NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE; AEM510

COURSE TITLE: PSYCHOLOGY FOR EXTENSION PERSONNEL

COURSE GUIDE

AEM510
PSYCHOLOGY FOR EXTENSION PERSONNEL

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Published By:
National Open University of Nigeria

First Printed 2011

ISBN: 978-058-033-6

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Introduction

The word psychology comes from the Greek words Psyche-Soul, Logos –Science. Thus, psychology is the science of soul. Formerly, psychology was a branch of philosophy but now it is an independent discipline. The study of psychology has influenced the education process in many ways. Considering its importance, the teaching of educational psychology is necessary to equip the prospective teachers and extension personnel with the necessary skills and competencies to enable them deal effectively with the teaching –learning problems in the class as well as the farmers on the field. It is a common experience that most of the teachers and extension personnel with equal academic qualification differ to a great extent in communicating their ideas effectively in the class as well as on the field. This difference may be attributed to lack of knowledge of educational psychology; that is knowledge of the learners, their abilities, stages of development, and the influence of the environment. This course will expose you to the meaning of educational psychology, human development, intelligence, teaching and learning, individual differences, motivation and emotional problems of farmers.

The Course

This Course Guide tells you what to expect from reading this material. The study of Psychology of Extension Personnel will enable you to understand the concept of human development. It will expose you to the various theories of human development as well as acquaint you with the various stages of human development.

Growth is a sensitive and intricate process that is being regulated by a mechanism usually referred to as maturation. Development is a product of interaction between heredity and environment which follows an orderly sequence in all individuals and shows high degree of similarity in the order in which various developments appear. Development is a continuous process which begins from the womb and terminates at death. Development is from bilateral to unilateral. Different aspects of development are inter-related and inter-dependent and it is a cumulative process. Development proceeds from general to specific. The rate of development differs in male and female children. Theories of child development can be classified into three main groups namely: psychoanalytic theory, behavioural theory and cognitive theory. Psychoanalytic theory as postulated by Sigmund Freud states that a child passes through five stages of psychosexual development. These stages are: the oral stage, anal stage, phallic stage, latency stage and genital stage. Behavioural approach lays emphasis on learning experiences of the child which involves stimulus-response associations that may result from either classical or operant conditioning procedures. Human

development is divided into three broad phases namely, rudimentary behaviour, secondary behavioural system, and secondary motivational system.

Intelligence according to the biological approach is the capacity to adapt relatively to the new situation of life. Stoddard saw intelligence as the ability to undertake activities that are characterised by difficulty, complexity, abstraction, economy, adaptation to a goal, social value emergence of originals and to maintain such activities under conditions that demand a concentration of energy and resistance to emotional forces. There are three types of intelligence; these are abstract intelligence, mechanical intelligence and social intelligence. There are different groups of intelligence; these include the feeble-minded which entails idiots, the imbeciles and the morons, the border line, the low average, the normal average, the accelerated or average, the bright or the superior as well as the genius and the mentally gifted.
Factors responsible for the differences in intelligence include: heredity, home environment, health and physical development, motivation as well as cultural differences.

The term individual difference refers to the differences between or among individuals. This might result from heredity, social, economic and political factors. Extension agents must consider the issue of individual differences while dealing with farmers. He must utilise various approaches in disseminating extension messages.

Teaching is the process of bringing about changes in skills, knowledge, values and attitudes of a learner. A teacher is someone who causes learning to take place. He/she must possess some good qualities for effective teaching to take place.

Teachers have numerous functions to perform. The leadership styles of teachers influence students' learning, hence there is need for teachers to understand and imbibe the best style that can ensure effective classroom learning. Learning is a permanent change in behaviour which depends on practical experience.

Learning manifests in the behaviour of the learner and results in changes of enduring nature; this change may be negative or positive. The basic elements of learning are the learner, the learning situation and learning process. Learning may take various forms, these include: verbal learning, concept learning, psycholinguistic, problem solving and perceptual or motor skill learning.

A theory is a provisional explanatory proposition or set of propositions, concerning some natural phenomenon and consisting of symbolic representations of:

(i) the observed relationships mainly independent and dependent variables
(ii) the mechanisms or structures presumed to underlie such relationships or
(iii) inferred relationships and underlying mechanisms intended to account for observed data in the absence of any direct empirical manifestation of the relationships.

A theory gives detailed symbolic information of an area of knowledge, guideline for further research and services to guide us to explore reality, the characteristics of which include testability, significance and parsimony. There are three schools of thoughts; these are: stimulus response theories without reinforcement, stimulus theory with reinforcement, and cognitive field theories. The teacher should take advantage of the different types of reinforcements to encourage persistent learning. The teacher should use awareness of extinction to combat forgetting and reduce the frequency of undesirable behaviour. Clients should be given opportunity to make their own choices and seek new experiences.

Transfer of learning means the effect of the list of prior learning on later learning of other special /similar situations. Almost all educational training programs are based on the assumption that what is taught in the classroom will transfer to a new situation. Transfer of learning could take several forms which are positive or negative transfer, zero transfer, lateral, horizontal, sequential, vertical or bilateral transfer. There are five major theories of transfer of learning, some of which still applies to the classroom situation today. For effective learning transfer to take place, the teacher has a pivot role to play. Several factors that can affect learning include socio economic, environment, health, motivation and host of others. Motivation is a process of initiating a conscious and purposeful action. Motivation could mean drive, need, goal, urge, in pulse or incentives. There are two types of motivation: intrinsic and extrinsic motivation. Intrinsic motivation occurs when an individual desire internally to learn or achieve a goal, while extrinsic occurs when an external reward is attached to a particular task or a goal. Extension agents should satisfy the deficiency needs of the farmers, set realistic goals and manipulate farmers' curiosity, interest and achievement to achieve set goals. He should encourage the use of praises and reward in extension work.

Emotion describes feelings such as love, hate, joy, sorrow, fear, hope, curiosity, wonder, pity, amusement. There are four major theories of emotion, these are; theories of creative impulse, emergency equipment, emotional excitement and arousing stimuli. Emotions can affect our health, memory, reasoning, surroundings, interpretation of situations, decision and actions as well as our sentiments. Fear and anxiety are emotions which play an important role in human motivation and might result from financial embarrassment, children's rebellion, business failure, barrenness, isolation, polygamy, tragedy, insecurity etc. Farmers may react to frustration in so many ways. Extension agents must recognise when any farmer is being affected and should help in proffering solutions to the problems.

Course Aims

The course aims at providing an understanding and appreciation of human development from infant to adult, cases of individual difference, intelligence, teaching and learning as well as various theories of learning. It will expose the need for motivation as well as emotion related to Extension Education.

Course Objectives

In addition to the aims above, the course set to achieve some objectives. After going through this course, you should be able to:

- explain the concept of human development, theories of human development and the various stages of human development
- discuss how intelligence plays a vital role in the life of an individual and that factors responsible for the differences in intelligence include heredity, home environment, health and physical development, motivation as well as cultural differences
- explain the concept of individual differences, causes of individual differences and the implication for extension workers
- explain teaching, qualities of a good teacher, elements of good teaching and leadership style of teachers and its implication on the teaching-learning situations
- discuss the various theories of learning as postulated by different psychologists, as well as their application in classroom and life situations
- describe how transfer of learning can take place, the significance of transfer as well as the role of teacher in transfer
- explain the need for motivation in extension work, the types of motivation as well as the theories of motivation

- identify emotions that are related to extension work, the effect of fear, frustration and strategies adopted for coping with emotional problems, as well as how to help farmers out of their emotional problems.

