lecture, we will describe the various types of learning. We will also discuss the application of the various types of learning.

2.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Describe the various types of learning
- Discuss the application of the various types of learning

2.3 Types of Learning

These are derived from the theories of learning and include:

1. The behaviourism S-R (Stimulus-Response) learning theories
2. The social learning or observational learning theory
3. Insight learning

2.4 The Behaviourism S-R (Stimulus-Response) Learning Theories

Under this we have classical conditioning and operant conditioning

(a) Classical Conditioning

A response is triggered off by a certain stimulus. This type of learning was first studied by Ivan Pavlov. His studies were designed to discover the conditions which should be provided to enable a dog to respond to a neutral stimulus. In the same way the dog would respond to a natural stimulus for example dogs salivate when they see or smell meat powder and also through classical conditioning dogs can be made to salivate when a neutral stimulus such as a bell is rung. This is done by presenting (several times) the neutral stimulus closely followed by the natural stimulus in this case presenting the bell and the meat powder closely together.

In classical conditioning, pairing of events is very important. In Pavlov's demonstration, the dog learned to salivate in response to the bell because the ringing of the bell had been paired with meat powder. Therefore, in classical conditioning, the organism forms associations between stimuli because the stimuli are contiguous (contiguous means next to one another)

(b) Operant Conditioning or Instrumental Conditioning

Operant conditioning was first intensively studied by B.F. Skinner. Unlike classical conditioning, the responses that are conditioned are voluntary responses which do not have to be triggered by a specific stimulus. After the response is emitted, it is rewarded immediately and therefore increasing its likelihood or probability of occurrence in that situation for example, a rat will keep on pressing a lever if it keeps on getting food every time it presses the lever.

2.4.1 What aspects of Behaviourism are Applicable in the Classroom Setting?

1. From behaviourism we learn that it is important to provide a conducive learning environment. In behaviourism there is the belief that all behaviour is controlled by environmental conditions and demands. Therefore, the environment should be enriched. It should be arranged in a manner that makes learning possible.
2. **The principle of contiguity** – This refers to paired events that is, what events appear together. A teacher who pairs aversive stimuli with the school experience conditions pupils to hate and fear the school. Aversive stimuli would

include use of harsh words, insulting language, sarcasm, loud voices and so on. These aversive stimuli affect the pupils' adjustment to the school and affect performance. They lead to creation of negative attitudes and feelings towards the teacher, the school and the subject. These negative attitudes and feelings can affect the physical condition of the learner for example, they can lead to illnesses.

3. **Reinforcement** – The principle of reinforcement is very important. It is derived from operant (instrumental) conditioning. Positive reinforcement in the classroom setting means presentation of a pleasant stimulus to encourage desirable behaviour. Desirable behaviour includes being polite, honesty, being hard working, completing small chores and so on. Positive reinforcement can be
- verbal for example saying “good” to a child
 - non-verbal for example patting a child on the head or
 - material for example giving a child a book

Negative reinforcement can also be applied. It is the removal of an aversive stimulus to encourage a desirable behaviour for example removing furniture in a room so a baby can have space to learn how to crawl

Reinforcement can also be used in behaviour modification. The teacher can use reinforcement to maintain and strengthen desirable behaviour. Reinforcement can also be used to eliminate undesirable behaviour

4. **Programmed Learning** –It is based on operant conditioning. It involves piecemeal learning where a difficult topic is broken down into small, simple manageable parts presenting the parts sequentially until the whole topic is mastered. Programmed learning does not punish errors. Instead, correct responses are reinforced.
5. **Involving learners** – Making learners search for knowledge and not be passive recipients. Allow learners to discover knowledge under reinforcement conditions.

Activity

Distinguish between classical and operant conditioning

2.5 Social Learning or Observational Learning

This type of learning is associated with Albert Bandura. He studied children and noted that sometimes children learnt some things without reinforcement. The children were learning new behaviour through two types of observational learning.

These are:

- (a) vicarious learning or vicarious conditioning
- (b) modelling

(a) Vicarious learning

In vicarious learning, the learners' behaviour will increase or decrease in relation to rewards or punishments that someone else received for similar behaviour for example, a younger sibling observes that when the older sibling behaves responsibly, performs well in class or obeys orders, the parents, teachers or guardians reward him or her.

Rewards may include praise, presents and so on. The younger sibling therefore learns the behaviour that is praised or rewarded. On the other hand, if the older sibling receives punishment for certain behaviour, the younger sibling will avoid the behaviour that the older sibling is punished for.

(b) Modelling

This is learning by imitation. It involves a model and an observer. The model can be a parent, a teacher, older sibling or any other person. The observer is the learner.

The behaviour observed could be mannerisms, gestures, manner of dressing, language, aggression and so on.

The observer watches the model display certain behaviour and he in turn practices or copies this behaviour. For social learning to take place there should be:

- (i) Attention – the observer should attend to the particular behaviour that is, see, hear or experience the behaviour.
- (ii) Retention – to imitate behaviour the observers must remember what they observed. Here, rehearsal of the behaviour is necessary
- (iii) Production of behaviour – the behaviour must be practised until it is well reproduced (practice makes perfect)
- (iv) Motivation and reinforcement – for the behaviour to be demonstrated there must be an incentive such as a good grade, compliments or encouragement.

2.5.1 Application of Social Learning

1. Teachers have to be models as pupils/children imitate teachers. Teachers should display socially acceptable behaviour since they are role models to pupils. This is the reason why schools insist that teachers should dress neatly, not smoke in front of pupils, not go to class when drunk and so on. Note that children are more likely to imitate what parents, teachers or guardians do than to heed what they say.
2. Role models should be invited to schools to talk to children.
3. Children who do well should be rewarded.
4. Children who misbehave should be reprimanded

2.7 Insight Learning

This falls under the cognitive theories of learning. A German psychologist Wolfgang Kohler gives us an example of how insight learning takes place. Kohler had a

chimpanzee called Sultan. Sultan was put in a cage and a banana was put outside the cage out of arms reach. In the cage was a stick. Sultan used the stick to retrieve the banana.

The next time the banana was put further away. Sultan could not reach the banana with the stick but this time, there were two sticks in his cage which could be fitted together to reach the banana. The solution was not simple but Sultan had to think of what to do. He was extremely frustrated and he kept on fiddling with the sticks.

Soon afterward, Sultan happened to align the two sticks as he fiddled. Then in what seemed to be a flash of inspiration, Sultan fitted the two sticks together and pulled in the elusive banana. Kohler was impressed by Sultan's rapid **perception of relationships** and used the term **insight** to describe it.

It seemed Sultan understood the principle of the relationship between joining sticks and reaching distant objects. It therefore seems that Sultan suddenly perceived the relationships between the elements of his problem so that the solution occurred by insight. He seems to have had what Gestalt psychologists have termed as an "**Aha! Experience**" or the "**Aha! Phenomenon**".


Gestalt is a German word meaning pattern or form. The Gestalt Psychologists see things in totality or in complete forms. Insight learning can therefore be described or defined as the very rapid, almost immediate learning that takes place when one sees the solution to a problem. It is a rapid perception of relationships among elements of the perceptual field, permitting the solution of a problem. It involves a rapid restructuring or reorganisation of the perceptual world.

2.6.1 Application or implications of insight learning

1. We should recognise that people have active minds which work with the information they receive. Children will therefore make sense of what they learn by cognitively restructuring events. Children can therefore be able to think and solve problems.

2. A rich environment is very important as far as insight learning is concerned. The environment should be arranged in a manner that makes insight possible. Clues should be provided so that children do not get discouraged that is, possibilities should be provided e.g. the two sticks for Sultan. Children have to be given an opportunity to try out possibilities.
3. Teachers and guardians should realise that the structure and organization of the subject matter plays an important part
4. If children are to gain insight learning, there have to be diagrams and demonstrations
5. Questions also have to be used that is, challenging questions
6. We should realise that small children perceive concrete things better therefore we should try to capture children's attention using visible objects.
7. Practice is important. If practice is to lead to improvement of skills, there are some rules which have to be enforced that is:
 - guidance should be given in the early stages
 - knowledge of the results is necessary that is, feedback should be given
 - practice must be regular
 - Practice periods must be of suitable length. If they are too long they will be boring, if they are too short, facts will not be grasped adequately
 - There should be practice of wholes. Some important things should not be left out during the practice exercise
 - as much as possible, the practice should be done in lifelike conditions

Activity



Discuss the application of social learning theory

2.7 INFORMATION PROCESSING MODEL/THEORY

This involves the study of how facts, concepts, principles and skills are attended to, how they enter the memory banks, how they are retrieved, and how they may be forgotten. According to the Atkinson & Shiffrin (1968) model, the human being is considered as an information processing system that senses, stores and retrieves information much as a computer does. The systems discussed under this model are hypothetical. These systems are the memory systems that explain how learning occurs.

