Mount Kenya University

Course Code: BEC 125

Course Title: GENERAL PSYCHOLOGY AND HUMAN LEARNING.

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BEC 125: GENERAL PSYCHOLOGY AND HUMAN LEARNING.

PURPOSE OF THE COURSE

This course will help the learner conceptualize the principles underlying General psychology and human learning. It will give the learner the required knowledge, skills and attitudes towards the psychological basis behind human learning.

COURSE DESCRIPTION

This course entails definition of terms related to general psychology and human learning,Historical perspective of psychology, The nature and scope of psychology,. Theories of psychology, Methods and branches of psychology, Frustration, conflicts and defense mechanisms, Sensation, perception and intelligence. Application of psychology in education, Meaning of Learning, how Children Learn, Nature of Learning process, Factors influencing learning, Learning and performance, Information processing and forgetting, Decision making, Transfer of learning, Individual differences in learning, Current issues in learning. Principles of human behavior.

TEACHING/LEARNING METHODOLOGIES

This course will be offered and/or undertaken through tutorials, group discussions, group and individual assignments, presentations, interactive questions and answers, micro-teaching lessons, peer teaching and e-learning interactive forums. The learner will be required to go through this training module, make notes based on the objectives of the course and attempt the questions given at the end of every lesson. Tutorial classes will be organized by the university where the lecturer will take the student through the course. The purpose of tutorials is to help the learner conceptualize the course. It is, therefore, important to study the module before attending the tutorials. Further reading in this area of curriculum is encouraged. However all information gathered should be within the course description and objectives.

COURSE ASSESSMENT AND EVALUATION

Learning will be assessed through sit in Continuous Assessment Tests (CATs), Take Away Assignments and a Main Examination. The CATs will constitute 30% and the Examination 70%

MODULE ORGANIZATION

This module is organized in form of lessons. In every lesson an introduction is given. The introduction shows what the lesson constitutes. This is followed by the lesson objectives. Then, the learner is taken through the lesson content. The content may be sub-divided into sub-topics depending on the nature of the topic in a lesson. A summary of what has been learnt is given. At the end of the lesson the learner is given activities. These activities are in form of Questions and practical. It is good to note that this is not a text book. The content is therefore in form of lecture notes. Further reading from text books is recommended. A list of books to refer to is given at the end of the module.

Course content

- Definition of terms related to general psychology and human learning.
- Historical   perspective   of psychology.
- Nature and scope of psychology.
- Theories of   psychology.
- Methods   and branchesof psychology.
- Frustration, conflicts and defense mechanisms.
- Sensation, perception and   intelligence.
- Meaning of learning, how children learn, nature of learning process factors influencing learning, learning and performance.
- Information processing and forgetting.
- Decision making, transfer of learning and   individual differences in learning.
- Current issues in learning and principles of   human behaviour.

COURSE OBJECTIVES:

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

- Outline the historical perspective of psychology

- Define psychology and related concepts

- Identify various theories of psychology

- Highlight methods and branches of psychology

- Establish children's frustrations, conflicts and defense mechanisms

- Explain sensation, perception and intelligence

- Apply psychology in education

- Define the meaning of learning

- Describe how children learn

- Discuss the nature of learning process

- Outline factors influencing learning

- Examine learning and performance of children

- Assess information processing and forgetting

- Evaluate decision making

- Explain transfer of learning

- Describe Individual differences in   children's learning

- Analyze current issues in children's learning

- Evaluate the importance of psychology in understanding and predicting human behaviour

LESSON ONE: A HISTORICAL PERSPECTIVE OF PSYCHOLOGY

1.1 Introduction

This is the introductory lecture where some important terms are defined to provide a foundation for the learning of the course.

1.2 Lecture Objectives

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

- Define psychology
- Describe the nature and scope of psychology
- Explain the growth of psychology
- Illustrate some of the branches of modern psychology

1.3 The Nature of Scope of Psychology

Psychology is a science. It is a science that study behaviuor that is, what people do, reasons for doing certain things, conditions under which this behaviuor occurs, etc.

Rathus (1984) defines psychology as a science that studies observable behaviuor and mental processes.

Psychology is also defined as the science or study of human and animal behaviuor.

Can Psychology be classified as a Science? What Makes a Subject a Science?

A science is a body of systematized knowledge obtained by observation and verified by experimentation.

Science is objective that is. It is free from personal biases; it is critical and has a universal approach to knowledge.

The major objective of science is to seek and find truth irrespective of personal benefits, biases or religious persuasions.

Psychology obtains its information by means of careful observation and measurement of behaviuor. This information is formulated into theories or a systematized body of knowledge which is used for both descriptive and predictive purposes. For this reason, Psychology is science.

In psychology we are concerned about behaviuor. We cannot observe feelings and thoughts without the use of special equipment but we can observe and measure behaviuor. Behaviuor can be seen, it can be recorded and studied for example you can hear what a person says and record it.

In psychology we are only concerned with the observable and measurable behaviuor. The role of the mind or brain can only be inferred on the basis of behaviuor.

Psychology extends its interest to the behaviuor of animals for two purposes:

- To understand purposes
- To use the knowledge gained to understand human behaviuor.

Similarities between human and animals behaviuor have been observed in laboratories by psychologists such as Skinner and Pavlov. In psychology animals are used as guinea pigs where human beings cannot be used due to ethnical reasons.

Psychology as a science is:

a) **Empirical:** meaning that its body of information is gathered by means of observation and experimentation.

b) **Systematic**: meaning the body of knowledge can be classified in an orderly, consistent and meaningful manner.

c) **Uses measurement theory**: it is acute and precise. The term used in psychology are defined operationally that is, term such as intelligence and motivation are defined in a manner that makes them measurable.

1.4   Growth of Psychology: Historical Perspective

Psychology as a scientific discipline is relatively new. It involved philosophy, Psychology and Biology.

It was considered a part of the Philosophy Department in most universities and it became an independent discipline in the 19th Century. During this time, experimental methods were developed to study the mind and behaviuor.

Psychology experiments were initiated by natural scientists that is, physicists and physiologists who began to think of themselves as psychologists. As a science psychology evolved slowly because some of its basic arguments conflicted with religious beliefs for example the idea of human mind, soul and spirit having a free will and not being governed by natural laws and principals.

Modern psychology is dated from 1879 when the first psychology laboratory was established in Leipzig Germany by Wilhelm Wundt (1832-1920). Wundt was the first to call himself a psychologist. He developed the first systematic approach to Psychology called Structuralism.

Growth of Psychology as a Scientific Discipline

Psychology as a new scientific discipline has had its own development history. This history has been characterized by successive schools of psychological thought.

1.4.1 Structuralism

This was the first school of psychological thought. The person who started this school was WILHELM Wundt (1832-1920). He did this with the assistance of his student who was called E.B Titchener (1867-1927).structuralism was concerned with

the structure of the conscious experience or the structure of the mind. Structuralism posited that conscious experience is made up of elements just like matter is made up of atoms and molecules. Titchener broke down the elements of conscious experience into three basic elements that is, physical sensations, feelings and images.

Conscious experience can be studied by breaking down the elements of sensation and studying:

- The quality of sensation.
- The intensity of sensation
- The duration of sensation.

This is done through a method called analytic introspection. Introspection is a method of describing ones mental content as objectively as possible. This method can only be used by the individual who experiencing the sensation. The method involves breaking down complex experience into elementary components for example while looking at a flower the person notes the elements that make up the flower for example size, shape, texture, smell colour, brightness , etc. this involves perceiving of the parts of the experience in order to construct the whole.

Structuralism as a school of thought had some inherent difficulties that is:

a) It had serious limitations because it needed people who are very alert to be trained to use analytic introspection therefore people of unsound mind, children and animals could not be used.

b) It was difficult to discover the laws that come into play to make the various elements combine into a perpetual whole of example do parts of a flower add up to the flower? What does one see in terms of colour, brightness, etc?

c) It is difficult for individuals to study their emotional consciousness using analytic introspection.

d) There is no objectivity in analytic introspection because consciousness is a highly individual and private affair which is not open to public scrutiny.

Due to these inherent difficulties structuralism wakened and collapsed. Its greatest contribution was to bring science to psychology and to establish psychology as a science.

1.4.2. Functionalism

This was the second school of psychological thought. It was spearheaded by William James (1842-1010) of Harvard University and John Dewey (1859-1952) of university of Chicago. This school of psychological thought was concerned with the study of mind as it functions in adapting the organism to its surroundings. They agued that conscious experience cannot be broken to elementary components. They agued that conscious experience should be studied as an ongoing process or stream. They also believed that the mind can only be revealed in habits and perception.

The school of thought believed that consciousness is caused by the interaction between the organism and the environment. Their main interest was uses or functions of mind not its structure. The use of mind is to help the organism to adapt to its environment. The functionalists believed that past experience teaches us to function more adaptively. Many of our functions such as lifting spoon to our mouth and turning door knobs require our full attention at first but with experience such activities become habitual or automatic through repetition.

Functionalism was concerned about the problem solving behaviuor and intelligence that enable the organism to adapt to the environment and survive for example food seeking behaviuor, avoiding danger and reproductive behaviuor. According to Functionalist, behaviuor should be studied in terms of its adaptive significance. They

argue that behaviuor which has any adaptive significance is learned, retained and organized, and evaluated depending on experience. In this process, the mind and the body are involved; therefore all the behaviuor is psychological.

Achievements and Functionalism.

a) It broadened the subject matter of psychology to include all types of people that is; children, the mentally ill, other species such as chimpanzees and dogs, etc.

b) Functionalism developed objective methods of studying behaviuor.

c) It was broader in scope than structuralism.

d) It allied psychology to related discipline like psychology, sociology and related sciences for facts and methodological procedures.

e) The functionalists were the first to develop intelligence tests for classifying children in America.

1.4.3. Behaviorism or the Behaviouristic Revolt

This was the third school of psychological thought to emerge. It was started by a young psychologist known as John B. Watson (1878-1958). He attacked structuralism because he claimed the consciousness and mental contents cannotbe studied scientifically. Watson brought a new definition to psychology which was the science of behaviuor. He argued that psychology should study behaviuor as its overt and observable. Psychology should describe, explain, predict and control behaviuor.

Behaviorists study behaviuor in terms of stimulus and responses. They believe that given a particular stimulus, we should be able to predict the response for example if we put meat near a dog, we can predict the dog will start to salivate.

Behaviorists believed in the study of the environment as they believed the environment shapes behaviuor (not heredity). The study of the environment is very important because it provides the stimulus and the organism produces the responses.

Watson contributed a great deal to fundamental research in the area of child psychology and applied research. He is recognized as the father of modern psychology.

1.4.4. Gestalt Psychology

This was a new movement that was developed in Germany in opposition to structuralism functionalism and behaviorism. The key figures in this school of thought were Max Wertheimer (1883-1943), Wolfang Kohler (1887-1967) and Kurt Koffka (1886-1941). These people favoured the study of human behaviuor as a whole. They argued that people perceive in unitary wholes and not parts. These unitary wholes are called gestalts that is, form of patterns.

These psychologists focused their attention on certain phenomena that is, the tricks that the mind plays on itself and which could not be explained by earlier psychologists, for example why do we perceive a table as a rectangular form irrespective of the angle of viewing or why we perceive a series of dots(…………………) as a straight line and not as dots following each other. This is because the mind has an inmate tendency to close gaps and to perceive things in wholes and not in parts.

There is tendency to organize the perpetual field following the law of proximity (nearness), continuity, similarity and closure. Gestalt psychology continues to influence psychology in the areas of learning, perception, child psychology, motivation and social psycholog

1.4.5 Psychoanalysis (psychoanalytic Psychology

Psychoanalysis is the study of unconscious mind. It was developed by Sigmund Freud (1856-1939). He was interested in the etiology (causes, development and cure of mental disorders with a psychogenic origin.

Freud developed the idea that most mental problems were caused by conflicts and emotions that lie in the unconscious mind and which the patient is unaware of. His argument was that behaviuor is largely motivated by hidden forces in the unconscious mind. He argued that the psychological problems in adults can be traced back to traumatic experiences of early childhood. These experiences are blocked from consciousness or repressed and preserved. The unconscious mind finds an outlet in symptoms of mental illness. In order to bring these repressed memories back to consciousness, Freud developed psychoanalysis or the cure. The talking cure involves one relaxing on a couch and speaking out whatever comes to their mind. There is also interpretation of dreams. This approach is used by psychotherapists today where they ask their clients to lie on a coach and talk about whatever is troubling them.

Learning activities
Distinguish between the various school of thought giving their strengths and weaknesses

1.4.6. Cognitive Psychology

Cognitive psychology is associated with Jean Piaget (1896-1980) and Tolman (1886-1959) . The major interest of this approach is to study how people acquire knowledge. It focuses on the internal psychological processes that are involved in the acquisition of knowledge that is, the mental operations that enable one to think, to solve problem, to read, to write, etc.