Working through this Course

This course requires you to spend a lot of time to read. The content of this material is very dense and requires you spending great time to study it. This accounts for the great effort put into its development in the attempt to make it very readable and comprehensible. Nevertheless, the effort required of you is still tremendous. I would advise that you avail yourself the opportunity of attending the tutorial sessions where you would have the opportunity of comparing knowledge with your peers.

Course Materials

The main components of the course are

1. The Course Guide
2. Study Unit
3. References
4. Assignments
5. Presentation Schedule

In addition, the course comes with a list of recommended text books which though are not compulsory for you to acquire or indeed read, are necessary as supplements to the course material.

Study Units

The course is divided into modules that are made up of units. Study modules and units in this course are as follows:

Module 1

Unit 1 Concept of Human Development
Unit 2 Intelligence
Unit 3 Individual Differences

Module 2

Unit 1 Teaching
Unit 2 Learning
Unit 3 Theories of Learning
Unit 4 Transfer of Learning

Module 3

Unit 1 Motivation
Unit 2 Emotion related to Extension Education

Module 1

The first unit in module 1 introduces you to the concept of growth and human development. It explains the differences between growth and development, as well as the process of development from different perspectives. It describes the theories of development and explains the four major stages of human development and the tasks associated with each stage.

The second unit gives a succinct definition of intelligence. It describes social intelligence, concrete intelligence, and abstract intelligence.
It also explains the theories of intelligence and exposes the two methods of measuring intelligence and the factors that can affect the development of intelligence.

The third unit talked about individual differences, it described various causes of individual differences and the implication of individual differences to Extension Personnel.

Module 2

The first unit in module 2 talked about teaching. It explains the qualities and functions of a good teacher as well as the elements of good teaching .It describes the leadership styles of teachers and their influence on students' learning.

The second unit in module 2 deals with learning. It describes what learning involves and what it is not. It expatiates on the attributes of learning. It also explains the basic elements of learning as well as the various forms of learning.

The third unit in module 2 defined a theory .It states the importance of theory and the characteristics .It explain the various theories of learning and their implications on teaching-learning situations and extension personnel.

The forth unit in module 2 is concerned with transfer of learning. It states the significance of transfer and explains the various forms of transfer. It also expatiates on the theories of mental discipline, identical

elements and generalisation. It explains the role of teacher in transfer of learning.

Module 3

The first unit in module 3 talked about motivation. It explains motivation theories and the types of motivation. It also described how extension workers can use the knowledge of motivation to help farmers improve their productivity.

The second unit in module 3 is concerned with emotion related to extension education: emotions, fear, anxiety and frustration. It defines emotion, effect of emotion, strategies for coping with emotional problems, causes of fear, anxiety and frustration, reactions to frustration and ways of helping farmers suffering from frustration.

Each unit consists of one to two weeks work and includes an introduction, objectives, reading materials, exercises, conclusion, summary, Tutor-Marked Assignments (TMAs), references and other resources. The unit directs you to work on exercises related to the required reading. In general, these exercises test you on the materials you have covered. Together with TMAs, these exercises will help you in achieving the stated learning objectives of the individual units and of the course.

Presentation Schedule

Your course materials give you important dates for the early and timely completion and submission of your TMAs and attending tutorials. You should remember that you are required to submit all your assignments by the stipulated time and date. You should guard against lagging behind in your work.

Text Books and References

Adepoju, T. L. (1999). *Principles and Practice of Primary Education in Nigeria.* Ibadan: Corporate Publication.

Ajayi, I. A. (2004). *Social Science Methods*. Ado-Ekiti: Green line publisher.

Chaucer, S.S. (1989). *Advanced Educational Psychology*. Vikas Publishing House PVT Ltd.

Clerk, L.H and Star, I.S. (1967). *Secondary School Teaching Methods*. New York: Macmillan Publishing Company.

Okorie, J.U. (1979). *Fundamentals of Teaching Practice*. Enugu: Fourth Dimension Publishing Company Ltd.

Oyinloye, I. O. Emoniwa, F. O. & Ogunsanmi, J. O. (2004). *Educational Psychology (Human Learning).* Ondo: Adex Printing/Publishing Press.

Assignment File

In your assignment file, you will find all the details of the works you must submit to your tutor for marking. The marks you obtain for this assignment will count towards the final mark you obtain for this course. Further information on assignment will be found in the Assignment File itself, and later in this Course Guide in this section on assessment. There are many assignments for this course, with each unit having at least one assignment. These assignments are basically meant to assist you to understand the course.

Assessment

There are three aspects to the assessment of the course. First are self-exercises, second are the tutor-marked assignments and third is the written examination/end of course examination. You are advised to be sincere in attending the exercise. In tackling the assignments, you are expected to apply information, knowledge and techniques gathered during the course. The assignments must be submitted to your tutor/facilitator for formal assessment in accordance with deadlines stated in the presentation schedule and the assignment file. The work you submit to your tutor for assessment will count for 30% of your total course work. At the end of the course, you will need to sit for a final or end of course examination which will count for 70% of your total course mark.

Tutor-Marked Assignments (TMAs)

The TMA is a continuous assessment component of your course. It accounts for 30% of the total score. You are required to submit at least four (4) TMAs before you are allowed to sit for the end of course examination. The TMAs would be given to you by your facilitator and returned after you have completed them.

Assignment questions for the units in this course are contained in the assignment file. You will be able to complete your assignment from the information and materials contained in your reading of the study units and references. However, it is desirable to demonstrate that you have read and researched more into other references which will give you wider view point and may provide a deeper understanding of the subject. Make sure that each assignment reaches your facilitator 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

facilitator before the assignment is due to discuss the possibility of an extension. Extension will not be granted after the due date.

End of Course Examination and Grading

The end of course examination for Psychology for Extension Personnel will be about 3 hour's duration and has a value of 70% of the total course grade. The examination will consist of questions, which will reflect the type of self-testing, practice exercise and tutor –marked assignment problems you have previously encountered. All areas of the course will be assessed.

Utilise the time between finishing the last unit and sitting for the examination to revise the whole course. You might find it useful to review yourself-test, TMAs and comments on them before the examination. The end of course examination covers information from all parts of the course.

Course Marking Scheme

Assessment	**marks**
Assignment 1-4	four assignments, best three Marks out of the four account at 10% each = 30% of course Marks
End of course examination	70%of overall course marks
Total	100% of course materials.

How to Get the Most from this Course

1. In distance learning, the study units replace the university lecture. This is one of the great advantages of distance learning: you can read and work through specially designed Study Materials at your own pace. And at a time and place that suits you best. Think of it as reading the lecture instead of listening to the lecturer. In the same way a lecturer might give you some reading to do. The study unit tells you when to read, and which are your text materials or recommended books. You are provided exercises to do at appropriate points; just as a lecturer might give you an in-class exercise.
2. Each of the study units follows a common format, the first item is an introduction to the subject matter of the unit, and how a particular unit is integrated with the other units and the course as a whole. The next to this, 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 unit. These learning objectives are meant to guide your study. The moment a unit is finished, you must go back and check whether you have achieved the objectives. If this is made a habit, then you will significantly improve your chances of passing the course.