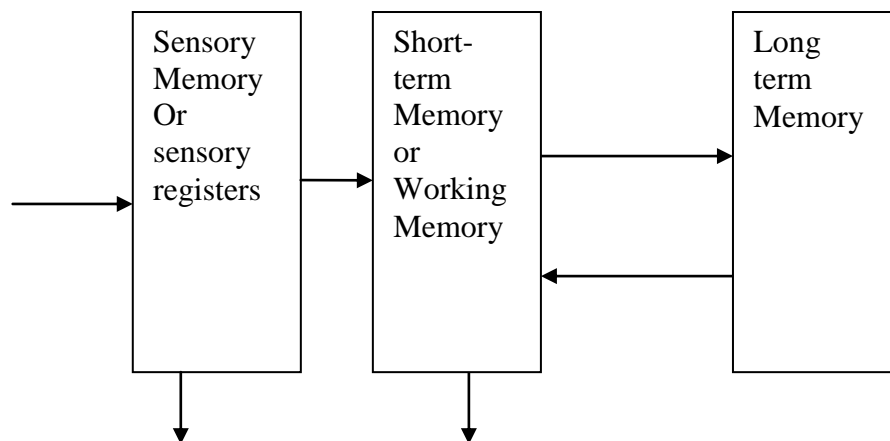


Diagram showing Atkinson and Shiffrin (1968) model

Sensory register

First of all, an individual processes the inputs that is the signals from the environment taken in through the sensory registers that is, the ears, eyes and skin. The sensory

register which holds visual data is called the Iconic memory and it takes 0.5 to 1 second to perceive this data.

The sensory register that briefly holds mental representations of auditory stimuli is called the Echoic memory and it takes about 4 seconds to perceive the information received. Attending or paying attention is very important at this point. If an individual does not pay attention to some information, this information will be lost. All the information that is not attended is forgotten.

Short Term Memory or Working Memory or Thinking Pad

The information that is attended to is then transmitted to the short term memory (STM) which is a temporary storage facility which can hold limited amounts of information. The major function of STM is to hold information long enough for processing. This is a matter of seconds.

You use STM when you add figures in your head, remember a telephone number, listen to a lecture or take part in a conversation. The information is held in your memory long enough for you to dial the telephone number, to take lecture notes, to answer a question, or to respond to a comment. The information then leaves STM and is either discarded, forgotten because it is of no further value, or moved into long term memory for future use. Short term memory has limited capacity. It can contain approximately 5-9 pieces of information at a time.

In general, STM can be compared to a simple calculator; entries are made and then quickly cleared to make room for new information. In STM, the image tends to fade significantly after 10 to 12 seconds if it is not repeated or rehearsed. Rehearsal involves the reciting of information over and over for example, repeating a phone number or a person's name.

Long Term Memory

Through rehearsing, an individual can place information in the long term memory (LTM). The long term memory is a virtually permanent storage facility containing names, dates e.g. birthdays or places e.g. capital cities.

The long term memory bank has unlimited capacity. The fact the information is in LTM however, does not mean you can find it whenever you like. If it is not well organised and file, it may be difficult to retrieve it.

2.7.1 Application of the Information Processing Theory

1. Get information attended – the teacher should try to encourage learners to pay attention
2. Get information rehearsed
3. Get learned material stored in long term memory
4. Get information over learned – over learning means learning beyond the criterion. The individual keeps on going over and over material he/she has already grasped
5. Proper filing in the LTM to avoid wrong data getting to LTM

2.8 Summary



In this lecture we have looked at the various types of learning which are derived from the theories of learning. We have discussed the S-R learning theories, social learning theory and insight learning. We have also described the information processing model.

2.9 Self-test Questions



1. Describe the S-R learning theories
2. Discuss the implications of the information processing model

2.10 Further Reading



Hilgard, E. R. (1977). Introduction to Psychology. New York: Harcourt, Brace and World

Lamberth, J. (1996). Foundations of Psychology. New York: Harper and Row Publishers.

Morris, C. (1980). Psychology an Introduction. New Jersey: Prentice Hall.

FACTORS THAT INFLUENCE LEARNING

LECTURE THREE

3.1 Introduction



In this lecture, we are going to discuss some of the factors that influence learning. This lecture helps us understand the various factors that could either hinder or facilitate learning.

3.2 Lecture Objectives



By the end of this lecture you should be able to:

- Describe the various factors that influence learning
- Discuss how these factors can be exploited to ensure effective learning

3.3 Factors that Influence Learning

There are variables in the teaching-learning situation which can enhance or hinder learning. These include:

1. **Teachers' personality and competence-** A competent teacher will enhance learning while an incompetent one will hinder the learning process. A competent teacher will be able to apply techniques that will foster learning. He/she will be able to organise the class, handle the problems in the classroom and maintain order. The reverse applies to the incompetent teacher. A teacher's personality also matters a great deal. The way a teacher behaves in class can either enhance or hinder learning. Is the teacher pleasant or hostile? Is he/she able to communicate effectively?
2. **Characteristics of the learning environment** – The environment should be suitable for learning. An environment that enhances learning has enough light, enough ventilation, good buildings, no bullying and classrooms are not overcrowded, etc. An environment that hinders learning has overcrowded classrooms, is dark, is stuffy/no ventilation, has poor quality buildings, bullying is present and children learn in the open, etc.
3. **Learner Characteristics**
 - Intelligence – brighter learners process information faster than dull ones
 - Motivational levels
 - Emotional levels – emotional problems hinder learning
 - Readiness to learn/mental ability – remember Piaget. Teach children according to their mental capability or levels of intellectual development
 - Socio Economic background – research shows children from middle class backgrounds tend to work harder in school than children from high class backgrounds
4. **Subject matter** – The subject matter should be meaningful if learning is to take place. If the learner is subjected to meaningless material, learning will not

occur. For material to be meaningful, it should be selected, organised and presented in a potentially meaningful manner. The content should be consistent with the learners' developmental level. The teacher should also motivate the learner so that he/she has the desire to know.

If these conditions are met, the material will be assimilated into the learners' cognitive structure. A major problem is that teachers make the subject abstract such that the content has no bearing in the lives or experiences of the learner. The teacher should therefore seek ways and means of bringing relevance of content to the learners' experience.

How can the teacher ensure that the subject matter enhances learning?

- The teacher should assess the readiness of the learner before presenting content by identifying the knowledge the learner already has, his skills, his abilities, his motives, his experiences and make this the starting point
- The teacher should then present the material in a style that captures the learners attention and motivation
- He/she should also build on the learners past experience
- Discovery learning should also be encouraged. Learners should discover concepts, meanings and relationships on their own. Knowledge that is self discovered is more significant to the learner and is remembered better
- Usefulness of content – content should be made relevant to the needs of the learner. The learner should perceive content as useful to him/her
- Concept learning – the learner should not be exposed to facts that are isolated. He/she should be able to see relationships e.g. relate what is being learnt to what was learnt earlier on. Concept learning is very important both in understanding a subject and in transferring the knowledge to future situations.

3.4 Summary



In this lecture we have discussed the various factors that influence learning. We have also discussed how we can apply this information in classrooms or during teaching-learning sessions.

3.5 Self-test Questions



1. How can a teacher's personality influence learning in a classroom?
2. Discuss how a teacher can ensure that the subject matter enhances learning.

3.6 Further Reading



Hilgard, E. R. (1977). Introduction to Psychology. New York: Harcourt, Brace and World

Lamberth, J. (1996). Foundations of Psychology. New York: Harper and Row Publishers.

Morris, C. (1980). Psychology and Introduction. New Jersey: Prentice Hall.

Myers, D. G. (1990). Exploring Psychology. New York: Worth Publishers Inc.

Silverman, R. E. (1982). Psychology. Englewood, New Jersey Cliffs: Prentice Hall Inc.

TRANSFER OF LEARNING

LECTURE FOUR

4.1 Introduction



In this lecture, we will look at the topic transfer of learning. First we shall describe the types of learning then consider how we can foster positive transfer of learning. We shall also discuss ways of teaching for transfer.

4.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Define transfer of learning
- Differentiate between the different types of transfers of learning
- Discuss ways of teaching to ensure there is positive transfer of learning

4.3 Definition of Transfer of Learning

Transfer of learning refers to the influence which learning one task may have upon the subsequent learning or performance of another task. Transfer of learning means that performance on one task is affected by performance on another task. Performance might be positively affected or it might be negatively affected.

4.4 Types of Transfer of Learning

1. **Negative transfer of learning** – This is where previous learning hinders or interferes with future learning. It inhibits the learning and/or retention of something new for example, children who speak mother tongue at home have difficulties when they join a preschool where Kiswahili is being used. They might include words from their mother tongue when talking to the teacher in the preschool.
2. **Zero transfer of learning** – Here, previous learning has no effect on future learning. Previous learning neither precipitates nor hinders future learning for example learning how to ride a tricycle does not help a child when he has to learn letters of the alphabet.
3. **Positive transfer of learning** – This is where previous learning precipitates or facilitates future learning. Positive transfer is probably one of the most important

goals of teachers. One can say that teaching is successful to the extent that children learn to apply what they have learned to new situations, in and out of school. An example of positive transfer of learning is that learners who did home science in secondary school perform better than their classmates in the unit “Foods and Nutrition”.