Cognitive psychologists are therefore interested in such topics as perception, memory, language and thinking. They use hypothetical like memory traces, schema, mental image, etc. They however use behavioral methods to study the effect that mental processes have on behaviuor.

They can measure behaviuor and therefore infer the presence or absence of given mental processes.

1.4.7. Humanistic Psychology

Humanistic psychology is associated with Abraham Maslow. Humanistic psychologies come up to protest against the use of scientific method to study psychology. It argued that we cannot reduce the human being into an object of scientific study.

Humanistic psychologists argued that should study the subjective, conscious experience of the individual person. They believed that people are inherently good and worthy and have an inherent potential for growth and fulfillment. They also argued that psychology should assist every individual person to realize maximum growth of his or her potential. People should be given the opportunity to grow in the direction of health intellectual creativity. Achievement, love and understanding.

1.7 Summary

In this lecture, we have had an introduction to psychology as a course. Psychology is the scientific study of human and animal behaviuor. Psychology has grown over the years and there are several branches of psychology in existence such as social psychology, educational psychology and personality psychology.

1.8 Self Assessment Questions

a. Define psychology

b. Describe structuralism as a school of psychological thought.

c. Explain why achievements of functionalism.

d. Describe the branches of modern psychology

1.9 Further Reading

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

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

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

LESSONTWO: THEORIES   OF PSYCHOLOGY

Introduction

In this lecture we are going to look at different theories and how they influence learning

Definition of a theory

A theory is a set of interrelated concepts, assumptions and generalizations that systematically describes and explains behaviuor

 A theory attempts to fit relevant facts into logical explanations and also serve as a frame work for collecting information.

Lecture objectives

By the endof this lecture you should be able to:

a) Name theories influencing learning

b) Discuss how these theories influence learning

FUNTIONS   OF ATHEORY

a) Provides the basis   of organizing our thinking

b) Assist us in building concepts of behavior and performances

c) Uses variables that are important in understanding behavior

d) Theories help us in predicting understanding and identifying education problems in education setting

e) It helps us examine the linkage between variables and concepts

f) It stimulates research and enhances increase in knowledge.

g) It helps us understand and interpret human behavior.

h) Theories help us have models to work from in our approach to implementing concepts and information that we acquire from research.

Psychological theories which can be applied to learning are as follows:

a) Behavioral theories

b) Social-Learning theories

c) Information processing theory

Behavioral theories

a. The two main behavioral theories are: classical conditioning by Ivan Pavlov and J.B Watson

b. Operant conditioning by B.F Skinner

These behavioral theories have greatly influenced the study of learning

Why are they known as behavioral theories?

The term behavior is applied to these theories because behaviorists only concern themselves with that which can be directly observed i.e. the behavior of a person or organism. The main idea behind behavioral theories is conditioning and learning by associating. Conditioning in this case is the process of learning whereby one acquires and reproduces behavioral responses under specific conditions.

CLASSICAL CONDITIONING

This is a form of learning where a neutral stimulus that usually has no effect in learners come to elicit a response of some sort by some virtue of its association with stimulus that naturally always produced that response.

OPERANT CONDTIONING

His is a form of learning in which freely emitted acts or behaviors become either more or less probable depending on the consequences they produce. According to skinner all behavior that are reinforcedtend to bestrengthened anddeveloped further e.g. if you visited your mother in-law

and you are received warmly you would likely want to visit her again. However, undesirable behaviors can underscore extinction or disappear if it is not rewarded.

SOCIAL LEARNING THEORY

It originated from Albert Bandura an American psychologist

Social learning theory does not wholly agree with the fact that all behaviors is learnt through conditioning as in classical and operant conditioning theories. It recognizes that most behavior is learned through observation.Bandura believed that individuals have the ability to select and control his own behaviors by imitating people such as peers, parents and teachers.

HUMANISTIC THEORIES

These are a group of theories that believe that behavior is determined by ones private world or by ones own perception of reality.Accordingly ones behavior is not controlled by external factors e.g. a learner who works hard to excel in math's may be seen to be driven by some motivating internal factors such as the urge to become an accountant.Similary a learner who studies widely may be driven by the internal need to become the best student possible.

COGNITIVE THEORIES (INFORMATION PROCESSING THEORIES)

Information processing describes the encoding,registration. Storage and future retrieval of information from the mind. Cognitive theory takes keen interest in these processes because they have learning implications in a classroom situatin, teachers therefore must understand the processing procedures in an effort toencourage learners.Information processing involves receiving and attending toinformation from the environment i.e initial processing

The main components areas of information processing are;

Sensory register

It involves the following:

-Short term   memory (STM)

-Long term   memory (LTM)

Summary

In   this   lecture we have defined a theory as a set of   interrelated concepts, assumptions and generizations that systematically   describes   and explains behavior. We have alsolooked at how   different theories influence learning.

Self assessment

    a. Define a theory

    b. Discuss how different theories   influence   learning

Further reading

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

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

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

LESSON THREE: METHODS AND BRANCHES OF PSYCHOLOGY

Introduction

In this lecture   we shall look at various methods and branches   of psychology. We   shall alsolook at their relevancein relation tounderstanding learning

Lecture   objectives

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

a. Highlight various methods and   branches of psychology

b. Discuss how the various methods and braches   contribute   towards understanding of learning

Methods of psychology

1. Observation   method

This   is the most   objective process of gathering information in   psychology. It involves the   experimenter noting   what his   subject does   and not   what he   feels or thinks. While   carrying   out observation the   experimenter records   the environmental conditions   which   behaviors are   exhibited in addition to   the different   types   of   behavior or   stimuli.

Advantages

 This method calls for a veryaccurateobservation by use of equipments e.g. video camera, global positioning system (GPS) device for studying subjects. It can be used to study the following: animals, small children, the sick and the mentally retarded.

Disadvantages

a) Concerns itself only with observable aspects not what is happening within the subject being studied.

b) There is   lack of generalization- reliability

c) Observer effect   could bring out change   in subjects behaviuor

2. Naturalistic observation/field study   method

It is the technique frequently referred to as naturalistic observation because it involves critical studies of subjects in their natural environment. All the observations must be made without interfering with the subjects in the environment. The subjects could be human beings or animals.

Advantages

   a. The investigator does not require the direct cooperation of his subject

   b. The results of the observation can be verified by an independent investigator

Disadvantages

a. Can be time consuming

b. Can be expensive with respect to procurement, cost of observation, equipment, travel expenses and having assistance.

c. The subject can behave artificially if they suspect that they are being observed.

d. Some field studies can lead to loss of life or injury especially those involving animals

e. It involves an extensive study of certain aspects of subjects over a long   period of time

   It may take any of the following forms:

a)Day book method

Mostly used in child study. The child development is keenly observed and recorded on daily basis. On completion, such records provide standards on which to judge normality on children**.**

b) Clinical method

The medical life history of a person can be reconstructed on the basis of the medical records available. It can be used by Psychiatrists, psychologists, physician and social

workers. This method involves follow-up investigations in order to monitor progress once the remediation program has been embarked on.

3. Biographical method

This is an attempt to obtain information from an analysis of a subject biography.

Advantages of a (life History) biographical method

a. The day book method can be used to accurately determine whether a child is normal or not.

b. The clinical method gives vital information on the subject which could also be beneficial to family members especially when a certain condition appears to have a genetic or familiar connection.

c. The biographical method gives important clues on characteristics underlying a certain subject personality.

Disadvantages of biographical method

a. It is likely to be inaccurate if record keeping is inconsistent

b. The clinical method may be time wasting if past medical records are not available

c. This method can be compromised by personal interests and biased**.**

4. Survey method

This method involves administration of research instruments such as questionnaires and interviews to a large group of respondents in order to obtain description of their attitudes, behaviors and intentions. The researcher needs to be careful in his\her sample selection so as to ensure the sample is a true representation of the large heterogeneous population. It is used by researchers. It is used to find the distribution of different variables in a given population

In cases where it is impossible to interview the whole population survey method is used.

Advantages of Survey method

a. It is relatively accurate

b. It is relatively inexpensive

Disadvantages

a. The results can be compromised if the sampling is biased

b. Telephone interviews can be very expensive

c. The return of the questionnaires is often poor especially if they arte to be posted back to researcher

d. The respondent can lie

5. Case study

These are detailed studies of individuals or groups. The main aim of the researcher is to learn about the subject social development and relationship with people in the society

It involves observations but the method of study is dictated by the study objectives.

A case study can also draw information from an individual's biography.

Advantages of case study

They provide vital information about interpersonal relationship. If the observations are carried out well the results can be very accurate.

Disadvantages of case study

a. Can be inaccurate especially when on biased biographies

b. It can be time wasting

c. Verification of information may not be possible

6. Experimental method

This is the most highly developed and formalized use of data collection methods. The perimeter carefully defines and analyses the problems under consideration and a formal statement is then made stating the problems

The conditions under which observation will be made and on indications of the procedures to be followed in processing the data and evaluating the results. The whole process is known as the experimental research design.

Steps of experimental research design

i. **Statement of the problem**-all scientific research is motivated by an idea that calls for further investigations. In this level the researcher is expected to state the problem in simple and clear terms. e.g. can high school performance be used to predict achievement at the university?

Do teachers' comments on pupils' books improve performance?

ii. **Hypothesis formulation**

A hypothesis is a statement or proposition usually based on the results of previous observation(an unproved theory). It is therefore a suggestion of the likely outcome of the result. The purpose of the result is to test the truth of the stated outcome.

Good hypothesis should;

a. State the relationship between two or more variables

b. Should be stated in a declarative statement

c. Should have the potential for empirical testing

There are two types of hypothesis

Null hypothesis: - It indicates the relationship between variables.

Substantive or alternative hypothesis

Indicates either a positive or negative relationship between the variables

Deductive reasoning

It involves evaluating the (feasibility) of research. In this step the researcher considers the following aspects:

a. Material requirements

b. Suitability of the subjects

c. Time available for the research

d. Financial implications

e. Reliability of the study

This step is very crucial as it is the real judge of the study feasibility. Some studies are modified at this stage while others are abandoned.

iii.   Experimentation step

The aim of this stage is to collect data based on the hypothesis already determined. There are two kinds of variables that the psychologist is concerned with in this step.

a. Dependant variables

b. Independent variables

Dependent   variable

It's the factor whose change depends on the independent variables   to predict change.

Independent variables

Is the factor whose effects are being examined? The test of the hypothesis is what happened to the dependant variables. If it changes in the predicted manner the results are said to support the hypothesis. If the predicted changes fail to occur the hypothesis is refuted (refused).

iv.   Analysis of data

The purpose of this to convert raw data from the previous step into a meaningful form.

In simple studies data may be analyzed manually and then depicted in the form of tables, graphs and bar charts.

Computerized and nominal studies are recommended preferably using (SPSS). Statistical package for social science for data processing and display. Conclusions, implications and recommendations are then drawn.

These steps include drawing of conclusion based on the results of hypothesis testing. The researcher is also expected to determine the implication of this result before suggesting recommendations for further actions.

v. Drawing of the conclusion

These conclusions are drawn from the analysis of the hypothesis in relation to the research findings, questions or objectives that guided the study.

Vi. Report writing

This is the final stage of scientific research design. It involves preparation of concise document for presentation to: - Sponsors, beneficiaries of the research, the government or the agentsconcerned. A good report should contain a summary of the previous report as they will facilitate future implication. Reportshould cover implication outcomes and report recommendations.

Advantages

a. Very precise

b. Verification is possible by same or other researcher

c. It is possible to use experimental controls .This method provides a procedureto get the validity of tentative principles.

Disadvantages

a. The method is lengthy

b. The researcher need specialized training to go through the seven steps

c. It can be expensive

6. Co relational study

It examines the degree of relationship that exist between two or more variables e.g. you might compare the exam performance of learners in boarding schools and those in day schools, you may also compare the

reading abilities of learners from   homes with literate parents/guardians and those with illiterate parents/guardians. When one event is used to predict changes in the other   we say the two   are correlated.

7. Longitudinal   studies

Longitudinal studies   are carried out on particulargroup of   subjects over different points of time. A researcher may   decide to study a group of children (x) at age 5,then decide to study it every   five years over a period   a period of twenty   years thus at ages 10,15 ,20,25.

It should be noted that longitudinal studies have a disadvantage in that it takes   a long time to complete. Some   subjects could die and others   could even move to other places withoutleaving their contact.

8. Cross-sectional studies

The studies compare one age group or cohort with another at one point of time. An example would be comparing four groups of cohorts such as those born in 1980,1985,1990 and 1995 at one given point of time. The studieslook at changes that occurduring the   lifespan.