3. The main content of the unit guides you through the required reading from other sources. This will usually be either from your reference or from a reading section.
4. The following is a practical strategy for working through the course. If you run into any trouble, telephone your tutor or visit the study centre nearest to you. Remember that your tutor's job is to help you when you need assistance. Do not hesitate to call and ask your tutor to provide it.
5. Read this Course Guide thoroughly, it is your first assignment.
6. Organise a study schedule-design, a course overview to guide you through the course. Note the time you are expected to spend on each unit and how the assignments relate to the units. Important information, e.g. details of your tutorials, and the date of the first day of the semester is available at the study center. You need to gather all information into one place, such as your diary or a wall calendar. Whatever method you choose to use, you should decide on and write in your own dates and schedule of work for each unit.
7. Once you have created your own study schedule, do everything to stay faithful 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 help.
8. Turn to unit 1 and read the introduction and the objectives for the unit.
9. Assemble the study materials. You will need your references and the unit you are studying at any point in time.
10. Visit your study centre whenever you need up to date information.
11. Well before the relevant due dates (about 4 weeks before due dates) visit your study centre for your next required assignment. 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.
12. 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. When you are confident that you have achieved a unit's objective you can start on the next Unit, proceed unit by unit through the course and try to space your study so that you can keep yourself on schedule.

13. When you have submitted an assignment to your tutor for marking, do not wait for its return 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 the written comments on the ordinary assignment.
14. After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved that unit objective (listed at the beginning of each unit) and the course objectives (listed in the Course Guide).

Facilitator/Tutors and Tutorials

There are 14 hours of tutorial provided in support of this course. You will be notified of the dates, times and location of these tutorials as well as the names and phone number of your facilitator, as soon as you are allocated a tutorial group.

Your tutor or facilitator will mark and comment on your assignments, keep a close watch on your progress on any difficulties you might encounter and provide assistance to you during the course. You should mail your tutor-marked assignment to your tutor before the schedule 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 facilitator by telephone, e-mail and discuss problems if you need assistance.

The following might be circumstances in which you would find help where necessary. Contact your facilitator if:

- You do not understand any part of the study units or the assigned readings.
- You have difficulty with the self-test or exercises.
- You have a question or problem with an assignment or with the grading of an assignment.

You should try your best to attend the tutorials. This is the only chance to have face to face contact with your course facilitator and to ask questions which are answered instantly. You can raise any problem encountered in the course of your study. To gain much benefit from course tutorials, prepare a question list before attending them. You will learn a lot from participating in active discussion.

Summary

The course is to provide you with some underlying knowledge of psychology for extension personnel. By the time you complete the course, you will be able to answer the following questions:

- What are the major differences between growth and development?
- Explain the four major stages of human development and the developmental tasks associated with each stage.
- State the various categories of intelligence and explain 5 factors that can affect the development of intelligence.
- Define the term individual differences and explain four major causes of individual differences.
- What are the implications of this concept to extension personnel?
- Define teaching.
- Enumerate the qualities and functions of a good teacher.
- State 5 elements of good teaching.
- Describe democratic and autocratic style of leadership and their effect on teaching- learning situation.
- Define Learning.
- State 5 attributes of learning.
- Explain the learner as a key element in learning situation. State the importance of theory.
- State the characteristics of a theory.
- Explain stimulus -response theory with reinforcement.
- Describe Gestalt's theory of learning.
- Describe Pavlov theory of learning.
- Differentiate between classical and operant conditioning theories.
- State the implications each school of thought has on the classroom situation and the extension personnel.
- Define transfer of learning.
- Differentiate between positive and negative transfer, vertical and horizontal transfer, sequential and bilateral transfer.
- Expatiate on the roles of the classroom teacher in ensuring effective transfer.
- Define motivation.
- Discuss briefly two types of motivation. Write short notes on emotion, fear, anxiety and frustration.
- Explain the theory of emotional excitements.
- Describe five major causes of fear to farmers.
- What are the ways in which the Extension workers can help the farmers to cope with their emotional problems?
- We wish you success in this course. In particular, we hope you would be able to appreciate the concept of individual differences, intelligence, theories and factors affecting learning as well as the

emotions that can influence farmer's performance on the farm and how to cope with emotional problems.

We hope you enjoy the course.
Best wishes.

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Published By:
National Open University of Nigeria

First Printed 2011

ISBN: 978-058-033-6

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MODULE 1

UNIT 1 CONCEPT OF HUMAN DEVELOPMENT

CONTENTS

1.0 INTRODUCTION

In every educational setting, people of different socio-economic, cultural and geographical background can be found in a class. The differences in individuals start from the early stages of life. In an attempt to provide effective guidance for harmonious development of children, there is need to study human development. Individual differences among children play an important role in education. The teacher must know the potentials and capacities of each and every child in his class, in order to exploit them to the maximum benefit of the individual and the society. Hence in this unit, you will learn the concept of growth and development, the principles and theories of development, as well as, the stages of development and the implications of these stages for effective teaching and learning to take place.

2.0 OBJECTIVES

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

- differentiate between growth and development
- explain the process of development from different perspectives
- describe the theory of development under the following headings:

- psychoanalytic theory
- behavioural theory
- cognitive theory

- explain the four major stages of human development and the developmental tasks associated with each stage.

3.0 MAIN CONTENT

3.1 Growth and Development

Growth and development have been used interchangeably by most of the development psychologist because the processes are inter-related and inter dependent on each other. It is difficult to differentiate the contribution of either of them in the development of the personality of an individual. However, growth has been defined by some psychologist as an indicative of increase in bodily dimensions; height and weight and it is generally confined to quantitative changes. Some see growth as a function of the organism rather than of the environment.

Growth is a sensitive and intricate process that is being regulated by a mechanism usually referred to as maturation. Development on the other hand can be defined as the emerging and expanding of capacities of the individual to provide greater facility in functioning. Development is achieved through growth. Development refers to the interaction of person and his environmental surroundings whose after products alter existing response to tendencies in such a way as to increase their strength, degree of differentiation, and the organisation of personality. It refers to those effects upon the person's cognitive- emotional system which strengthens or enlarges one or more of them. Development is confined to qualitative changes in the organisms, and can be viewed as a collection of learning experiences which the child acquires in the process of interaction with the environment. Piaget believed that development occurs as a result of interplay between maturation and equilibration. Some psychologist opined that development from infancy to adolescence is governed by physical changes that are mapped out by individual genes and that most of these changes occur as a result of maturation.

3.2 Fundamental Principles of Development

The fundamental principles of development are as follows:

(a) Development is a product of interaction between heredity and environment: Heredity forces are inherent in the genetic constitution of the individual while environmental forces

influence the development of the organism. It is very difficult to differentiate between heredity and environmental forces.

(b) Development follows an orderly sequence in all individuals and shows high degree of similarity in the order in which they appear.

The following developmental trends are reported by psychologist:

- **Cephaulo caudal:** Development starts from the head and proceed towards heel. For instance, a fetal head is well developed before his leg assumes their final form. Also after birth, heads develop in advance of the lower parts of the body.
- **Proximodigital:** Development starts from the centre line of the body to the outer parts, more distant from it. The infant uses the shoulders and elbows to reach for an object before he uses the wrists and fingers.
- **Locomotion:** Locomotion develops in a sequence of creeping, crawling and walking in all infants of different cultures of the world. However, the time may vary in the development of locomotion.

(c) Development is a continuous process which begins from the womb and terminates at death: This process is not always smooth and gradual. There are spurts in physical growth and psychological functioning as increase in height and weight, sharp rise in vocabulary during pre-school years, and sudden improvement in problem solving during adolescence.

(d) Development is from bilateral to unilateral: The new born baby is essentially a symmetrical organism anatomically, physiologically and functionally. This functional symmetry is revealed in the early motor development. The infant up to two and half years of age use both the hands with equal case. The hand preference starts after the age of two and half years.