There are **two kinds of positive transfer** that is, vertical and horizontal.

- **Vertical transfer** – describes the way in which an individual becomes increasingly capable of more complex tasks, the way an individual ascends from simple tasks to more and more difficult ones. Application in the classroom – the teacher must be certain that children attain prerequisite capabilities before moving on to more advanced capabilities e.g. the learner should be able to do simple addition and subtraction before he starts learning multiplication. Greater knowledge of prerequisites facilitates learning, retention and transfer.

- **Horizontal transfer or lateral transfer** – This refers to the individual’s ability to apply a skill learned in one situation to another situation for example; can a child who learns how to count in the classroom be able to count tomatoes when his mother sends him to the shop to buy some tomatoes? Several factors influence horizontal transfer and the learner’s chances of success:
 - The similarity between the school situation and the real-life situation
 - Knowledge of the underlying principles
 - Amount of practice

Activity



Differentiate between the different types of transfers of learning

4.5 Fostering Positive Transfer of Learning

How do you as a teacher teach something to learners that they will apply it later on in life?

- a. **Meaningfulness of the material learnt** – to be able to apply what they learn in class, children should understand what they are learning.
- b. **Degree of mastery of the learnt material** – If the degree of mastery is very high, one can apply knowledge or skills without difficulty
- c. **Constant review of the learnt material/Practice** – studies show that where learners review what they previously learnt, they show more positive transfer of learning than those who do not.
- d. **Distributed learning** – This means there should be intervals in the learning e.g. breaks in between school terms. When there are no pauses or breaks, we have what we call massed learning. Material learnt under distributed learning shows more positive transfer than that learnt under massed learning.
- e. **Use of principles and concepts** – When teaching emphasis should be on principles and concepts rather than on isolated facts e.g. not just ask children to cram a formula in maths. If a child has learned the principle behind a type of mathematical problem, he/she should be able to do related problems without difficulty. If he/she has only learned to do a particular type of problem by imitation, he/she may be totally unable to transfer the problem-solving ability to similar problems.

4.6 Ways of Teaching for Transfer

There are two basic ways of teaching for transfer:

- The substantive method
- The procedural method

Substantive method – This is derived from the theory of identical elements which says that for transfer to take place there has to be similarity for example, if the child is learning how to ride a tricycle, then he should be tutored using a real tricycle. If he is being taught how to swim, then we should have a pool of water.

Procedural method – This method entails the teacher ensuring that basic principles and concepts are understood. If the main principles and concepts are not understood, understanding becomes very difficult. For example, in learning the meaning of words such as untie, unfair or unarmed, it is useful for the learner to be told that the prefix “un” means not or contrary to.

The learner will then find meanings for many words like unaffected, unaccompanied, etc. In this kind of teaching for transfer, teachers should try to present a wide range of examples in which the learners can see how new principles and techniques are used. As much as possible, examples should be placed in real world settings.

4.7 Summary



In this lecture we have looked at transfer of learning. We have described the different types of transfer of learning and also described how we can ensure positive transfer of learning occurs.

4.8 Self-test Questions



1. Define transfer of learning
2. Describe negative transfer of learning
3. Discuss ways of teaching for transfer

4.9 Further Reading



LeFrancois, G. R. (1994). Psychology for teaching. USA: Wadsworth Publishing Company.

Santrock, J. W. (2004). Educational psychology. USA: McGraw-Hill.

REMEMBERING AND FORGETTING

LECTURE FIVE

5.1 Introduction



In this lecture, we will discuss remembering and forgetting. We will look at why learners sometimes forget what we have taught them and also discuss how we can help learners remember what they have learnt.

5.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Discuss why learners sometimes forget what they have learnt
- Describe how learners memory can be improved

5.3 Remembering and Forgetting

Why do learners forget the things they learn? Why is it that at times some things are remembered very well while others are completely forgotten? Behaviourists have developed the following explanations:

The Disuse Model

According to this model, learners forget the S-R connections or associations made previously because they grow rusty or fade away through lack of use. Information that is not used becomes rusty or fades away through lack of use. Information that is not used becomes rusty or fades away.

Implication of this is that to prevent forgetting of learned material, the teacher should encourage repetition, reviewing and tying in any learning with what is already known.

The Interference Model

Situations may arise where old information interferes with new information or vice versa. Learners forget what they learned previously because they learn new things or they forget new things they learn because what they learnt earlier interferes. There are two main forms of interference

- a) **Proactive Inhibition** – this occurs when old information makes it difficult to remember new information for example if you were to give learners a list of words and ask them to study it (List A). Don't test at this time. Then give them another list that is list B and ask them to study it. Test them on B. As they try to recall words on list B they will mix A and B because memory of A interferes with memory of B.

- b) **Retroactive Inhibition** – This occurs when new information makes it difficult to remember old information. If learners learn lists A and B and they are asked to recall A, they will mix A and B because the memory of B interferes with their recall of A. It is as if later memory acts backwards to interfere with earlier memory.

Both retroactive and proactive inhibition/interference are greater when the items in memory are similar for example:

List A: cat hut fat rut further goat lot cup

List B: cut hat fit rat father **gate** rot cap

5.3.2.1 Application/Implication:

- New learning should be made clear by bringing out the similarities and differences between old and new information
- Tasks must be practiced until they are mastered. Partially learned tasks interfere more with other partially learned tasks.

Information Processing Explanation – cognitive psychologists believe that the key to memory is the way in which the material is coded and organised as it is kept in the long term memory bank. The important factors are cataloguing, filing and retrieval of facts.

- (a) At the **Sensory Register or Short Term Sensory Storage** any information that is not attended to is lost. At this level the key to memory is attention.
- (b) At the **short term/working memory** rehearsal of information is important. A learner here can engage in maintenance rehearsal. Maintenance rehearsal involves repeating the information over and over again e.g. a phone number or a shopping list. When no longer needed, this information is forgotten. Another type of rehearsal is elaborative rehearsal. This involves repetition of information and linking it with information already existing in the long term memory. Elaborative rehearsal is important for information to be transferred to the long term memory.
- (c) At the **long term memory** information is catalogued and file. In the long term memory we have declarative memory and procedural memory.
- **Declarative memory** is memory for things that can be expressed in words and there are two types of declarative memory that is, semantic memory and episodic memory. **Semantic** memory is memory for general facts for example you know that Kenya has 8 provinces without necessarily visiting all of them. **Episodic** memory is memory of personal experiences for example your memory of what you ate for breakfast or what your friend said yesterday afternoon. Episodic memory is memory of events that occur to a person or take place in the person's presence.
 - **Procedural memory** concerns skills that we cannot readily describe in words. This is memory for actions and skills. It involves knowledge of how to do things. You learn and remember how to ride a bicycle, how to turn lights on and off, etc. Procedural memories tend to persevere even when we have not used them for many years for example, you will not forget how to turn lights on and off if you are transferred to a village where there is no electricity.

Information in the long term memory is organised in categories. For each item there is an index card. Forgetting occurs if the memory index card is catalogued in the

wrong way that is, cataloguing errors occur. Think of when there is misfiling or a card gets lost in a library.

5.3.3.1 What causes cataloguing errors?

- Cataloguing errors can occur when the learner takes in too much information within a short time. For example if you were introduced to a dozen people at a party you would most likely not remember all their names later on but if you were introduced to one person a day for a dozen days, you will file correctly there are fewer chances of errors occurring.
- If two things are similar, cataloguing errors may occur because one thing may be remembered in place of the other.

5.3.3.2 Application/Implication of Information processing explanation

- The teacher should ensure that the material learned by learners gets beyond the short term memory and is stored in the long term memory because the information that gets there is permanent as long as there is no brain damage
- The teacher should ensure that the correct responses get to the long term memory bank.

Activity



Discuss why learners sometimes forget what they have learnt

5.4 IMPROVING MEMORY

1. Increase **attention** by selecting a study environment which does not contain too many distractions

2. **Rehearsal** – this is repetition of what has been learnt. Correct responses should be repeated ensuring that learners are aware of the meaning of those responses (meaningfulness of material learnt). The learners should also be made aware of what the correct responses relate to that is, try to relate what is being learnt to what was learnt before. Important facts should therefore be reviewed immediately and reviewed again later on.
3. **Distributed practice** – there have to be intervals during the study period. Massed practice should be avoided.
4. Use of **mnemonic devices** – These are memory aids. They are techniques that have been developed to improve memory especially memory for bits of unrelated information. Mnemonic devices include use of acronyms, pegword method, loci method and keyword method.
 - **Loci method** – Loci is Latin for “places”. This method was used by the ancient Romans as early as 6 to 82 BC. The first thing is to think of locations e.g. the locations you would come upon in a slow walk through your room in the hostel. You enter through the door, move next to the bed, then to the table, then to the curtains at the window, and so on. Once you can easily take this mental walk, you are ready to memorize as many unrelated words as there are locations on your walk. You form an image that relates the first word to the first location, another image that relates the second word to the second location, and so on. If the words are items on a shopping list – bread, shoe polish, foolscaps and biro pens, you might imagine a slice of bread nailed to the door, a can of shoe polish on the bed, foolscaps on the table and biro pens hanging on the curtains. Once you have memorized the items this way, you can easily recall them in order by simply taking your mental walk again.
 - **Keyword method** – It is used to learn foreign vocabulary. This method involves two steps. The first thing is to find a part of the foreign word that sounds like an English word e.g. the Spanish word “caballo” which means “horse” is pronounced “cob-eye-yo”. Hence “eye” could serve as the key word. The next step is to form an image that connects the key word and the

English equivalent – such as a horse kicking a giant eye. To recall the meaning of caballo, you would first retrieve “eye” and then the stored image that links it to “horse”.