BRANCHES   OF   PSYCHOLOGY

i.   Experimental psychology

This branch of modern psychology relies on experiments to study behaviuor and mental life. Examples of areas experiments are carried out on include experiments to determine the biological basis of behaviors, experiments on animal learning and behaviour; and experiments to determine cognitive processes for example perception, memory, language and thinking.

ii. Social Psychology

Social psychologists are interested in how social factors affect behavior. They study the interactions between people, peoples' perceptions of one another, and the effects that groups have on the behavior of individuals for example how does your friends behavior affects your behavior in some situations? Social psychologists are also interested in group processes such as leaders emerge. They study such topics such as attitude change, conformity and obedience, prejudice and aggression. In all these cases the individual's behavior is influenced by others.

iii. Personality psychology

Personality psychologists are concerned about individuals differences that is, how people differs in terms of given characteristics such as authoritarianism or emotional stability or why people in the same situation often behave differently. Personality psychologists administer tests and classify people into types.

iv. Development Psychology

This branch of psychology cuts across all areas of psychology and it is concerned with the physical and psychological changes that occur as a person grows from infancy to adulthood and on to old age. These psychologists might be interested in all changes at a particular age such as adolescence or they may be interested in how a particular function such as memory across the life span.

v.   Clinical psychology

Clinical psychologists diagnose and treat individuals who suffer from emotional or adjustment problems. They work in mental hospitals, universities and some are in private practice.

vi.   Organization and industrial psychology

This is an applied field. Psychologists in this field are practitioners who apply psychological principles to the work setting. They are concerned with the "human factor" in the technological set up for example how satisfied are workers with their job? How can the workers morale and productivity be increased? How can the quality of the industry's service be increased? How can better training and placement programs be developed? etc.

These practitioners have a special set of skills. They must be able to translate psychological knowledge and skills to practical settings as well be able to communicate psychological principles to an audience with little or no background in the field.

1.7 Summary
In this lecture, we have looked at methods and branches of psychology. Psychology has grown over the years and there are several methods such as observation, survey, case study and cross-sectional among others .Branches of psychology in existence are   for   instance social psychology, educational psychology and personality psychology.

1.8 Self Assessment Questions
   a. Describe methods of psychology

b. Describe the branches of modern   psychology

c. Explain therationale ofmethods and branches of psychology   to   human learning.

1.9 Further Reading

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

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

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

LESSON FOUR: FRUSTRATION AND CONFLICT

3.1   Introduction

In this lecture we are going to look at same sources of frustration and conflict. We will also discuss the effects of both short term frustration that is, how people try to deal with frustration.

3.2   Lecture Objectives

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

- Name some sources of frustration
- Describe some types of conflicts
- Explain some effects of frustration
- Discuss some solutions to conflicts.

3.3   Definition of Frustration

This means blockage of motives by obstacles that lie between needs and goals. When behavior which is directed towards a goal is blocked, delayed or interfered with, then a state of frustration results. Examples of frustration include when you are busy writing an exam but your pen runs dry or you urgently need to see a friend but he or she is not at home.

3.4   Sources of Frustration

1. Environmental frustration: This frustration results when obstacles in the environment block the person from attaining his goal for example rain stops you from visiting your grandmother.

2. Personal frustration: this type of frustration results from personal limitations or an inadequacy because a person is unable to achieve the stardards which he has set out to attain university education but is unable to obtain the minimum admission requirements, he is bound to suffer personal frustration. Another example is an individual wants to be a musician but he cannot sing and he is not good at playing musical instruments.

3. Conflict Frustration: this is the frustration that results when two or more motives are competing for satisfaction. This result in frustration because satisfaction of one motive means frustration of another motive.

3.5. Causes of conflict

Conflict: conflict occurs when one or more motives are competing for satisfaction. Failure to cope with conflict may result in emotional upsets and even mental illness. Conflict arises when we must make a choice between two or more alternatives but we cannot arrive at a decision.

Causes of conflict occur:

1. When two inner needs are in opposition for example the need to steal mangoes from the neighbours' farm and the guilt one feels.

2. When two external demands pull a person in different directions for example you are invited to a two birthday parties on the same day and at the same time. One experiences a conflict wondering which one to attend.

3. When an inner need is incompatible with external reality for example you wish to own a carbut do not have the money to buy the car.

3.5.1. Types of Conflict

1. Approach-Approach Conflict

Here a person is caught up between two goals which are both positive and equally attractive for example a child may be asked to chose between an ice-cream cone and a bar of chocolate . The child wants both but he is told he can only have one and has to choose from the two items. This is the simplest conflict and solving it causes the least emotion. These conflicts are easily resolved if one goal is superior to the other but if the goals are equal, they may be disturbing. The period of indecision leads to stress. Even then a person usually resolves such conflict by satisfying first one goal then the other one, or choosing one goal and giving up the other one.

2. Avoiding –Avoiding Conflict

This happens when a person is caught up between two goals which are both unpleasant. The two goals are re negative and /or threatening. They arouse fear in the person forcing him to withdraw to avoid the unpleasantness they have for example.A student must accept admission into a degree programme he would not have chosen or lose his chance of university education or an individual has to choose between going to the dentist or remaining with an aching tooth. Both actions are not pleasant that is, going to the dentist is not pleasant and nor is remaining with an aching tooth. Avoidance-Avoidance conflicts are not easy to solve. People try to escape from the conflict situation for example they let their thoughts escape from the conflict by day-dreaming. They may also avoid making the decision band hope things will sort them selves.

3. Approach-Avoiding Conflict

Here the individual is attracted to a positive goal but this goal also has a fear or threat (Negative goal) associated with it. Of the three types of conflict described this is the most difficult to resolve for example a journalist who wants to write a newspaper story about Riots in the university, but risks being struck by stones being thrown by

students or a person has strong sexual motives but is afraid of getting infected with HIV/AIDS.

4. Double Approach –Avoiding Conflict

This type of conflict occurs when a person is faced with two situations each with attractive aspect and a repulsive aspect. These are the most complicated yet most common conflict for example:

- A young person is offered a job abroad (approach)
- He can take his family (avoidance).
- He can keep a poorly paid job in his country (avoidance)
- He wants to stay with his family (approach)

This conflicts are difficult to resolve and therefore remain unsolved for a long time and when finally solved the person may still wonder whether he made the right decision.

Learning Activitiy

Using relevant examples distinguish the various types of conflicts.

3.6   Immediate (short term) Effects of frustration or General Reactions to Frustration

Restlessness and Tension: This is observed in fidgeting, clenching fists, chewing gum, thumb sucking, nail biting etc.

Aggression and Destructiveness: people attack objects physically and verbally.

Apathy: This includes indifference, withdrawal or inactivity for example prisoners resort to apathy because any other behaviuoris futile.

Fantasy: This involves seeking unrealistic solutions such as day dreaming.

Regression: This involves the act of retreating or reverting to earlier patterns of behaviour which are mostly childish ones. In the face of threats, one resort to crying, sucking the thumb, bedwetting, being over-dependent, etc. if is frequently encountered in children of about 4 or 5 years of age who are beginning to face an increased variety of complex frustration. For example the birth of another child may cause the older child to revert to baby talk. Adults also show regressive behaviour when they burst in to fists of anger.

3.7   Long Term Effects of Frustration

When a frustration keeps recurring, the reactions of the person become habitual and characteristic of the personality of the person. These modes of behaviuor are generally called defense mechanisms. Defense mechanisms are aimed at defending or protecting the individual's self –esteem anxiety. Defense mechanisms are not realistic ways of meeting problem.

3.8: Types of Defense Mechanisms

1. Repression: Here memories are not permitted to enter consciousness but instead operate at the unconscious level. It can be viewed as unconscious forgetting of incidents which would cause too much anxiety and misery if remembered.

    The person is not aware of what is repressed. He behaves as if he has forgotten a personally unacceptable motives and if the behaviour resulting from such a memory is completely absent. Examples of repression include amnesia where a person may lose memory of all events preceding a nasty incident such as death of a loved one, a rape ordeal, etc.

2. **Suppression:** Here the individual consciously makes an effort to keep memories in check. He reacts to situations through controlled forgetting for example when

someone makes you angry you can decide to count from one to ten, sleep over the issues, etc the deal with situation when you are no longer angry.

3. **Rationalism**: Many times we do not want to accept responsibility for certain things like poor performance, disappointment or behaviour that elicits guilty feelings individuals therefore invent excuses to justify this behaviour to reduce the guilt e.g. a person says we failed the exam because the teacher is bad. Rationalization helps to comfort the person and diminish the guilt feelings.

4. **Substitute:** Here an individual substitutes unapproved goals for approved ones. Activities which have a likelihood of success are chosen instead of those doomed to fail. By doing this person's problems are solved and tensions reduced without his being aware of the disapproved motives. There are two forms of substitution that is, sublimation and compensation. In **sublimation**, the individual uses substitute activity to gratify a motive. Freud gives examples where the sexual urge (unacceptable motive) may find expression by channeling the urge into activities such as art,,, writing poetry, composing music or any other activity that is socially acceptable**. Compensation**: on the other hand is an attempt to make up for failure or loss or self esteem in one activity by making an effort in some other activity. compensation un like sublimation does not imply provision of an outlet for frustration, or bottled up energy, but it includes seeking alternative achievement e.g. a student who is not good in sports focuses all his energy studying and ends up being the best student countrywide.

5. **Reaction Formation**: this involves hiding actual motives and showing motives that are directly opposite of the true motives for example one may hate a spouse, parent or child but instead of behaving in a hateful manner, the person show these people exaggerated love.

6. **Projection:** One may have private thoughts and feelings or personality traits that one does not wish to acknowledge such as a strong desire to cheat; to be unfaithful, to be promiscuous, etc. These characteristics threaten self-esteem. The individual therefore tends to ascribe these characteristics to other people for example, accuse some one else of having these intentions. The person completely fails to acknowledge that he or she wants to cheat or steal. It is the other person who is guilty.

7. **Rationalization**: Many times we do not want to accept responsibility for certain things like poor performance, disappointment or behavior that elicits guilty feelings. The person invents acceptable reasons to justify this behaviour and feelings to reduce the guilt for example we failed because the teacher is bad. Rationalization helps to comfort the person and diminish the guilt feelings.

3.9   Summary

In this chapter we have looked at frustration and conflict. We have described some sources of frustration and also discussed some of the causes of conflict. We have gone a step further to explain how individuals react in the long and short term when they face frustration.

3.10: Self Assessment Questions

1. You have been invited to give a lecture on the long term effects of frustration. Discuss the main points you would talk about.
2. Differentiate between the following terms:
    - Regression
    - Repression

- Suppression

3. Describe the causes of conflicts.

3.11: Further Reading

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LESSON FIVE: SENSATION   AND PERCEPTION

4.1.   Introduction

In this lecture, we will discuss sensation and perceptions. We will distinguish between these two concepts then give a description of how sensation can be measured and some factors which influence human perception.

4.2.   Lecture Objectives

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

Distinguish between sensation and perception

Describe how we can measure sensation.

Discuss the factors that influence human perception

4.3.   Distinction between perception and Sensation

Perception is the ability to understand the stimulation that comes to the nervous system by way of the sense organs. It is a cognitive process that entails analyzing of information, organizing of information and reasoning (in short, what we do with information)

The perpetual process begins with sensation. Sensation is the study of how the various receptor cells in the body translate physical energy into a neural messages and how these messages reach the central nervous system and the experience that results. Sensation therefore is raw sensory data for example what we see, hear, taste, etc. While perception is the interpretation of these data by the brain.

These organs receive information from the environment making us consciously aware of the surrounding world through vision, hearing, taste, smell and touch. How these data are received depends on the functioning of the sense organs and the physical condition of the body in transmitting the information to the central nervous system.

4.4. Nervous system

1. The basic element in the nervous system is the nerve cell called neuron. Neurons are found in the sensory tissues along nerve pathways, in the spinal column and in the brain itself.

2. The receptor cells in the sensory tissue receive information from the environment. There are three types of receptor cells:

   - Those that collect information outside the organisms body
   - Those that collect the information from surfaces within the body for example gut and blood vessel walls.
   - Those that collect information from within tissues for example muscles. This receptor cells record pressure and tension.

3. Information received by these receptors is converted into neural energy which is electrochemical in nature. The information is sent along sensory neurons to the spinal cord and to the brain at a speed of 200Mph. from the brain message travel through nerves to the muscles or glands and this constitutes sensation that is. One becomes aware of what is sensed.

4.4.1. Measurement of Sensation

1. **Absolute threshold in sensation**

This is the weakest stimulus that any sensory can detect; it is the smallest amount of physical energy that will produce a sensation. Our senses respond to quite low levels of stimulation for example, using our vision we can see a candle thirty miles away on a clear, dark night or we can smell one drop of perfume in a three roomed house.

Dogs have a better sense of hearing and smell while hawks have a keener sense of sight. Some fish have taste buds all over their bodies. Human being can only see a fraction of the light waves surrounding them. They cannot see ultra violet rays or infra red rays.

2. Differential threshold

Differential threshold is the amount of change in a physical stimulus necessary to produce a just noticeable difference in sensation. Here we are talking about the smallest change in stimulation that a person can detect. An example is a good cook tastes a dish, then adds salt to it, then tastes it again to measure the change. Our ability to detect differences in stimulus intensity depends on the magnitude of the initial stimulus. We easily detect even small changes in weak stimulus, but we require much larger changes before we notice differences in strong stimuli for example small adjustments in soft music will be noticed while it takes longer to notice small adjustments in loud music.