(e) Different aspects of development are inter-related and inter-dependent: For instance, a child's early social behaviour is inter-related with his physical development. If a child is physically handicapped, then his social behaviour will be retarded.

(f) Development is an individualised process: Each child has his own rate of physical, mental, social and emotional development even at different ages.

(g) Development is a cumulative process: Certain changes impress the observer with their dramatic suddenness, but actually these changes do not emerge all of a sudden as the child has continuously been preparing for most of the functions.

(h) Development proceeds from general to specific: The world at the time of birth is a big buzzing, blooming confusion for a child.

From out of mass and undifferentiated behaviour emerges more differentiated, refined behaviour and goal directed response. For instance, language development of a child begins from the birth cry, as mass response to refined vocabulary as the child developed.

(i) **Rate of development differs in male and female child:** Girls mature early in comparison to boys. Girls are taller and heavier than boys during pre-adolescence but by the end of adolescence, boys surpass them.

3.3 Theories of Human Development

Theories of child development can be classified into three main groups namely:

- Psychoanalytic theory
- Behavioural theory and
- Cognitive theory

(A) Psychoanalytic Theory as Postulated by Sigmund Freud

According to Freud, a child passes through five stages of psychosexual development. These stages are; the oral stage, anal stage, phallic stage, latency stage and genital stage.

(a) **The Oral Stage**: Child development starts with the act of nursing by his mother. The child's love object is his mother's breast which he sucks to satisfy his hunger. The focus of pleasure at this stage is the mouth.

(b) **The Anal Stage**: At this stage the focus of pleasure shifts from the mouth to the anus. The child takes interest in the activities pertaining to the anus and pleasure is drawn from activities like urinating and defecating.

(c) **Phallic Stage**: The focus of pleasure at this stage shifts from anus to the sexual organs. Children masturbation is very common at this stage. Also a male child desire his mother- a complex called oedipus complex, and want to destroy his father, but perceives his father as a powerful rival and is afraid of castrating him. The primitive fear of physical harm is called castration anxiety. Gradually, this conflict is resolved by repressing his desire for his mother and identify with his father. The female child likes her father and hates her mother. This is called elektra complex.

(d) **Latency Stage**: During this stage, infantile sexuality becomes less important. The child engages himself in learning skills and in the development of values.

(e) Genital Stage: The focus of pleasure at this stage shifts to the member of the opposite sex.

(B) The Behavioural Theory

Behavioural approach laid emphasis on the learning experiences of the child which involves stimulus-response associations that may result from either classical or operant conditioning procedures. Human development is divided into three broad phases. These are rudimentary behaviour, secondary behavioural system, and secondary motivational system.

Phase I; Rudimentary Behaviour: Phase one starts from birth to sixteen months. During this period, the behaviour of the child is activated by innate needs which create tension and in order to reduce tension, the child is motivated for actions which gratify his needs. The infant behaviour operates purely on altruistic level unrelated to any social world, but gradually social events become the prime motivator of behaviour. For instance hunger motivates the infant to cry and he requires the breast or bottle for the gratification of his needs, and his action becomes more learned and goal directed. He tries to imitate previously successful action and thus, socialisation begins. The child depends on someone for the fulfillment of his needs. In early infancy, the behaviour of the child is controlled by the principle of operant conditioning. The Social environment in which a child is born has great influence on his later development. The sex of the child, ordinal position in the family and socio-economic condition of the parents has bearing on the development of his/her personality. In Nigeria, a male child is preferred to a female and discrimination treatment is given right from the birth of the child.

Phase II; Secondary Behavioural Systems: The training for socialisation of the child begins in this phase in the family. The child is motivated by basic requirement of life and secondary dependency needs. Parents and other members of the family continue to be the major reinforcing agents of child's behaviour. Child begins to imitate the behaviour of his parents. Therefore, it is very important that parents should present model before the child.

Phase III; Secondary Motivational Systems: During this phase, the social boundary of the child expands beyond the four walls of home. The child comes into contact with other families and the process of socialisation is accelerated. The teacher becomes a new support for dependence in school. The quality of dependency is influenced by the previous experiences. Development proceeds in terms of seeking and gaining admiration and approval from parents and others. The teacher

and the parents should strike a balance between independency and control of child's behaviour. As the number of environmental reinforces increases, the child identifies himself with models that satisfy his needs. If adults fail to present desirable models, then child identifies with his peers. The child acquires social, religious, political and economic values from his environment. The child continues to strive for his parents' acceptance of him in order to maintain the gratification of such acceptance.

(C) Cognitive Theory as Postulated by Jean Piaget

Piaget highlighted four stages of development as;
sensorimotor stage, pre-operational stage, concrete operational stage, and formal operational stage. (See learning theory for details)

4.0 CONCLUSION

Every human being passed through different stages of development. There are several fundamental principles and theories of human development. It is essential for extension agents to understand the various stages of human development and develop strategies for coping with them.

5.0 SUMMARY

In this unit, you have learnt that:

- growth is a sensitive and intricate process that is being regulated by a mechanism usually referred to as maturation
- development is a product of interaction between heredity and environment
- development follows an orderly sequence in all individuals and shows high degree of similarity in the order in which various developments appears
- development is a continuous process which begins from the womb and terminates at death.
- development is from bilateral to unilateral
- different aspects of development are inter-related and inter-dependent
- development is a cumulative process
- development proceeds from general to specific
- rate of development differs in male and female child.
- theories of child development can be classified into three main groups namely: psychoanalytic theory, behavioural theory and cognitive theory

- psychoanalytic theory as postulated by Sigmund Freud states that a child passes through five stages of psychosexual development. These stages are; the oral stages, anal stage, phallic stage, latency stage and genital stage
- behavioural approach laid emphasis on learning experiences of the child which involves stimulus-response associations that may result from either classical or operant conditioning procedures
- human development is divided into three broad phases' namely rudimentary behaviour,\secondary behavioural system, and secondary motivational system.

6.0 TUTOR-MARKED ASSIGNMENT

1. Differentiate between growth and development
2. Explain the process of development according to Sigmund Freud
3. Explain the four major stages of human development and the developmental tasks associated with each stage

7.0 REFERENCES/FURTHER READING

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UNIT 2 INTELLIGENCE

CONTENTS

1.0 INTRODUCTION

One of the most important single variables that affects schooling is the quality of behaviour usually referred to as intelligence. The term intelligence is vague and ambiguous in its meaning. Physiologists have been interpreting intelligence in different ways but no two physiologists agreed on a single definition of the term. This is due to misconception in the minds of people about the meaning, which creates difficulty in understanding the concept. People think that intelligence is a noun which refers to things or concrete objects which can be directly prescribed but actually, it is an obstruction from the behaviour of the individual.

This unit is designed to acquaint you with the various definitions of intelligence, the types and theories of intelligence and how to measure intelligence, aptitude and interest.

2.0 OBJECTIVES

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

- list various definitions of intelligence
- describe social intelligence, concrete intelligence, and abstract intelligence
- explain faculty theory and two factors theory, multi factor and theory of intelligence
- explain at least two methods of measuring intelligence.

3.0 MAIN CONTENT

3.1 Definition of Intelligence

The dictionary defines intelligence as the capacity to acquire and apply knowledge. Several physiologists have attempted to define intelligence.

Vernon classified the definition of intelligence into three groups which are:

- Biological
- Physiological and
- Operational.

While Freeman classified intelligence into three adjustments;

- Adaptation ability
- Ability to learn and
- Ability to carry on abstract thinking.