- **Acronyms and acrostics** – these include short forms such as KU for Kenyatta University, KM for Kilomita Moja. They also include acrostics e.g. phrases such as **M**ercury’s **V**ery **E**ager **M**other **J**ust **S**erved **U**s **N**ine **P**otatoes helps learners remember the order of the planets that is, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto.
- **Pegword Method** – the first step is the creation of a set of mental pegs, such as numerals to which the items to be memorized could be attached. The learner begins by memorizing a set of rhymes such as one-bun, two-shoe, three-tree, etc. Once these pairs are mastered they are ready to serve as mental pegs. To learn a serial list of items (e.g. frog, college, earthworm, etc) the learner must form different compound images that connect each item with its cue word. The first image might be of a frog in a bun, while the second might be of a shoe being thrown at the college, etc.

5.5 Summary



In this lecture we have looked at remembering and forgetting. We have discussed the various explanations of why forgetting may occur. In addition, we have also discussed how we can improve memory.

5.6 Self-test Questions



Berger, K. S., & Tompson, R. A. (1995). The developing person through childhood and adolescence. Worth Publishers Inc.

Craig, G. (1992). Human development (6th Ed.). Prentice Hall Inc.

5.7 Further Reading

INDIVIDUAL DIFFERENCES IN LEARNING

LECTURE SIX

6.1 Introduction



In this lecture, we will discuss individual differences in learning by examining in detail the various factors that cause these individual differences.

6.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Describe some of the factors that cause individual differences in learning

6.3 Individual Differences in Learning

Why is it that learners in the same class with the same books and the same teachers show variations in achievement? What causes individual differences in intellectual ability and achievement? The answers lie in the following factors:

1. **Genetics or Heredity** – Heredity fixes the blue print of intellectual abilities. It provides the raw materials and sets the limits. What is inherited is unchangeable. One inherits the potential towards high IQ or low IQ. The inherited potential interacts with environmental conditions and demands to unfold intellectual abilities to optimum levels
2. **The Environment** – The environment can be enriched and therefore promote intellectual growth. On the other hand it can be impoverished and therefore inhibit intellectual growth. Environments include:

- **Early environment which is the home** – it affects both IQ and achievement. The home has both human and physical resources that is, there are parents, siblings and physical facilities. The home places the child in an environment which can be stimulating or non-stimulating. A child in a stimulating environment may be able to perform intellectual tasks above his mental age. On the other hand a child in an impoverished environment may be brighter than his IQ or achievement scores indicate.

 - **Socio Economic Status (SES)** – Social class can be determined by among other factors the family income, educational level of the parents, residence or neighbourhood and family background. Children from middle class backgrounds will generally perform better in school as compared to those from low class backgrounds. One of the reasons is that those from low class backgrounds may lack learning materials (poverty cycle). Another reason is that middle class people are more ambitious therefore they push their children to succeed in school.
3. **Characteristics of the learner** – These include the psychological attributes
- **Maturation status** – mature learners will be better able to learn and understand certain concepts than less mature learners for example learners at the formal operations stage can conserve while those at the pre-operational level cannot conserve.

 - **Emotional status** – emotional problems at home will affect children in school. Children from homes where parents fight or where the children are abused both physically and psychologically will be very anxious. Too much anxiety affects learning and academic achievement

 - **Motivational levels** – Learners can either be highly motivated or lowly motivated. Highly motivated individuals normally learn better than those who are lowly motivated. They also have better academic achievements than the lowly motivated individuals.

- Aspirations – learners who desire earnestly to succeed will work harder in school than learners who have no aspirations for example a learner who aspires to be an engineer and he/she knows she/she has to do well in the sciences will probably put more effort in his/her school work.

6.4 Summary



In this lecture we have looked at the causes of individual differences in learning which include genes, the environment and the learner's characteristics.

6.5 Self-test Questions



- 1 How do genes influence individual differences in learning?
- 2 Which learner characteristics will cause individual differences in learning?

6.6 Further Reading



LeFrancois, G. R. (1994). Psychology for teaching. USA: Wadsworth Publishing Company.

Santrock, J. W. (2004). Educational psychology. USA: McGraw-Hill.

LECTURE SEVEN

7.1 Introduction



In this lecture, we will look at motivation in learning. We will examine some theories that discuss motivation in learning and also discuss how teachers can motivate learners.

7.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Define motivation
- Discuss some theories that describe motivation in learning
- Distinguish between extrinsic and intrinsic motivation

7.3 Motivation

Motivation is the driving force behind behaviour, thoughts or actions. It energizes behaviour and gives it direction towards a goal. The goal should be to satisfy a need. The need could be for hunger, thirst, pain avoidance, to achieve, to be competent, to be recognised by peers, and so on.

In a school setting, you can have pupils but whether they learn or not depends on their interests, their priorities, their attitudes and their values. Learners may be physically present in the classroom but their minds are absent. Some theories exist which provide ideas on how teachers can motivate learners.

1. **The Behaviouristic Theory** – This theory advocates the use of reinforcement, both positive and negative. Positive reinforcement involves the administration of a pleasant event or a tangible reward in order to encourage a behaviour. Negative reinforcement involves the removal of an aversive/unpleasant stimulus in order to encourage desirable behaviour. The similarity between negative and positive reinforcement is that they both encourage desirable behaviour.
2. **The social learning theory** – This theory advises the teacher about the value of both vicarious conditioning and modelling. Allow learners the chance to observe the desirable behaviours you wish them to emulate for example, be a model of hard work, punctuality, honesty, use words such as please, thank you, etc. In addition, invite models that is, people who children can emulate/copy. Let the children also see other children who have displayed the good behaviour being rewarded. They should also see children who misbehave being reprimanded.
3. **The cognitive theories** – These emphasize the importance of intrinsic motivation where pupils learn because of the inner desires and interests.
4. **The humanistic theories** – These emphasize that learners needs must be sufficiently met if they are expected to show desirable behaviour. Maslow's hierarchy of human needs can be used to illustrate this.

Maslow arranges human needs in a hierarchical order with the more basic needs falling at the bottom.

- Physiological needs come first according to Maslow. Hunger and thirst must be satisfied before there is motivation to do anything else. A hungry child is not likely to be fully motivated to learn. School feeding programmes are an effort to reduce the numbers of children who cannot function because they are hungry.
- Safety needs – a child who finds the environment unpredictable and therefore threatening is not likely to be fully motivated to learn

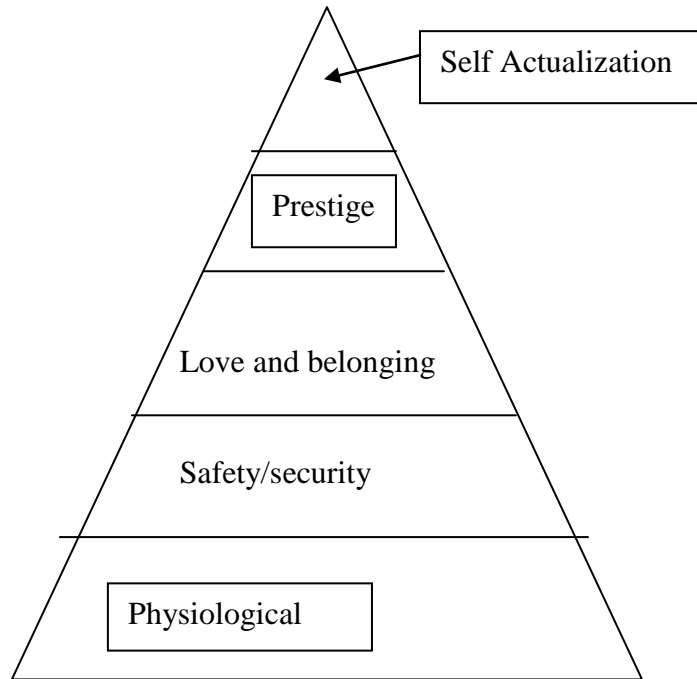


Figure 1: Maslow's Hierarchy of Needs

- Need to belong – an outcast, a child scorned by others, is not likely to be fully motivated to learn
- Need for self esteem – (to feel worthy and important). Self-concept influences performance in school for example one study found that children who performed poorly in a reading test were found to view themselves negatively.
- Self-actualization – this need arises in only a small proportion of the population. These needs are aimed at developing the full potentialities of the person for example a company executive who has advanced to the rank of multi-millionaire does not stop there but continues working hard to expand his financial standing.

