NATIONAL OPEN UNIVERSITY OF NIGERIA

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COURSE CODE: EDU 321

COURSE TITLE: PSYCHOLOGY OF LEARNING

COURSE GUIDE

EDU 321
PSYCHOLOGY OF LEARNING

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INTRODUCTION

EDU 321: Psychology of Learning is a semester, two credit unit foundation course. It is a core course for all students in Teacher Education programmes. It is also suitable as a course of study for anyone who wants to acquire some knowledge of Psychology of Learning.

THE COURSE

This course will introduce you to what Psychologists refer to as Learning.. Do not worry if you do not have extensive knowledge of psychology. One of the aims of EDU 321: Psychology of Learning is to give you a general background to psychology of learning and to illustrate key areas in which it can be applied in a practical way during the teaching-learning process in particular and in learning situations in general. The course consists of 15 study units, which include definitions of learning, what is meant by Human Learning, learning process, factors affecting learning and their corresponding implications for human learning, transfer of learning and important factors in human learning that teachers must know. The course material has been developed to suit not only distance learners in Nigeria by virtue of the fact that it has practical examples from the local environment but to also suit distance learners elsewhere given examples and illustrations of universal dimension. The intention is to make use of local experiences and situations including international illustrations to support the students while studying and to ensure that the content remains current.

This Course Guide is a window into the course. It tells you briefly what the course is about, what course materials you will be using and how you can work your way through the materials. It suggests some general guidelines for the amount of time you should spend on each study unit of the course in order to complete it successfully. It also gives you some guidance on your tutor marked assignments (TMAs). Detailed information on TMAs is similarly made available. There are regular tutorial classes that are linked to the course. You are advised to attend these sessions at your study centre.

WHAT YOU WILL LEARN IN THIS COURSE

The overall aim of EDU 321: Psychology of Learning is to introduce specific definitions of the concepts of learning, why you need to study psychology of learning, major theories of learning, transfer of learning and remembering and forgetting. During this course, you will learn about schedules of reinforcement, some factors affecting learning, and important factors in human learning that teachers must know.
Although there is little disagreement among psychologists as to the

importance of learning and pervasiveness of learning in nearly all forms of human activity, there is a marked difference between the ways they look at learning and the ways the layman does. You will learn specific definitions of the concept of learning. You will also learn what psychologists refer to as human learning, theories of human learning generated from psychological experiments on lower organisms.

You will understand what is meant by schedules of reinforcement, basic ratios of reinforcement, motivation, and theories of motivation. You will be given sufficient grounding to understand how interest in human learning can be sustained and important factors that you must know about human learning, which should provide you with the necessary basis for further study.

COURSE AIMS

This course aims to give you an understanding of the concept of learning, what is meant by human learning, theories of learning and their implications for human learning. Schedule of reinforcement and their implications for behaviour management, some factors affecting learning, and how interest in learning can be sustained are also targets of this course.

These aims will be achieved by:

a. Introducing you to the definitions of the concept of learning;
b. Explaining to you what psychologists mean by human learning;
c. Describing how psychologists develop theories of learning;
d. Enumerate classroom implications of transfer of learning;
e. Outlining basic ratios of reinforcement;
f. Explaining some factors affecting learning;
g. Describing how teachers can assist students in training their minds;
h. Outlining important factors which teachers must know.

COURSE OBJECTIVES

To achieve the aims set out above, some carefully stated overall objectives must be considered. In addition, each study unit also has specific objectives. The study unit objectives are always included at the beginning of a study unit; you should read them before you start working through the study unit.

You may want to refer to the objectives during your study of each unit to check on your progress. You should always look at the study unit objectives after completing a study unit. In this way, you can be sure

that you have done what was required of you by the study unit.

Set out below are the wider objectives of the course as a whole by meeting these objectives, you should have achieved the aims of the course.

On successful completion of the course, you should be able to:

a. Define the concept of learning;
b. Explain what is meant by human learning;
c. Discuss the five stages of learning process;
d. Explain Thorndike's theory of learning;
e. Describe Skinner's Operant conditioning theory of learning;
f. Discuss Pavlov's Classical conditioning theory of learning;
g. Explain Gestalt theory of learning;
h. Discuss the implications of theories of learning for human learning;
i. Specify basic ratio of reinforcement;
j. Explain factors affecting learning;
k. Discuss how teachers can assist students in training their memory.
l. Enumerate classroom implications of transfer of learning.

WORKING THROUGH THIS COURSE

To complete this course you are required to read the study units, read books and other materials provided by the National Open University of Nigeria (NOUN). Each study unit contains Self-Assessment Exercises (SAEs) and Tutor Marked Assignments (TMAs) and at each point in the course you are required to submit assignments for assessment purposes. At the end of the course is a final examination. You will also find listed, all the components of the course, what you have to do and how you should allocate your time to each study unit in order to complete the course successfully and on time.

COURSE MATERIALS

Major components of the course are:

1) Course Guide
2) Study Units
3) References
4) Presentation Schedule

STUDY UNITS

The study units in this course are as follows:

Module 1

Unit 1 Learning Conceptual Clarification
Unit 2 Learning Process
Unit 3 Factors Affecting Learning
Unit 4 Classical Conditioning – Ivan Pavlov
Unit 5 Thorndike's Theory of Connectionism

Module 2

Unit 1 Skinner's Operant conditioning
Unit 2 Applications of Operant conditioning
Unit 3 Some factors affecting learning
Unit 4 Additional theories of learning
Unit 5 Motivation

Module 3

Unit 1 Additional Theories of Motivation
Unit 2 Critique of Maslow's hierarchy of needs
Unit 3 Observational learning
Unit 4 Transfer of Learning
Unit 5 Remembering and Forgetting

PRESENTATION SCHEDULE

The presentation schedule included in your course material gives you the important dates of this year for the completion of tutor-marked assignments and for attending tutorials. Remember, you are required to submit all your assignments by the due date. You should guard against falling behind in your work.

ASSESSMENT

There are three aspects in the assessment of the course. First is a set of Self – Assessment Exercises (SAEs), second is a set of tutor-marked assignments (TMAs), and third is a written end of semester examination.

In tackling the assignments, you are expected to be sincere in attempting the exercises; you are expected to apply the information, knowledge and techniques gathered during the course. The assignments must be submitted to your tutor against formal deadlines stated in the

presentation schedule and the assignment file. The work you submit to your tutor for assessment will make up 30% (undergraduate) and 40% (post graduate) of your total course mark.

At the end of the course, you will need to sit for a final written examination of two hours' duration. This examination will make up the remaining 70% (undergraduate) and 60% (postgraduate) of your total course mark.

TUTOR-MARKED ASSIGNMENTS (TMAS)

There are TMAs in this course. You are encouraged to submit all assignments. Assignment questions for the study units in this course are stated within the study units. You will be able to complete your assignments from the information and materials contained in your reading, and study units. However, it is desirable in all degree level academic programmes to demonstrate that you have read and researched more widely than the required minimum. Using other references will give you a broader viewpoint and may provide a deeper understanding of the subject.

When you have completed each assignment, send it together with a TMA (tutor-marked assignment) form to your tutor. Make sure that each assignment reaches your tutor on or before the deadline given in the presentation schedule and assignment file. If, for any reason, you cannot complete your work on time, contact your tutor before the assignment is due to discuss the possibility of an extension. Extensions will not be granted after the due date unless in exceptional circumstances.

FINAL EXAMINATION AND GRADING

The final examination for Psychology of Learning will be of two hours' duration and it has a value of 50% of the total course grade. The examination will consist of questions, which reflect the type of self-testing, practice exercises and tutor-marked assignments (tutor-attended-to problems) you have previous encountered all areas of the course will be assessed.

Use the time between finishing the last study unit and sitting for the examination to revise the entire course. You might find it useful to review your self-tests, tutor-marked assignments and comments on them before the examination. The final examination covers information from all parts of the course.

COURSE MARKING STRUCTURE

The following table lays out how the actual course marking is done.

Assessments	30% (Undergraduate) 40% (Postgraduate)
Final Examination	70% (Undergraduate) 60% (Postgraduate)
Total	100% of Course Marks

Table I: Course Marking Structure

HOW TO GET THE MOST FROM THIS COURSE

In Open and Distance Learning (ODL), the study units replace the University Lecturer. This is one of the great advantages of ODL. You can read and work through specially designed study materials at your own pace, and at a time and place that suit you best. Think of it as reading the lecturer. In the same way that the lecturer might set you some reading to do, the study units tell you when to read your other materials. Just as a lecturer might give you an in-class exercise, your study units provide exercise, for you to do at appropriate points.

Each of the study units follows a common format. The first item is an introduction to the subject matter of the study unit and how a particular study unit is integrated with the other study units and the course as a whole. Next is a set of learning objectives. These objectives let you know what you should be able to do by the time you have completed the study unit. You should use these objectives to guide your study. When you have finished the study unit, you must go back and check whether you have achieved the objectives or not. If you make a habit of doing this, you will significantly improve your chances of passing the course.

The main body of the study unit guides you through the required reading from other sources. This will usually be either from a reading section or some other sources. You will be directed when there is need for it.

Self – Assessment Exercises (SAEs) are interspersed throughout the study units. Working through these SAEs will help you to achieve the objectives of the study units and prepare you for the assignments and examination.

You should do every SAE as you come to it in the study unit. There will also be numerous examples given in the study units. Work through these when you come to them too.

The following is a practical strategy for working through the course. If you run into any trouble, telephone your tutor immediately. Remember that your tutor's job is to help you. When you need help, don't hesitate to call and ask your tutor to provide it.

1. Read this course guide thoroughly.

2. Organise a study schedule. Refer to the course overview for more details. You should note that it is expected of you to devote at least 2 hours per week for studying this course. The number of hours to be devoted for intensive study stated above is outside other need driven academic activities like self help, group discussion and instructional facilitation. Note the time you are expected to spend on each unit and how the assignments relate to the study units. Important information e.g. details of your tutorials, and the date of the first day of the semester is available. You need to gather together all these information in one place, such as in your diary or a wall calendar. Whatever method you choose to use, you should write in your own dates for working on each unit.

3. Once you have created your own study schedule, do everything you can to stick to it. The major reason why students fail is that they get behind with their course work. If you get into difficulties with your schedule, please let your tutor know before it is too late for him to help you.

4. Turn to unit 1, read the introduction and the objectives for the unit.

5. Assemble the study materials. Information about what you need for a unit is given in the table of content at the beginning of each unit. You will almost always read both the study unit you are working on and one of the materials for further reading on your desk at the same time.

6. Work through the Unit. The content of the unit itself has been arranged to provide a sequence for you to follow. As you work through the unit, you will be instructed to read sections from other sources. Use the unit to guide your reading.

7. Keep in mind that you will learn a lot by doing all your assignments carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the examination. Submit all assignments not later than the due date.

8. Review the objectives for each study unit to confirm that you have achieved them. If you feel unsure about any of the objectives, review the study materials or consult your tutor.

9. When you are confident that you have achieved a unit's objectives, you can then start on the next unit. Proceed unit by unit through the course and try to pace your study so that you keep yourself on schedule.

10. When you have submitted an assignment to your tutor for marking, do not wait until you get it back before starting on the next unit. Keep to your schedule. When the assignment is returned, pay particular attention to your tutor's comments, both on the tutor-marked assignment form and also as written on the assignment itself. Consult your tutor as soon as possible if you have any questions or problems.

11. After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit objectives (listed at the beginning of each unit) and the course objectives (listed in the course guide).

TUTORS AND TUTORIALS

There are 15 hours of tutorials provided in support of this course. You will be notified of the dates, times and location of these tutorials together with the name and phone number of your tutor as soon as you are allocated a tutorial group.

Your tutor will mark and comment on your assignments. He will also keep a close watch on your progress or any difficulties you might encounter and provide assistance to you during the course. You must mail your tutor-marked assignments to your tutor well before the due date (at least two working days are required). They will be marked by your tutor and returned to you as soon as possible.

Do not hesitate to contact your tutor by telephone, e – mail, or discussion board if you need help. The following might be circumstances in which you would find help necessary. Contact your tutor if:

You do not understand any part of the study units or the assigned readings. You have difficulty with the self – assessment exercises.

You have a question or problem with an assignment, with your tutor's comments on an assignment or with the grading of an assignment.

You should try your best to attend the tutorials. This is your only chance to have a face-to-face academic contact with your tutor and to ask questions on problems encountered in the course of your study. To gain the maximum benefit from course tutorials, prepare a question list before attending them. You will learn a lot from participating in discussions actively.

SUMMARY

Upon completing this course, you will be required with basic knowledge of Psychology of Learning, its theories and implications for human learning. You will be able to answer questions like these ones.

1. What is learning?
2. How would you define human learning?
3. How many theories of learning can you identify?
4. As a teacher in training, why do you need to study psychology of learning?
5. What are schedules of reinforcement?
6. How can we distinguish Skinner's theory of learning from Pavlov's?
7. What is motivation?
8. What are the factors affecting learning?
9. What is Gestalt?
10. How can we apply the law of exercise in human learning?
11. What is law of effect?
12. How can we explain the weakness (es) of the Gestalt theory of learning?
13. How can we describe observational learning?

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MODULE 1

UNIT 1 LEARNING: CONCEPTUAL CLARIFICATION

CONTENTS

1.0 INTRODUCTION

By now, you have read through the course guide, which was sent to you as part of your instructional package for the course. If you have not, please ensure that you read the course guide before reading your study materials as it provides a comprehensive outline of the materials you will cover on a study unit to study unit basis, starting with the topic you are about to study: learning: conceptual clarification. The study unit guides you through several descriptions and definitions of learning across the ages. Let us look at what you should learn in this study unit, as specified in the study unit objectives below:

2.0 OBJECTIVES

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

- describe the concept of learning;
- define learning with examples
- describe three things that cannot be regarded as learning.

3.0 MAIN CONTENT

3.1 Description of Learning

Learning is a psychological concept that cuts across psychology and education. It occupies a very important place in our lives. Most of what we do or do not do is influenced by what we learn and how we have learnt it.

To the layman, 'learning' is, getting to know something he does not know. Just like Oxiedien (1968:5) puts it, that 'we learn what we are taught (that is from a layman's view). Let us look at the term learning from this scenario. While a child is approaching a burning match stick, he/she gets burnt and withdraws. The next the when he/she faces a burning match stick, he/she wastes no time in withdrawing him/herself away. He /she learns to avoid not only the burning match stick but also all burning things.. When this happens, we say that the child has learnt that if one touches a flame, one gets burnt. In this way, we say that direct or indirect experience brings a change in the behaviour of an individual which the term learning is all about. Learning broadly speaking stands for all the changes and modifications in the behaviour of the individual which he/she undergoes from birth till death.

Here we will look at some other descriptions of the concept of learning. You will probably have come across the word 'learning' before, and you may have your own idea of what learning is all about. There are a number of misconceptions and misunderstandings as to what learning is exactly, and for this reason we will consider why this is so and then examine some additional descriptions of this subject area.

SELF-ASSESSMENT EXERCISE

How would you describe learning? Make brief notes before moving on to the next section?