A. Vernon Classification of Intelligence

i. Biological Approach: Intelligence according to the biological approach is the capacity to adapt relatively to the new situation of life. This definition is based on the fact that man is a biological being among creatures that have the ability to adapt to his environment. If psychology is interpreted as a biological science, then intelligence can be interpreted as adaptation to environment. The weakness of this definition is that, many great men to whom one could hardly deny an assessment of exceptional intelligence have been spectacularly ill adapted in their physical and social environment. Also the biological concepts of intelligence in a practical point of view have not been of great use in studying individual differences.

ii. Physiological Approach: According to the physiological approach, intelligence is defined as innate, general cognitive ability. The approach distinguished two kinds of intelligence as fluid intelligence A and B.

- Intelligence A is thought as genetic potentiality or the basic innate qualities of the individual nervous system.
- Intelligence B or crystallised intelligence is mainly the result of experience, learning and environmental factors.

The flaw of these definitions is that it is impossible to assess genetic potentials that are not contaminated by the effect of training, experience and other environmental influences.

iii. **Operational Approach:** Defines intelligence by giving conditions for the truth of a sentence in which the term occurs. The definition is called operational because it states what must be done in order to make certain observations. For instance, in order to determine a child's intelligent quotient (IQ), a specific test must be conducted followed by observation of his performance on the test and then make certain conclusions and decisions. At the end, we may say the IQ of the child is low or high.

B. Freeman's Classification

Stern defines intelligence as the general capacity of an individual.

i. **Adjustment or adaptation ability:** Here an individual is thought intelligence in proportion to his ability to adjust to new situation and problems of life. An intelligent person has no difficulty in the adjustments. He adjusts in an effective way and can vary his behaviour according to the situation. A person who is less intelligent is rigid and has fewer responses to make in the process of social interaction.

ii. **Ability to learn:** Burkinham defines intelligence as the ability to learn. This category of definition considers the importance of an individual's ability to learn.

iii. **Ability to carry on abstract thinking:** Terman defines intelligence as the individual is intelligent in proportion as he is able to carry on abstract thinking.

Wechsler defines intelligence as the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal efficiently with his environment Stoddard saw intelligence as the ability to undertake activities that are characterised by difficulty, complexity, abstraction, economy, adaptation to a goal, social value emergence of originals and to maintain such activities under conditions that demand a concentration of energy and a resistance to emotional forces.

3.2 Types of Intelligence

There are three types of intelligence, these are:

a. abstract intelligence
b. mechanical intelligence
c. social intelligence.

a. **Abstract Intelligence:** When an individual possess the ability to reason and to conceive ideas in an abstract manner, leading to empirical postulations as in languages (speaking so many languages) mathematics, physics and statistics, he is said to have abstract intelligence.

b. **Mechanical Intelligence or Ability:** This involves when an individual has the ability or skills, or has traits of manual manipulations (as in operation with motor mechanics using trial and error to find out mechanical faults), holding of biro to write, counting of currency, driving, display of acrobatics, use of musical instruments, magic, circus, foot-balling and such like. Farmers in this group can easily comprehend the learning involving manipulation of skills such as involving spraying and other tillage equipment. Such farmers can also be used as models to assist the extension workers in the training of others. The extension worker should therefore identify such farmers at the early stage of interaction.

c. **Social Intelligence:** Individuals that possess this type of intelligence are able to mix with people freely; they socialise and are diplomatic in their approaches. The extension worker must not only aspire to be able to mix freely with his clients but must be able to identify those clients that can do the same. Such individuals are good materials to be used as contact farmers since they will be accessible to others.. The knowledge of the type of intelligence the farmer possesses therefore can assists the extension worker to plan relevant programmes and accomplish same with ease.

The varying degree of intelligence possessed by the population, as measured by the IQ, has implication on the achievements of the individual, physically and mentally. This phenomenon is therefore germane to the understanding of the farmer's capability by the extension workers.

3.3 Groups of Intelligence Quotient

1. **The feeble minded**: The individuals under this category have IQ 70. The intelligence of feeble minded individual is frequently oriented by normal persons. However, many simple activities are performed by the feeble minded just as by normal people but, motor skills and memory activities may bring a distinction. Three distinct classifications are present.

The idiots: The idiots are the lowest in intelligence having IQ below 20, as adults, they have mental ages less than three years. The idiots are incapable of learning to any noticeable degree, they require close supervision and care in such simple habits as eating, dressing and cleaning themselves. Their behaviour is on a very primitive level and they seldom acquire coherent speech.

The imbeciles: The imbeciles have higher scale of intelligence than the idiots. They have IQs between 20 and 50. As adults, they have mental ages 3-8 years. The imbeciles cannot learn to read, spell or even do simple addition or subtraction. With very careful instructions, they may learn motor tasks.

The morons: The morons are the highest of the feeble minded. They have IQ of 50-70 and as adults have the mental ages of between 8-11 years. The high grade morons can usually complete primary 3-4 but frequently fail and are usually considered stupid by others.

If the feeble minded people are found as farmers they require the sympathy of extension workers rather than condemnation. They require careful instructions which must be mainly demonstrative rather than theoretical or abstract.

2. **The borderlines**: These groups of individuals score 70-79 on the scale. They have inferior intelligence to the extent that their capacity is at the borderline. The educational capacity is about primary six achieved with numerous failures. They are capable of following routine if sufficient patience is exercised to establish it. Many individuals in this group are found in the routine activities of modern industries.

   To a large extent, these groups are capable of following instructions on innovations but the extension worker must still give room for individual differences during teaching-learning process.

3. **The low average:** This group may also be referred to as the backward or the retarded. They have IQ of between 80 and 89. They are capable of learning all the basic skills but frequently with some difficulty. In the school situation, more difficulty is encountered in developing motivation.

   The low average can read instructions on new technologies and systematically follow demonstration steps. The extension worker may not encounter much difficulty in relating with this group.

4. **The normal average**: This people has IQ of 90 -109. A large percentage (58%) of the world's population falls into this group. They have easy accomplishments of all the skills demanded in daily life. Most of them finish high school and substantial percentage start tertiary education. Tertiary level of education is usually difficult for this group particularly, if there is deficiency in the background preparation or motivation. On the other hand, many are successful and many are found in various professions.

5. **The accelerated or average**: This group includes those with IQ of 110- 119. The group includes large percentage of graduates, large number of successful businessmen and large number of technicians. They also form a substantial part of the world's population.

   Among farmers, this group makes up a larger percentage of the innovators and early adopters. As a result of their usual success, they are highly regarded among the rest in the community and are therefore used as legitimises and contact farmers. The suggestions from this group can be very beneficial to the extension workers

6. **The bright or the superior**: This group has IQ of 120-127. They make up the largest percentage of those with capacity for reasonably easy accomplishment and scientific work.

7. **The genius and the mentally gifted**: About 1-3 percent of the World's population having an IQ of over 130 falls into this group. These individuals are referred to as geniuses, the mentally gifted or those with special capability. These ndividuals include the novel price winners, the receivers of society award. The groups' educational attainment, professional and social standing, income, health and general happiness are all higher than those of the average.

3.4 Group Differences in Intelligence

1. **Sex Difference.** No appreciable sex differences in intelligence are known, except that findings in research show that girls usually get higher intelligence test scores than boys until about the age of 13. It is because intellectual development parallels closely to that of physical development, which shows that girls are said to be more matured until the teens. Males generally excel

in skills; with numbers and in special relationship, but females excel in memory and verbal usages (linguistics).