4.5. Basic mechanism of perception- The visual System

The visual sense is the most important in terms of human perception. About 80% of the information taken in from the environment comes through the organs of sight. Light is electromagnetic energy force that travels through space at approximately 186,000 miles per second from sources like the sun, candles or electric bulbs. This energy traveling waves which hit surfaces at different intervals and with different

force. The waves of light travel in varying length and intensities. All the wavelengths of light appear as colorless white. When they strike a surface they scatter and each appears as different colour or hue.. Human beings are only able to utilize a small portion of the light waves that is 400 to 700 nanometers called the visible spectrum. The human eye cannot see ultraviolet or infrared rays.

Light is received through a pupil of the eye. It falls on the photosensitive surface called the retina. The retina contains 127 million light sensitive receptor cells. Their job is to convert light energy. This cell contains photo-pigments that react chemically to light. There are two types of cells that is, cones and rods. There are seven million cones in each eye.

Learning Activity

Describe the visual system

4.6 Principles of perpetual Organization

These principles were developed by a group of psychologists called Gestaltists in an effort to try and explain how humans impose organization on stimuli that they attempt to perceive, for instance the occurrence of illustration and false impressions is due to such imposed organizations.

1. Law of Proximity

Several elements are seen as a coherent object by virtue of being spatially close to one another for example in the following illustration; the dots are seen to form a rectangle because they are close together.

2. Law of similarity

An image is organized by similarity among its elements for example in the following illustration, there is a tendency to see a row of X's and arrow of O's.

```
    X           O           X
      X           O       X
    X           O         X
```

3. Law of continuation

This law states that the perceiver will continue contours whenever the elements of the pattern establish an implied direction for example in the following illustration there is a tendency to view the three lines as continuing in one direction.

_____   _____   _____
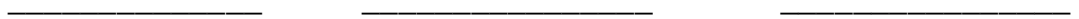
4. Law of closure

The law states that humans tend to enclose a space by completing a contour and ignoring gaps in the figure. For example in the following illustration, one sees a complete circle and square but does not easily notice gaps.
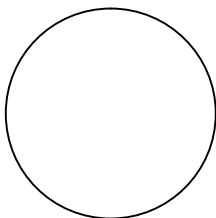
5. Law of pragnanz (good figure)

A stimulus will be organized in to a good figure as possible. The term "good" in this sense implies symmetrical, simple and regular. For example in the following illustration, we tend to perceive the figure below as two overlapping triangles instead of two small triangles and two irregular quadrilaterals because we tend to interpret a stimulus in the simplest terms.
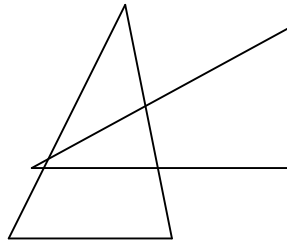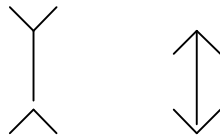
Illusions

The principles of perception make it possible for our eyes to play tricks on us

There are several illusions:

1. Muller-Lyer Illusions

Two lines at the same length, but the line on the left, with its reversed arrowheads looks longer.

2.   The ponzo illusion

This can only be seen when one stands   on a railway line the bars that are farther away looks shorter and smaller than the rails that one is standing on. Although all the bars on a railway line are the same size, those that are far away look smaller.

3. **The moon illusion**

The moon looks very much larger when it is on the horizon than when it is viewed at the zenith that is, at the highest point in the sky. Clearly the size of the retinal image does not change as the moon travels through the sky. Yet in phenomenological terms the moon is perceived as being much larger than at the zenith.

Extra Sensory Perception (ESP)

Normally when we speak of perception we refer to sensory perception that is perception that takes place through the senses. It has however been suggested that there may be perceptions that do not require any sense organ stimulation. This is called extra-sensory perception. Several classifications of ESP exist. These are:

a)Telepathy

This means transference of thought from one person to the other. It is when an individual claims to be able to tell what another person is thinking about for example being able to tell what the person seated next to you in the bus is thinking about.

a) **Clairvoyance**

This is perceptions of objects or events that are not influencing the senses for example, reading a card that is in a sealed envelop. No one knows what is in the envelope so in this case it is not another person's mind that is being read.

b) Precognition

With precognition, a person perceives an event that has not yet taken place that is, the person predicts the future.

c) Psycho kinesis

This has to do with the influence of a mental operation over a physical body for example telling a book to open itself.

d) Teleportation

This is the ability to transport materials, objects or people by means of mental processes.

Note:ESP has created a lot of controversy because these issues cannot be replicated and cannot be systematically investigated therefore cannot be measured. Manypsychologists and scientists therefore do not believe in ESP.

4.7. Factors which influence human perception.

1. Halo Effect

This is the tendency of letting your impressions or judgment of an individual be influenced by ones general impression of him or she for example a good student can easily get extra marks in an assignment.

2. Social-cultural factors

We tend to judge others by our standards   for example perception of beauty varies form one part of the world to another. In European societies, extremely thin women are seen as beautiful while in West African societies, it is very fat women who are viewed as being very beautiful.

3. Context or frame of reference

This is a frame work that serves as a reference against which the properties of a particular object are perceived. It can determine or distort out perception. For example, when one sees the following two lines, one can easily assume that the *second figure in the first line is the letter "B" while the second figure in the second sentence is seen as the number "13"*

12	B	14	15
A	B	C	D

4. Set

The predisposition to act in a certain way is tied up with past experience for example if someone treated us badly, the next time we see them, and we might approach them with caution.

5. Individual personal adjustments needs and wants.

There is a relationship between an individuals needs, wants and his perception for example some parents are poor in perceiving their children's faults and a person on love perceives his or her love differently.

6. State of health.

When an individual is sick, he or she may see things differently for example, if an individual is sick and has to do an exam on that day, he might find the exam more difficult than he would if he did the exam when he is not sick.

7. Mental state

An individual's mental state also affects perception for example when one is drunk, one may perceive a prostitute in a bar as a very beautiful woman and will want to go home with her but when he is sober , he will nor want anything to do with the prostitute.

4.8. Summary

In this chapter we have described sensation and perception and given a distinction between these two concepts. We have also discussed some of the principles of perceptual organization and talked about the factors which influence human perception.

4.9. Self Assessment Questions.

1. Describe two factors that influence human perception.
2. Using relevant examples describe the various thresholds in sensation.
3. Write an essay on how perception influences the way individuals react to situations.

4.10 Further reading

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LESSON SIX: INTELLIGENCE

5.1. Introduction

In this lecture, we will discuss intelligence. We will look briefly at some characteristics of good intelligence tests and discuss the long running debate as to whether it is heredity or the environment that determines an individual's intelligence level.

5.2. Lecture Objectives.

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

Define intelligence

Describe some characteristics of a good intelligence test.

Debate whether heredity or the environment influences an individual's level of intelligence.

5.3 Definition of intelligence.

It is an overall capacity to think rationally, act purposely and deal effectively with the environment.

5.4.Characteristics of good intelligence tests

Reliability, the ability of a test to yield the same score or nearly the same score each time it is given to the same person.

Validity: the *ability* to measure what is intended to measure

Objective: A test that gives the same score when different people score or mark it.

5.4.1. Factors to consider when constructing an intelligence test.

- If the test covers the mental abilities that is verbal comprehension, number ability, word in fluency, spatial visualization, reasoning, associative memory, and perpetual speed.

- If the test checks on terents that is movement skills, music skills, insightful skills, for understanding others, insightful skills for self understanding, etc.

- Whether it is a special aptitude test/ achievement test. Aptitude tests measure future performance while achievement tests are used to measure what one has learned.

- It should be culture fair that is, people should not fail it because they come from a certain culture.

5.4.2. Difficulties when using intelligence tests.

- Lack of culture fairness as these tests tend to favour people form certain cultures.

- They require trained individuals to administer them.

- They are not readily available e.g. money to purchase them.

Learning Activity.

Discuss the characteristics of a good intelligence test and the difficulties one may encounter when using intelligence tests

5.5.Heredity and Environment Debates

There have been debates as to whether it is heredity or the environment that influence intelligence levels. Due to the disagreements about what contributes to intelligence levels, twin studies were carried out to investigate this.

- Identical twins reared together were compared with identical twins reared apart. Those related together were found to have intelligence levels that were closer. This shows that the environment plays a role in intelligence levels.

- Normal siblings reared together were compared with normal siblings reared apart. Those reared together were found to have intelligence levels that were closer. This shows that the environment plays a role in intelligence levels.

- Identical twins were compared with normal siblings. Identical twins were found to have closer IQ levels than the siblings. This proves genes play a role in intelligence levels.

- Parents and their biological children's intelligence levels were measure. Parents and adopted children's intelligence levels were also measured. The parents and adopted children had very different IQ levels. However, the biological children had closer IQ levels with their parents. These prove genes play a role in intelligence levels.

5.6. Summary

In this lecture we have looked at intelligence. we have describe the characteristics of good intelligence tests and also described the long running debate as to whether it is genes or the environment which determine an individual's intelligence level.

5.7   Self Assessment Questions
1. Identify three difficulties experienced when using intelligence tests.
2. Describe three characteristics of a good intelligence test
3. Describe the type of questions you would include when constructing an intelligence test.

5.8. Further reading

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LESSON SEVEN: LEARNING

6.1   Introduction

In this lecture we will describe learning. We will discuss the relevance of learning, factors influencing learning, Learning& performance, Factors influencing learning and describe some theories of learning.

6.2Lecture   objectives

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

- Define Learning

- Explain the Relevance of Learning

- Describe the various types of learning.

- Explain factors influencing learning.

- **6.3.Definition of Learning**

Learning is a relatively permanent change in behavior as a result of reinforced practice or past experience.

6.4How children learn

There are five hierarchical sequences or stages or phases in learning namely: attention, perception, acquisition, retention, and transfer/generalization. Interaction with the stimuli is different from each other. Interference with learning at preceding phase, may affect learning at the next stage e.g. if the learner is not active at the first stage of attention, because he is looking at a passerby, when the teacher is explaining how to solve a simultaneous equation, the other phases will be affected.

a) Attention refers to the learner's vision or listening onto which focuses all his mental faculties of the observation at the exclusion of others. Learning begins with attention.

b) Perception is the stage at which the input from the senses (eyes, ears, tongue nose, skin) is registered and decoded or meaning added to it. Perception involves a bit of evaluation and synthesis of new with the old information. Perception is usually dictated by: subject being learned, learner's previous experience and learner's ability in terms of age, language level, interest, etc.

c) Acquisition is the phase at which the learner has attained a new skill, knowledge, ability or disposition that he did not have before. It's characterized by new ability or insight to see or do things he could not do earlier.

d) Retention is the learner's ability to keep in store for sometime or retain what he has learnt. It's the learner's ability to recall or reproduce what he has learnt for future use. Effective retention is determined by previous learning experiences organization methods, distribution of learning experiences and the amount/quality of practice given during and after learning.

e) Transfer/generalization is the leaner's ability to carry over skills, knowledge, performance gained in one topic or subject. Learning in one area may hinder or facilitate mastery of skill or knowledge in another or different situation.

Transfer is the aim of all learning for it enables the learner to apply his school knowledge and skills in totally different situation of life to solve basic problems of life. Transfer depends very much on retention, but it is higher for it demands, analysis, discrimination, synthesis and application of school and knowledge in novel situations. In transfer there is creativity and originality as the initial material may be altered to suit certain individuals or local needs.
For effective transfer to take place:
  ✓ There must be something in common between the two activities like facts, skills methods or principles.

  ✓ The learner must be able to perceive the similarities between the two subjects/activities.

  ✓ There must be a thorough learning of the first task.

  ✓ The learner must be made aware of the possibility of transfer.

  ✓ The learner must have a high ability to gain insight into the principle underlying the subject he is learning.

The value of transfer:
  ✓ Helps the leaner to solve new problems.

- ✓ The learner's reactions to later situations are influenced by their previous experience.

- ✓ It gives encouragement to solve a new problem.

- ✓ Almost all educational and training programmes are based on assumptions that what is taught in the classroom is transferred to new situations.

Teacher's role in helping the learners in the skill of transfer.

- ✓ Making sure the learners have thoroughly mastered the subject before moving to the other.

- ✓ Helping the learners to develop the right mental set i.e. looking for the connections between one subject topics with the others.

- ✓ Helping learners to gain insight onto the rule underlying the subject they are learning.

- ✓ Allowing the learners to have an opportunity of experimenting with a variety of problems.

- ✓ Giving pupils plenty of practice in transfer.

- ✓ Using project method in teaching so that learners can see for themselves the connections between different subjects.

- ✓ Relating what is being taught in real life situation.

Learning readiness, which is the learner's active desire or willingness to want to be involved in the on-going learning, facilitates transfer. Learning readiness is a product of many factors:

- ✓ Practice in situations similar to which transfer is desired.