Now let us go on with our descriptions of the concept of learning.

Learning is a part of almost every aspect of psychology, from developmental psychology (how we acquire behaviours through the life cycle) to social psychology (how we learn to interact with others) to abnormal psychology (how we develop such behaviours as phobias and depression).

Learning has evolved over the course of genetic history as a set of adaptive mechanisms that allows us to acquire new behaviours and modify old ones. In order to understand this most complex of human

behaviours, we need to have a clear understanding of what psychologists refer to as learning. In addition, we need to know more about the basic processes fundamental to all learning.

You are learning, as you read this study unit 1, listen to your instructional facilitator and or guidance counsellor at the Study Centre of your choice, and study for a test or examination. Learning is also involved in many other aspects of life. You learn to ride a bicycle, recognize a song, drive a car, smile when someone smiles at you, repairs a stereo, and play football. In fact, learning influences behaviour to such a great extent that it is one of the most important concepts psychologists study.

SELF-ASSESSMENT EXERCISE

State one unique reason why psychologists study learning:

Let us now continue with our discussion.

3.2 Concept of Learning

Kohler (1925) in his book, 'The Mentality of Apes' (cited in Alhassan, 2000), explained learning as a perceptual process with the major emphasis being on the study of relationships and how people learn to see relationships among various items of experience. Learning of relationships can be clearly seen in the phenomenon of insight. Sometimes, pupils work for a long time on a problem or skill with little apparent progress. All of a sudden, there will be a flash of understanding (eureka) in which the pupil or student sees through the problem or re-forms his responses into a more complex habit. This phenomenon was first widely published by the famous German psychologist, Wolfgang Kohler, who found that apes, when confronted with a different problem, might act as if they were surveying the situation and would then go directly to the goal object (banana) by putting two sticks together, or by piling, one box on top of another. You will learn more about this exciting problem solving situation in study unit 2 of Module II where we shall discuss the Gestalt theory of learning.

Aristotle talked of learning as an association of ideas following the laws of similarity, contrast, and continuity. He believed that people learn and remember those things that are alike, that are striking because of their difference, and that occur together, in space and time (Murphy, 1998).

Bugelski (1986:117) on his part, sees learning as the process of the formation of relatively permanent neural circuits through the simultaneous activity of the elements of the circuit-to-be; such activity is

of the nature of change in cell structures through growth in such a manner as to facilitate the arousal of the entire circuit when a component element is aroused or activated.

Lindgren (1991) posits that learning is a central process in understanding human behaviour. Most aspects of human behaviour are learned contrary to the widely held view at the turn of the century that human behaviour is instinctive in nature. According to Lindgren, only perhaps such behaviours as sucking of breasts and blinking of the eyes are instinctive. Lindgren explains instinctual behaviour as inherited patterns of complex responses which become less important as life progresses up the evolutionary scale.

Learning may also be thought of as a process of problem-solving, a way of thinking, creating and synthesizing.

I am sure our discussion is clear and understandable. Now, try your hand on this question.

SELF-ASSESSMENT EXERCISE

List any two (2) human behaviour that are inattentive in nature:
1.----------
2----------

I am sure you are eager to know how psychologists defined learning and human learning. We must therefore continue our discussion.

3.3 Definitions of Learning

Alhassan (1985:17) opines that learning is the totality of the acquisition of factual information, the mastering of skills and means to aid further study (understanding); the entire socialization process, the acquisition of behaviour patterns, the styles of tackling problems of everyday life and more. Learning is a dynamic process whereby, through interactive experience, insights or cognitive structures of life spaces are changed and so become more useful for future guidance.

Gagne (1970:3) attempts a definition of learning which seems to have a wide appeal when he writes that learning even takes place when the situation affects the learner in such a way that his/her performance changes from a time before being in that situation to a time after being in it. The change in performance is what leads to the conclusion that learning has occurred. Thus, learning is a change in human disposition

or capability which can be retained, and which is not ascribable to the process of growth. It is important for you to note that all changes in performance that brought about by the environment may properly be referred to as learning. This view of learning is identical to the definition that says that learning is a modification in behaviour due to experience.

Kingsley and Garry (1957) defines learning as a process by which behaviour changes through practice or training.

According to Woodworth (1945) " any activity can be called learning as far as it develops the individual – (in any respect, good or bad) and makes him alter behaviour and experiences different from what would otherwise have been".

Notwithstanding the above discourse, learning may not be easy to define adequately. This may be so because we cannot see it directly. But when we observe a child's behaviour, we can conclude that some kind of learning has occurred. Let us give an example. When a pre-schooler is able to recite the alphabet from A – Z or the numerals, which he could not do before, we can deduce that some learning has taken place. Liebert (1997:114) stresses this point by stating that all animals, including human beings, are able to profit from experience. Placed in new situations for the first time, we are often clumsy and incompetent. However, after some practice or the opportunity to watch others perform, our own efforts usually improve dramatically. For many activities at least, we too, can successfully accomplish things that had previously been difficult and frustrating the process that is responsible for this change is called learning.

I can see you are finding this discussion interesting. Let us continue.

Let us cite another example. When you look at the stages of a child's development, you can see that he first knows how to eat, then to sit, to crawl about, to be able to stand, to walk, to run about, and to speak. The child is now capable of doing some things which he could not do earlier in his life. It may be said that in these respects, the child has learned because 'observed changes in behaviour are evidence of learning' (Balogun, 2001:43). Many psychologists agree that learning is a general term for relatively lasting or permanent change in performance or behaviour caused or produced directly by experience.

Dinkmeyer (1985) defines learning as a change in behaviour resulting from the interaction of the organism with its environment. Learning is dependent upon activity or special training and in this sense, differs from behavioural change which is solely due to maturation. Learning then involves relatively permanent behavioural change which is as a

result of experience.

Learning is a ---------- change in behaviour as a result of experience. (Fill in the gap)

The above definitions of learning reveal several components that deserve clarification.

First, learning involves change, be it good or bad.

Second, the change in behaviour must be relatively permanent. For instance a temporary change in behaviour as a result of fatigue is not considered learning.

Third, only change in behaviour acquired through experience is considered learning. Therefore, a change in an individual's thought process or attitudes, if accompanied by no change in behaviour would not be learning. Learning does not include the changes in behaviour on account of maturation , disease or physical damages, drugs, fatigue etc.

Fourth, some form of experience is necessary for learning. Experience may be acquired directly through practice or observation or indirectly through reading.

Finally, learning is universal and continuous. It is not confined to our schooling only. As a matter of fact, learning is a life – long process. Every creature that lives learns. In human beings it is not limited to any age, sex, race or culture.

4.0 CONCLUSION

Learning is a process which brings relatively permanent changes in behaviour of a learner through experience or practice. It must be noted carefully that here we have deliberately used the word "relatively permanent change " in place of absolutely permanent change in the behaviour of the learner. It is true that learning brings about changes in the behaviour of the learner, the skills we acquire, the habits we pick can be unlearned, modified or replaced by some other set of similar or differently acquired behaviour.

5.0 SUMMARY

i. What you have learnt in this study unit concerns descriptions and definitions of learning from the perspectives of different psychologists.

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ii. The study units that follow shall build upon this introduction to

ensure clarity of concepts and understanding of the contents.

6.0 TUTOR-MARKED ASSIGNMENT (TMA)

1. What do you understand by the concept of learning?
2. Explain what you understand by human learning with examples.
3. Describe 3 things that cannot be regarded as learning.

7.0 REFERENCES/FURTHER READING

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UNIT 2 LEARNING PROCESS

CONTENTS

1.0 INTRODUCTION

In study unit 1, we discussed descriptions and definitions of learning. The study unit also introduced you to other study units in this course material. You can now describe and define learning from your own understanding. You are about to start another interesting study unit which is on how an individual acquires learning. In other words the processes through which learning can take place. In this unit, we shall also look at the need for the study of psychology of learning.

2.0 OBJECTIVES

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

- discuss the five stages of learning process
- explain the need for psychology of learning.

3.0 MAIN CONTENT

3.1 Learning Process

In order for learning to take place in the school, the teacher plays a significant role in guiding the learner by motivating him towards learning activity through which he can achieve a purposeful goal. To achieve this, there are defined and clear processes of learning through which the desired changes will take place. These include:

1. **Sensation** – This is the process of receiving, translating and transmitting message from the environment to the brain. This process normally goes through bodily senses of sight, hearing, feeling, touching, smelling, tasting etc. These bodily senses are

generally referred to as gateways to knowledge.

2. **Perception** – This is the process of organizing and interpreting information received from the outside world. The sensitive organs (eye, ear, nose, skin, tongue) by means of which the learner becomes aware of the forces, objects or changes in the world around him are called receptors. Perception is the internal analysis of the sensation by the brain or the information processing unit. Sensation and perception are closely interrelated. Sensation causes the individual to turn his head, eyes or body in a particular direction while perception maintains the length of attention or consideration focused upon the direction of thing. Thus perception is the process of extracting information instantly and unconsciously from the environment.

3. **Association** – This is the third stage in learning process. It is the ability of connecting one's new experience with his previous experience.

4. **Generalization** --. This is the fourth stage in learning which involves the establishment of principles, theories, inferences, laws, conclusions or rules which summarize some findings.

5. **Application** – This is the final stage in the learning process. It is the process of using the established principles of learning to solve problems in actual life situation

Our discussion is getting clearer and more understandable. I commend your active participation. Now, try your hand on this question.

SELF-ASSESSMENT EXERCISE

"Sensation and Perception are two stages of learning process that are closely interrelated ". Discuss.

Well done! Let us continue our discussion.

3.2 The Need for the Study of Psychology of Learning

The relevance of the study of psychology of learning can never be over-emphasized. This is because since the main objective of the school as an institution is to bring about desirable changes in the behaviour of the learner through the process of learning, it demands therefore that all those who will engage in bringing about these changes should understand the approaches of learning in order to develop effective teaching strategies.

The need for study of psychology of learning include the following:

- To understand Individual differences: There is the need to understand the individual differences in learning among learners so that the teaching methods selected by the teacher can care take care of the individual differences existing among the learners.

- To master the concept of motivation: There is the need for the teacher to master the concept of motivation developed by various theorists of learning in order to understand the needs and motives of the learners at different age levels and be able to organize those activities which create interest and motivation in them.

- To understand the process of remembering and forgetting: The teacher needs to understand the process of remembering and forgetting so that he can utilize efficient methods to minimize the percentage of forgetfulness.

- To help the learner to transfer skills: With the knowledge gained from the study of psychology of learning, the teacher can help the learners to transfer skills and information acquired in classroom to life situations outside the school.

4.0 CONCLUSION

In this study unit, you have learnt the stages involved in learning process through which the desired changes can take place. You have also learnt the relevance of the study of psychology of learning. We can now say that the learning process and the need for the study of psychology of learning are very clearly understood by you.

5.0 SUMMARY

There is a vital need for the study of psychology of learning most especially by those who engage in imparting knowledge. This is because the more they understand the fundamental principles of learning , the more efficiently they become in guiding classroom teaching and learning.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the five stages of learning process
2. As a teacher in training, why do you need to study psychology of learning?

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UNIT 3 FACTORS AFFECTING LEARNING

CONTENTS

1.0 INTRODUCTION

In study unit 2, we discussed learning process and the need for the study of psychology of learning. In this unit, we shall be looking at the factors that affect learning. In the learning environment, there are three variables namely: the learner, the teacher and environment.

2.0 OBJECTIVES

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

- discuss how the factors resident in the learner can affect learning
- explain in what ways the teacher's personality can affect the way a learner learns
- identify and discuss the environmental factors that can affect the learner.

3.0 MAIN CONTENT

3.1 Factors Affecting Learning

In the learning environment, there are three variables involved – the learner, the teacher and the environment. The learner occupies an important place in teaching and learning because he is the one whose behaviour must change to enable him live well in his society and with others. The teacher as an individual personality is an important element in the learning environment. One of the factors that affect the efficiency of learning is the environment in which learning takes place. The environment includes the learner's home, school and the entire society.

3.1.1 Factors Resident in the Learner

- **Hereditary factors** : Whatever genetic factors that the learner has inherited at conception becomes very crucial in the rate of learning of the child.
- **Physical factors** :Visual and physical defects and ill health. It is generally recognized that ill health retards physical and motor development. The health of the learner will likely affect his ability to learn and his power to concentrate
- **Nutrition** : Malnutrition interferes with learning and physical growth.
- **Personality and self – concept** : The learner's self – worth and personality have been found to affect learning.
- **Maturation**: Learning is directly dependent on maturation. No learning can take place unless individual is matured enough to learn. Some children can learn better at earlier age while other take more time to learn the same content.
- **Motivation**: This refers to the drive to action. Motivation is the heart of learning process. It generates the will in an individual to do something.

SELF-ASSESSMENT EXERCISE

What are the factors resident in the learner that can affect his/her learning process?

3.1.2 Factors Resident in the Teacher

- **Teacher's personality:** The teacher's personality is an important element in the success and failure of the learner. The way in which his personality interacts with the personalities of the students being taught helps to determine the kind of behaviour which emerges from the learning situation. The teacher's personality is composite of his physical appearance, his mental gcapacity, his emotional behaviour and his attitudes.
- **Instructional factors:** Availability of learning materials such as well -equipped libraries, textbooks , audio-visual materials etc , the curriculum strategies, the teacher's methodology of teaching and mastery of subject matter are instructional factors that affect learning in school.

3.1.3 Factors Resident in the Environment

- **Family/Socio-economic background:** The impact of mother, father, other children , housemaids , uncles and aunties on the learning of the child is enormous. Certain unpleasant events in the family which are stored in the memory of the child throughout life could affect the child's learning process. Socio – economic factors refer to the level of education of the parents, where they reside (urban or rural) etc.
- **Physical environment:** Unusual traumatic events such as earthquake, thunderstorms, flood etc. may affect the learning of the child in life. Whether at home or in school, the learning conditions must be favourable and adequate if teaching is to produce the desired results.
- **Cultural background:** An individual's learning is mostly affected by his/her cultural background and the opportunities provided for informal and formal education.

SELF-ASSESSMENT EXERCISE

Briefly explain how parental socio – economic status of a child can affect his/her learning.

4.0 CONCLUSION

Effective teaching and learning are the results of an integrated personality of the teacher, the learner and the environment .

5.0 SUMMARY

In this unit, we have looked at factors resident in the learner the teacher and the environment and how these can affect learning.

6.0 TUTOR-MARKED ASSIGNMENT

1. Briefly discuss how the factors resident in the child can affect the way the child learns

2. "The teacher's personality is an important element in the success and failure of the learner". Discuss"

3. Identify and discuss the environmental factors that can affect learning.

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UNIT 4 CLASSICAL CONDITIONING – IVAN PAVLOV

CONTENTS

1.0 INTRODUCTION

From the work done in the previous units, you can define what learning is all about. In this unit, you will get to know about behavioural learning theory of Ivan Pavlov known as classical conditioning. You will also get to know about its implications to classroom situation.