2. **Racial or National Differences:** Racial or National differences in intelligence has been very controversial in history. According to the Americans, British and German psychologists, the whites are said to be more intelligent than the blacks, however, recent researches has proved the hypothesis wrong. All races and Nationals are therefore supposed to be equally intelligent given equal background, environment and motivation. The extension workers should therefore note that technologies involving manipulative skill would be better handled by male farmers than female counterparts. Also, technologies that are though designed with the white farmers in focus can be adapted to the black without prejudice.

3.5 Factors Affecting the Development of Intelligence

The making of intelligence in an individual is a product of a factor or several factors. The knowledge of this factors will place the extension worker in a position where he will restrain himself from heaping blame on his clients when he notices some display of non- intelligence responses. The factors that affect the development of intelligence include;

1. **Heredity**: An individual is a product of the genetic inheritance of his parents. If the individual inherited the potential or fruit of intelligence from his parents, he can be intelligent. The environment has limitations in making individual intelligent if the individual does not possess the natural ability, although environment may aid the development of intelligence if it is favourable.

2. **Home Environment**: Favourable home environment aids the development of intelligence. For instance, parents from middle and upper social class provide greater stimulation of the environment to their children. Such stimulations are in the areas of provision of balanced diet, learning material, less of hostile atmosphere and motivation, both physical and psychological. Children from such class therefore tend to be more intelligent than those from the lower social class.

3. **Personality**: Individuals are said to be either extroverts or introverts. These behaviours have effect on the exhibition of intelligent or unintelligent activities. For instance, even where an individual possess the trait of intelligence and he is expected to

be able to do something but as an extrovert, he may not have the patience of following the principles of doing it and in the process, falls into mistakes. Whereas an introvert even where he possess less intelligence than the extrovert but by following the principles of doing a thing with greater diligence may excel in doing that thing.

4. **Motivation**: Where an individual is rightly motivated in terms of having his physical, psychological or social needs met, the best of the individual is evoked.

5. **Health and Physical Development**: The health of the mother during pregnancy, her diet, the drugs she took, all dictate the nature of intelligence the child will possess. For instance, mothers that suffer from small pox, mumps,syphilis, infantile Amaurotic family idiocy, German-muscles, poor nutrition may transmit them to the fetus. These affect the child's central nervous system and intellectual ability.
6. **Cultural Differences**: The upbringing of children varies from one culture to another. This makes individuals to therefore, differ in their motivation, personality and interests. For instance, Muslim women kept in purdah, interact less with their environment and other social activities and therefore cannot exercise their mental abilities as those who are not.

4.0 CONCLUSION

Intelligence goes a long way in determining the contribution of any individual-be it farmer or extension agents to any development program. It is essential for the extension personnel to understand the theories, and groups of intelligence. This will be helpful in selecting different methods of relating and communicating with them.

5.0 SUMMARY

In this unit, you have learnt that:

- intelligence according to biological approach is the capacity to adapt relatively in the new situation of life
- operational approach: defines intelligence by giving conditions for the truth of a sentence in which the term occurs
- Stoddard saw intelligence as the ability to undertake activities that are characterised by difficulty, complexity, abstraction, economy, adaptation to a goal, social value emergence of originals and to maintain such activities under conditions that

demand a concentration of energy and a resistance to emotional forces

- there are three types of intelligence, these are: abstract intelligence, mechanical intelligence and social intelligence.
- there are different groups of intelligence, these include; the feeble minded which entails idiots, the imbeciles and the morons , the border line , the low average, the normal average, the accelerated or average, the bright or the superior as well as the genius and the mentally gifted
- factors responsible for the differences in intelligence include heredity, home environment, health and physical development, motivation as well as cultural differences.

6.0 TUTOR-MARKED ASSIGNMENT

1. Give 3 major definitions of intelligence
2. State the various categories of intelligence
3. Explain 5 factors that can affect the development of intelligence

7.0 REFERENCES/FURTHER READING

Alfred, S.D.Y. (2001). *The Advanced Psychology for Extension Personnel* (Unpublished lecture notes).

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UNIT 3 INDIVIDUAL DIFFERENCES

CONTENTS

1.0 INTRODUCTION

People tend to ask certain questions such as, why are some people tall while some are short or dwarf. Why are some lousy while some are quite, gentle and lots more, in this unit, we are going to learn the individual differences which tend to provide answers to some of these questions.

2.0 OBJECTIVES

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

- define individual differences
- explain various causes of individual differences
- state the implication of individual differences to extension personnel.

3.0 MAIN CONTENT

3.1 Concept of Individual Differences

Individual differences refer to the term in which there are demarcations between or among individuals. Individuals differ in physical dimension; they differ in strength and in the pattern of their needs. Individuals also differ in keenness with which their senses function and the way in which their intellectual and physical functions are integrated. Virtually, all measures of individuals, whether physical, mental, and emotional or some other, show characteristics involved to be distributed according to the normal probability curve.

The term individual differences answers such questions as; why are some people tall while some are short. Why are some people fat while some others are thin? Why are some people black while some are white? Why are some people introverts while some are extroverts? Why are some people strong while others are weak? Such questions are in fact endless. They constitute the parameters of measuring the individuals.

3.2 Causes of Individual Differences

Individual differences are caused by the following factors

a. **Genetics or Heredity:** this refers to inheritance of traits. Farmer A is different from farmer B, because they are not of the same parents. Even siblings of the same parents differ in some traits likewise are twins.

b. **Social Background:** the social activities one is involved in, the religion he practices, the tradition he believes in, the family class he belongs to, the tribe he is identified with and the level and type of education he is exposed to, all determine the differences that may exist between the individuals. The primary investigation, that must precede the introduction of a technology, must therefore put all these elements into consideration as they can mar or make the success of the adoption of such technology.

c. **Economic Background:** this is in terms of material wealth, which includes possessing of houses or not, high or low income. It has been found that individuals with higher economic background adopt innovations earlier than individuals with lower economic background. This may be because they are better placed to afford the required inputs. The extension worker, if capable of identifying such in that category, could become more effective in his assignment since such individuals could be used as models for others. It is also from this category, that the selection of contact farmers can be more recording.

d. **Political Background:** some individuals have their orientations directed towards some particular focus different from those of some others, who belong to different political camps. For instance, while free education was introduced in the western part of Nigeria in 1955, it was in much later years that it took place in some other parts of the country. Products of this circumstance could vary in their disposition towards some things. The extension work must therefore be very cautious when dealing with programmes that have political connotation, since even in a community people may have different political views. Many a times too no matter how seemingly effective a technology may appear, if F originates from C political field different from the

one some people believe in or belong to, they may reject hypothesis.

3.3 Implications of Individual Differences to Extension Personnel

The implication of the knowledge of the reality of individual differences to the extension workers is that, he must be aware that just as there are personality differences so are cultural, social and ecological differences. The extension worker needs not be disturbed because farmer A can do one thing why farmer B cannot, neither must he be too worried over why some farmers adopted a particular technology while some others did not.

He must also bear it in mind that, because a particular method of teaching was effective with some group of people, does not mean that it will be effective for all other groups.

4.0 CONCLUSION

There are no two individuals that are the same. The difference in individuals might result from heredity, social background, economic, as well as political background.

An extension agent must not be disturbed with the different attitude posed by farmers and must realise that he needs to understand the farmers and adopt different methods suitable to enhance effective extension programme.

5.0 SUMMARY

In this unit, you have learnt that:

- individual differences refers to the term in which there are demarcations between or among individuals
- individual differences might result from heredity, social economic and political factors
- extension agents must consider the issue of Individual differences while dealing with farmers
- They must utilise various approaches in disseminating extension messages.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define the term individual differences.
2. Explain four major causes of individual differences.
3. What are the implications of this concept to extension personnel?