Activity



Discuss some theories that explain how motivation in learning occurs

7.4 Extrinsic Motivation

Extrinsic motivation is motivation brought about by external or outside factors. It includes use of incentives and use of force or coercive power.

1. **Use of force or coercive power** – This is the use of punishment and threats to punish, to suspend or to demote those whose behaviours do not meet the set standards whether of academic or general conduct. Threats of force and the use of it often serve as powerful motivators and if used properly and wisely can instil discipline but the use of force has two serious limitations:
 - Even if it succeeds in stopping undesirable behaviour it is likely to create dependence on external agents than on internal resources. A pupil who is used to the use of force never learns self-direction. He relies on other to direct him.
 - A learner who is punished never performs a task with enthusiasm. He resents the things he is forced to do.

2. **Use of incentives** – This refers to the use of rewards or promise of rewards for example promises of trips, books, points, etc. This kind of motivation may be useful because most people want such rewards. The limitation of this method is that it is manipulative. People do things for the sake of the promised rewards. Just like in the use of coercion, it causes dependency. The learner works to please the teacher. In the absence of the reward, the desired behaviour stops so the motivation is short lived.

7.5 Intrinsic Motivation

This is motivation that comes from within the learner. The best way to motivate learners is to bring them to work or study because they want to do so. They will want to study if they have identified with the desired goals. They will identify with the desired goals if their needs for competence and achievement are met.

7.5.1 How does the teacher help the learners achieve intrinsic motivation?

- By providing the learner with the opportunity to become competent by giving the learner tasks he can succeed in. The teacher assists the learner to avoid failure and fulfil the need for achievement. Therefore, the teacher should give learners tasks which they are intellectually capable of doing. This enhances the learners self concept. The learner feels “I am able to”, “I can do it”, and so on.
- The teacher should also help the learners set both short term and long term goals. A short term goal would include mastering topics while passing examinations is a long term goal.
- The teacher should also provide learners with immediate feedback. Let the learner experience success in terms of how well he achieves his goals. A learner who is successful develops an interest and continues to pursue an activity while a learner who fails loses interest, avoids getting involved in activities, resorts to absenteeism and completely loses motivation.

Activity



Distinguish between extrinsic and intrinsic motivation

7.6 Socially Oriented Motives and School

These can be classified into two broad categories that is, affiliative motives and prestige motives.

(a) The affiliative motives and education/How affiliative needs promote learning

- **Development of character and learning** – The child who interacts with parents, teachers and other children learns the kind of behaviour which will lead to commendation (approval) or lead to blame or scolding. The child will engage in approved behaviour in order to enhance the affiliative relationship and he will avoid behaviour that leads to blame or scolding. Learning both at home and in school is based on the need to please adults whom the child likes. Children will work hard to obtain commendation from parents and teachers.
- **Levels of aspiration** – the levels of aspiration that children set are largely determined by standards and demands made by the parents and teachers. In an effort to please and maintain support and nurturance of parents, children will make all efforts to attain the levels of excellence that will satisfy their parents and teachers. Parents and teachers should use positive incentives to reward excelling academic performance. The use of punishment and negative reinforcement is discouraged.

(b) **Prestige motives** - These are aimed at enhancing the self-esteem of the individual. Each individual wants to feel important in the group he belongs to. In our schools prestige motives underlie the general competitive behaviour. The desire to excel in academic performance, games, etc. In the classroom, children want to answer questions, score high grades and outsmart others because it is prestigious to outsmart others. Prestige varies with the age and gender for example adolescent girls may cherish appearance more than boys.

How to manipulate prestige motives for educational purposes

- As incentives – incentives such as rewards, presents, praise, promotions, medals, etc can be used by the teacher to enhance prestige motives

- Rivalry and competition – the teacher can set up competitive activities e.g. between classes or dormitories. The class or dormitory that scores the highest points in the activities feels very important or prestigious.

Activity



Describe how socially oriented motives can be used to promote learning in schools.

7.7 Why Learners will Lack Motivation to Learn School Subjects

1. **Unmet needs of learners** – The child has needs which the school subjects do not help to meet because much of the school curriculum is not fundamentally and critically related to the child's needs, goals and purposes. What is done in the classroom belongs to the classroom and has no relevance outside school. The curriculum is abstract, coldly academic and it is of less vital concern for the child's immediate purposes.
2. **Many competing interests** – The child may have many competing interests and school work becomes of less importance. These competing interests could be watching TV, playing, and so on.
3. **Due to poor self concept** – the child may have developed a negative or a poor self image due to a history of continued frustration caused by failure. The child perceives himself as incapable and will only go to school to avoid being punished for playing truant.

7.8 The Teacher as a Motivator

1. Teachers should give moral support when children are experiencing difficulties

2. Teachers should also make subjects interesting, challenging and satisfying
3. They should use intrinsic motivation rather than extrinsic motivation

7.9 Summary



In this lecture we have discussed motivation. We have described some theories that try to explain how motivation takes place in learning. In addition, we have talked about why learners will sometimes lack motivation to learn school subjects.

7.10 Self-test Questions



1. Using Maslow's Hierarchy of Needs, discuss how motivation in learning occurs.
2. Discuss how teachers can motivate learners in their schools

7.11 Further Reading



Lamberth, J. (1996). Foundations of Psychology. New York: Harper and Row Publishers.
 Morris, C. (1980). Psychology and Introduction. New Jersey: Prentice Hall.
 Myers, D. G. (1990). Exploring Psychology. New York: Worth Publishers Inc.

ATTITUDES AND LEARNING

LECTURE EIGHT

8.1 Introduction



In this lecture, we will discuss attitudes and learning. We will also look at the functions of attitudes and how attitudes develop.

8.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Define attitude
- Describe the functions of attitudes
- Discuss the role of attitudes in learning

8.3 Attitudes

Definition: An attitude is a predisposition to respond toward a particular person or group of persons; a particular object or a group of objects in a favourable or unfavourable manner.

Phenomena in the world can be perceived in two broad ways. People perceive objects, events, ideas and other people as either bad or good, pleasant or unpleasant, and so on. People will always approach what they perceive as pleasant and avoid what they perceive as unpleasant.

In other words, people form attitudes. Positive attitudes towards what they find pleasant and negative attitudes towards what they find unpleasant. How a person perceives something affects how the person thinks, feels and acts towards that thing. Therefore the way a child perceives a teacher or school will affect the way he acts towards them.

8.4 Components of Attitudes/Structure of Attitudes

Attitudes have three components – affective/feeling, cognitive and behavioural

- (a) **Affective component** (consists of feelings or emotions) – It consists of positive or negative feelings. Any attitude with only the affective component will be irrational for example a child who dislikes a teacher for no reason will be displaying irrational behaviour.

- (b) **Cognitive component** (knowledge) – this involves knowledge and belief. One has information about the object, event or person e.g. that they are good or bad. One therefore takes a certain position on an issue because he has thought about it and considered evidence about it. A learner may dislike a teacher because he has information that that teacher beats small children. Sometimes an attitude may be based on a large store of incorrect information and false beliefs.

- (c) **Behavioural component** (behaviour) – our attitudes towards a person, an event, a place or an idea affect how we behave towards that thing. We should bear in mind that there will always be a discrepancy between our expressed attitude and our actual behaviour. Attitudes expressed verbally may be very deceptive. It is only after we observe the behaviour that we can tell what the actual attitude is. Therefore, attitudes are inferred from behaviour.

Activity



Describe the components of attitudes

8.5 Functions of Attitudes

1. **Adaptive functions** – to belong to any given group of people you have to have attitudes like theirs towards things. For purposes of survival in a given culture, an individual will adopt certain attitudes in order to be accepted by a group. In a school you may therefore find a group that likes or dislikes maths, games, etc sticking together.
2. **Cognitive functions** – attitudes exist to enable us to classify phenomena into categories e.g. positive or negative therefore know how to behave towards it.
3. **Need gratification** – attitudes exist to help us satisfy our needs. They help us approach what we think is good for us e.g. Good food, friendly company, an interesting subject, and so on.
4. **Ego Defense Mechanism** – Attitudes may be held to confirm an individuals beliefs about himself or others as good or bad, intelligent or dull, etc. A person looks for the slightest reason to confirm his belief and may even distort reality to satisfy his ego for example, a learner says he failed because the teacher is not a good teacher when in reality he failed because he did not study.

8.6 Development of Attitudes/Acquisition of Attitudes/Attitude Formation in a Learning Situation

Attitudes are acquired early in life through the experiences one goes through. They are therefore learned and not inherited. Theories on acquisition and change of attitudes include:

1. **S-R theories of learning** which include classical conditioning and operant conditioning.
 - **Classical conditioning** – positive experiences (UCS) are paired with an attitude object (CS). As a result the attitude object comes to elicit the same good feeling that was originally produced by the UCS for example schools in famine stricken areas would provide food to the children who come to school. The food is the

UCS while the school is the CS. The children will acquire a positive attitude towards school because they associate it with food.