2.0 OBJECTIVES

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

- define learning theories
- discuss the classical conditioning theory of Ivan Pavlov
- explain the educational implications of classical conditioning theory
- list the Stimulus – Response (S-R) theories with reinforcement and those without reinforcement.

3.0 MAIN CONTENT

3.1 Learning Theories

A theory is based upon a hypothesis and backed by evidence. A theory presents a concept or idea that is testable. It provides general explanation for observations made over time. What goes on in the process of learning? How does an individual learn a set of knowledge,

skills, habits, interests, attitudes and similar other things in life? Such questions have always been a subject of enquiry and investigation before psychologists and as a result a number of theories have come into being.

Learning theories are therefore conceptual frameworks that describe how information is absorbed, processed and retained during learning. In the broad sense, these theories may be classified into two major groups: Behaviourist theories and cognitive theories.

3.1.1 Behaviourist Learning Theories

Behaviourist learning theories belong to the school of behaviourism. Behaviourists believe that learning occurs through interaction with the environment. They interpret learning in terms of association between stimulus and response. They believe that our responses to environmental stimuli shape our behaviours. Behaviourist learning theories can be grouped into two namely:

(i) Stimulus – Response (S – R) theories with reinforcement
E.L. Thorndike's theory of Connectionism
B.F. Skinner's theory of Operant Condition
Clark L. Hull theory

(ii) Stimulus – Response (S – R) theories without reinforcement.
Ivan Pavlov conditioning theory
John B. Watson learning theory
Contiguity theory by E.R. Guthrie

SELF-ASSESSMENT EXERCISE

Outline the basic assumptions of behaviourists.

3.2 CLASSICAL CONDITIONING THEORY – Ivan Pavlov (1949 – 1936)

Pavlov was a Russian physiologist cum psychologist. He was well known for the classical conditioning experiments and findings. Classical conditioning is also known as Respondent Conditioning. The term respondent implies that the learned response is elicited involuntarily from the organism rather than produced by the organism in a voluntary (or operant) manner. Classical conditioning is a learning process that occurs through association between environmental stimulus and a naturally occurring stimulus. For example, if a student frequently encounters unpleasant stimuli in mathematics class such as unfriendly teachers, difficult questions, and a lot of homework, he may learn to dislike mathematics.

Pavlov was interested in the digestive system of dogs. He used a hungry dog which he immobilized in a sound proof cage (rendering the dog captive and inactive) several times when merely bell was rung, no salivation was noticed in the dog. Neutral Stimulus (NS) – No Response (NS).

The next thing Pavlov did was to present meat powder which is neutral stimulus or unconditioned stimulus (UCS) and the dog salivated which was an unconditioned response (UCR). Next, he paired the ringing of the bell and meat powder to the dog and the dog salivated. NS + UCS = UCR.

After some time, Pavlov then withdrew the meat powder and presented the bell alone. The dog salivated which is Conditioned Response (CR). However after some time, Pavlov observed that the quantity of saliva was reducing progressively as the number of presentation increased. At a point, salivation stopped. This is called Extinction. This suggests that there is a limit to which unconditioned response can be manipulated. To make the dog recover from extinction, it must be presented with Conditioned Response (CR)

Steps in the Process of Classical Conditioning

Step 1: Before conditioning
Before conditioning, the bell is a neutral stimulus. Neutral Stimulus (NS) is a stimulus that before conditioning does not naturally bring about the response of interest.

NS (bell) - No salivation
UCS (meat) - UCR (salivation)

Step 2: During Conditioning Procedure
During the conditioning procedure, the neutral stimulus (NS) is presented. It is immediately followed by the unconditioned stimulus (UCS) to produce unconditioned response (UCR).

Step 3: Test of Conditioning
After the classical conditioning procedures, the neutral stimulus (NS) becomes a conditioned stimulus (CS). It alone can produce salivation. At this point, the production of salivation is known as the conditioned response (CR).
NS (bell) $\rightarrow$ CR (salivation)

3.3 Educational Implication of Pavlov's Theory

Classical conditioning primarily influences emotional behaviour. Things that make us happy, sad, angry etc. become associated with neutral stimuli that gain our attention. For example, if a particular teacher produces emotional feelings in you, those emotions are probably a result of classical conditioning.

For instance, because of threatening tests, a student will feel a great deal of fear or anxiety. And when he experiences the fear, he gets associated with other things in the situation. Thus, the student's fear gets tied up with taking tests, with certain teachers and in extreme cases, with school itself.

Similarly, when people experience positive effect, that emotion gets conditioned to other factors in the situation. And then whenever those other factors are present, the positive emotion can be triggered.

4.0 CONCLUSION

In this unit, we have seen that classical conditioning is a process in which an organism learns to respond in a particular way to a stimulus that previously did not bring about that response.

5.0 SUMMARY

In this unit, we have looked at definition of theory, basic assumptions of behaviourists, classification of behaviourist learning theories, classical conditioning theory of Ivan Pavlov and educational implications of classical conditioning.

6.0 TUTOR-MARKED ASSIGNMENT

1. What do you understand by learning theories?
2. Discuss the classical conditioning theory of Ivan Pavlov
3. Explain the educational implications of classical conditioning theory.
4. List the Stimulus – Response (S – R) theories with reinforcement and those without reinforcement.

7.0 REFERENCES/FURTHER READING

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UNIT 5 THORNDIKE'S THEORY OF CONNECTIONISM

CONTENTS

1.0 INTRODUCTION

In this unit, you will read about the three major laws propounded by Thorndike on Connectionism. His theory went beyond Pavlov by showing that an act that is followed by a favourable effect is more likely to be repeated in similar situations and an act that is followed by unfavourable effect is less likely to be repeated.

2.0 OBJECTIVES

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

- discuss the three major laws of learning propounded by Thorndike
- discuss the educational implications of Thorndike's theory

3.0 MAIN CONTENT

3.1 Edward Thorndike's Theory

Edward Lee Thorndike (1874 – 1949) believed that all learning is explained by connections (or bonds) that are formed between stimuli and responses. Using cats, dogs and chickens, he devised experiments in which an animal was placed in a cage from which it could escape to reach food. The food was visible but not accessible from the cage. On the inside was a release mechanism which could be operated by the animal.

When first placed in the box, the animal (the cat) exhibited a random movement trying to escape to get food. Eventually, it operated the release mechanism which allowed it to escape and obtain food. On subsequent trials, the activity became less random and focused on the part of the cage near the release mechanism. The time of escape decreased until the animal eventually operated the release as soon as it found itself in the cage. In this 'trial and error' fashion, the cat hit on the release mechanism to get the food. From this work, Thorndike derived three major laws of learning.

3.2 Thorndike's Laws of Learning

Thorndike propounded the following laws of learning on the basis of his theory.

The Law of Readiness
When organisms both human and animal are ready to act or learn to do so is satisfying and not to do so is annoying or unsatisfying. Thorndike believed that readiness is an important condition of learning because satisfaction or frustration depends on an individual's state of readiness. Schools cannot force students to learn if they are not biologically and psychologically prepared. They can learn only when they are ready.

The Law of Exercise
This law has two parts – use and disuse
The law of use states that all things being equal, the more frequently a connection between a stimulus and a response is made, the stronger the connection will be.

The law of disuse: The law of disuse states when a connection between stimulus and response is not made over a period of time, the strength of that connection is weakened.

In this way, law of use refers to the strengthening of connection with practice while the law of disuse refers to weakening of connection when the practice is discontinued. In brief, it can be said that law of exercise as a whole emphases the need of repetition, practice and drill work in the process of learning.

The Law of Effect
This law states that learning occurs only when responses are followed by reward and satisfaction. On the other hand, if frustration or punishment is experienced by the learner, the connection between stimulus and response becomes weakened.

In simple words, it means that learning takes place properly when it results in satisfaction and the learner derives pleasure out of it. In a situation where the learner meets with failure or gets no satisfaction, the progress on the path of learning is blocked. In other words, this law emphasizes the role of rewards and punishment in the process of learning.

SELF-ASSESSMENT EXERCISE

With example, distinguish between the Law of Effect and the Law of Exercise.

3.3 Classroom Implications of Thorndike's Theory

1. Activities especially in the course material must be organized on increasing difficulty order as well as presented in varied ways so that novelty is maintained and learners progress without fear.

2. Guidance, praise and encouragement that give pleasure and satisfaction should be provided to keep learners in the right path.

3. More and appropriate opportunities must be given to learners to use and repeat knowledge they get in class

4. Review and drills are necessary to motivate and strengthen the connections of S – R for longer period.

5. Examination, quizzes, discussions, assignments and the likes must be provided for adequate exercise to enable and encourage learners to observe law of exercise. A connection will be strengthened with practice or forgotten without practice or use.

6. Experiences that will enable law of readiness to be practiced by the learner should be provided by teachers and even through the mechanism of motivation.

SELF-ASSESSMENT EXERCISE

As a learner, what are the implications of the three major laws of Thorndike's theory to you?

4.0 CONCLUSION

In short, Thorndike's theory of connectionism along with his major laws of learning have contributed a lot in the field of learning. It has made learning purposeful and goal-directed and has emphasized the

importance of motivation. It has given an impetus to the work of practice, drill and exercise and highlighted the psychological importance of rewards and praise in the field of learning.

5.0 SUMMARY

In this unit, you have learnt about Thorndike's theory of trial and error learning which emphasizes that learning is caused by the formation of connection between stimuli and responses. Three major laws of learners propounded by Thorndike were discussed as well as their implications of learning.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss Thorndike's three major laws of learning
2. Discuss the classroom implications of Thorndike's theory.

7.0 REFERENCES/FURTHER READING

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MODULE 2

UNIT 1 SKINNER'S THEORY OF INSTRUMENTAL OR OPERANT CONDITIONING

CONTENTS

1.0 INTRODUCTION

In the previous unit, you were taught Thorndike's theory of connectionism. In this unit, we shall be discussing about skinner's theory of instrumental or operant conditioning. Skinner revealed in his theory that learning is a function of change in overt behavior. Changes in behaviour according to skinners, are the result of an individual's response to events (Stimuli) that occur in the environment. The voluntary behaviour is either strengthened or weakened by the immediate presence of a reward or punishment.

2.0 OBJECTIVES

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

- discuss Skinner's Instrumental/Operant conditioning

- describe reinforcement and punishment
- enumerate the implications of Skinner's theory.

3.0 MAIN CONTENT

3.1 B.F. Skinner's Theory of Instrumental or Operant Conditioning

Instrumental conditioning theory of learning was formulated by B.F. Skinner (1904 – 1990), who was an American Psychologist. Skinner improved on the work of Thorndike. Skinner revolted against "no stimulus, no response" mechanism in the evolution of behaviour. He argued that in practical situations in our life, we cannot always wait for things to happen in the environment. Man is not a victim of the environment. He may often manipulate the things in the environment with his own initiative. In his view, each learning experience is a stimulus that produces a behaviour response.

Skinner was convinced of the importance of reinforcement. Skinner developed an explanation of learning that stresses the consequences of behaviour. What happens after we do something is all important. In Operant conditioning, behaviour must occur before it can be reinforced. Operant or instrumental conditioning is a form of learning in which the consequences of behaviour lead to changes in the probability that the behaviour will occur.

Skinner defined two types of responses – the one "elicited" by known stimuli which he called "respondent behaviour" and the other emitted by unknown stimuli which he called Operant behaviour. Examples of respondent behaviour may include all reflexes such as jerking one's hand when jabbed with a pin, salivation in the presence of food. In respondent behaviour the stimulus preceding the response is responsible for causing the behaviour, the stimulus causing such behaviour is unknown. In this case, the stimulus is not important but the consequences of the behaviour hence operant behaviour is controlled by the strength of its consequences instead of stimuli. Examples of such behaviour include moving one's hand, arms or legs arbitrarily, eating a meal, writing a letter, standing up and walking about and similar other everyday activities. Operant conditioning occurs when a response to a stimulus is reinforced.

To establish his claims, Skinner conducted a series of experiments with animals. Skinner constructed a box called Skinner box containing a lever that releases a pellet of food. Skinner, in one of his experiments placed a hungry rat in the above described box and if the rat presses the lever, the food would drop for it. The lever in the box was mechanically

connected to a device that automatically records every attempt the rat made.

In the box, the rat moved around tirelessly and each time the lever is pressed, the food falls for the rat. The rat becomes persistent in pressing the lever so that the food could fall. The food that comes down for the rat reinforces its action. The pressing response is instrumental in producing a reinforcer (food) which then acts as a stimulus for response (lever pressing). In contrast, if the food is not accompanied with the pressing of lever, the number of presses would fall gradually to the lowest point.

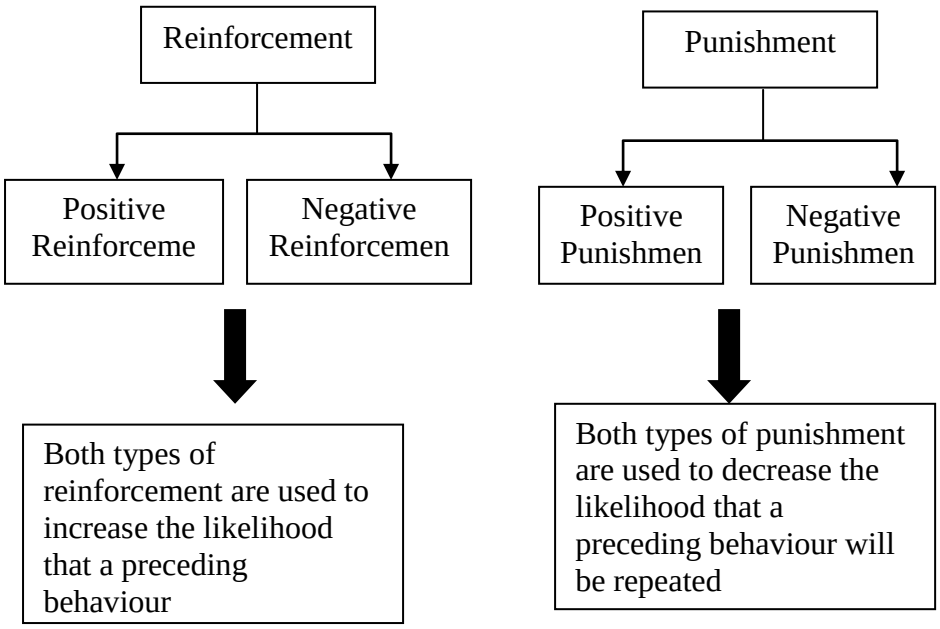
SELF-ASSESSMENT EXERCISE

i. What are the two types of responses defined by Skinner?
ii. Mention two (2) examples of each of the responses mentioned above.

3.2 Forms of Reinforcement and Punishment

Reinforcement is a consequence that increases the probability that a behaviour will occur. On the other hand, punishment is a consequence that decreases the probability that a behaviour will occur. In other words, reinforcement will strengthen a behaviour while punishment will weaken a behaviour.

There are two forms of reinforcement and punishment as shown below:



It is important to note that when something is added or presented, the process of learning is called positive and when something is removed or taken away, the process of learning is called negative.