- ✓ Avoidance of interference within the learning environment.

- ✓ Sequential or hierarchical building up of the learning materials/content.

- ✓ Level and intensity of motivation

- ✓ The learners level of emotional adjustment.

6.5 Nature of learning process

In the learning process there are three elements: the learner, stimulus and response.

The learner may have certain capacity of learning, may have some needs and/or problems that may facilitate or hinder learning.

Stimulus is an object or event in learner's environment that may stimulate or affect his sense organs, which transmit nerve impulses to the central nervous system where they are interpreted or translated into response.

Response is the nervous, muscular or activity/performance of the learner that results from stimulation or manipulation. It's described as a performance in form of observable behaviour changes.

6.6 Factors influencing learning

6.6.1 Nutrition

When a child is deprived appropriate nutrition his learning is affected. A child cannot learn on an empty stomach or lack of balance diet as this may lead to retardation which slows performance. Iron deficiency in infancy may cause a permanent loss of intelligence quotient later in life. Its deficiency and Anemia lead to shortened attention span, irritability, fatigue and consequently difficult with

concentration. Children becomeAnemic and tend to do poorly in vocabulary, reading and other tests.

6.6.2 Health

It is primary that children learn better when they are healthy. Sickly children may not concentrate due to pain, discomfort and mobility e.g. it has been evident in children suffering from HIV/Aids that their performance is generally poor because they are on and off because of sickness. The health of the mother is also very important especially during the first trimester (3 months).If a mother is on drug abuse especially alcohol and hard drugs it affects the foetues. Mothers using alcohol may have babies who have Foetal alcohol syndrome. Smoking in pregnancy is also associated with interference with cognition in early childhood. Also, mechanical injuries and exposure to radiation affect child development hence intellectual retardation.

6.6.3. Genetic and heredity

Nature determines the intellectual fitness of individual child. Intellectual ability is genetically determined. Studies done by various psychologists have tended to confirm high correlations in IQ among identical twins reared apart. This position holds to view that intelligence is fixed and the child is a helplesspawn of the lactation of nature. Materials found in the child's environment have contributed a lot to child's learning. Some of the behaviors are learnt from the computers and TVs. To some extent learning is also hindered by computers because they have become educators of children and major agents of socialization.

6.6.4. Social economic status

Different societies are gifted in different ways and their status observed differently;

- People see themselves in certain class because of their status and this affect their
  Learning of their children as well.

- Parents educational background and place.

- Children's from low social background may not be able to have

      - Clean water

      - Lack of food

      - Lack health facilities

      - Brought up by siblings

- These children do not get right learning atmosphere.

6.6.5. **Culture** – These determines the training and how individual undergoes there Experiences in the society.

- In some communities boys are circumcised when they are very young. They are drawn from school to attend ceremonies and rituals.

- In other communities girl's education is not highly valued. When girls are mature they are withdrawn from school to get married. This is evident in some communities in coast provinces. Some ceremonies e.g. burial is accompanied by dances which takes a whole week in the bereaved family. This hinders learning.

6.6.6. Government policy

A policy – A plan of action agreed or chosen by the government.

These are written statement e.g. No tuition in both public and private institutions. This statement affected learning since the teachers had anticipated for it to take place because some work was left uncovered. The policy of F-PE affected learning in ECD centres because some parents felt that they cannot afford the E.C.D fees and pulled their children out of school and those children were admitted in primary school.

6.6.7. Previous experiences

This is the connection of the events each one has gone through for example

Practice learning where one is able to use experience for better learning or to avoid making mistakes.

- Previous experiences in learning enhances (motivates) it plays as an important role in re-learning what they learn but may be forgotten.

- It is away of relating the old to the new by using similar materials which may affect the learners schema.

6.6.8. Environment factors

The learner needs good learning atmosphere to be able to learn.

It should be stimulating and motivating e.g. if the parents are not encouraging some tell their children that they went to school and did not get anything from school. This makes the child think that they will end up like their parents hence drop out of school. An environment which is not supportive to the learner's e.g. an environment which brews beer here the academic performance of children is affected by the behaviors seen and activities done by the parents.The teacher in school can also hinder learning negatively if they do not deliver the content appropriately and when children are not given time to explore and discover for themselves within the environment.

6.6.9. Readiness

This is when the learner is exposed to learning experiences when he/she is not ready.

- Readiness is affected by maturation, experience and prior learning hence influencing learning in general.

6.6.10. **Frustration and conflict** Frustration – (obstacles)

Psychologist defines frustration as blockage of motives by obstacles. Theseobstacles lies between our needs and our goals.

- Frustration may also result from the delay or interference with our goals/ directed behaviors.

- Frustration may be threatening or not   threatening e.g. A faulty light bulb may lead to the mild inconvenience of looking for a spare one while loosing money to thieves may be threatening if one wanted to use money to pay a hospital bill.

6.6.11. Intelligence: intelligence determines how much information the child will gain from a given learning situation, how fast can child gain information, how he can synthesize information and apply it to perform a task.

6.6.12. Gender and sex: boys are mostly given priority for schooling than girls in some cultures whereas girls are left at home helping in family chores.

6.6.13. Personality: this affects an individual learner's level of motivation and the drive to learn. It influences the self concept and self image of the child, which are very essential in learning process.

Talents: a child may have unique abilities to perform learning tasks.

6.6.14. Learning styles: children have different learning styles that determine their learning level. These learning styles may not necessarily match with only one method of teaching by the teacher. The teacher must vary his teaching methods to accommodate all learners.

6.6.15: Circumstance and Situation: the state of the child determines how the learner will perform. If the learner is impaired or has a problem in a given time, his learning performance may be affected.

The teacher can influence pupils' learning by motivating them to learn by:

- ✓ Letting the survival needs of the learners be met.

- ✓ Delivering interesting lessons catering for children's needs and interests.

- ✓ Planning lessons at the learners' level of understanding.

- ✓ Rewarding learners' success however small.

- ✓ Making learning materials meaningful.

✓ Giving learners activities to do during the lesson.

✓ Making learners feel socially secure by accepting them the way they are.

✓ Randomly distributing questions to the whole class.

✓ Good role modeling for learners to emulate.

✓ Practicing good teaching and using learning resources.

✓ Varying teaching methods and learning activities.

✓ Making the objectives of the lesson clear.

6.7: Learning and performance

There is a difference between learning and performance. Rewards and punishments have different functions for learning and for performance. For learning, the functions of reward and punishment is to enable the child to discover which acts are rewarded and which ones are punished (what leads to what). Positive or negative rewards only convey information but don't guarantee that the same behavior may be repeated by the leaner in future.

In performance, as distinguished from learning, the function of reward and punishment is to determine which response will be made and with what efficiency and speed. With a 'better' reward or higher degree of motivation the individual will perform what he has previously learnt with more efficiency or speed. Therefore, it's true to say that 'better' rewards lead to better performance and not learning. In many of our studies we measure performance and not learning.

6.8: Relevance of Learning

Learning is a process that is most important and basic human survival. We learn various things for example one learns to socialize in a given manner, ones learn

religion, one learns a profession or trade   for survival, etc. in learning for human beings, and there are three important determinants of learning:

a) A highly developed and complex brain and its information storage systems.

b) The use of language which facilitates the development of thought and linkage of past, present and future.

c) Environmental conditions and demands which determine what adaptive behaviors humans must learn.

6.9: Types of learning

There are various types of learning for example:

- Classical conditioning
- Operant or instrumental conditioning/Learning

6.9.1: Classical conditioning

This is a simple form of learning in which one stimulus comes to bring forth the response usually brought forth by a second stimulus being paired repeatedly with the second stimulus.

This type of learning was first studied by a Russian Named Ivan Pavlov. Pavlov's studies which were mainly carried out on dogs, were designed to discover the conditions which should be provided to enable an animal to respond to a neutral stimulus with a response that would otherwise be evoked by a specific natural stimulus for example hungry dogs tend to respond naturally and reflexively to a stimulus such as meat by salivating. Through classical conditioning it is possible to bring this response under the control of stimulus such as a bell, which does not naturally have the power to evoke salivation and which is virtually a neutral stimulus as far as the response of salivation goes.

The set up required to bring this about is as follows:

i) Select a stimulus that naturally evokes a certain response for example meat in the month of the dogs elicits salivation that is :

Meat powder`   ⟶   salivation

     (Natural stimulus)   (Natural response)
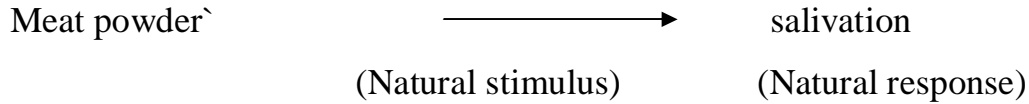
ii) Select a stimulus which is neutral with respect to the response you want to condition that is stimulus which does not naturally elicit that response for example:

     Bell   ⟶   no salivation

     (Neutral stimulus)   (no response)

iii) present the neutral stimulus closely followed by the natural stimulus that is

     Bell + Meat   ⟶ salivation
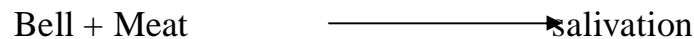
iv) Repeat this procedure several times that is,

     Bell +Meat powder ⟶   salivation (x5 times)
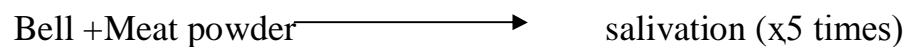
v) Present the neutral stimulus alone to see whether salivation will follow. If salivation

   Follows then conditioning has occurred for example:

     Bell ⟶ salivation

     (Conditioned stimulus)   (Conditioned response)
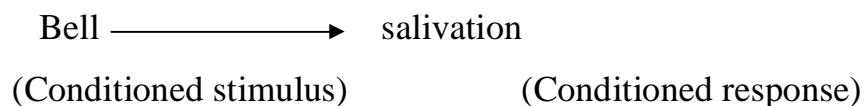
The dog would still salivate at the sound of the bell because it had learnt to associate the bell tone with food.

Terminology used in Classical Conditioning

a) Unconditioned stimulus (UCS): A stimulus that elicits a response naturally from an organism without learning.

b) Unconditioned response (UCR): An unlearned response. It is a response to an unconditioned stimulus.

c) Conditioned stimulus (CS): A previously neural stimulus that elicits conditioned response because it has been paired repeatedly with a stimulus that already elicited that response.

d) Conditioned response (CR): A Learned response to previously neutral stimulus. It is a response to a conditioned stimulus.

The whole procedure used by Pavlov can be summarized as follows:

1. Before conditioning

Neural stimulus ⟶ no response
(bell)

Unconditioned stimulus ⟶ Unconditioned response

UCS   UCS

(food)   (Salivation)

2. During conditioning

Conditioned   + ⟶   Unconditioned

Unconditioned

    Stimulus   stimulus   response

    (bell)   (food)   (salivation)

    CS   UCS   UCR

3. After conditioning

    Conditioned stimulus ⟶ Conditioned response

      CS   CR

      (bell)   (salivation)

Another example of classical conditioning is where Watson and Raynor (1920) taught an infant called Albert to react with fear to the sight of a rabbit. The conditioning procedure involved pairing the sight pf a white rat or rabbit which previously did not produce a fear response (crying) in Albert, with the occurrence of a loud sound, which naturally elicits a fear response in infants. After a few pairings, presentation of the white rat or rabbit alone was able to produce the same fear response as the loud sound.
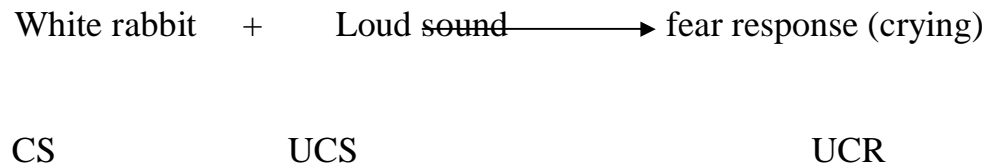
1. Before Conditioning

    White rabbit ⟶   no fear response

      (neural stimulus)

      Loud sound ⟶   fear response (crying)

UCS   UCR

2. During conditioning

White rabbit   +   Loud ~~sound~~ ────────► fear response (crying)

CS   UCS   UCR

NB: The UCS always follows the CS during conditioning

3. After conditioning

White rabbit ────────────►   fear response

CS   CR

The General. Characteristics of Classical Conditioning.

1) Reinforcement

This is any event, procedure or stimulus which will strengthen the conditioned response. A rein forcer increases the probability of occurrence of a response which it accompanies. In classical conditioning the CS-UCS pairings are the reinforcement.

2) Extinction

This refers to the elimination of the conditioned response as a result of withdrawal of reinforcement. If reinforcement is withheld, that is, if the conditioned stimulus is presented repeatedly alone, the conditioned stimulus losses its power to evoke the conditioned response. The process is called extinction. For example when Pavlov

continued ringing the bell alone to evoke the conditioned response, the dog eventually stopped salivating to the bell as the conditioned response to the bell had suffered extinction.