- **Operant conditioning** – attitudes can also be acquired through reinforcement for example in a school setting, the teacher can positively reinforce a learner by praising him when the learner displays attitudes or behaviours that are considered desirable.

2. **Social learning theory** – this theory says attitudes are transmitted through the process of imitation. From early childhood the child sees how another person, a parent, a sister or brother reacts to something e.g. a kind of food, to a certain animal, to a certain person, etc and learns to react in the same way. In later childhood and adolescence, the individual observes the peer group and identifies with them by assuming the attitudes they hold.

3. **Cognitive theory of attitude change** – cognitive theory of attitude acquisition and change was developed by Festinger (1957). This theory emphasizes on cognitive elements. These elements are called **cognitions** and include knowledge, beliefs and opinions which could be correct or incorrect. There are times when cognitions are inconsistent for example an individual knows the dangers of smoking but goes on smoking or a learner who knows it is wrong to cheat in an exam cheats. When we hold inconsistent cognitions a state of discomfort called **cognitive dissonance** occurs.

Cognitive dissonance works on the basic assumption that people want consistency between their attitudes and behaviour and they work to maintain the consistency. When the attitudes one holds are inconsistent with behaviour, the state of cognitive dissonance that is created is unpleasant. One then becomes motivated to **change ones attitudes to make them consistent with behaviour**. Thus an attitude change results from the attempt to restore consistency between attitudes and behaviour.

Sources of dissonance

- **Logical inconsistency** for example knowing something is bad or harmful yet one continues to indulge in it such as cigarette smoking, stealing, etc.
- **Inconsistency with cultural practices** – when one holds beliefs that go against the culture, dissonance occurs for example when a community believes in female circumcision but a school girl does not want to be circumcised
- **Inconsistency between a particular behaviour and the general trend of behaviour** – for example a learner is always obedient and honest and tells a lie at one time. This learner may experience dissonance after telling the lie.
- **Where the event does not fit our past experience** – for example when an old friend does not return a greeting.

8.7 Attitudes in Educational Settings

Learners will have attitudes about themselves, the school, teachers and subjects. These attitudes will affect learning. Attitudes can be changed by:

- Using the peer group – for example if a child has a negative attitude to school, cries and refuses to go to school, point at other children who are going to school and tell him “look at that boy, he is going to school and he is not crying”
- Allowing room for first experience – this is more effective than telling learners about something for example, if children have heard that a teacher is bad, let that teacher teach the children so the children can realise that the teacher is not bad
- Using effective communication – using language level that children can understand and also providing correct information so attitudes will not be based on incorrect information
- Looking for periods in the learners life when he can be persuaded– that is, when the learner will be most receptive to new attitudes.

8.8 Summary



In this lecture we have discussed the role of attitudes in learning. We have looked at the functions attitudes have and some theories that explain how attitudes are formed.

8.9 Self-test Questions



- 1 Define attitudes
- 2 Name some sources of dissonance
- 3 Which advice would you give teachers who are trying to change their learner's attitudes?

8.10 Further Reading



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MENTAL HEALTH AND LEARNING

LECTURE NINE

9.1 Introduction



In this lecture, we will discuss mental health and learning. We will look at how factors such as anxiety influence learning and we will also examine the home and school impact on learners' mental health.

9.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Describe how mental health and learning are related
- Describe the characteristics of good and poor mental health
- Discuss various factors that could influence learners' mental health

9.3 Mental Health

Mental health and learning are closely related. Emotional maladjustment leads to intellectual inefficiency. Healthy individuals appraise themselves realistically, accept their shortcomings and respect their talents and virtues. They also set for themselves attainable goals.

Mental health also implies a feeling of being wanted and of belonging to groups, of trusting and being trusted, of loving and being loved in family, peer and teacher-pupil

relationships. Emotionally healthy children display efficient problem-solving activities while emotionally maladjusted children often exhibit symptoms of impaired efficiency in learning and problem-solving situations.

Emotional disturbances can develop from frustration and conflict experienced in school, from unhealthy parent-child relationships, or from other unfortunate personal or social experiences.

9.4 Characteristics of Good Mental Health

1. **Efficient productivity** – individuals with good mental health tend to be more productive
2. **Satisfaction of basic motives** – As individuals, learners have basic motives they want to satisfy. When satisfactions are there, these are characteristics of good mental health
3. **Self-concept of competence and integrity** – Individuals having good mental health perceive themselves as competent in certain spheres
4. **Flexibility and mobilisation of resources under stress** – individuals having good mental health tend to be flexible for example when faced with difficult situations, they try to solve problems even under stress. They do not break down.
5. **Commitment with others to social goals.**

9.5 Characteristics of Poor Mental Health (Maladjustment)

1. **Underachievement** – individuals who are maladjusted are capable of performing at a higher level than the level at which they perform.
2. **Self concept of inferiority and guilt** – maladjusted individuals tend to have an inferiority complex and do not believe in their own abilities

3. **Breakdown in efficiency under stress** – maladjusted individuals are not able to cope with a lot of stress and may breakdown
4. **Feelings of rejection in interpersonal relations** – individuals who are maladjusted tend to view others as being hostile to them. This includes parents, teachers and peers.

Activity



Differentiate between characteristics of good and poor mental health

9.6 Anxiety

Anxiety is a characteristic of all maladjusted persons. It is vaguely defined as a feeling of looming disaster and of apprehension about being inadequate to meet the inevitable problems of life. Having failed in important life activities, maladjusted children develop feelings of inferiority, unworthiness and guilt. They come to anticipate failure in any challenging task; and as consequences of failure, they fear loss of acceptance, esteem and love.

As a defence against the painful anxiety thus frequently aroused, they are constantly ready for a variety of self-defensive reactions. Anxiety influences learning. Anxious learners usually progress more slowly and attain lower levels of mastery than non-anxious learners. Excessive anxiety is detrimental to learning and academic achievement. Too much anxiety interferes with productive thinking that is, when anxiety is high, effective learning does not take place.

9.7 The Home as a Factor in the Development of Mental Health

1. **Relations between parents** – children who have parents who do not live together harmoniously show maladjustment. Tension between parents has an effect on children's mental health
2. **Relations between parents and children** – when parents are abusive, too harsh or show little love for their children, this can lead to maladjustment in the children. Parents should try to be understanding with their children in order to foster good mental health in their children.
3. **Relations between siblings** – for good mental health to be fostered, siblings should get on well. Older siblings should not bully or mistreat younger siblings and parents should not openly show favouritism for some of the children
4. **Parental love and interest** – parents should display their love for and interest in the child. Therefore the child has a base for developing feelings of security, trust of people, personal worth and confidence.
5. Parents should show recognition and encouragement of children's developing talents, interests and aspirations so as to foster the children's mental health.
6. For a child to have good mental health, there has to be a sense of belonging. A sense of belonging and opportunities to participate as a family member in the group approach to family problems fosters good mental health.
7. For a child to have good mental health, there has to be a sense of belonging. A sense of belonging and opportunities to participate as a family member in the group approach to family problems fosters good mental health.
8. Parents should take an active part in providing adequate opportunities for physical, intellectual, social and moral development. Parents should provide appropriate guidance in structuring approaches to developmental tasks, approve children's achievements, reward their constructive efforts and encourage them when they fail.

Activity

Discuss the role the home plays in learners' mental health

9.8 The Role of the School in Mental Health

1. **Relations between teachers and learners** – there should be a good relationship between teachers and learners for the learners' good mental health. Teachers should not be too harsh to learners or humiliate them.
2. **Relations between learners themselves** – learners should not be allowed to bully each other or mistreat each other in any way. Bullying can lead to development of poor mental health.
3. Curricula which give children understanding and control of the problems they meet and opportunities for constructive expression of their talents also enhance their mental health.
4. Mental health oriented teachers sense each child's difficulties and adapt the conditions of effective learning to each child's particular needs. Such teachers recognise that learners are diversely talented and that each one needs opportunities to identify, develop and use his or her best abilities.
5. Teacher guidance should make learners more effective and happy in their study, work and play. This will enhance the learners' mental health. The feelings of competence and self-esteem which come with worthwhile accomplishments can both enhance positive mental health and prevent or correct maladjustment.
6. To give every child opportunities for the friendships and esteem he or she needs, teachers should also make effective use of their resources for guiding children's

social learning. These include helping children acquire the traits that win them peer esteem, building class morale which recognises each individual's contributions and needs, guiding peer support of the constructive efforts of maladjusted children, and fostering constructive self-discipline.

7. Teachers can also take direct steps to turn maladjusted children toward mental health for example by counselling the children, cooperating with the children's parents and working with mental health experts.

9.9 Adjustment Problems That May Occur in Schools Due to Poor Mental Health


1. **Psychological absence from class** – this means children may be physically present in the classroom but their minds are elsewhere, that is, they do not concentrate in class.
2. **Too much noise and disruptive behaviour** – children may act out and disrupt the teaching-learning episodes since they may not see much sense in being in school.
3. **Stealing and cheating** – children may steal and cheat in order to gain attention. Some children cheat in exams due to poor self-concept. They do not believe they can be able to pass exams.