Forms of Reinforcement and Punishment

Positive reinforcement	Receiving something pleasant will increase behaviour occurrence	A student is praised for asking question. Subsequently, the student asks more questions.
Negative reinforcement	Removing something unpleasant will increase behaviour occurrences.	A child who is tired of hearing his father's nagging will do his homework. He does the homework to remove the nagging .
Positive punishment	Receiving something unpleasant will decrease behaviour occurrences	If a teacher frowned when his student asked a question, the student would be less likely to ask question again.
Negative punishment	Removing something pleasant will decrease behaviour occurrences.	A misbehaving student is removed from the class.

Both positive and negative reinforcement functionally increase behaviour. Negative reinforcement should not be confused with punishment.

3.3 Schedules of Reinforcement

A reinforcer is a contingent event that increases the frequency of behaviour. Reinforcers are more effective when they are given as soon as possible after a student performs the target behaviour.

Schedule of reinforcement: A reinforcement schedule is simply a rule which specifies how often and under what conditions a particular response will be reinforced. Reinforcement may be given at continuous or intermittent schedule.

Continuous reinforcement: In this reinforcement technique, every correct response or behaviour is reinforced. For example, a student may

be rewarded for every correct answer he gives to the questions or problems asked by his teacher.

Intermittent reinforcement: This involves sometimes withholding and at other times providing reinforcement. In this type of reinforcement only some of the correct responses are reinforced.
There are four types of schedule of reinforcement. They are as follows:

1. **Fixed ratio schedule:** This is when a behaviour is reinforced after a set number (fixed) of responses have occurred. For example, a student may be given a bar of chocolate for every ten mathematical problems solved.

2. **Variable ratio:** This is a type of reinforcement schedule where the number of responses needed for reinforcement varies from one reinforcement to the next. The number of responses needed to gain the reinforcement is not consistent. The individual does not know when he is going to be rewarded and consequently he remains motivated throughout the learning process in the wait of reinforcement. For example, a student may be rewarded after 3, 5, 9 and 15 mathematical problems solved.

3. **Fixed interval schedule:** This is a kind of schedule in which the time between reinforcement varies. The time period keeps changing. For example, rather than waiting for a standard ten or fifteen minutes, teachers ask for responses at different times immediately later, and in the middle of the class.

3.4 Educational Implications

1. Clear detailed specific objective expected during and at the end of each unit must be well stated

2. Reinforce positive behaviour and punish bad behaviour immediately and consistently with minor punishment.

3. For the desirable behaviour in the learner to be demonstrated and repeated, it must be immediately reinforced. The time lag between reinforcing the demonstrated behaviour should not be too long.
4. Use schedule of reinforcement, such as rewards to encourage persistence.

5. Punish students' behaviour, not their personal qualities.

6. Tell the students which behaviour is being punished.

4.0 CONCLUSION

In operant conditioning, we see that the consequences of behaviour produce changes in the probability that the behaviour will occur.

5.0 SUMMARY

In this unit, you have learnt about Skinner's Operant Conditioning Theory. You also learnt about forms of reinforcement and punishment and the educational implications of Skinner's theory.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss Skinner's instrumental or operant conditioning.
2. Define reinforcement and punishment
3. Write short notes on the following:
   (i) Continuous reinforcement
   (ii) Intermittent reinforcement
4. What are the contributions of Skinner's theory to the learners?

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UNIT 2 APPLICATIONS OF OPERANT CONDITIONING

CONTENTS

1.0 INTRODUCTION

In study unit 4, we discussed Skinner's operant conditioning theory of learning. You can now explain responses as operants. You can also describe schedules of reinforcement. You are now in a position to explain the implications of Skinner's theory for the management of classroom behaviour in particular and human behaviour generally. You are about to study an extensive dimension of the usefulness of Skinner's theory of learning. It is a very stimulating study unit you are about to begin. Let us look at what other content you should learn in this study unit as specified in the study unit objectives below.

2.0 OBJECTIVES

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

1. List aspects of human behaviour that operant conditioning affects.
2. Explain how one form of abnormal behaviour can be acquired through operant processes.
3. Describe how Skinnerian approaches can be applied to parenting and education.

3.0 MAIN CONTENT

3.1 Operant Conditioning in Everyday Life

Operant conditioning affects many aspects of human behaviour. We smile, help others, and go to work every morning because we are reinforced for these behaviours. Welfare payments (as in the United Kingdom, for instance) may reinforce some able-bodied adults for not working, and politicians shake thousands of hands and kiss babies because they are reinforced by the advantages of elective office. Operant conditioning can be responsible for the development of abnormal behaviours but can also be systematically used in very positive ways. Let us consider one theory of how psychology is used to modify a variety of behaviours, enhance the educational process, and develop new drugs. Now try to answer this quiz:

SELF-ASSESSMENT EXERCISE

List any four (4) behaviours for which **you** or anyone around was reinforced within the last one week:
i) ……
ii) ……
iii) ……
iv) ……

That's nice of you. Let us continue our discussion.

3.2 Learned Helplessness and Depression

Martin Seligman (1985) has shown how one form of abnormal behaviour, depression, can be acquired through operant processes. He delivered electric shock to two dogs simultaneously. The Group A dog could turn off the shock by pressing a button and thus had some control over the situation. The Group B dog received the same shocks as the Group A dog but had no control, it was helpless. Both groups were then moved to a shuttle box.

Each dog was placed in one compartment, where a signal was followed by shock. Group A dogs soon learned to jump the barrier when the signal sounded in order to avoid the shock, but Group B dogs did not. This raises a relevant question: Why? It was so because the Group B dogs had previously learned that they had no control over the shock thus did not try to make the avoidance response (Mineka & Hendersen, 1985). Seligman called this phenomenon **learned helplessness**. Other studies have demonstrated that lacking operant control over the

environment can produce helplessness in humans as well (Kofta & Sedek, 1989). The secretary who is repeatedly overruled by her boss when she tries to be more efficient and by her family when she tries to improve home life may eventually come to feel helpless more generally. Such learned helplessness can be a major factor in depression.

SELF-ASSESSMENT EXERCISE

Demonstrate you understand what we have discussed by listing any three (3) situations in which you lacked operant control over any/some situations/environments.

i) ……
……
ii) ……
……
iii ……
……

That's good effort on your part. Let us continue our discussion.

3.3 Modifying Human Behaviour

The intentional application of Skinnerian principles in an effort to alter human behaviour is called **behaviour modification**. Skinnerian approaches have been applied to parenting, education, therapy, and the development of new drugs.

Operant techniques can be helpful in correcting problem behaviour in children. Clinnard (1984) explains that problem behaviour is behaviour that digresses from what the majority approves of, or a variation of a normal behaviour. Gardner (1988) explains that in a child, any behaviour is generally viewed as what he does, how he relates to others, what he accomplishes, what he reports about his emotional experiences, how he approaches a learning task, how he performs in a competitive situation and how he uses covert cognitive behaviours to influence other behaviours. A problem behaviour is thus any consistent discrepancy between what is expected of a child in academic and social areas and what is done by him in these various areas.

Education at any level is expected to influence behaviour of those who experience it. This applies to primary school children and other school children. Igborghor (1981) writes that in the Nigerian school system, problem behaviours have been manifested in various forms and to varying levels of seriousness. These range from relatively simple problems of lateness to school and disobedience to more serious ones as

stealing, fighting, truancy, rioting and extreme damage to lives and property. Problem behaviours such as drug addiction, destructive tendency, aggressiveness, restlessness, cheating which are common among adolescents may affect their cognitive functioning.

In one study, frustrated parents whose children watched an average of 21 hours of TV per week agreed to a Skinnerian behavioural programme. The child received 20 tokens per week; each could be turned over to mummy or daddy in exchange for 30 minutes of TV viewing time. If the children watched no more than the 10 allotted hours, they received a gold token that could be exchanged for some special reinforcer, like a trip to an amusement park or a party for friends. The children cut their TV viewing time to 10 hours and kept it there over a period of 8 months after they stopped receiving the tokens (Wolfe et. al., 1984).

A second application of Skinnerian techniques has been **programmed instruction**. Developed by Skinner in 1954, it applies operant techniques to the teaching of various school subjects. One early device presented addition problems and allowed a child to type the answers on a keyboard. The machine reinforced correct responses by moving on to the next problem. Such reinforcement is immediate and accurate to a degree that can never be achieved by a teacher working with many children at once. It is important for you to note that current computer based instructional systems are the modern products of Skinner's genius.

Skinnerian approaches have also been applied to the modification of abnormal behaviour. Hospitalized mental patients suffering from such serious disorders as schizophrenia typically have few of the social skills needed to obtain reinforcement in the world outside the institution. Behavioural programmes called token economies teach them social skills through operant techniques specific behaviours (for example, keeping a neat room and going to meals on time) are identified as appropriate reinforcers (for example, candy, movie attendance, and TV privileges) are determined. When patients perform the desired behaviours, they receive tokens, such as poker chips, that can later be exchanged for the reinforcers they want.

3.4 Testing New Drugs

Before a new drug becomes available, we need some way to be certain that it is safe and effective. Operant techniques can be used to teach an animal a new behaviour. A drug is then administered to see how it affects the behaviour. The effects of new tranquilizers and of

antipsychotic drugs – those that reduce the symptoms of psychotic patients – have been evaluated in this way (Burke et. al., 1994; Wiley et. al., 1994).

Similarly, the effects of withdrawal from narcotics have been assessed (Higgins & Sellers, 1994), as has the interaction between narcotics and the antidepressant drugs were used to treat clinical depression (Kovera,1994).
Finally, Skinnerian techniques have been applied to show that cocaine decreases response rates and reduces the consistency of behaviour (Haaren, 1994)

4.0 CONCLUSION

In this study unit, you have learnt the application of operant conditioning theory of learning in everyday life. You should also have learned about learned helplessness and depression. In addition, you have learnt how human behaviour could be modified as well as the process of testing new drugs.

5.0 SUMMARY

i. What you have learnt in this study unit concerns operant conditioning in everyday life.
ii. You have also learnt; learned helplessness and depression.
iii. In addition, you have learnt how human behaviour could be modified.
iv. Finally, you have learnt the process of testing new drugs.

6.0 TUTOR-MARKED ASSIGNMENT

1. (a) Explain the concept of behaviour modification.
(b) What do you understand by programmed instruction?

2. Briefly describe the application of operant conditioning in the testing of new drugs.

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UNIT 3 DISTINCTION BETWEEN CLASSICAL CONDITIONING AND OPERANT CONDITIONING

CONTENTS

1.0 INTRODUCTION

From the work done in the previous units, you can discuss what classical conditioning and operant conditioning are all about. In this unit, you will get to know about the differences that exist between the two types of conditioning. You will get to know about the key terms and concepts in the two theories of learning.

2.0 OBJECTIVES

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

- list the differences between classical and operant conditioning
- explain the following terms:
    (i) Discrimination
    (ii) Extinction
    (iii) Generalization
    (iv) Conditioned Stimulus

3.0 MAIN CONTENT

3.1 Distinction between Classical Conditioning and Operant Conditioning

In classical conditioning, the organism is passive. It must wait for something to happen before it can respond. The behaviour cannot be emitted in the absence of a cause e.g. the dog waits for food to arrive

before salivating while in operant conditioning, the organism is active. Operant behaviour is initiated on his own without a stimulus by the organism. In other words, much emphasis is placed on the response rather than the stimulus causing the response. For example, accidental pressing of the lever by the rat.

In classical conditioning, reinforcement comes first, whereas in operant conditioning, reinforcement comes after appropriate response is made. Classical conditioning involves the pairing of unconditioned stimulus (food) and conditioned stimulus (bell) while in operant conditioning, there is no pairing.

Classical conditioning is stimulus-oriented while operant conditioning is response-oriented.

Operant conditioning is more flexible than classical conditioning because responses that may be conditioned are not confined to natural or innate responses but to a variety of responses.

In operant conditioning, the association is between the emitted behaviour and the reinforcement upon which the behaviour is contingent while the association is between a stimulus and elicited response in classical conditioning.

In classical conditioning, the essence of learning is stimulus substitution whereas in operant conditioning, the essence of learning is behaviour modification.

SELF-ASSESSMENT EXERCISE

In your own words, list three differences between classical conditioning and operant conditioning.

3.3 Key Terms and Concepts in Classical Conditioning and Operant Conditioning

Terms	Definitions
Conditional Stimulus	Stimulus that acquired the ability to produce the response because it was paired with the unconditioned stimulus
Conditioned response	Response that is similar to unconditioned response (UCR) but is produced by the conditioned stimulus
Discrimination	The ability to differentiate between similar stimuli. In other words, it is the process by which we learn not to respond to similar

	stimuli in the same way
Extinction	The disappearance of a response due to the removal of the reinforcer that maintained the response. In other words, it is a process by which conditioned responses are lost.
Generalisation	Responding in the same way to two different stimuli
Unconditioned response (UCR)	Unlearned or inborn reaction to the unconditioned stimulus
Unconditioned stimulus	Stimulus that can produce response without any learning
Classical conditioning	Type of learning in which neutral (conditioned) stimulus gradually gains the ability to elicit a response because of its pairing with a natural (unconditioned) stimulus.
Operant conditioning	Form of learning in which the consequences of behaviour lead to changes in the probability that the behaviour will occur
Spontaneous recovery	The reappearance of an apparently extinguished conditioned response (CR) after an interval when conditioned stimulus is presented again.

SELF-ASSESSMENT EXERCISE

With examples, explain the following terms:
i. Generalization
ii. Extinction
iii. Discrimination

4.0 CONCLUSION

Although classical conditioning and operant conditioning are classified and included in the category of conditioning, there still exist some differences between them. For both theories, learning is the acquisition of new behaviour through conditioning.

5.0 SUMMARY

In this unit, you learnt about the distinction between classical conditioning and operant conditioning. You also learnt about the key terms and concepts in the two types of conditioning.

6.0 TUTOR-MARKED ASSIGNMENT

1. List the differences between classical conditioning and operant conditioning
2. Write short notes on the following:
   (i) Discrimination
   (ii) Extinction
   (iii) Generalization
   (iv) Conditioned Stimulus

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UNIT 4 GESTALT THEORY OF LEARNING

CONTENTS

1.0 INTRODUCTION

In study unit 4 of Module I, we discussed Pavlov's classical conditioning theory of learning. You can also explain Pavlov's altered experiment. You are now well positioned to identify the differences between classical conditioning and operant conditioning theories of learning. You are about to study another stimulating theory of learning known as Insightful or Cognitive learning theory. This theory is in contrast with the stimulus – response learning which places emphasis on piecemeal learning. Gestalt theory states that learning must be seen as a whole where the learner organizes and understands what is learned. Let us examine what other content you should learn in this study unit as specified in the study unit objectives as stated hereunder.

2.0 OBJECTIVES

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

- discuss the Gestalt theory of learning.
- list main features of insightful learning.
- identify the weaknesses of Gestalt theory of learning.
- explain the implications of the theory for teaching - learning situations.