3) Stimulus Generalization

This refers to the tendency of an animal to respond to wide range of stimulus which is similar to that used as the conditioned stimulus. If a stimulus which is similar to the conditioned stimulus is presented instead of the conditioned stimulus the conditioned response may be evoked but to a lesser degree and with a lesser probability. For example, the fear response in the infant Albert was elicited by other furry objects such as the white furry coats, or white beards. In other words, the fear generated to similar objects. The more similar a stimulus is to the conditioned stimulus, the higher the degree of generalization.

4) Stimulus Discrimination

This refers to the tendency of the animal to confine his responses to the conditioned stimulus rather than respond to any stimulus similar to the conditioned stimulus. If two stimuli are presented to the organism, one of which is always followed by the unconditioned stimulus and the other is never followed by unconditioned stimulus, the conditioned response will occur only when the reinforced stimulus is presented. In other words responses to the other stimulus suffer extinction. The organism is said to have acquired discrimination for example, if the white rat is always followed by a loud bang but in another case the white rat is not followed by a loud bang, then a child will only cry when he sees the white rat.

Note: where as the stimulus generalization tends to occur during the early conditioning trials, stimulus discrimination tends to occur later in conditioning when the animal has had the chance to discover which stimulus are reinforced and which ones are not.

5) Spontaneous Recovery

If the experimenter allows the dog that has been conditioned and that has undergone the extinction process to rest for sometime for example a few days then he puts it back in the lab and presents the bell tone,(CS) without the food(UCS), the dog starts to salivate again. This is called spontaneous recovery. However if this is continued for some time that is, the conditioned stimulus keeps on being presented without the unconditioned stimulus, the response dies again so the food would be needed to strengthen the associate.

6) Higher Order Conditioning

First the dog is conditioned to salivate when it hears bell tone. Then the experimenter introduces a new element in the situation for example he turns on a light before the bell and presenting the food that is:

Light $\longrightarrow$ bell $\longrightarrow$ food

This is done for some time. The dog therefore learns to salivate when the light is turned on we therefore have:

CS1   CS2 $\longrightarrow$ CR

This is higher order conditioning.

Uses of classical Conditioning

1. Extinctions

Extinction involves elimination of a response through the withdrawal of a response through the withdrawal of reinforcement. Extinction can therefore be used by teachers when they want to deal with undesirable behaviuor in students. When faced by disruptive behaviuor, the teacher should eliminate any reinforcement that maintains the undesirable behavior this brings about extinction.

For more desirable behaviuor, the reinforcement should be given simultaneously. The mistake most teachers make is that they pay more attention to children when the children misbehave. This attention is reinforcing and it can actually encourage undesirable behaviuor even when the attention consists of orders about things that the child should or should not do. Therefore, what should the teacher do?

a) Withhold reinforcement for example if a learner has a habit of reading while saying the punctuation marks and the class laughs, the teacher instructs the class not to laugh and he or she does not say anything to the naughty learner about this bad behavior.

b) Reinforce the alternative positive behavior for example praise the learner on the day he reads without saying the punctuation marks aloud.

6. Reinforcement

A rein forcer is a stimulus that follows a response and increases the frequency of the response. The teacher therefore should ensure that the environmental conditions are reinforcing. Many human emotions are acquired through classical conditioning therefore positive emotions should be paired with learning experiences and negative emotions should be avoided. The teacher should try as much as possible to avoid associating the school with negative emotions. He or she should avoid situations

which give rise to or perpetuate strong emotions in pupils. Strong emotions interfere with effective thought processes.

The child who is emotionally disturbed cannot be expected to learn efficiently. If a child, for instance, becomes angry or frustrated by an assignment, or if he is humiliated by sarcasm. Very little learning will take place until the emotions goes away. It is therefore important for the teacher to avoid arousing such strong emotions in children or try to cool off such strong emotions before engaging the pupils concerned in learning activities.

Learning Activity

Describe the experiments Pavlov did

6.9.2. Operant or Instrumental Conditioning or Learning

Operant conditioning is a process through which organisms learn to repeat behaviours that yield positive outcomes or permit them avoid or escape from negative outcomes. Unlike classical conditioning, the responses that are conditioned voluntary emits the response, conditioning follows. Conditioning simply consists of rewarding the response immediately and thereby increasing its like hood or probability of occurrence in that situation.

Instrumental conditioning requires the subject to respond. In this type of conditioning a certain event such as food is given if and only if the subject makes the required response. B.F. Skinner (1904-1986) is psychologist associated with operant conditioning. He invented an apparatus called the **Skinner box** which was a small enclosure with a door, a lever or a bar and a small tray that received food when the lever was pressed.

Skinner put a rat in the Skinner box and the rat accidentally touched the lever. Ones the lever was touched, food fell into the tray. After many trials and errors, the rat learnt that touching the lever led to the appearance of food. After this the rat went straight to the lever and pressed it for food without displaying any unrelated activity such as moving around the box.

Characteristics of Operant (Instrumental) conditioning

    1. Reinforcement

There are two types of reinforcement in operant conditioning. These are positive reinforcement and negative reinforcement. positive rein forcers are stimuli that strengthen responses that precede them for example the food given to the rat in the skinner box is positive rein forcer because it made the rat repeat the action that led to the appearance of food. On the other hand, negative reinforcement involves the removal of noxious, unpleasant or aversive stimulus in order to strengthen behaviour for example, removing broken pieces of bottles from a playing field in order to encourage children to play on the field. The effect of negative reinforcement is to maintain and strengthen the correct response, while the undesired response suffers extinction.

Modes of Reinforcement or schedules of reinforcement

An application of operant conditioning is in generating a variety of behaviour patterns psychologists have discovered that once a given behaviour pattern has been established. it is not necessary to maintain it by giving reinforcement for every occurrence. It can be arranged so that every other response is reinforced. Alternatively it can be arranged so that reinforcement comes once after a fixed time interval irrespective of how many responses may have been displayed.

The various patterns of reinforcement include:

    1. Continuous reinforcement schedule

This is where reinforcement is given for every response for example if a rat receives food each time it presses a lever or a small child receives a shilling each time he ties his shoe laces correctly.

2. Fixed interval schedule

Here a reward is given at fixed time intervals. When placed on schedule of this type, people generally show a pattern in which they respond at low rates, immediately after delivery of reinforcement but that gradually respond more and more as the time when the next reward can be obtained approaches. A good example of behaviour on fixed interval schedule is provided by students studying. After a big exam, little if any studying takes place. As the time for the next test approaches, the rate of studying increases dramatically.

3. Variable Interval Schedule

This is where reinforcement comes after random time intervals. An example of behaviour on a variable interval schedule of reinforcement is provided by employees whose supervisor checks their work at irregular intervals. Since the employees never know when such checks will occur, they must perform in a consistent manner in order to obtain positive outcomes, such a s praise, or avoid negative ones such as criticism.

4. Fixed ratio schedule

Here reinforcement occurs only after a fixed number of responses. Individuals who are paid on a piece work basis, in which a fixed amount is paid for each item produced, are operating according to a fixed ratio schedule. People who are paid for every kilo of tea or coffee they pick are behaving according to a fixed ratio schedule.

Another example is children who are rewarded for every piece of paper they collect from the ground in the school compound.

5. Variable ration schedule

This is where reinforcement comes after a random number of responses have been displayed. Organisms usually respond at high and steady rates when confronted with a variable ratio schedule since they cannot predict how many responses are required before reinforcement will occur. The effects of such schedule on human behaviour are apparent in gambling casinos, where high rates of responding occur in front of slot machines and other games of chance.

Use of Operant Conditioning in the Classroom

1. Controlling behaviour by using positive reinforcement

Operant can be used instead of punishment when controlling behaviour. Most behaviour occurring in the schools situation is voluntary. The teacher should try to find out what the rein forcer for positive behaviour is and use this rein forcer to strengthen and maintain the positive behavior. Positive reinforces like teachers could include verbal praise, good grades, e.t.c.

2. **Controlling behavior through negative reinforcement**

Negative reinforcement can be used by teachers to maintain and strengthen the correct responses while the undesired responses suffer extinction. An example is a teacher who finds learners in his school playing on the high way because the school's playing field has glass. The teacher can have the glass cut down in order to encourage children to play on this field instead of playing on the dangerous highway.

2.1. Similarities between Classical Learning and Operant Learning

- Both classical and operant conditionings represent simple forms of learning by association.

- Both follow the same principles in such ideas as extinction that is if the rein forcer is not given, responses weaken and ultimately disappear.

- The principle of reinforcement is central in both.

- Stimulus discrimination where the subject learns to respond to stimuli which are associated with reinforcement and does not respond to those not associated with reinforcement.

- Stimulus generalization for example in instrumental conditioning a bird can be conditioned to peck at a red key or red button and it will peck at buttons with different shades of red but will not peck at dissimilar coloured buttons.

2.2. Differences between Classical Learning and Operant Learning

- In classical conditioning the conditioned stimulus and the unconditioned stimulus are delivered to a passive subject. In instrumental conditioning the rein forcer is delivered only if the subject makes the required response.

- Different types of responses are involved, in classical learning Reinforcement is based on reflex behaviours like salivation, dilation of the pupil of the eye, fear, shock, etc these are behaviours that have their release in the autonomic nervous system that is, they are elicited involuntarily. However, in instrumental these are skeletal responses with their release in the central nervous system. Therefore these responses are emitted voluntarily.

- In operant conditioning it is the response that the subject gives which operates on the environment to achieve some response (to achieve reinforcement in classical

Classical conditioning reinforcement follows the conditioned stimulus not the animal's response.

6.10. Summary

In this lecture, we have defined learning and described its relevance. We have also discussed the various types of learning and given the various similarities and differences between some of the theories for example, some of the similarities and differences between classical learning and operant learning.

6.11. Self Assessment Questions

1. Write an essay showing how you would use the various patterns of reinforcement when working with young children.

2. Using relevant examples discuss three general characteristics of classical conditioning.

3. using relevant examples discuss how you would use the following when working with young children:

   - Classical conditioning
   - Operant conditioning

6.12.   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.

LESSON EIGHT: DECISION MAKING,INFORMATION PROCESSING AND FORGETING

Introduction

In this lecture we shall discuss decision makingprocess, kinds of decisions and decision making skills. We shall also look at information processing model , stages of information processing and the process of forgetting.

Lecture objectives

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

a. Define decision making, information processing and forgetting.

b. Describe different kindsof decisions anddecision making skills.

c. Explain stagesof information peocessing.

d. Discuss the processing of forgetting

7.1. Decision making

7.1.1 Decision making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Making a decision implies that there are alternative choices to be considered, and in such a case we want not only to identify as many of these alternatives as possible but to choose the one that (1) has the highest probability of success or effectiveness and (2) best fits with our goals, desires, lifestyle, values, and so on.

7.1.2. Decision making is the process of sufficiently reducing uncertainty and doubt about alternatives to allow a reasonable choice to be made from among them. This definition stresses the information-gathering function of decision making. It should be noted here that uncertainty is *reduced* rather than eliminated. Very few decisions are made with absolute certainty because complete knowledge about all the alternatives is seldom possible. Thus, every decision involves a certain amount of risk. If there is no uncertainty, you do not have a decision; you have an algorithm--a set of steps or a recipe that is followed to bring about a fixed result.

7.1.3. Kinds of Decisions

There are several basic kinds of decisions.

1. Decisions whether. This is the yes/no, either/or decision that must be made before we proceed with the selection of an alternative. Should I buy a new TV? Should I travel this summer? Decisions whether are made by weighing reasons ofpro and con. It is important to be aware of having made a decision whether, since too often we assume that decision making begins with the identification of alternatives, *assuming that the decision to choose one has already been made.*

2. Decisions which. These decisions involve a choice of one or more alternatives from among a set of possibilities, the choice being based on how well each alternative measures up to a set of predefined criteria.