9.10 Summary




In this lecture we have discussed the role of mental health in learning. We have described the characteristics of poor and good mental health and also described the role of the home and school in learners' mental health.

9.11 Self-test Questions

9.12 

1. What is the role of anxiety in learners' mental health?
2. Discuss some of the problems that may be seen in schools when learners have poor mental health.

9.12 Further Reading



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LEARNING AND PERFORMANCE

LECTURE TEN

10.1 Introduction



In this lecture, we will discuss both learning and performance. We will look at the characteristics of slow and rapid learners and also discuss how teachers can deal with both slow and rapid learners.

10.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Describe the characteristics of slow learners
- Describe the characteristics of rapid learners
- Discuss how teachers should deal with both slow and rapid learners.

10.3 Learning and Performance

We cannot measure learning per se (by itself). What we measure is performance. There are various factors which may bring a situation where pupils do not reflect what they learnt that is, there are factors associated with poor performance even when pupils had learnt the material. These include:

1. physical sickness

2. psychological sickness or emotional disturbance e.g. death of a close family member
3. anxiety – this leads to panicking for example some children misinterpret questions in an exam due to panic
4. genetic factors that is, IQ levels
5. environmental factors e.g. hunger

For optimum performance, good health, proper diet, rich intellectual opportunities and environments that produce emotional stability, independence and self-confidence are important. Apart from the normal learners we have in schools, we also have slow and rapid learners.

Activity



Differentiate between learning and performance

10.4 Characteristics of a Child Who is a Slow Learner

There may be slow learners whose IQs are in the normal range (90-110) but most of them will be found in the IQ categories below 90. The lower the IQ of the child, the less likely that he or she will attend a normal school.

Slow learners need about three times as many experiences as do normal and bright pupils so they can learn. Even with extra time and repetitions, slow learners often reach the ceiling of their ability and fail to learn what is expected of them.

10.4.1 Suggestions for Dealing with Slow Learners:

1. Those dealing with slow learners should use more praise than criticism with them.
2. Examples, demonstrations and illustrations should be used to make learning concrete
3. Repetition of facts in different contexts and drills on basic concepts may be useful
4. Those dealing with slow learners also need to exercise a lot of patience when dealing with them.
5. The slow learners strengths must be capitalized on e.g. strengths in music, art, reading or arithmetic

10.5 Characteristics of the Rapid Learner

Rapid learners are sometimes referred to as “gifted”. IQ scores are used to identify gifted individuals e.g. some researchers argue that a score of 130 identifies one as gifted while other researchers view scores of 135 to 140 as better pointers to gifted individuals.

Rapid learners may find school work easy. They frequently are among the youngest in their class. They typically have a wide range of interests and these interests may be mature for example some gifted children may already have lost interest in the games played by their age-mates. Rapid learners may also be superior in character and personality traits.

10.5.1 Suggestions for Dealing with Rapid Learners:

1. Repetition is boring for the gifted child. The gifted child should be given more difficult problems to solve instead of more problems of the kind he or she has already been able to solve. The gifted child should be encouraged to study beyond the requirements for an average or slow learner.

2. An abundant supply of books and illustrative materials should be provided for the gifted child
3. Gifted children tend to have more drive and originality therefore they should be allowed to pursue some tasks on their own instead of always being allocated some work to do.

10.6 Summary



- In this lecture we have described the characteristics of slow and rapid learners. We have also had an extensive discussion on how teachers should

10.7 Self-test Questions



1. Who is a rapid learner?
2. How would you deal with a rapid learner?

10.8 Further Reading



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PUNISHMENT AND BEHAVIOUR MODIFICATION TECHNIQUES

LECTURE ELEVEN

11.1 Introduction



In this lecture, we will talk about punishment, the adverse effects of punishment and how punishment is used wrongly especially in schools. We will also discuss alternatives to giving punishments to learners.

11.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Define punishment
- Discuss the adverse effects of using punishment
- Describe alternative ways of instilling discipline in learners.

11.3 Definition of Punishment

Punishment is an aversive or an unpleasant stimulation applied to a behaviour. It is any event that decreases the behaviour that it follows. Therefore, it is a form of control of behaviour in which an aversive stimulus is administered. It also includes removing an individual from a reinforcing situation or a reinforcing stimulus is removed from the individual. In short, we can say that punishment involves:

1. Administering an aversive/painful stimulus in order to stop behaviour e.g. caning
2. Removing an individual from a reinforcing situation e.g. separate a child from others, send a child out of a room, etc
3. Removing a reinforcing stimulus from the individual for example, taking from a child a stick he has been using to distract other children with.

When it is swift, strong and consistent, punishment can be a powerful instrument for modifying behaviour. However, no matter how effective it is in restraining unwanted behaviour, punished behaviour is only suppressed, but not forgotten. Therefore, the punished behaviour may reappear in settings where punishment is unlikely.

11.4 Types of Punishment

1. Physical punishment – e.g. caning
2. Psychological punishment – e.g. scolding, ridicule, etc

- Both physical and psychological – e.g. asking a child to kneel before the class and put up his hands. It is physical punishment as the child feels pain in his body and he is also embarrassed to kneel before the other children.

Activity



Describe some types of punishment

11.5 Adverse Effects of Punishment

- Hostility – the individual may hate the punisher that is, hates whoever administers the punishment
- Anxiety – punishment can cause fear and anxiety in children. They can also get hurt e.g. physical punishment such as caning can cause injuries to children.
- May increase the behaviour it seeks to eliminate for example children who realise they only get attention when they do something wrong may resort to doing wrong things as they feel attention is paid to them when punishment is administered.
- Children may learn other undesirable behaviour in order to escape from punishment for example children learn to tell lies instead of admitting their mistakes in order to avoid punishment.
- Punishment especially physical punishment teaches children to use physical violence to control behaviour rather than rational means
- Punishment does not guide the child towards the desired behaviour. In addition, those children who are punished too often soon develop apathy since they feel that punishment is unpredictable and unavoidable.

11.6 Misuses of Punishment

- Infliction of punishment for poor performance – for example punishing a child because he or she performed poorly in a reading test or exam.

2. Infliction of group punishment – that is, punishing a whole group without finding out who the culprit is.

Activity



Describe an incident where teachers in a school have used punishment wrongly

11.7 Factors to Consider when Using Punishment

1. The success rate of punishment will depend on the factors sustaining the undesired behaviour for example, a child who steals food because of hunger will probably need to have his poverty status addressed since this is what sustains the stealing habit.
2. The time lapse between the undesired act and punishment must be as short as possible so that the child may be able to form an association between the behaviour and the punishment.
3. Punishment must be fair and consistent. This means that the same mistake should attract the same punishment at different times and there should be no favouritism
4. Duration of the punishment should not be too long although the punishment should be intense enough to correspond to the offence.

11.8 Behaviour Modification Techniques

Teachers should realise that bad behaviour is usually a symptom of a problem. They should therefore avoid using punishment. Behaviour modification techniques can be used to try and change children's behaviour. Many researchers argue that it is better to use behaviour modification techniques rather than use punishment. Types of behaviour modification techniques include:

1. Eliciting – elicit wanted behaviour by calling on the student. Provide opportunities for involvement of the pupil, give assignments that require wanted activity.
2. Contracting (group and individual) – agreements between student-teacher which specify both student and teacher behaviour e.g. can agree that the learner will volunteer once each day to collect all the play materials and if the child keeps the contract he/she will get a new one and also get something that the learner wants. After this contract expires, a new one is made for example volunteering twice a day for 3 days, and eventually the reward will become unnecessary will have become intrinsic.
3. Reasoning – concrete reasons appear to be more effective with younger children and abstract reasons with older children. Reasons that appeal to the effect of behaviour on others are successful and important in development of higher levels of moral orientation
4. Modelling – By showing a film or demonstrating appropriate behaviour and reinforce others appropriate behaviour
5. Reinforcing – reinforcing immediately when responses are made. If a child volunteers, call on him, accept his ideas, praise him, and so on.
6. Shaping – Apply the principle of shaping successive approximations for example when a child almost volunteers, reinforce the tentative behaviour, if shows a fleeting spark of interest, praise, if he offers a hesitant tentative opinion, accept it and make use of the idea in your remarks and begin (not too quickly) to demand a little more before you reinforce.
7. The token economy – this is a method of providing students with reinforcement for appropriate behaviour. Tokens are concrete forms of reinforcers. They are usually in form of points. They are presented to learners after performing a desirable behaviour e.g. coming to class on time – 2 tokens, using words such as please and thank you – 2 tokens, etc. At the end of a period of time e.g. one week or one month, tokens are exchanged for backup reinforcers such as

permission to do something interesting. Back up reinforcers have to be alternative and there is also a cost feature e.g. tokens can be taken away if for example one misbehaves. Token economy should have the following components:

- A set of instructions that specify expectations held for the learners
- Tokens that can be accumulated over time
- Guidelines for awarding or taking away tokens
- A procedure for identifying effective back up reinforcers (rewards for learners)
- A guide for exchanging tokens for backup reinforcers.