3.0 MAIN CONTENT

3.1 Kohler's Experiment

You no doubt have insights. For example, you are faced with a complex new concept, perhaps in a mathematic course, and decide that you will

never fully understand it. You put the course material away and come back to the problem hours later. After 10 minutes of renewed study, you suddenly say 'Aha!' as the concept becomes clear. This is insightful learning.

Helen Keller (1957:28) provides a classic example of insightful learning: 'Suddenly I felt a misty consciousness as of something forgotten….'

One of the most famous examples of human insight was that of chemist Frederick Kekule in 1865. Kekule had been trying to devise an overall theory of the structure of organic molecules. One afternoon, he was dozing before his fire and had a dream in which 'atoms gambolled' before his eyes, forming 'long rows, sometimes more closely fitted together; all turning and twisting in snakelike motion'. As the dream continued, Kekule noted that 'one of the snakes had seized hold of its own tail, and the form whirled mockingly before my eyes. As if by a flash of lightening, I awoke' (quoted in Rothenberg, 1979:395 - 396). In the vision of the snake biting its own tail, Kekule saw that important organic and compounds consist of closed rings of atoms. He had made a discovery fundamental to the understanding of organic chemistry.

The word 'gestalt' means a configuration, shape, or form. The Gestatltists - Wertheimer, Koffka, Kohler, Lamin, Combs and Snygg - reject learning as the formation of a bond between stimulus and response. They believe that learning occurs by insight: there is a sudden reorganisation of the person's field and he understands. These psychologists argue that since all events in nature occur within some field, it is the totality of the field, its properties and structure, that explains all events happening within the field. It is important for you to note that of all the experiments conducted by the Gestaltists, Kohler's seems most instructive and he is a basic reference in Gestaltists psychology. Let us therefore consider a relevant question: What was his theory about? You are anxious to know this. You would now. Let us continue our discussion.

Kohler's approach considers man's inner processes as a 'whole' instead of seeing them as tiny pieces like those of jigsaw puzzle. In addition, Kohler and his fellow Gestaltists assume that our perception of the whole world is of meaningful whole and that (this) is different from, and more than, an accumulation of sensations, images or ideas. The Gestaltists rejected the simple stimulus - response (S - R) connections as the explanation of behaviour. The concept of organisation between stimulus - response was introduced by the Gestaltists. It is important for you to note that this means we learn, not by associating bits of expressions but by forming new Gestaltists - by seeing new patterns and

by organising them into a meaningful whole in the total situation (Alhassan, 2000).

SELF-ASSESSMENT EXERCISE

Given our discussion, explain briefly what you have learnt in this study unit.

…….

Well done. Let us continue our discussion.

Essentially, Kohler placed a hungry chimpanzee in a cage. Outside the bars of the cage and just beyond its reach was a banana. The chimpanzee (later called Sultan) made a few futile attempts to each through the bars and gets the banana. Then the chimpanzee noticed a stick lying on the floor of the cage. Picking up the stick, the animal smoothly and without further hesitation reached out and took in the banana. A relevant question arises: How would you explain the problem - solving behaviour of Sultan? Let us continue our discussion.

Kohler's explanation was not Sultan had engaged in insightful learning, which is characterised by sudden resolution or action after a period study during which there is no action or apparent understanding.

How can insight learning be explained theoretically? A partial answer is that it appears to involve two stages. The first is a process of problem solving, a kind of mental trial and error, in which solutions are tried out and rejected without any actual behaviour being displayed. The second stage is storing the final solution in memory, where it is available for retrieval later.

Are cognitive processes the best explanation for conditioning and learning? Some psychologists clearly believe they are, but others are not convinced. They argue that the proposed cognitive processes cannot be directly observed and must be inferred. When cognitive psychologists do not fully understand how a conditioned association takes place, their critics argue, they propose constructs like expectancy, prediction, and cognitive maps to fill the gaps in understanding. The danger is that such constructs may be difficult to test empirically. This theoretical battle represents a scientifically healthy difference of opinion and promises to continue for many years to come.

Mukhejee (1978) reveals that Kohler explained this problem - solving behaviour by saying that 'insight' came to the chimpanzee when the problem was solved. Kohler argues that all problem solving depends

on insightful learning. Mukherjee (op. cit: 57) in analysing the chimpanzee's problem - solving behaviour states that:

a. There were several meaningful trials all of them being goal-oriented (directed);
b. There were several turning away from the goal;
c. There was a pause after sighting the stick lying in a different position from the chimpanzee and the banana; and
d. Then there was solution of the problem with the stick which was used as an extension of arm.

The writer further states that such learning can be transferred to new situations whereas there are many regressions in trial and error learning.

SELF-ASSESSMENT EXERCISE

Demonstrate you understand our discussion by listing any three (3) meaningful trials you made in the last 3 weeks towards the achievement of an objective or objectives.
i)
ii)
iii)

That's nice of you. Let us continue our discussion.

Kimble & Garmezy (1968) observes rather significantly that the chimpanzee had previously learnt to use implements (such as sticks) to draw to itself desirable objects. By implication, therefore, the insightful solutions to problems may be the result of long experience with the materials involved in any particular problem (situation).

Sperling (1979) writes that the chimpanzee seems to have combined a memory image of drawing a banana into the cage with a synthetic image madeup of a memory image of extending a rod out of the cage. Now consider this quiz: what are the features of insightful learning? Think about the answer to that question for 60 seconds. Now, let us continue our discussion.

Oladele (1989) sees the following as the main features of insightful learning:

i) Learning through insight depends upon the arrangement of the problem situation. Insight will come easily if the essentials for solution are arranged so that relationships can be perceived.
ii) Complex situations can only be tackled through insight - a higher form of learning than trial and error.

iii) Insight, like other learning, depends upon the capacity of the learner. Older children, for example, can learn things more easily than younger children.

3.2 Critical Assessment of Gestalt's Theory of Learning

While it may be said that insightful theory of learning concerns itself with higher and problem - solving skills, it does not explain forms of learning, for example, concept of learning. In addition, it is silent about the notion of transfer of learning and about why insights come to some individuals more quickly than others. Psychological evidence shows that more intelligent persons seem to handle insightful learning more readily than less intelligent individuals.

3.3 Implications for Practice

The teacher should realize the importance of instructional aids during teaching – learning activities, hence he/she should make use of teaching aids for a meaningful learning in the classroom

The teacher should be able to point out the inter relatedness of topics by linking previous experiences with the import of the present lesson

Learners should be given ample opportunities in mental exercises since learning is essentially a cognitive exercise.

Learner must be assisted to see the learning material as a whole and not as disjointed pieces. Doing so would enable learners to solve learning problems on their own.

Learning should essentially be made real using concrete materials and practical examples. Abstracts presentation of facts should be avoided. Teaching should progress from known to unknown, abstract to concrete etc

3.4 Gestalt Therapy

Gestalt therapy was developed by Frederick Perls (1967, 1969), who was trained in both psychoanalysis and Gestalt psychology. The latter emphasises that we act not on the basis of external reality but rather in accord with our perceptions of that reality. We actively organise the stimuli that make up the world into meaningful patterns or wholes (gestalts) that are based on our expectations and needs. These gestalts and perceptions more generally, are typically inaccurate even in normal people because we see the world as society teaches us to see it (Recker, 1993).

When perceptions become abnormally in accurate, they can lead to psychopathology. Accordingly, the emphasis in Gestalt therapy is on creating a whole person by increasing perceptual accuracy and unifying mind and body. The importance of immediate, individual experience is stressed, and the therapist works hard to keep the client focused on current experience (Polster & Polster, 1993).

4.0 CONCLUSION

In this study unit, you have learnt the Gestalt theory of learning as presented by Kohler in his experiment with Sultan, the Chimpanzee. You should also have learned the strength and weakness of Kohler's insightful theory of learning; and implications of the theory to the teaching - learning process in particular and situations in general.

5.0 SUMMARY

i. What you have learnt in this study unit concerns Kohler's insightful theory of learning.
ii. You have also learnt the strength and weakness of the insightful theory of learning.
iii. In addition, you have learnt the implications of the insightful theory of learning for educational practice.

6.0 TUTOR-MARKED ASSIGNMENT

Briefly explain three (3) main features of insightful theory of learning.

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UNIT 5 MOTIVATION

CONTENTS

1.0 INTRODUCTION

In the last unit, we were able to learn about Gestalt theory of learning and the main features of insightful learning. In this unit, we are going to learn about the driving force behind human behaviour known as motivation. We shall also discuss some theories of motivation.

2.0 OBJECTIVES

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

- explain the term motivation
- describe the two type of motivation
- list four instincts and their corresponding emotions according to Mc Dou-gall (1932)
- state why the theory of Instinct fell into disrepute.

3.0 MAIN CONTENT

3.1 Definition of Motivation

Motivation is defined as the eagerness and willingness to do something. It is the reason why an individual wants to do something. Motivation, therefore is the driving force behind human behavior. It involves the biological, emotional, social and cognitive forces that activate behavior.

Motivation is a general term for conditions that cause an individual to begin an activity and pursue it with vigour and persistence.

Motivation is the energizing and maintenance of goal- directed human behavior (Alhassan, 1983). In the opinion of Oladele (2005), motivation is a process by which the learner's internal energies are directed towards various goal objects in his/her environment.These energies or arousals push an individual in achieving his goals. Motives are the needs and desires the goal – directed behavior attempts to satisfy. Why do you eat when you feel hungry? Why are you reading this study unit? The brief answer to these questions is motivation.

3.2 Types of Motivation

There are two types of motivation namely Intrinsic motivation and Extrinsic motivation. The desire for food or sex arises from within us (intrinsic), while the yearning to obtain recognition or approval is influenced by the conditions in our environment (extrinsic).

Intrinsic Motivation refers to motivation that arises from within the individual.We are motivated intrinsically when we do something because we experience internal compelling force to do it. An example of an intrinsically motivated student is one who reads simply because he sees value in reading or one who solves Mathematics problems because he readily perceives that it is somehow to his advantage to do so.

Extrinsic Motivation refers to motivation that arises from source outside the individual. A student that is extrinsically motivated will execute an action in order to obtain some reward or avoid some sanctions. For example, a student who read hard for the examination did so because of the desire to obtain better grade.

SELF-ASSESSMENT EXERCISE

List any six (6) goal- directed behaviours you manifested in the last seven (7) days

i.----------
ii ----------
iii ----------
iv ----------
v ----------
vi ----------

That is nice of you. Let us continue our discussion.

3.3 Theories of Motivation

Theorists addressing motivational issues have faced three broad questions:

1) What are the major motive systems and how do they motivate behaviour?
2) How do these systems relate to each other?
3) What are the underlying psychological, environmental, and physiological causes of motivated behaviour and how do they interact?

Attempts to answer the above questions have resulted in a number of theories such as:

a) The theory of instinct;
b) Homeostasis theory of physiological needs;
c) Drive theory;
d) Theory of intrinsic motivation;
e) Theory of Achievement motivation;
f) Theory of motivated behaviour; and
g) Hierarchy of needs theory.

In this study unit, we shall discuss some of the above theories while others shall be discussed in the study units that follow:

SELF-ASSESSMENT EXERCISE

Having understood the meaning of motivation, which of the above listed theories would you list as capable of explaining why you enroll in the National Open University of Nigeria (NOUN) academic programme?

All right. Let us continue our discussion.

3.4 The Theory of Instinct

Some behaviours are driven by instincts - innate, biological motives that are expressed in a consistent way (Hadley, 1992; Tinbergen, 1989).

Nest building in birds is an innate behaviour pattern triggered by a combination of internal and external events. Instinct is considered to be a purposive, inherited, goal-seeking tendency (Alhassan, 2000).

Some theorists placed great emphasis upon one or two instincts, for example, Freud on the sex instinct, while others advanced lists of instincts. This theory implies that for every type of human behaviour manifestation, there was an underlying instinct and an accompanying emotion.

Mc Dougall (1932) listed various instincts and their corresponding emotions. Let us give examples:

Instincts	**Emotions**	**Instincts**	**Emotions**
Fight	Fear	Self-assertion	Positive self -feeling
Food seeking	Gusto	Self-abasement	Negative self-feeling
Curiosity	Wonder		
Pugnacity	Anger	Reproduction	Lust
Affiliation	Affection	Gregariousness	Companionship
Acquisition	Feeling of ownership	Repulsion	Disgust
Laughter	Amusement		
Appeal	Distress		

The analysis of instincts will reveal that instincts are natural urges or innate tendencies. They are therefore unlearned, independent of schooling and individual experiences. They are universal in the entire species, and usually aim at the safety and well-being and preservation of species. You should note that instincts are not ready at birth; they have their time for maturity and stimulation. Following Mc Dougall's lead, other psychologists added to the list of instincts, and some 14,000 instincts were invoked by various authors to explain the motivational bases for human behaviour (Atkinson, 1964).

It is important for you to note that the theories soon fell into disrepute because they could not explain the variability in human behaviour, which was clearly influenced by learning (Tolman, 1932). The so-called human instincts simply do not fit our definition of the term 'instinct'.

Note also that instinct theory more generally survives today in the form of ethnology, the study of the species - specific behaviours of animals (including humans) in their natural settings. The primary emphasis of ethnology is on the origins of behaviours in lower animals.

Ethnologists are interested in behaviour that is species specific meowing in cats, barking in dogs - and behaviour that occurs in fixed action patterns - behavioural sequences that occur in exactly the same way each time because they are hand-wired into the nervous system. Fixed action patterns are triggered by a releaser - specific stimulus that elicits the behaviour. Flight without a practice in some birds is an example.

Some ethnologists also point to fixed actions in human behaviour, such as the smile of very early infancy that occurs without learning. We shall discuss another theory of motivation in the next section of this study unit.

3.5 Homeostasis Theory of Physiological Needs

At this point in our discussion, there is a necessity to distinguish between needs and drives before attempting to expound on this theory. If a rat (in an experiment) that has been deprived of food for several hours is placed inside a box with several alleys leading to food, it will be active. A well-fed rat placed in the same maze may move about a little, but it will cover less ground than the hungry rat. After eating, the hungry rat will no longer be restless and if returned to its cage, it is likely to curl up and go to sleep. When the rat is hungry again, its activity cycle will begin again.

In the example discussed above, we refer to the food-deprived state as a state of need. The organism needs food, and when the rat has not eaten for a while, chemical changes in its blood indicate its need. The need for food is physiological but a state of physiological need has psychological consequences. We call the psychological consequences of a need a drive. Thus, the food need in the rat leads the rat through processes we call hunger drive that is the drives to look for food.

While need and drive are parallel, they are not the same. Drive does not necessarily get stronger as need gets stronger. A starved organism may be so weakened by its goal need that drive is weakened. Men who have fasted for a long time report that their hunger pangs (a subjective representation of hunger drive) come and go, but of course, their need for food persists.

The theory of homeostasis was propounded by Cannon (1932). What is homeostasis? Homeostasis is a state of equilibrium or stability that the body strives to sustain. Under the control of centers in the brain, homeostatic mechanisms maintain a variety of physiological balances. They ensure a constant internal body temperature of 98.6^0 even in very hot and very cold environments (Weisinger et. al, 1993). They also

maintain proper blood concentrations of oxygen, carbon dioxide, salt, sugar, and other substances (Boldyner, 1993; Stellar, 1993). Let us cite examples to make our discussion clearer.