7.0 REFERENCES/FURTHER READING

Alfred, S.D.Y. (2001). *The Advanced Psychology for Extension Personnel* (Unpublished lecture notes).

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MODULE 2

UNIT 1 TEACHING

CONTENTS

1.0 INTRODUCTION

In every society, there is the need to bring about desirable changes in the knowledge, skills, value, and attitude of an individual or group of individuals. An attempt to achieve this requires the assistance of certain people who are trained to do so. These groups of people are usually referred to as teachers. In this unit, you will learn about teachers, their qualities and functions, elements of good teaching as well as leadership style of teachers and their influence on students learning.

2.0 OBJECTIVES

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

- define teaching
- explain the qualities and functions of a good teacher
- state the elements of good teaching
- describe the leadership styles of teachers and their influence on students learning.

3.0 MAIN CONTENT

3.1 Teaching

Teaching is an activity or set of activities performed by a person called teacher in imparting knowledge, skills, values and attitude to an individual or group of individual called a learner or learners.

Clerk and Star (1967) defined teaching as an attempt to help someone acquire or change some skills, attitude, knowledge, ideas for appreciation. In other words, the task of a teacher is to create or influence desirable changes in behaviour or in tendencies towards behaviour in his pupils. According to Akinlua (2000), teaching is an activity or set of activities (e.g. singing, walking, talking, showing, proving, demonstrating and so on) performed by a person who is called teacher with the sole intention of bringing about learning (which is a new end state) in another person called the learner. He also stressed on a situations where a teacher is replaced by a machine and the process is called self study, one should bear in mind that the teacher factor is still present, even through far hiding behind the screen. This implies that the teacher is involved either directly or indirectly in teaching learning process.

3.2 Elements of Good Teaching

For teaching to be effective, it must contain some elements or attributes. Okorie (1979) identified the following factors as elements or characteristics of good teaching.

1. Making classes interesting through maintenance of atmosphere, social and physical, this stimulates and encourages learning.
2. Using a variety of methods and encouraging efficient and friendly sharing and cooperation in all facets of classroom activities.
3. Supplementing methods with audio-visual aids.
4. Using as much as possible pupils own motive as guides in the selection of learning goals and experiences.
5. Applying teaching to learning situation.
6. Organising and develop a good teaching plan, bearing in mind the needs of the pupils.
7. Using other people in teaching where there is need for expert information in a particular subject area.
8. Knowing today what one plans to teach tomorrow.
9. Making the pupil to think as you teach.
10. Trying something new in teaching.
11. Accepting the responsibility that next generation depends on you.
12. Evaluating pupils accurately, fairly and in an organised manner.

13. Providing the pupils with activities for most classes.
14. Getting to know the pupils, loving them for what they are, believing that they are the greatest crop one will ever have the opportunity to grow and cultivate.

3.3 Who is a Teacher?

A teacher is someone who causes learning to take place. Someone who imparts knowledge, skills, values and attitude to a learner or group of learners is referred to as a teacher. He is a role model in the process of gaining the much experience, desired to be acceptable to the society one belongs. Learning cannot take place without the teacher, even though he is not physically present; he is indirectly represented by the medium through which learning takes place.

3.4 Qualities of a Good Teacher

A teacher must be:

- capable of managing his class without being authoritative
- brilliant and business minded
- clever, creative and morally good
- diligent and disciplined
- friendly, firm and forceful
- good looking, Godly and gentle
- humble, helpful and of high spirit
- innovative and of integrity
- just and jovial
- knowledgeable and kind
- lively, lovely and a good leader
- matured and magnanimous
- neat and very close to his pupils
- organised and open to the students in school and others in school environment
- punctual in school and of good personality
- academically qualified
- responsible, reliable and radiant
- simple, success minded and a good supervisor
- tender, thorough, and flexible
- able to treat all students equally without any prejudice
- virtuous, vast and versed in his subject area
- attractive, pleasing and bright
- able to think for the child and make a wise guess of the need of the students

- ready to surrender himself to activities directed at improving his present academic state or in any other area of his life and work
- zealous at accomplishing the basic task before him at all time.

3.5 Functions of a Teacher

A teacher performs a number of functions in the school to facilitate effective teaching-learning process, according to Adepoju (1999) the functions of every teacher include:

1. explaining, informing and showing out
2. initiating, directing and administering.
3. unifying the groups
4. giving security
5. clarifying altitudes, believes and problems
6. diagnosing learning problems
7. making curriculum materials
8. evaluating
9. enrichment of community activities
10. arranging and organising classroom
11. participation in school activity
12. participation in professional and civil life.

Apart from planning of classroom activities, a teacher organises activities and materials, coordinates tasks, controls people behaviour,, lead pupils in the classroom and manages instructional resources. The roles of a teacher in the task of nation building cannot be over emphasised. A teacher is a developer of knowledge, skills and altitudes necessary for social, political and economic advancement of the society.

For teachers to perform their functions effectively, the school environment must be made conducive to learning by the stake holders. To this end, cooperative effort of the student, teachers, parents, head teacher, society and the government are required to ensure effective teaching-learning process in schools.

3.6 Leadership Styles of Teachers and Their Influence on Students' Learning

The style of leadership used by a teacher determines his/her behaviour in the classroom setting, how a teacher behaves also influences students learning. Teachers are role models and their activities in the classroom have implications for learning. On the basis of the various leadership styles identified in the literature, teachers could be classified into four groups namely: democratic teachers, autocratic teachers, laissez-faire

teachers and benevolent autocratic teachers. This are examined as follows:

1. Democratic Teacher

A democratic teacher is the type possessing good human relationship, cares about the well being of his/her pupils and he is always approachable. He involves pupils in planning and decision making regarding classroom activities. He is always willing to guide and assist his pupils and keep his class busy. He encourages group participation in lessons. He maintains equity, fair play and justice in dealing with his pupils. He does not believe in the use of punishment to foster learning but rather praises and reward his pupils for good work.

Pupils regard democratic teachers as their friend and would be willing to do much good work in the classroom. They always like to be in his class and show much interest in what the teacher is doing; hence the rate of learning is high. Whether or not the teacher is in the class, there are few problems of discipline or motivation as the pupils must have learnt how to assume responsibilities.

2. Autocratic Teacher

An autocratic teacher is a dictator and a fault finder. He does not believe in praising pupils for good performance as this tends to make them lazy. He does not believe that the students can learn on their own without being guided. He hardly allows pupils to ask questions as he considers this as an attempt to undermine him. He dominates the classroom with little or no participation from the pupils. He believes in the theory of X, which stipulates that an average human being is inherently lazy and would avoid work if he can, hence, he needs to be coerced and thoroughly supervised to make him work. He makes several rules and regulations which the students have to obey without complaint. Pupils in the classroom of an autocratic teacher usually live under constant fear of severe punishment. They are submissive and passive. They do not have confidence in themselves and lack initiatives. Learning may not take place in such a class as pupils pretend to be too busy doing nothing. As the teacher leaves the class, they feel relaxed and would always prefer and pray for his absence in the classroom

3. Laissez faire Teacher

He is a care free teacher. He has no rules in his classroom and maintains little or no discipline. He has no clearly defined goals. He does not encourage or discourage his pupils; rather he allowed them to do what they like. He finds it difficult to make decision and lack supervision of

class activities. In a class headed by a laissez faire teacher, pupils do not know what to do and how to do it, hence, they tend to work at cross purposes. The pupils tend to be lawless and have no respect for the teacher. It is a class without direction, no unity of purpose, and learning becomes difficult if not an impossible task.