3. Contingent decisions. These are decisions that have been made but put on hold until some condition is met.

*For example, I have decided to buy that car **if** I can get it for the right price; I have decided to write that article **if** I can work the necessary time for it into my schedule. OR even, We'll take the route through the valley if we can control the ridge and if we detect no enemy activity to the north.*

Most people carry around a set of already made, contingent decisions, just waiting for the right conditions or opportunity to arise. Time, energy, price, availability, opportunity, encouragement--all these factors can figure into the necessary conditions that need to be met before we can act on our decision. Some contingent decisions are unstated or even exist below the awareness of the decision maker. These are the type that occurs when we seize opportunity. We don't walk around thinking, "If I see a new laser printer for $38, I'll buy it," but if we happen to come upon a deal like that and we have been contemplating getting a new printer, the decision is made quickly. Decisions made in sports and warfare are like this. The best contingent and opportunistic decisions are made by the prepared mind--one that has thought about

7.1.4. Decisionmaking skills

Skills for effective decision making include: critical thinking, creative thinking and problems solving skills.

i) **Critical thinking** is the ability of the child to look at something and make a comment about it. This is by analyzing and evaluating ideas associated with the issue at hand. The child weighs all options and alternatives available and imagines consequences of actions taken. Children should

acquire and apply basic critical thinking skills early in life e.g. solving puzzles, riddles, provoking questions, etc.

ii)   **Creative thinking** is the ability to come up with new ideas and solutions when faced with challenges and unfamiliar situations. It involves engaging with self in activities to come up with a new product. Every day, children face challenges and problems that require creative solutions. Sometimes, they want to play games that they saw on the TV. The teacher can encourage creative thinking by giving them the opportunity to play using the locally available materials. The teacher can also pose a problem situation and ask children to come up with the solutions to the problem.

iii) **Problem solving skills** is the ability to come up with possible solutions to a certain issue. This can be done by coming up with the causes of the problem, analysing them and coming up with the best solution to the problem. Children encounter difficulties when faced with problems; therefore, they should be helped to acquire problem solving skills. This can be achieved by exposing them to situations that will require the use of problem solving skills e.g. fitting jig-saws.

7.2. Information Processing Model – (Shiffrin & Atkinson)

Information processing model is not a theory but it is an important tool in learning . According to Shiffrin & Atkinson (1977); Piaget (1983) information processing involves the ways in which individuals process information about their world.This is how information enters the mind, how it is transformed, stored, retrieved to perform activities such as problem solving and reasoning. The information is later disseminated. Other models which have done the study of memory, state that learning involves the processing of information and storage in three stages

7.2.1. Three Stages of information processing

a. Sensory Memory Storage

b. Short- term memory storage

c. Long – term Memory Storage

i. Sensory Memory Storage

It involves acquiring raw or unprocessed information from the environment through the sense organs. In sensory storage no cognitive processing takes place. However it appears that there is no way sensory sensation can take place without the functioning of mind. Information lasts for about a second or less then the sensation fades away, if it is not attended to.
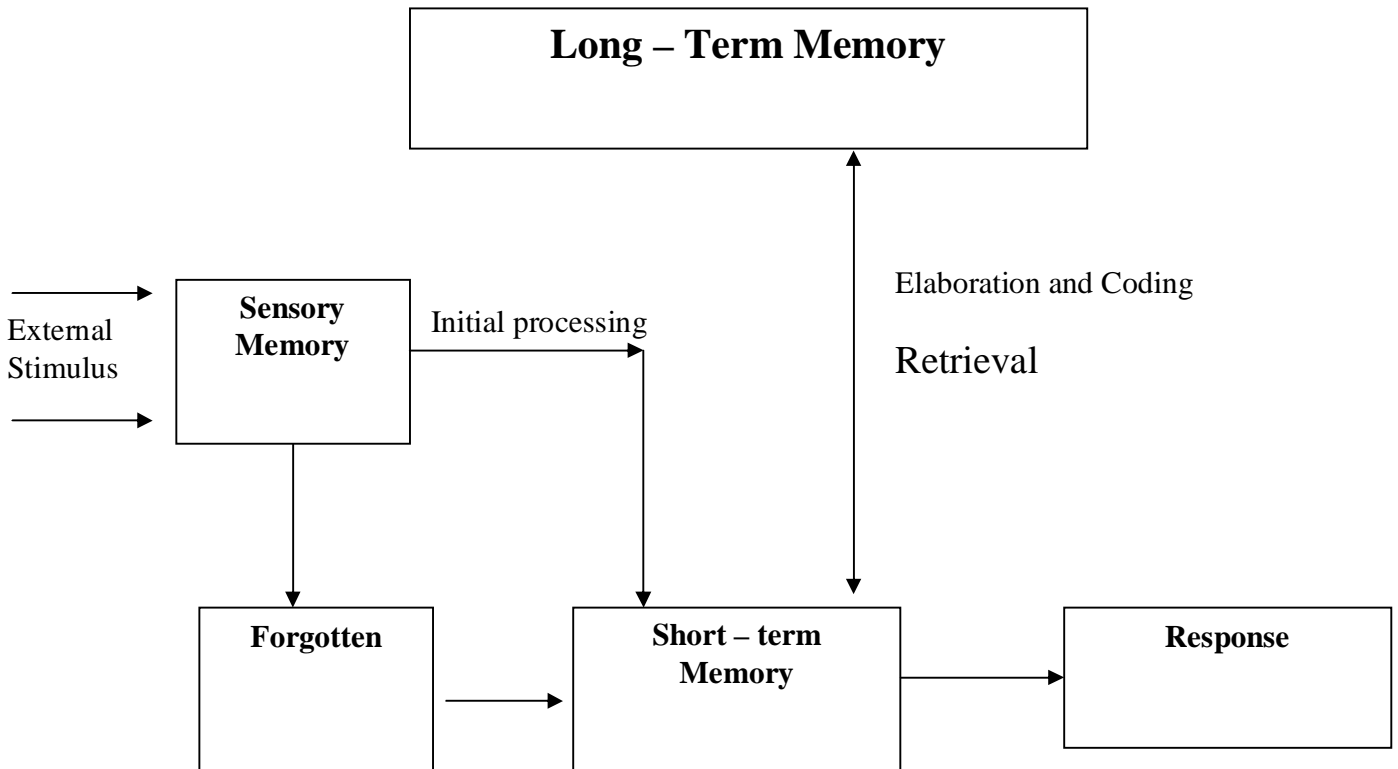
ii. Short- term Memory Storage

This involves very little processing of information. It is only retained for about 15 – 30 seconds. Short-term memory also includes the working memory of an aspect that represents information being attended to at a given time. Working memory serves as a central processor that controls the flow of information in and out of the memory system.

Note: Retention is the process through which raw information is transformed into the form in which it will be stored depending on the length of time it is attended to.
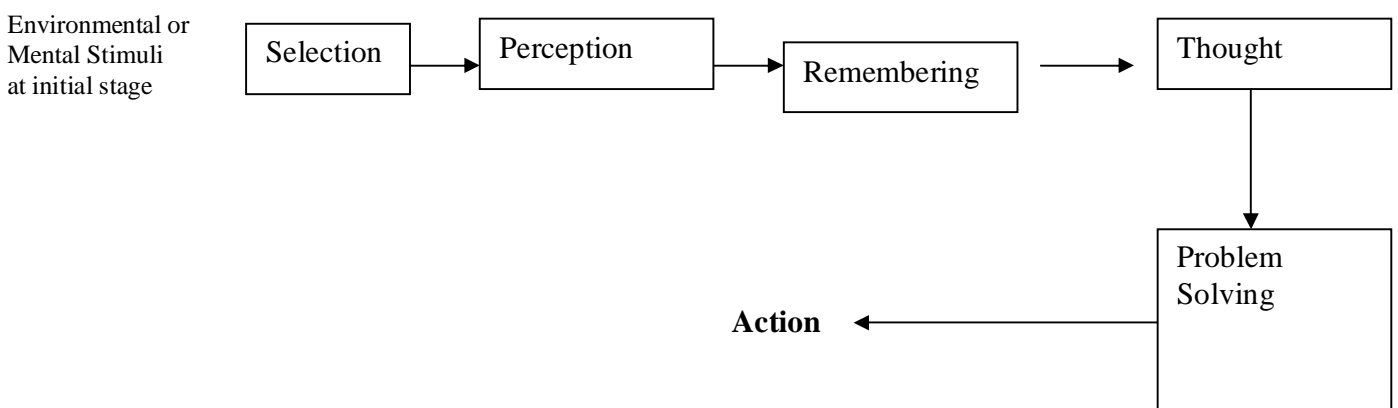
iii. Long- term Memory Storage

This involves information that has been retained for intervals as brief as a few minutes, Long- term memory holds unlimited amount of information for over a long period of time. That is why we are able to remember old friends; familiar foods etc by retrieving the information (see the figure below)

Figure 1.Information processing model

Long – Term Memory

External Stimulus

Sensory Memory

Initial processing

Elaboration and Coding

Retrieval

Forgotten

Short – term Memory

Response

According to Piaget (1984), information moves back and forth between short – term memory and long-term memory after sensory stimuli had been received in the initial stage from the environment and even when information is retrieved from the long-term memory to the short – term memory. Processing of information goes through the following steps in every stage as illustrated below

Figure 2. Stages in information Processing

Environmental or Mental Stimuli at initial stage

Selection

Perception

Remembering

Thought

Problem Solving

Action

7.3. FORGETING

Forgetting is the inability to retrieve previously stored information or failure to access stored memories. It seems that as much as we do remember, we forget even more. Forgetting isn't really all that bad, and is in actuality, a pretty natural phenomenon. Imagine if you remembered every minute detail of every minute or every hour, of every day during your entire life, no matter how good, bad, or insignificant. Now imagine trying to sift through it all for the important stuff like where you left your keys.

There are many reasons we forget things and often these reasons overlap. The first is **encoding failure.** Like in the example above, some information *never makes it* to LTM. Other times, the information gets there, but is lost before it can *attach* itself to our LTM. Other reasons include **decay theory,** which means that information that is not used for an extended period of time decays or fades away over time. It is possible that we are physiologically preprogrammed to eventually erase data that no longer appears pertinent to us.

Failing to remember something doesn't mean the information is gone forever though. Sometimes the information is there but for various reasons we can't access it. This could be caused by **distractions**going on around us or possibly due to an **error of association** (*e.g., believing something about the data which is not correct causing you to attempt to retrieve information that is not there*). There is also the phenomenon of **repression**, which means forgetting memories because we do not want to remember the associated feelings (*motivated forgetting*) *Motivated forgetting*

*theory*states that weforget things that are painful, threatening or embarrassing. This is often sited in cases where adults 'forget' incidences of sexual abuse when they were children. Another cause of forgetting is **interference.** According to*interference theory…* people forget not because memory is actually lost from storage but because other information gets in the way of what we want to remember. For example, in *pro-active interference,*previously learned materials interfere with newly learned material. *Retroactive interference…*newly learned material interferes with previously learned material. Next is the **retrieval failure theory** of forgetting which claims that information stored in long term memory never lost but may at times be inaccessible. Finally, there is **amnesia,** (*loss of memory*) which can be psychological (*e.g. due to a traumatic experience*) or physiological in origin, (*e.g. due to brain damage*). **Anterograde amnesia** memory disorder is loss of the ability to form or store new memories.

Summary

In this lecture we have defined decision making, information processing and forgetting. We have also looked at the processes of decision making, information processing and forgetting and how they influence learning.

Self assessment

   a. Define decision making, information processing and forgetting.
   b. Describe types of decisions.
   c. Discuss stages ofinformation processing and how they influence learning.

   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) Psych

LESSON NINE: TRASFEROF LEARNINGAND INDIVIDUAL DIFFERENCES IN LEARNING

In this lecture we shall look at aspects of transfer of learning, types of transfer of, methods of teaching transfer and individual differences in learning.

Lecture objectives

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

   a. Describe aspects of transfer of learning

   b. Explain types of transfer

   c. Discuss how transfer influence learning

   d. Analyses individual differences in learning.

8.0Transfer of learning.

What is learned in school is intended to prepare student for life outside. Also what is learnt in one context can be applied in another context can be applied in another. Therefore transfer of learning is a key concept. It refers to the ability to apply knowledge and skills in new situations.

Transfer of learning occurs when previously learned content influences the present learning either positively or negatively.

e.g. when a student applies mathematical principles to solve problems in physics this is a positive transfer.

Transfer of learning is a process that enables us to make previously learned responses into new situations.

Aspects of transfers of learning

1. Discrimination
2. Generalization

1. Discrimination – When the learner is exposed to knowledge or skills that are similar he should understand the entire specific features so that he can apply in each situation features so that he can apply in each situation on those aspects that are applicable and leave out those features that are not applicable. Pavlov used the idea of discrimination when conditioning dogs to respond to the bell sounds. He used to give the dogs food under one particular sound and not any similar sound.

- The dog learned that there was one sound that led to food; it salivated when that particular sound was presented.

E.g. Use of dictionary, catalogue and directory. They have general and specific features all of them have their contents arranged alphabetically and therefore requires the same skill in their use.

- Discrimination occurs for example when we want to look up for meanings of words we consult the dictionary, when we need to get address or telephone

numberwe get it from a directory and when we want information of books we use catalogues.

- Discrimination is used in computers. These are general and specific features in computer discrimination are the ability to pick out the difference which is what we apply in a specific situation.

2. Generalization

This is the understanding of the general features,similarities, sameness of information or skills i.e. the dictionary,directory, catalogue are similar in that the information is arranged alphabetically.

- In computer operation the skills used to open it and access information is the same.
- In general factors pavlov conditioned dogs to acquire generalization training.
- He would call different sounds and give the dog food every time it was sounded so long there was a sound the dog knew the food was coming.

8.1. Types of transfer of learning

There are 3 types

a. Zero transfer
b. Negative transfer
c. Positive transfer

8.1.1 Zero transfer – These refers to acquiring knowledge, skills or principles that are not

Transferable from a situation to another. This happens when there is no relationship between one subject and another.