We quench our thirst with a drink that makes us feel satisfied or contended. Our experience of various needs satisfied from childhood acquaints us with the learning of various primary goals, for example food, sex, water, and environmental pressures. It is important for you to note that this theory explains how needs generate primary drives (hunger, thirst, and so on) but does not explain how and why human beings are continually driven to seek more money, better job, and higher standards of living, and so on.

3.6 Drive Theory

One of the most widely used concepts in theories of motivation is drive. What is the meaning of drive? Do you have any idea? Let us continue. A drive is a condition of arousal or tension that motivates behaviour aimed at reducing that tension. Drive theories typically hypothesize that a set of physiological survival drives motivate behaviour. These include hunger, thirst, sleep, pain, and sex. Additional drives can be learned on the basis of these physiological drives.

Although the drive concept was introduced by Robert Woodworth (1918), it was Clark Hull (1943) who first used the term in a major theory of motivation and learning. In his drive reduction theory, he gave explanations on how the primary drives are transformed into secondary drives and how the primary goals eventually lead to the secondary goals. According to this theory, behaviour probability of response is determined by the product of two factors:

1) drive strength - motivational factors depending on the internal states and external incentives, for example, period of food deprivation; and
2) habit strength - habit built up through practice, learned mechanism, strength of the bond connecting the stimulus and response, for example, the number of times the response is reinforced, in the case of a hungry child, it is crying response which is being reinforced by food or milk.

Then by means of simple stimulus substitution and stimulus generalisation, a host of other stimuli is associated with the primary goal, for example, presence of mother, fetching food, and so on. If the child experiences frustration in trying to realise these primary goals, ‘conditioned fear’ or ‘anxiety’ in the child is generated. Anxiety is thus a secondary drive. As learning goes on, the organism wants to be free

from stress situations caused by anxiety. He therefore, generates secondary drives of acquisition or acquisitiveness, competitiveness, and so on to realise secondary goals of job, education, wealth, home, and so on. It is important for you to note that the drive theory has been more acceptable to psychologists since the conditions that produce drive and the definition of the particular drive state are more susceptible to accurate measurement.

It is also important for you to note that individuals learn to progress towards secondary goals, but the drive theory does not explain a number of other details in human motivation. For instance, why does one individual manifest more motivation than another when both are aspiring for the same goal, say education? How can motivation be increased by controlling the stimulus situation confronting them? Why are certain activities self-motivating?

SELF-ASSESSMENT EXERCISE

1.(a) From your understanding of our discussion, briefly explain what a drive is

---

(b) Why do you think anxiety is a secondary drive?

4.0 CONCLUSION

In this unit, you have learnt that motivation is the motive, the urge or the need for engaging in a particular task. It is the driving force behind human behavior.

5.0 SUMMARY

i. You have learnt the meaning of the term motivation and types of motivation
ii. In addition, you have learnt the theories of instincts and homeostasis of physiological needs.
iii Finally, you have learnt about the drive theory.

6.0 TUTOR–MARKED ASSIGNMENT

1. Briefly explain the term motivation.
2. Describe the two type of motivation you know
3. List four (4) instincts and their corresponding emotions according to Mc Dougall (1932)
4. State why the theory of instinct fell into disrepute.

7.0 REFERENCES/FURTHER READING

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MODULE 3

Unit 1 Additional Theories of Motivation
Unit 2 Critique of Maslow's Hierarchy of Needs
Unit 3 Observational Learning
Unit 4 Transfer of Learning
Unit 5 Remembering and Forgetting

UNIT 1 ADDITIONAL THEORIES OF MOTIVATION

CONTENTS

1.0 INTRODUCTION

In the last unit, we discussed some theories of motivation such as the theory of instinct, homeostasis theory of physiological needs and the drive theory. You are about to study other theories of motivation so as to enhance your level of understanding of human behavior.

2.0 OBJECTIVES

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

- distinguish between achievement motivation and motivated behavior
- describe Maslow's hierarchy of needs
- state how flexible the hierarchy of needs is.

3.0 MAIN CONTENT

3.1 Theory of Achievement Motivation

Consider the cases of two young business executives, Tata and Sapa. Tata arrives at work promptly at 8.00 a.m. and seldom leaves before

4.00 p.m., always taking a loaded briefcase home with him. He works at least one day each weekend, always arrives at meetings on time, and often completes assigned work early. Sapa works the minimum hours from 9 to 4 and takes long lunches. He is often late for meetings and frequently requests extensions to complete assignments. David Mc Clelland might suggest that the principal difference between these two people is in their levels of achievement motivation or need for achievement. A uniquely human drive, achievement motivation is a striving to overcome challenges, improve oneself, attain excellence, and accomplish more than others.

Mc Clelland and his associates hypothesise that achievement motivation is an important determinant of goal attainment. So important did Mc Clelland believe achievement motivation to be that he developed an entire theory of this motive based in part on the earlier work of Henry Murray (1938). Mc Clelland's theory views achievement motivation as a learned motive. There is considerable support for his hypothesis that people differ greatly in need for achievement and that these differences are reflected in a variety of behaviours (Elliot, 1994; Rebeta, 1993).

Moreover, the levels of achievement motivation that characterise a society have considerable impact on its technological and economic growth and on the overall success of that society as a culture (Mc Clelland, 1961). One member of the original Mc Clelland group, John Atkinson, went on to develop a more detailed theory of achievement motivation.

In support of Hunt's theory, Atkinson (1978) came up with his model of achievement motivation. He identifies two factors that determine the will of the individual to achieve, that is factors that intrinsically motivate the individual to engage in an activity. These are:

a. probability of success (PS); and
b. incentive to success (IS).

To make our discussion clearer, let us cite an example: if we are faced with a problematic task or situation we ask ourselves; what is the probability that I will succeed in the task? Theoretically, PS and IS are inversely related, that is, if the probability of success is low then the task involved must carry with it a high incentive and vice versa. For instance, in any society, a profession demanding a lot of expertise of a very high degree is usually well paid, that is they carry with them a very high incentive, and therefore the motivation to succeed in this profession is very high.

Atkinson suggests that there are some people who are success oriented, and there are some who have high degrees of anxiety about failure.

Results from experiments he conducted reveal that success-oriented people tend to set personal goals of intermediate difficulty or middle level difficulty (they have a fifty - fifty chance of success). Anxiety - ridden people tend to set personal goals that are either too high or too low. If these anxiety - ridden people will fail on the hard task, no one can blame them, and they are sure to succeed on the easy task. It is obvious therefore that there is a strong need in the individual to avoid failure especially if they experience repeated frustrations because of failure. This must be taken into account in arranging learning experiences. Atkinson, like Hunt, suggests that the individual is motivated to achieve when the task is presented at half-way level of difficulty, that is, there is enough degree of probability that they will succeed and that there is a corresponding degree of incentive attached to it.

In the classroom, when the lesson is too easy, the children will get bored and restless, and when the lesson is too difficult, they will feel frustrated and disinterested. The optimal level of difficulty, therefore, should be half way between the extremes of ease and difficulty for all the children to exhibit their maximum tendency to achieve success in their learning undertaking

SELF-ASSESSEMENT EXERCISE

1. Given our discussion, list three (3) things for which you have a strong need to achieve:

i) …….
ii) …….
iii) …….

Well done. Let us continue our discussion.

3.2 Bruner's Model of Motivated Behaviour

Relevant to the theory of intrinsic motivation is Bruner's (1966) model explaining motivated behaviour. He identifies three types of intrinsic motivation that may make a child willing to learn:

i) Curiosity: Bruner believes that we come into the world equipped with a curiosity drive. He feels that curiosity drive is of biological relevance, that is, curiosity is necessary to the survival of the species. Bruner suggests that young children are two often curious, that they are unable to stick with anyone activity. Their curiosity leads them to turn from one activity to another in rapid succession, and it must therefore be channeled into a more powerful intellectual pursuit.

ii) **Drive to achieve competence:** Children become interested in what they are good at, and it is virtually impossible to motivate them to engage in activities in which they have no degree of competence.

iii) **Reciprocity:** Involves a need to work with others cooperatively, and Bruner believes that society itself developed as a result of this basic motivation.

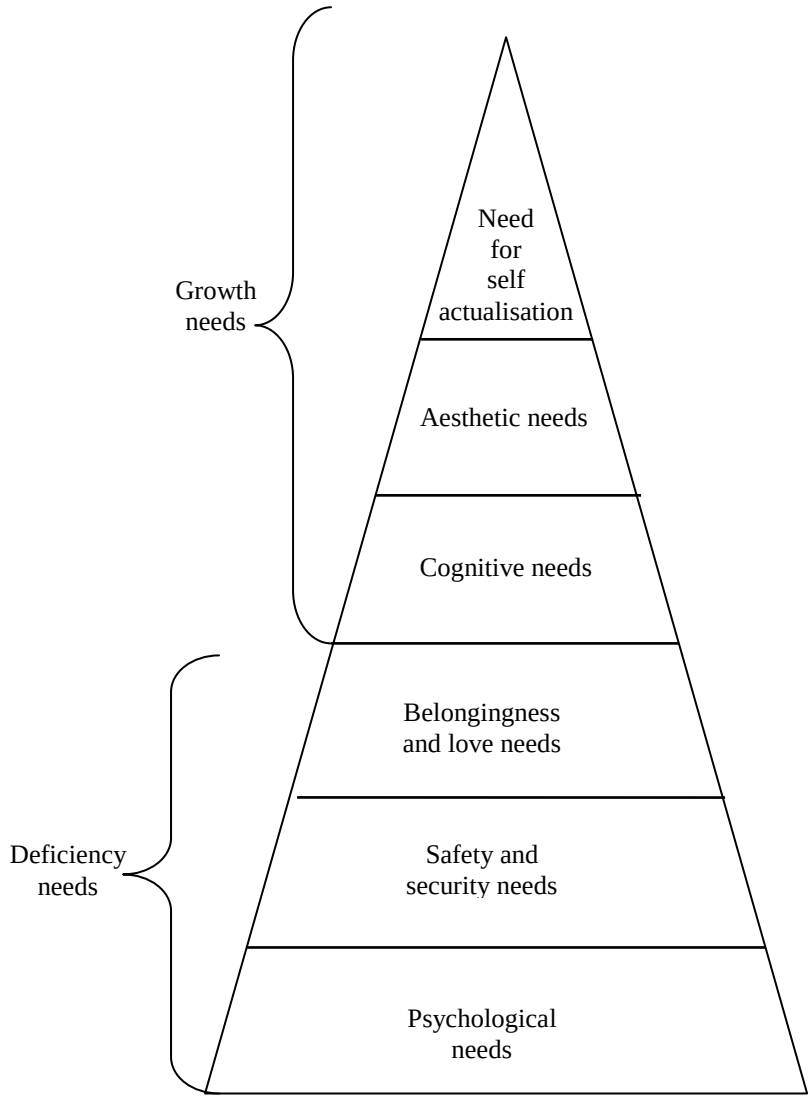
3.3 Maslow's Hierarchy of Needs

The instinct, drive, intrinsic motivation, achievement motivation and model of motivated behaviour theories all assume that humans are motivated in the same ways as lower animals. Abraham Maslow's theorised that some motivational forces are distinctly human. In promoting this idea, Malsow became one of the founding fathers of the Humanistic school of psychology, which emphasises that humans are unique in the animal kingdom.

The humanistic view suggests that human beings are unique in the animal kingdom; they are not merely the organisms standing on the highest rung of the evolutionary ladder. Humans are uniquely capable of having a self-concept, a perception of their own characteristics. In addition, every individual is different, and this individuality is a central determinant of human behaviour.

Behaviour is controlled not so much by the external environment as by the subjective environment created by the individual's biased perceptions of what is going on around her. Each individual experiences the world a bit differently, and it is this subjective, individualised world that influences behaviour. Biology has a role, in that each person is endowed with biological motivations that greatly affect behaviour.

Figure I: Maslow's Hierarchy of Needs. Human needs are arranged in a hierarchy. Basic needs must be satisfied before higher needs are fulfilled (Maslow, 1970).



Maslow hypothesised that human behaviour is motivated by a number of competing needs that can be arranged in a hierarchy. It is important for you to note that this need hierarchy is a systematic listing of needs in priority order, such that needs further up the hierarchy can be met only after more basic needs have been satisfied. The more basic needs are deficiency needs - needs that must be satisfied for survival. The needs at the very top are growth needs - needs that enhance the person's psychological functioning (see Figure I). Let us now explain in more detail the six basic needs:

1) Physiological needs

At the lowest level of the hierarchy are physiological needs such as hunger, sex, maternal behaviour, and various sensory pleasures (that is of the senses, for example taste). These needs are of remarkable importance essentially because they are the most prepotent of all man's needs and, if unsatisfied, dominate all activity.

2) Safety needs

These are almost as dominating as the physiological needs. These are illustrated by a child's reaction to noise and light, and generally reflect man's need for a safe, orderly predictable world. It includes the need for shelter, clothing, and freedom from fear of personal danger, many parents in Nigeria satisfy the safety need for children. A substantial percentage of parents do not. This generates a severe obligation for other agencies of society particularly the school. Today in Nigeria, both child and adult safety needs are often threatened by societal violence, avoidable communal violence, and state-of-the-art armed robbery incidence.

3) Belongingness and love needs

Travers (1986:206) writes that if the physiological and safety needs are met, the need for love, affection, and belongingness emerges. The individual begins to look to others for satisfaction, both to give and to receive. The educational implications of this need seem obvious: children must feel wanted and experience a sense of affection toward and from the teacher. Remember that children need and want discipline as much as they require love and affection.

4) Esteem needs

These are the needs of being worthwhile and capable of making a contribution to society. Real self-respect is based upon achievement, and the esteem needs founded upon actual achievement, manifest themselves in a feeling of self-confidence and a corresponding desire for recognition by others. Self-esteem is the need to maintain a perception of oneself as a generally competent, strong, independent person. The need for other esteem is the desire to have a good reputation and to obtain recognition and status. Failure to satisfy the esteem needs is likely to lead to feelings of incompetence, helplessness, and inferiority. It is important for you to note that the lesson for educators seems obvious: Teachers must insure that the task are such that pupils/students can satisfactorily complete them, thus insuring goal achievement and a growing confidence in self and recognition by peers.

5) Aesthetic needs

When all the deficiency needs are regularly satisfied, the growth needs, including the cognitive needs for understanding and knowledge, and the aesthetic needs for order and beauty, become dominant motivators. The aesthetic needs are the needs in which one finally comes to a deep understanding of the world and the purpose of life and feel a part of the cosmos. Satisfaction of these needs moves the individual to a higher state of psychological functioning and makes him a more effective person.

6) Self-actualisation needs

The very highest need - the capstone of Maslow's hierarchy - is the need for self-actualisation. It is each individual's need to advise all higher capacities, fulfill his/her potentials, and become the best in which one enjoys the experience of creativity and the joy of personal success.