11.9 Summary



In this lecture we have looked at punishment, the adverse effects of using it and how it has been misused. We have also discussed behaviour modification techniques that could be used in place of punishment.

11.10 Self-test Questions



1. Define punishment
2. Describe three behaviour modification techniques



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11.11 Further Reading

DECISION MAKING

LECTURE TWELVE

12.1 Introduction



In this lecture, we will have a discussion on decision making. We will describe the steps taken when making decisions, the factors to take into consideration when making a decision and some poor decision making patterns.

12.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Describe the steps taken when making a decision
- Explain the factors to take into consideration when making a decision
- Discuss some poor styles of decision making

12.7 Decision Making: An Introduction

Every individual has to make decisions every day. Decisions to be made touch on areas such as careers, academic issues, health matters and so on.

Decisions are usually made under conditions of uncertainty. The important thing is to be rational when making the decisions. When making decisions, we need to weigh facts, resolve conflicts, choose between alternative courses of action and overcome indecisiveness.

Even children have to make decisions although the issues they usually face are not always serious like the issues adults have to deal with.

12.4 Steps in Decision Making

Decision making is a cognitive process in which individuals evaluate alternatives and make choices. For decision making to take place, the individual has to work through a series of steps. These steps are:

1. **Identify** the decision that needs to be made
2. Generate a list of **alternative courses of action** for example brainstorm, obtain opinions from others.

3. Gather or **collect information** relative to each alternative for example by interviewing knowledgeable persons, reading and so on.
4. **Evaluate each alternative** (to decide if it is negative or positive) for example look at possible rewards, implications and so on
5. Make a **choice among the alternatives** that is, select and decide on the course of action
 - Eliminate the least desirable
 - Select the most promising
 - Re-evaluate your objectives
6. **Implement** and evaluate the decision
 - If satisfactory, the decision is complete
 - If not satisfactory, the individual goes back to earlier steps
7. Generalise the decision making process to:
 - Everyday situations
 - Critical developmental points
 - Stressful moments

Decision making helps us to anticipate problems, minimises probability of acting impulsively, lessens anxiety and tensions and helps in solving problems

Activity



Discuss the Steps taken when making a decision

12.5 Factors to Take into Consideration When Making a Decision

1. The individual's needs – these include immediate needs, personal, economic, social or psychological needs
2. Beliefs and values for example, the belief that abortion is wrong will influence a woman's decision not to carry out an abortion
3. Previously learned patterns of decision making
4. Degree of risk involved for example, when the risk is very high, one might think deeply before making a decision
5. Personal feelings
6. Seriousness and importance of the decision for example deciding which biro pen to buy is not as serious as deciding where to buy a plot of land
7. How the decision will affect other aspects of your life for example how will the decision to pursue further studies affect your employment prospects
8. How significant others will be affected for example how your parents or children will be affected by your decision to take up a job in a far off country

12.6 Poor Patterns or Styles of Decision Making (Procedures Used)

1. Impulsiveness

There is little thought or examination. Here the individual just chooses what is available. It is like leaping without looking

2. Fatalistic

Here the individual leaves everything to chance for example one can say "It is beyond my control"

3. Compliant

Here the individual follows someone else's plans. Such an individual would say "I will do whatever you say"

4. Intuitive

The individual in this instance follows his or her inner feelings for example says "It feels right".

5. Delaying

The individual postpones the decision until later for example says “I will solve that one one day in future”

6. Agonising

The individual becomes overwhelmed, that is, the decision making process is too much for him/her. He/she may say “I don’t know what to do”.

7. Paralysis

The individual cannot make a decision due to tension or anxiety for example says “I cannot face it”

12.7 Summary



In this lecture we have had an extensive discussion on decision making. We have looked at the steps taken when making a decision and the factors taken into account. We have also given a description of poor decision making styles.

12.8 Self-test Questions



1. Which steps do individuals usually take when making a decision?
2. You are to give a lecture to some ECD students on “poor styles of decision



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12.9 Further Reading

LECTURE THIRTEEN

CREATIVITY

13.1 Introduction



In this lecture, we will talk about creativity. We will discuss the stages in creative thinking, the relationship between creativity and intelligence, how creativity develops, and the causes of variation in creativity.

13.2 Lecture Objectives



By the end of this lecture, you should be able to:

- Describe the stages involved in creative thinking
- Discuss the relationship between creativity and intelligence
- Explain how creativity develops

13.11 Stages Involved in Creative Thinking

(a) Period of preparation

During which facts are learnt, observations made and information and skills are acquired. The later products are based on this information

(b) Period of Incubation

Period in which there is no apparent progress in problem solving and in which the individual feels frustrated

(c) Period of Inspiration

Period in which new products or new creative products emerge often suddenly.

(d) Period of Verification

Period during which the inspiration is evaluated, enlarged upon and improved.

13.4 Relationship between Creativity and Intelligence

Not all people with high intelligence are creative but to be creative successfully, one must have above average intelligence. There is a positive correlation between intelligence and creativity between IQ 120 and 130. This implies that there are some

creative people who are not extremely highly intelligent and very intelligent people who are not creative.

Activity



Describe the stages in creative thinking

13.5 Classification of People According to Creativity

1. High creativity - high intelligence

These individuals exercise both control and freedom. They show both adult like and childlike kinds of behaviours.

2. High creativity – low intelligence

These individuals are in conflict with themselves and their environments. They feel unworthy and inadequate.

3. Low creativity – high intelligence

These individuals tend to be bookworms. They cannot dream of academic failure. They strive to get excellent grades.

4. Low creativity – low intelligence

These individuals sometimes seem confused and may use many defense mechanisms

13.6 Development of Creativity

Creativity appears early in life. It is shown first in children's play and it spreads slowly to other areas. Studies on creativity show that creativity reaches its peak during the 30s

and then either remains a plateau or gradually declines. Declines in creativity can result from poor health, financial pressure, lack of free time or family circumstances.

Research shows that individuals who have achieved creative distinction in their fields had shown interest from childhood days in the areas in which they achieved success. Research findings also show that creative women as showed both interest in and experiences related to such creative activities as imaginative play, painting, writing stories or putting on some plays.

Non-creative women on the other hand engaged in activities involving aggression and competition. They tended to be convergent thinkers.

Activity



Discuss some of the factors that may be viewed as playing a role in the development of creativity.

13.7 Variations in Creativity

1. Sex differences

Boys show greater creativity than girls due to the different treatments boys and girls receive. Boys are given more opportunities to be independent and are encouraged to show more initiative and ingenuity.

2. Socio Economic Status (SES)

Sometimes children from higher and middle socio-economic status families tend to be more creative than those from lower socio-economic status perhaps because the higher and middle socio-economic status children have access to more resources while the lower socio-economic status children may have to work.

3. Family Size

Children from smaller families also tend to be more creative than those from large families perhaps also due to access to more resources than children from large families

4. Ordinal Position

Middle and later borns are likely to be more creative than first borns. This is because first borns are usually subjected to pressures to conform to parental expectations. First borns tend to be conformers rather than creative individuals.

13.8 Obstacles to Development of Creativity

In early childhood, there are manifestations of creativity therefore if not careful, some things could happen in the environment that could affect creativity such as:

1. Home atmosphere

- (a) Some parents discourage children from asking questions. If such questions are discouraged, development of creativity is interfered with.
- (b) Some parents do not allow for flexibility. The parents give timetables for their children's activities. This discourages children from pursuing their individual interests.
- (c) Some parents give their children toys that do not encourage creativity for example fully dressed dolls. Children have little opportunity to manipulate or rearrange things if not given a chance to try and make and/or repair their own toys.
- (d) Some parents discourage their children from indulging in fantasy for example they do not allow their children to day dream

2. School

School conditions affect the development of creativity. If these conditions are favourable, this will foster the development of creativity. If unfavourable, this will stifle the development of creativity. Children should not be discouraged from asking

questions when in school. Children should also be given some free time to pursue their own interests.

3. Social Factors

Most people have an unfavourable attitude towards children who are creative and do not reward for creativity. This stifles the development of creativity. Children who are divergent that is, children who don't conform or who deviate from the norm are rejected.

Activity



Which obstacles prevent creativity?

13.9 Conditions Favouring Development of Creativity

1. Having a positive attitude towards creative children
2. Provide a favourable environment
3. Encouragement of children who show creativity
4. Asking questions that could trigger creative thinking
5. Making room in the curriculum for tasks that are sufficiently challenging for children with creative gifts.
6. Providing opportunities for spontaneity, initiative and individualized expression

13.10 Characteristics of Creative Individuals

1. Divergent thinkers
2. Non-conformists
3. Radical or adventurous
4. Tend to be independent

5. Show a liking for abstract thinking

13.11 Summary



In this lecture, we have discussed the stages in creative thinking. We have also looked at the development of creativity and some obstacles to creativity. In addition, we have talked about the conditions that favour creative thinking and the characteristics of creative individuals.

13.12 Self-test Questions



1. What causes variations in creativity?
2. Describe five characteristics of creative individuals.

13.13 Further Reading



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