- It means learning one subject has no effect on the other one positively or negatively.

- Each subject is independent from the other in terms of factors , skills , principles and technical jargons. The learning of one does not inhibit but enhances or complement the other.

8.1.2. Negative transfer – this occurs when content in a subject or two different subjects has a negative influence on one another. It happens when what is learnt is one situation hinder or inhibits what is learnt in another situation e.g if a learner is introduced to two new languages which are similar at the same time negative transfer occurs.

- A learner who is learning English and German at the same time experiences difficulties mastering both languages simultaneously due to inhabitation or interference.

English will interfere with German and vice verse. This interference leads to a slur.

- However this can be overcome by doing a lot of practice.

8.1.3. Positive transfer – This is the opposite of negative. It happens when the knowledge acquired in one situation helps the learner to acquire skills or principles in other situation faster e.g. learning mathematical principles helps a learner to acquire principles in physics.

- Learning of biology and agriculture or learning grammar in any language and writing compositions in the language.
- It indicates positive relationships between particular topics areas in given subjects or even two or more context area in different subjects.
- It operates at two levels.
i)   Lateral horizontal
ii)   Vertical

      i.   Lateral transfer

It occurs when a learner is exposed to content that us applicable to another subjects or situations at the same level.

- When a learner acquires basic skills of baking a cake in school. He applies the same Knowledge to bake at home. Horizontal he will use same ingredients , methods , measures as learnt at school.

ii. Vertical transfer

This occurs when knowledge is applied to other learning at a level higher either in the same subject or another subject. E.g. mathematical series is a foundational for form 1 – 4. This happens to all applications of subject areas in an ascending order. For vertical transfer to occur a subject should be well mastered to foundational levels e.g. when a pupil masters simple English correctly, write correctly and study English properly this will help other studies.

Methods of teaching for transfer

a. Substantive (specific)
b. Procedural (general)

1.Substantive – This refers to specific transfer or rules facts or skills. It is direct transfer of knowledge from one situation to another. E.g. using alphabets to find a word in a dictionary.

In order for this transfer to occur the learner is exposed to the substance of the material to be applied. This is usually so in computer programming. A person who want to take a certain program in a certain computer, he is taught that particular programme during training.

2. Procedural (general)

This method is useful when applying knowledge about how principles and rules apply across a wide variety of situation. It includes the learning of words such as undo, unfaithful is used to learning the prefix which means not or centrally to.

To train learners to use this method the teacher should present them with a wide variety of examples in which they can see how new principles and techniques are used. The example should be taken from real world setting.

INDIVIDUAL DIFFERENCES IN LEARNING

Individual differences in learners' abilities affect the learner's performance. Rarely can a student make the same rate of progress in all stages of skill learning. Some children will show little progress e.g. when reading phonics whereas others will show moderate and others dramatic increase in the knowledge of what is being leant. It is reasonable to expect wide range of learning ability.

There is therefore a need of the teachers to take into account the individual differences in the different abilities required at the various stages of learning. The teacher must know all the abilities required by the practice of the skill so that he can determine where each student will make the most rapid and the slowest progress and so that he can supply the necessary help for the periods of slowest progress. An effective plan of teaching must take account in variations in intelligence, in language and conceptual skills, in maturity, in interest and in the presence or absence of handicaps to learning. If a learning program is to succeed with all pupils, it must be flexible enough o give different pupils the kinds of instructions they need. Important to note is that some children are visual learners, others audio learners whereas others are motile learners.

Mental capabilities

Mental capabilities for example, learning disabilities or high levels of intelligence could either hinder or enhance activities requiring mental skills and affect how individuals view themselves and other people view them. For example people with high levels of intelligence may have a higher self concept of themselves than those with learning disabilities. Those with higher levels of intelligence may also be more popular than those with learning disabilities.

Health

Health for example being weak, strong, normal or abnormal leads to thinking or acting in certain socially acceptable or deviant ways and this also influences the sort of personality that people have. For example, if a child is born with a heart defect, he will not be able to take part in certain activities and this health problem might make him quiet and to prefer activities which do not require a lot of physical activity.

5.3.2 Environment

The environment refers to our background, the surrounding, location or setting in which an individual is brought up in. some environmental factors that influence personality development include:

- Our cultural background
- Social class
- Family and
- peers

An example of how culture may influence our personality development is seen when we examine our cultural practices. For example. Many African societies expect relatives to assist each other in times of need. You may therefore for example find that when a man gets a job, he will start paying school fees for his younger brothers

and sisters. On the other hand, in many European countries ,relatives are not expected to help their kins therefore a young European man in Europe may get a job and never help his parents pay his younger sibling's school fees. The Africans may therefore be considered by some people as generous while the Europeans may not be as generous,. Another example is that in some areas, culture may dictate that boys should be treated better than girls for example they are given better food such as the biggest and juiciest pieces of meat when a goat is slaughtered. This means girls in these societies may have a lower self-esteem than the boys and this will influence their personality development.

Social class may also determine the way we behave. Rich people are usually referred to as high class or upper class while poor people are seen as lower class. Whether individuals are upper class or lower class will influence how they see themselves and how they respond to various situations. For example, a man from the upper class would not want people to see him entering a bus through the window but a man from the lower class will not be worried about this.

The family is another environmental factor that influences personality development especially through the way it brings up the child. The child learns many things from other family members that is, the other family members are role models that the child learns from. The child's therefore learns and imitates what other family members are doing therefore these family members do influence the child's personality development. The family also rewards or punishes the child for certain behaviour. The child will therefore learn to repeat the behaviour that is rewarded and avoid the behaviour that is punished. The family thereofrewarding certain behaviour and punishing other behaviour.

Peer groups also socialize individuals into accepting new rules of behaviours and provide experiences that influence personality development. For example, a child

who has friends or peers who are always   engaging in anti-social behaviour such as fighting and taking drugs may also develop anti-social behaviour.

Everything in our environment and everything that happens to us in our environment will therefore definitely impact on our personality.

9.2.   Self Assessment Questions

a. Describe   aspects of transfer of learning
b. Highlight types of transfer of learning
c. using relevant examples discuss how you   would   teach   transfer   when working with young children:

9.3.   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) Psych

LESSON TEN: CURRENT ISSUE AFFECTING LEARNING AND PRINCIPLES OF HUMAN BEHAVIOUR.

Introduction

In this lecture we shall look athow different factors affecting learning and how different principles influence human behaviour.

Lecture objectives

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

     a. Name factors affecting learning

     b. Discuss how different factors affect affect learning.

     c. Analyze principles of human behaviour.

1. Poverty

Kenya experiences a rapid population growth rate. This leads to limited distribution of resources especially in ECE. Poverty in households and high rate of unemployment impacts on access, enrolment, retention and dropout of preschool. Poverty reduces education quality and leads to gender inequality.

2. Learner-teacher ratio

On averagethere are more children per class per teacher. With this large number there is significant impact on quality of education. The teachers in these classes get demoralized and frustrated and can hardly meet their targets.

3. **Child labor**

Incidences of high levels of poverty in a high population are causing a lot of children to engage in child labour. Others are perennially in and out of school. The long term effect is that these families will bring forth other families that are poor and the poverty will continue in a vicious cycle.

Low income $\Longrightarrow$ poor family $\Longrightarrow$ inadequate education unemployment

4. **Cultural factors.**

There are cultural factors that often produce negative impact on ECE as a result of dropout rates. These factors include: early marriages, unwanted pregnancies, FGM, parent negativity on education, gender, division of labour, etc.

5. **HIV/AIDS**

Most of HIV infected people are the income generating age. Majority are their households' breadwinner. As a result of less income generation due to effects if HIV/AIDS, there has been lack of school facilities, finances and resources. This is leading to high wastage of human resources in terms of children who would have participated in schooling.

6. **Free primary education**.

Since the invention of FPE in 2003 there has been an influx of children joining class one at the expense of preschool education. They feel that preschool education should also be free. More so, with the explosion of primary school population, many facilities meant for preschool use were shifted to be used by primary school children.

E.g. classes formerly occupied by ECE children were given to primary schoolers and ECE children forced to learn from under trees.

7. Preschool teachers.

Majority of preschool teachers in public preschools are paid meagre salaries from the pockets of poor parents. This demoralizes the teachers who in turn may not deliver quality education to children. Sometimes maintaining these teachers for long in the preschools is an impossible thing and children have to be inconsistent in their flow of learning.

8. Government policy

As much as elementary education is compulsory in Kenya, There still exists a deficit where the government doesn't give preschool attendance as a requirement for joining std 1. Again no authority seems to be making a follow up of those children who don't attend preschool. Parents who are ignorant on preschool programme haven't been compelled to take their children to preschool by the relevant government authorities.

PRINCIPLES OF HUMAN BEHAVIOUR

Determinants of social behaviour

Social influence

Social influence occurs whenever an individual does something he/she would not otherwise have done except for the presence (real or imagine) of the people. Robert Cialdini (1985) has identified six basic psychological principles that underline social influence attempts. The six principles are: obedience to authority, liking using others as social standards, reciprocation, consistency, commitment and scarcity.

1**.**   **Obedience to authority:** every modern society has a complex and widely accepted system of authority. We are brought up to obey our parents, teachers, elders, people in positions of authority, etc.

2.   Liking: we are more easily influenced by people we like than by those we don't. Sales people are very aware of this fact and the most successful salespeople are often those who appear especially likeable to their customers.

3.   Using others as social standards: we tend to use the behaviour of others as standards for our own actions for example when one travelled to another/strange place; one watches the people there to learn the actions that are seen as appropriate. When companies advertise their products as the fastest growing or best-selling items, they are using this principle. People tend to think that if so many people are buying a certain product, then it must be very good.

4.   Reciprocation: people tend to be very likely to return favours e.g. we always feel like inviting to our houses friends who invited us to their houses/buy lunch for those buy lunch for us.

5.   Consistency and commitment: everyone strives to appear consistent, therefore sometimes when we have a promise; we may find it difficult to break it.

6.   Scarcity: influence tactics also often involve real or artificial scarcity. Opportunities often seem more valuable when their availability is limited. Advertisers and companies often try to create artificial impressions of scarcity in order to boost sales of their products through limited supply offers and impending deadlines e.g. special offer ends on 31st December.

 Influence of others on individual's behaviour

Conformity: people feel pressure to fit in with the crowd and to be accepted by doing what is expected of them e.g. a student may go for his first lecture at the university wearing a three piece suit and a tie. To his surprise, he sees that the other students are dressed in T-shirt. This is an example of conformity. The student is yielding to perceive group pressure. He behaves according to the perceived group norms which

are contrary to his private preferences. The student has used the other students as social standards for appropriated dressing.

Personality and conformity

·   People with lower intelligence are likely to conform perhaps because they feel less competent and less expert than others.

·   People with low self esteem and low feelings of personal worth conform more than those to higher self esteem.

·   People high in public self consciousness tend to conform more than that high in private self consciousness. People high in private self consciousness are concerned with their personal identity and are very attentive to their own thoughts and feelings. In contrast those high in public self consciousness are most concerned with their social identity and other peoples' reactions to it.

Presence or actions of others lowering ones' inhibitions

Behavioral contagion - people and groups can sometimes stimulate individuals into new and at times negative behaviour. Often a person refrains from doing what he would prefer due to internal restrains such as guilt or fear of embarrassment. If however he sees someone doing what he wanted to do, this provides social information that the action is now acceptable. This may reduce his restraints against similar actions. This is referred to as behavioral contagion (Think of how people enter buses through windows during or a few days before Christmas). Behavioral contagion differs from conformity in that the people end up doing what they really wanted to do all along. In conformity, conflict occurs after an individual observes a conforming model and feels group pressure. In behaviour conflict occurs before the individual observes the model.

Deindividuation, self-consciousness and disinhibition- when an individual feels submerged in a group deindividuation may occur. Deindividuation refers to the loss

of inner restraints that may occur when an individual feels submerged in a group. The behavior displayed under these conditions is often compliant or aggressive.

Self-consciousness (or self-awareness) may be especially important in deindividuation. The process of deindividuation is produced by a lack of self-consciousness. Self consciousness is reduced when:

· One is not identifiable to authority figures in a situation.

· Is anonymous to potential victims

· Feels immersed in a group

· Feels that responsibility for behaviour is shared with other group members

The lack of self consciousness produces a disregard for personal and societal standard of appropriate conduct. The person becomes more aware of environmental cues that can reduce inhibition towards behavior that one would ordinarily not engage in. if the cues are positive e.g. suggesting cooperation, and then the individuation can increase positive behaviour. However, if the cues are negative e.g. suggesting aggression, then negative behaviors are more likely to occur.

Summary

In this lecture we have looked at how current issues affect learning

Self assessment

a. Discuss how differentcurrent issues influence learning.

b. Analyze principles human behaviour.

Further Reading

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

Lambert. (1996). Foundation of psychology. New York. Hamper and Row Publishers.

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