The self-actualising person referred to by Maslow as the fully human person, is constantly striving to achieve higher and higher levels of personal growth. He/she is non-defensive, open to experience, spontaneous, problem-oriented, and largely autonomous from the environment (Mittelman, 1995). Maslow (1970) believed that a person's position on the hierarchy is likely to rise with age, but estimated that less than 1 percent of the population ever achieve self-actualisation. Travers (1986) similarly states that probably few, if any, people ever experience self-actualisation but it is undoubtedly this need that drives man to his greatest accomplishments, both personally and socially.

SELF-ASSESSEMENT EXERCISE

1) Take a close, critical look at the Nigerian society. Do we have self-actualised people (living or late) in Nigeria?

Let us continue our discussion.

3.3 Flexibility of the Hierarchy

It is important for you to note that there is nothing inflexible about the hierarchy. For instance, for some people, one need may assume much greater significance than another (the esteem need may be less important than the love need). For most people, partial need satisfaction is apparent. This is to say that we are never completely satisfied in our needs, such that as the individual determines that he has achieved sufficient satisfaction in one need, then another need emerges.

We need to achieve a better understanding of how these needs can be fulfilled in adolescents. Humanistic psychology, which assumes that people are basically good so long as their basic needs are met, has a better chance of doing so. Teachers and parents as well as others who would be helpful to teenagers should become more aware of the teachings of humanistic psychology.

Humanistic educators such as Sidney Simon (values clarification), Carl Rogers, Abraham Maslow, and Lawrence Kohlberg (states of moral development) presented teachers with a variety of techniques to clarify the values and develop the moral base of their students. You should note also that humanistic educators insisted that greater attention should be placed on developing the affective domain or emotions and feelings of a child, not just the cognitive domain, or intellect. Thus, the emotions, the intellect, and the psychomotor - all need attention.

4.0 CONCLUSION

In this study unit, you have learnt about the theory of achievement motivation and Bruner's model of motivated behaviour. You should also have learned the hierarchy of needs as propounded by Maslow. In addition, you should have learned the flexibility of the hierarchy of needs.

5.0 SUMMARY

i. In this study unit ,you have learnt about the Bruner's model of motivated behaviour
ii. You have also learnt the theory of Maslow's Hierarchy of needs and their educational implications.
iii. In addition, you have learnt flexibility of the hierarchy of needs.

6.0 TUTOR-MARKED ASSIGNMENT

1. Given our discussion, would you say Maslow's hierarchy of needs is rigid? Support your answer with a brief explanation.

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UNIT 2 CRITIQUE OF MASLOW'S HIERARCHY OF NEEDS

CONTENTS

1.0 INTRODUCTION

In study unit 5 of Module II, we discussed how interest in learning could be sustained. You can also explain Maslow's hierarchy of needs. In addition, you should also be able to state the flexible nature of the hierarchy of needs. You are about to commence the study of a unit that you would find refreshing. Let us examine what other content you should learn in this study unit as specified in the study unit objectives as stated below.

2.0 OBJECTIVES

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

- explain the strength and weakness of Maslow's theory of hierarchy of needs.
- describe cognitive theory of motivation.
- discuss how perception motivates behaviour.

3.0 MAIN CONTENT

3.1 Critique of Hierarchy of Needs

A point you must note is that Maslow's theory has been very influential both in practical applications and in generating research (Ebersole & De-vore, 1995). In the world of business, it has provided a way of understanding what motivates employees and has been used as a tool to reduce turnover, increase productivity, and improve job satisfaction (Aamodt et. al. 1993). Maslow's need theory suggests that management

should work to gradually move each employee up the motivational hierarchy toward self-actualisation - the full realisation of an individual's potential.

In addition, applications in education, nursing, consumer economics, management training, and elder care are also common (Daniels, 1992; Seeley, 1992; Umoren, 1992).

It is important for you to note that research support, on the other hand, has been hard to come by. Complex constructs like self-actualisation are difficult to define and measure, and what supportive research there is has been widely crticised (Heylighen, 1992).

Equally as important is the repeated failure to confirm the priority ordering of the need hierarchy (Wicken et al, 1993). When subjects are asked to rank the needs in order of importance for them, the rankings typically do not conform to Maslow's hierarchy (Mills, 1985). Enduring satisfaction of physiological and security needs does not necessarily mean the person will go on to seek belongingness and love. In other cases, those needs may be pursued even in the face of chronic hunger.

Now try this quiz:

SELF-ASSESSMENT EXERCISE

1. Given our discussion so far and your own personal experience list out the hierarchy of needs according to your priority:

That's okay. Let us continue our discussion.

Moreover, the age hypothesis has not been confirmed: Position on the need hierarchy does not consistently increase with age (Goebel & Brown, 1981). All the same, it is important for you to remember that Maslow's theory has been influential and is widely applied in practical settings but has not been supported by research.

Piaget's theory holds that intelligence is part of the biological adaptation of the human being to the world. Through the process of assimilation and accommodation, learners acquire and modify their cognitive structures. These cognitive structures organise learner's experiences and make them meaningful.

Piaget viewed humans as biological organisms who must develop means of fitting into their environment in order to survive. Intelligence is a particular instance of biological adaptation and achievement which allows the individual to interact effectively with the environment (Glover et. al 1982).

The cognitive theory sees an organism as inherently active, and acting on its environment rather than merely reacting to it. The organism is ultimately involved in the construction and definition of its environment.

3.2 Cognitive Theory

Cognitive theories of motivation emphasise the role of thought processes in initiating, maintaining, and guiding behaviour. We use active, conscious, decision-making processes to determine both our goals and the means by which we achieve them. In short, thought motivates action (Fodo, 1994). Let us cite an example. When the scale says you are 10 kilograms overweight, you think about the consequences and decide to go on a diet.

The above are the cognitive processes, and your weight loss is thus motivated by your cognitions. It is important for you to note that in this theory, perception is a motivator and there is an important difference between extrinsic and intrinsic motivators.

The next section of this study unit discusses how perception motivates behaviour.

3.3 Perception Motivates Behaviour

In cognitive theories, certain kinds of thought processes can be motivational. Theorist Bernard Weiner (1980) focuses on the role of perception, or cognitive interpretation, in behaviour. Action is motivated by the person's perception of causality - of what is causing outcomes to occur. Weiner hypothesises three major dimensions of perceived causality, which he calls locus, stability and controllability.

The locus of perceived causality may be either inside or outside the person. When you perceive an internal locus, you see yourself as causing success or failure. If you failed a test, for example, you might conclude that you didn't study hard. When you perceive an external locus, you attribute the success or failure to forces outside yourself. You might blame your test failure on the instructor's poor instructional approach/style.

SELF-ASSESSMENT EXERCISE

1. In your years of schooling, have you ever failed to test/exam? If so, what would you say was responsible for that situation?
   If not, what would you say was responsible for that situation?

That's interesting. Let us continue our discussion.

The second dimension, stability, refers to your perception of the consistency of the phenomenon in question. If you always do poorly on exams of this type, you might perceive such failure as a stable characteristic in your life. But if such failure is unusual, you are likely to see it as an unstable characteristic.

Controllability is your perception of the extent to which you can influence the outcome of the situation. You may feel that you can do better on your next exam by studying harder (controllable outcome) or that nothing you can do will improve your performance (uncontrollable outcome).

But how do these cognitive dimensions affect motivation? You shall soon know this.

These three cognitive dimensions affect motivation in a number of ways. Locus affects your self-esteem, which may be increased or decreased. Your perception of stability determines the extent to recur in the future. And your concept of controllability can affect your perceptions of other people.

If you feel that others are in control of a situation, you will like them more if the outcome is positive than if it is negative. Some studies have confirmed the utility of Weiner's theory in understanding motivation and associated achievement (Prussia et. al. 1993).

It is to be noted that Weiner's cognitive theory of motivation is related to a broader social psychological theory called attribution theory, which deals with the perception of causal relationships in social situations.

Attribution theory came into being in 1958, when Fritz Heider hypothesised that the perception of both social and non-social events involves an ongoing quest for meaningful explanations of the causes of these events. He distinguished between dispositional and situational attributions and suggested that although some attributions are largely based on logical analyses of events, others may reflect the person's psychological needs, expectations, and motivations.

3.4 Evolutionary Theory

From the evolutionary perspectives, motives are seen as mechanisms that have evolved to ensure the survival and reproduction of the species. As with other evolved features, the motivational systems of current humans are those that best permitted our ancestors to adapt to their environments.

The adaptive value of such physiological motives as hunger, thirst, pain, and sex is easy to see. All are required for the survival of either the individual or the species, and survival is basic to Darwinian theory. Psychological feelings of hunger and thirst arise from bodily mechanisms triggered by the deprivation of substances basic to life itself. They cause behaviour that acts to replenish these essential survival resources, whether it be hunting in the forest or driving to Mr. Biggs.

Pain is also essential because it protects the body. The feeling, or even the possibility, of pain is again triggered by specific, evolved mechanisms and causes action to remove the source of pain. You reflexively withdraw your hand from the hot stove and actively avoid the bee that might sting you. Without the pain drive, the body would be much more vulnerable to injury and death. The sex drive deals with the survival of the species through reproduction. More complex social motive systems also represent adaptations that solved specific environmental problems over the course of evolutionary history (Thornhill, 1992). Let us consider the example of the affiliation motive - the need to seek out and interact with other people. The evolutionary perspective hypothesises that this nearly universal human motive arose because our ancestors found the company and help of others to be essential to survival. Mutual protection from predators, aid in times of illness, and help in obtaining food may all have been basic to the development of the affiliation motive.

4.0 CONCLUSION

In this study unit, you have learnt the strength and weakness of hierarchy of needs. You should also have learned the cognitive theory of motivation. In addition, you should have learned how perception motivates behaviour.

5.0 SUMMARY

i. What you have learnt in this study unit concerns the strength and weakness of the hierarchy of needs.
ii. You have also learnt cognitive theory of motivation.
iii. In addition, you have learnt how perception motivates behaviour.

6.0 TUTOR-MARKED ASSIGNMENT

Briefly explain three (3) strengths and two (2) weaknesses of Maslow's hierarchy of needs.

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UNIT 2 OBSERVATIONAL LEARNING

CONTENTS

1.0 INTRODUCTION

In study unit 2 of Module III, we explained the strength and weakness of Maslow's theory of hierarchy of needs. You can also describe the cognitive theory of motivation. In addition, you should also be able to discuss how perception motivates behaviour. You are about to study a unit that is stimulating and relevant. Let us examine what other content you should learn in this study unit as specified in the study unit objectives as stated below.

2.0 OBJECTIVES

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

- explain Bandura's theory of observational learning.
- identify the four basic processes.
- describe the role of reinforcement.

3.0 MAIN CONTENT

3.1 Bandura's Observational Learning

Have you ever fired a pistol? If not, if you were called upon to do so, you probably would know how to hold it, aim it, and pull the trigger. That's because you have often seen guns being fired in movies and on television. In the same way, you acquire a large repertoire of social and other behavioural abilities by seeing your parents and others perform these behaviours as you grow up. You are engaging in a cognitive learning process that theorist Albert Bandura (1965:1992) calls observational learning. Note that observation takes place when the

ability to perform a behaviour is acquired or modified by observing others. Those performing the behaviour and being observed are called models.

In a classic study of observational learning, Bandura (1965) showed young boys and girls a short film depicting an adult model behaving aggressively toward a Bobo doll, an inflated toy that bounces back whenever it is knocked down.

Social Learning The Bobo Doll experiment, showing the model beating up the doll in the film the children watched and then the children imitating the model's behaviour (Banduna, 1965)

After the film, the children were taken to a room containing a number of toys, including a Bobo doll. Results showed that the children tended to reproduce the model's aggressive behaviour toward the doll rather than engage in other types of behaviour.

It is important for you to note that a control group of children who did not see the Bobo doll film did not display the modeled behaviour toward the toy. The behaviour of the children in the experimental group could not readily be accounted for by operant conditioning principles, since they had not been reinforced for playing with the Bobo doll. The modeled behaviour had been learned by observation alone. Let us ask a relevant and timely question: What would happen if the children saw the model actually being rewarded for her aggressive behaviour? A second Bandura study answers that question: Modeling aggression increases aggressive behaviour, and rewarding the model increases it even more. (After Bandura, Ross & Ross, 1963). Alhassan (2000) also states that after viewing actual television shows depicting realistic violence, children are more willing to hurt another child than after watching non-aggressive shows.

Individuals often acquire new forms of aggression through exposure to the actions of other persons. Specifically, individuals frequently seem to learn new ways of harming others through exposure to the actions of parents, friends, actors in movies or characters in TV shows. Informal evidence for the occurrence of such effects among adults is available from several different sources. For example, it is often the case that movies which depict or describe unusual violent crimes are followed by a wave of similar events around the nation, particularly in urban centres and large towns. In such instances, viewers seem to acquire new forms of attacking others, and also learn that it is possible to 'get away' with such actions.

Evidence for the occurrence of destructive modeling has been obtained in many other experiments in which adult subjects exposed to live (Baron, 1974a) or filmed aggressive models (Geen and Stonner, 1973) have been observed to demonstrate higher levels of aggression than subjects not exposed to such models. If adults can be influenced in this manner by exposure to the aggressive actions of others, it might be expected that children, with their weaker sense of morality and lack of sophistication, would be affected to an even greater degree.

More recent research has gone even further, suggesting that after viewing actual television shows depicting realistic violence, children are more willing to hurt another child than after watching non-aggressive shows (Liekert & Schewartzberg, 1987). We can conclude that the high level of violence prevailing in many popular television shows has adverse effects upon the persons who view them, though not all experimental findings support this conclusion (Manning & Taylor, 1985). But the weight of existing evidence does seem to suggest that exposure to televised violence may weaken children's restraint against attacking or harming others.

Studies suggest that even lower animals learn by observation. Children that have observed chicken models pecking a key to obtain grain learn the response themselves more quickly than chickens that did not observed the model (Johnson, 1986). In the sections that follows in this study unit, we shall discuss the basic processes involved in observational learning, the role of reinforcement, and applications of Bandura's approach to the understanding of social behaviour. But before that, try your hand on this quiz:

SELF-ASSESSMENT EXERCISE

1. From your understanding of our discussion, what type of movies and television programmes would you recommend for children and adolescents in your community or neighbourhood? Briefly explain your response.

That's nice of you. Let us continue our discussion.

3.2 Four Basic Processes

Bandura (1965) explains instances of observational learning as involving four basic processes:

i) Attention. You must attend to the model in order to learn by observation.

ii) Retention. If you are to later use what you have learned, you must store it in memory.

iii) Reproduction. You must be capable of reproducing the learned response. For instance, watching Bruce Lee or Chucks Norris expertly executing a series of Karate moves doesn't mean that you can reproduce them accurately.

iv) Motivation. You will reproduce observationally acquired behaviours only if you are motivated to do so. You need to have some expectation that making the response will be rewarding. Dada picked up and fired the gun because his friend offered to give him N1,000.00.

3.3 The Role of Reinforcement

It is important for you to note that observational learning can take place without reinforcement. In fact, Bandura emphasises that reinforcement seen as so essential in classical and operant conditioning theories is totally unnecessary in an observational learning. How then does learning occurs

Learning occurs by simply observing a model. The model performs the behaviour, you observe it and 'copy' it into your behavioural repertoire. You may display it immediately, as in the Bobo doll study, or not until many years later, as when someone invites you to fire a gun at a target range.

Although not necessarily for learning, reinforcement does have at least two functions in Bandura's approach:

1) First, it plays a role when the person actually performs the behaviour. Bandura suggests that an observed behaviour may be incorporated into an individual's repertoire but never actually be exhibited until reinforcement is available for that behaviour. Unfortunately, watching people or cartoon characters fire guns and beat each other up, activities that many children see everyday in violent TV programmes, may also lead to observational learning and perhaps later to violent behaviour when reinforcement is available.

2) The second role of reinforcement is to enhance the learning process. If, for example, the adult model is rewarded for a particular response, the child is more likely to learn that response rapidly than if the model is not rewarded or is actually punished.

4.0 CONCLUSION

In this study unit, Bandura's theory of observational learning was discussed and the four basic processes involved in observational learning were also discussed.

The role of reinforcement in observational learning was also explained.

5.0 SUMMARY

You were able to learn that in observational learning, learning occurs by simply observing a model.

6.0 TUTOR-MARKED ASSIGNMENT

1. List and explain the basic processes involved in observational learning.

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UNIT 4 TRANSFER OF LEARNING

CONTENTS

1.0 INTRODUCTION

In the previous units, you learnt about various theories of learning and their implication to classroom situation. The significance of education is to be able to use the knowledge acquired in a situation to solve a similar problem under different environment. In this unit, you are therefore going to learn how previously acquired knowledge can be used to solve problems in new situation.

2.0 OBJECTIVES

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

- explain transfer of learning
- discuss three theories of transfer of learning
- enumerate five classroom implications of transfer of learning.

3.0 MAIN CONTENT

3.1 Transfer of Learning

We learn so many things and perform many tasks in our life. Sometimes when we learn or perform a new task, we find that it has been influenced by some of our previous learning or training. The learning of addition and subtraction helps child in learning multiplication and division. Learning of mathematics helps in solving the numerical problems in physics and even in chemistry.

Similarly, if one has learnt to play tennis , one finds it easier to learn to play Badminton. In this way, learning in one situation influences our learning or performance in some other situation. This influence refers to the carry- over of learning from one task to another.

Transfer of learning can be described as the application of previously acquired knowledge or skills in the solving of problems in a new situation. In other words, when experiences which have been acquired in one learning situation can be used to solve problems in a new situation, we can say transfer of learning has taken place.

Transfer of learning is important in psychology of learning because of the following:

1) Most things we do are influenced by our earlier experiences.
2) School learning is based on the assumption that what is learnt in school will be transferred to life situations outside the school.

SELF-ASSESSMENT EXERCISE

As a teacher in making, why do you think transfer of learning is an important topic to be discussed?

3.2 Types of Transfer of Learning

There are three types of transfer of learning namely:
i) Positive Transfer
ii) Negative Transfer
iii) Zero Transfer

i) **Positive Transfer:** Transfer is said to be positive when something previously learned benefits performance or learning in a new situation. For instance learning addition will facilitate solution of multiplication.

ii) **Negative Transfer:** Transfer is said to be negative when something previously learnt hinders performance or learning in a new situation. For instance, a child that has learnt to pronounce BUT correctly now finds it difficult to pronounce PUT correctly.

iii) **Zero Transfer:** Transfer is zero when previous learning has no effect on the learning or performance of new learning. In other words, the initial learning has no effect on the subsequent or new task. For instance, learning how to cook has no effect on learning how to sing or drive.

SELF-ASSESSMENT EXERCISE

Describe positive and negative transfer of learning. Give at least three examples of each from your own experiences.

3.3 Theories of Transfer of Learning

a) Theory of Mental Faculties

This theory was propounded by the Greek Philosophers, notable among them was Aristotle. The basic tenet of the theory is that human mind is sub – divided into several faculties like memory, judgment, reasoning or thinking which are like the muscles of the body which can be strengthened by physical exercise. The essential requirement of the theory was to provide hard intellectual work to the learner to train his mental faculties. This theory had a great influence on the curriculum in the 19th century. Subjects like Mathematics, Latin and Greek were regarded as best subjects to train the various mental faculties of students.

b) Identical Elements Theory

Thorndike developed the theory of identical elements to explain how transfer of learning occurs. This theory assumes that elements presents in the original learning situation must also present in the new learning. The identical elements may be facts, methods or skills. After the student has mastered the additional facts, he can use them for other problems in which the same facts appear. After a student has mastered skill in using an index in one book, the skill can be transferred to other indexes that are organized in a similar way.

This theory therefore maintained that maximum transfer takes place when two activities have common factors and the total situation have important characteristics in common.

c) Theory of Generalization

The theory of generalization was developed by a psychologist named Charles Judd. The assumption of the theory is that when general principles are taught, they facilitate transfer rather than specific solutions to problems. According to him, one way of facilitating transfer is by teaching learners general principles rather than specific solutions. He was of the opinion that teaching should proceed from general to specifics. This theory believes in Gestalt, an assertion which views learning from a whole or complete form rather than in isolated form. For example, the theory of generalization indicates that a learnt experience should be useful in other day – to – day related activities.

SELF-ASSESSMENT EXERCISE

Out of these theories of transfer of learning that you have learnt , which one do you consider least satisfactory or most satisfactory? Give reasons for your choice.

3.4 Classroom Implications of Transfer of Learning

1) The extent of transfer in an academic subject depends on the teaching method. Teachers are teaching for transfer, this implies that almost every subject taught in the school has application to other situations. For instance .Latin can be taught so as to improve our knowledge of the English vocabulary. Equally, Religion is taught to improve our moral life. There is therefore the need for the teacher to emphasize the similarities or relationship that exist between one subject – matter and the other

2) The teacher should provide the opportunity for his/her students to practice a subject – matter being discussed along with him/her. When the learners are. allowed to take active part in teaching-learning activities, they will be able to repeat the task at another time.

3) The teacher should endeavor to develop positive attitudes towards a learning task so that the students can be motivated to like the task rather avoiding it.

4) The teacher should ensure that the topics in a subject are arranged sequentially, i.e. the easier topics will be taught before the harder ones.

5) The teacher should provide a variety of examples in his teaching. The example can be drawn from life experiences so that the students will be able to see the school as an integral part of the society. This will help them to apply what they learn in school to outside life.

4.0 CONCLUSION

In this unit, you have learnt that transfer of learning is an important aspect of teaching – learning since the ultimate goal of schooling is to help students to transfer what they have learnt in school to everyday settings of home, community and work place.

5.0 SUMMARY

This unit dealt with the definition of the transfer of learning, types and theories of transfer of learning. The classroom implications were also discussed.

6.0 TUTOR-MARKED ASSIGNMENT

1) What do you understand by transfer of learning?
2) Discuss three theories of transfer of learning that you know
3) Enumerate five classroom implications of transfer of learning.

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UNIT 5 REMEMBERING AND FORGETTING

CONTENTS

1.0 INTRODUCTION

In this unit, we are going to learn about memory, remembering and forgetting. This is because learning may turn into futile exercise if what is learnt is not utilized soon or later. For the material learnt to be used, it must remain in the mind stored up to for use when the need arises. The ability or power of the mind to store the past experiences of learning and utilize them at a later stage is known as ‘ Memory’. Without good memory, man will not be able to retain previous learning hence, the subject of remembering and forgetting is a general human problem.

2.0 OBJECTIVES

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

- define memory
- explain remembering and forgetting
- discuss the causes of forgetting
- discuss the classroom implication of remembering and forgetting

3.0 MAIN CONTENT

3.1 Memory

Memory is regarded as a special ability of the our mind to conserve or store what has been previously experienced or acquired through learning and then at some later stage to enable us make use of it in the

form of recall or recognition. In other words, memory is the ability to acquire and retain information and recall it when needed.
Memory is fundamental for remembering and forgetting. It is the life wire on which the study of remembering and forgetting rests. It is the ability of an organism to store information from earlier learning process and reproduce that information in answer to stimuli.

Types of Memory
The two common types of memory are Short -term and Long- term memory.

Short -Term Memory involves the retention of information for a little while before it is forgotten. It could be that the information was not well stored in the memory. The retention of short - term memory can be disturbed by other events that take place shortly after the learned materials. For instance, name of a person just met remains in STM only momentarily. Unless a conscious effort is made to pay proper attention to the name by transferring it to LTM, It is quickly lost. It could be due to lack of rehearsal, a result of emotional disturbance, lack of motivation etc.

Long- Term Memory is an aspect whereby the information stored is retained in the brain over a long period of time e.g. weeks, months etc. Such information gets to the short term memory first before getting to the long- term memory . Example is remembering our identifying data like our name, father's name, date of birth, date of marriage, etc,

SELF-ASSESSMENT EXERCISE

What is Memory? Distinguish between short term memory and long term memory.

3.2 Remembering

Remembering is the ability to recall, recognise or perform what has been learnt in the past. Remembering therefore is the ability to recall stored ideas or materials in the brain to the mind. It is clear that two things happen to what we learnt; we either remember it or forget it.

Types of Remembering

Remembering can occur in many forms:

Recollection
This is the form of remembering which involves recollection or re-establishment of earlier experiences on the basis of partial cues which

enable an individual to remember the whole information. Some textbooks refer to it as 'reproduction'. Recollection brings into fore old experiences on the basis of partial cues. For instance, looking at one's wedding ring reminds one of all that happened during the wedding ceremony.

Recall
This is a simple form of remembering that does not involve complex thinking or researching process. Recall is the ability of bringing back to memory old experiences formally learnt in the past in a manner that reflects the actual picture of those experiences. The attempt at recalling correctly determines one's retentive ability.

Recognition
Recognition is to recognize something, to acknowledge that it is familiar. We recognize the faces of people, paintings and patterns of physical arrangements which already have been registered in our memory. This therefore shows that our ability to recognize will depend on our past experience and how familiar that object is to us.

Relearning
This is to learn again what has been previously learnt. It is a situation where a previously learnt material can be re -learnt very easily and quickly. This is because it is easier for an individual to relearn material that was previously learnt and forgotten.

3.3 Forgetting

Forgetting is the failure to retain what has been acquired or learnt. If an individual fails to remember what he has learnt in the past, it means the individual has forgotten. Forgetting therefore means the failure at any time to recall an experience, when attempting to do so, or to perform an action previously learned. Forgetting is the opposite side of remembering and essentially a failure in the ability of reproducing.

Theories of Forgetting
There are many reasons why and how people forget what they have learnt. These are:

1) **The Trace Decay Theory:** According to many psychologists, time is the cause of much forgetting. What is learnt or experienced is forgotten with the lapse of time. The cause of such natural forgetting can be explained through a process known as decay of the memory trace. This theory assumes that learning results in neurological changes leaving certain types of memory traces in the brain. With the passage of time through disuse, these memory traces of learning impressions get weaker and

weaker and finally fades away. This means that the less we use or revise our previous learning, the quicker it will fade.

2) **The Interference Theory:** The second major theory of forgetting holds the mechanism of interference responsible for forgetting. Interference here refers to the influence of a previous task on learning a new one. This theory maintains that one may fail to remember a piece of information because other pieces of information are blocking or interfering with it. The interference effects of things previously learnt and retained in our memory with the things of our recent memory can work both ways, backward and forward . The psychological term used for these are two types of interference are retroactive inhibition and proactive inhibition.

   a) Retroactive inhibition :This is when the acquisition of new learning works backward to impair the retention of the previously learnt material. For instance, when a student spends the next half learning French and then, without pausing, and spends the next half hour learning Russian, he or she will find either the French he/she has learnt interferes with his/her ability to learn Russian or vice versa.

   b) Proactive inhibition : This is just the reverse of retroactive inhibition. Here the old learning or experience retained in the memory works forward to disrupt the memory of what we acquire or learn afterwards , that is something learnt before interferes with the retention of something learnt later. Learning of A – interferes with the recall of B. For example, learning a new formula may be hampered on account of the previously learnt formulae in one's memory.

   In both types of above inhibitions, it can be easily seen that similar experiences when follow each other produce more interference than experiences that are not similar.

3) **The Repression Theory (Motivated forgetting):** The concept of repression or motivated theory was developed by Sigmund Freud as part of his psychoanalytic theory. According to this theory, forgetting is a process whereby experiences that are unpleasant and unpalatable are pushed into the unconscious . This kind of forgetfulness is well motivated and intentional. Thus as a result of repression we forget the things which we do not want to remember. We forget about our dearest relatives and friends who are dead and gone, names of people we do not like etc. Even people under heavy emotional shock are seen to forget their

names, homes , wives and children.

4) **Retrieval – Failure Theory:** This theory emphasizes the inability of the subject to get a memory from storage. Sometimes we want to recall information but we cannot, due to non availability of appropriate cues, Here , forgetting is very often a temporary rather than a permanent phenomenon. Forgetting occurs because of failure in the mechanism responsible for remembering. In other words when cues that were present at the time of learning are not available at the time of recall, retention suffers. For instance , at times when we want to recall a friend's name, we forget to recall the name but later under different conditions the name comes back more or less spontaneously. This phenomenon is called TOT (tip-of-tongue) TOT shows how non-availability of appropriate cues hinders retention.

SELF-ASSESSMENT EXERCISE

i. How can you relate types of remembering to classroom teaching?
ii. Distinguish between retroactive and proactive inhibition.

3.4 Classroom Implication of Theory of Remembering and Forgetting

a) To combat the problem of disuse, the teacher should endeavor that the students learn things well in the first place. This can be achieved by making use of recitation, examples and text questions to provide repeated exposure and frequent review sessions.
b) To prevent distortion, the teacher should try to emphasize meaningfulness and de-emphasize rote learning
c) In order to guide against repression which is a common feature in learning process, the teacher should make is classroom and teaching pleasant and enjoyable through the use of relevant and adequate teaching aids.
d) Based on the explanation of motivated forgetting, students should be taught things that are of interest and relevant to their experience
e) Field trips and excursion seeing things practically and drawing personal conclusion and discovery enhance retention and information gathered tend to remain permanent.
f) The teacher should always associate the current learning with practical examples.
g) The teacher should teach the use of mnemonic devices in order to aid recall. This is a situation where an individual coins out memory cues for himself. For example MR NIGER-D.

4.0 CONCLUSION

Every individual requires a device to store information and this device is referred to as memory. Information when encoded is expected to be retrieved sooner or later and not just retrieved, but can be recalled, recollected which are all aspects of remembering. A student that is unable to remember is said to have forgotten what he has learnt. When this occurs, the teacher needs to use some strategies while teaching. This will improve memory.

5.0 SUMMARY

In this unit, you have learnt about memory, why people usually forget what they have learnt in the past and how the students can be assisted by the teacher to remember or recall earlier learning.

6.0 TUTOR-MARKED ASSIGNMENT

1) Define memory
2) Explain remembering and forgetting
3) Discuss the causes of forgetting
4) Discuss the classroom implications of remembering and forgetting

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