4. Benevolent Autocratic Teacher

A benevolent autocratic teacher is seen by his pupils as being autocratic but in the real sense, he is not. .Even though he shows interest in his pupils, he does not praise them for good performance. His weakness is that he believes he knows the best ways of doing things and hence insists that things must be done in his own way. He does not welcome advice from anybody and his pupil must obey all rules and regulations guiding the conduct of the class. Even though pupils may like a benevolent autocratic teacher personally; they do not like his methods. Pupils have to depend much on him for more direction. Pupils' class work may be high and of good quality, nevertheless, over dependency of pupils in such teacher for direction hampers their initiatives and sense of creativity. Consequently, this may hinder effective learning in the classroom.

4.0 CONCLUSION

The process of bringing about desirable changes in an individual or group of individuals is referred to as teaching. For effective teaching to take place there is the need to have teachers possessing good qualities and embracing a democratic leadership style.

5.0 SUMMARY

In this unit, you have learnt that:

- a teacher is someone who causes learning to take place
- teaching is the process of bringing about changes in skills, knowledge, values and attitudes of a learner
- teachers must possess some good qualities for effective teaching to take place
- teachers have numerous functions to perform
- the leadership styles of teachers influence student's learning, hence there is need for teachers to understand and imbibe the best style that can ensure effective classroom learning.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define teaching
2. Enumerate the qualities and functions of a good teacher
3. State 5 elements of good teaching

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UNIT 2 LEARNING

CONTENTS

1.0 INTRODUCTION

Psychologist and educationists have concerned themselves with learning, the learning process and how to improve learning. Several definition of learning has been formulated. Despite the numerous versions of definition of learning, psychologists are almost uniform in their identification of what learning consists of and what it is not.

This unit is designed to acquaint you with the various definitions of learning, experience to learning, elements of learning and forms of learning.

2.0 OBJECTIVES

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

- define learning
- describe what learning involves and what it does not involve
- state the attributes of learning
- explain the basic elements of learning
- describe the various forms of learning.

3.0 MAIN CONTENT

3.1 Meaning and Definitions of Learning

Learning has been defined severally by psychologist and educationist. For instance Onwuegbu (1975) defines learning as a process through which behaviour is initiated, modified or changed.

Some have defined learning as a change in behaviour which arises from experience, while others see learning as the process by which, through experience, change or modification in adjective pattern of behaviour occur.

Learning is also seen as a sum total of changes which occur in an individual, stemming from his responses to representative stimuli, present or past.

Coady (1950) sees learning as that which makes one to master ones destiny.

Hill-gard defines learning as a change in a subject's behaviour to a given situation brought about by his repeated experiences in that situation, provided that the behaviour change cannot be explained on the basis of native response, tendencies, maturation or temporary states of subjects (e.g. fatigue, drug etc).

From all the definitions, 5 major attributes of learning can be deduced:

- Learning is a permanent change in behaviour. However, it does not include changes due to fatigue, maturation or use of intoxicants.
- Learning is not directly observable but manifest in activities of the individual.
- Learning results in some changes of enduring nature.
- Learning depends on practical experience.
- The charge can be in either a positive or negative direction.

Explaining learning in concrete terms if 3 children from the 3 major tribes of Nigeria are brought together in a class, the way the 3 will greet the teacher will differ from one another. This is because of their training and experiences in home. The early training has brought about a permanent change in their behaviour. This type of change can be termed as learning.

What Learning is not?

The following behaviour cannot be described as learning:

i. **Instinctive behaviour:** The behavioural pattern that is inborn e.g. sucking, crying, and mating behaviour
ii. **Drugs:** Induced behaviour changes e.g. behaviour generated due to drunkenness
iii. **Fatigue effect:** Changes brought about by tiredness or fatigues are not regarded as learning
iv. **Maturation:** Changes resulting from physical growth cannot be regarded as learning.

3.2 Basic Elements of Learning

There are 3 basic elements necessary for effective learning to take place. These are:

- The learner
- The learning situation
- The learning process

The Learner: the learner is the key element in learning. All variables centre on him. The characteristics, capabilities, interests and attributes of the learner are vital to learning. The learner encodes and decodes information and knowledge being imparted to him. Evaluation of the educational programme can be achieved only through him. The success of the teaching/learning situation and the ability of the learner to cope with what is taught depend on the learners' level of development, social and psychological balance, personality and characteristics, perception and expectations from the learning situation.

The Learning Situation: this refers to the general environment the learner finds himself. This includes: the classroom, farm, home or any other significant environment. For effective learning to take place the environment must be conducive, and devoid of any psychological intimidation.

The Learning Process: refers to how the impartation and acquisition of knowledge and subsequent behavioural changes occur. For effective learning to take place, the teaching methods and materials of the teacher are very crucial.
The teacher, peer group, the parents and the community are other important elements of the learning situation.

3.3 Forms of Learning

Psychologists have been able to identify and prescribe the following forms of learning over time.

1. **Verbal Learning:** Can be demonstrated by utterance or verbal behaviour/production. It includes.

i. **Serial Learning:** Sequential learning of alphabets or numbers.
ii. **Paired Associate Learning:** This entails pairs of diagrams, pictures and words with each pair showing some forms of relationship (e.g. A for Apple, B for Ball etc).
iii. **Recall Learning:** Usually acquired by rote and known to be transient.

2. **Concept Learning:** This involves selecting critical attributes and generalising them on the basis of the attributes e.g. learning about living and non-living things.
3. **Psycholinguistics:** This form of learning emphasises that the basic structural rules of grammar of language is fundamental to meaningful learning of concepts especially in the learning of language e.g. English, Yoruba, Igbo, French etc.
4. **Problem Solving:** This involves problem identification and the use of strategies or skills to find out solutions to a problem (Mathematical or mechanical).
5. **Perceptual or Motor Skill Learning:** This involves gross bodily activity e.g. walking, swimming, manipulating tools etc. This learning involves the development of organised muscular pattern in response to changing sensory signals from the environment.

4.0 CONCLUSION

This unit has enabled you to understand that learning usually bring about a permanent change in behaviour, as a result of experience which cannot be observed directly by the learner but manifest in the activities of the learner and that certain basic elements are crucial for effective learning to take place and that learning can manifest in various forms.

5.0 SUMMARY

In this unit you have learnt that:

- learning is a permanent change in behaviour which depends on practical experience
- learning manifests in the behaviour of the learner
- learning results in changes of enduring nature, this change may be negative or positive
- the basic elements of learning are the learner, the learning situation and learning process
- various forms of learning include verbal learning, concept learning, psycholinguistic, problem solving and perceptual or motor skill learning.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define Learning.
2. State 5 attributes of learning.
3. Explain the learner as a key element in a learning situation.

7.0 REFERENCES/FURTHER READING

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UNIT 3 MAJOR THEORIES OF LEARNING

CONTENTS

1.0 INTRODUCTION

Over the years, several psychologists have formulated theories about how learning occurs. This occurs as a result of numerous experimental studies carried out by them. These theories can be grouped into some major schools of thought. These schools include; behaviourism, cognitivism and phenomenalism. In this unit you will learn about the various schools of thoughts and implications of their experiment on the classroom situations as well as on extension personnel.

2.0 OBJECTIVES

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

- define a theory
- state the importance of theory
- state the characteristics of a theory
- explain Stimulus -Response theory with reinforcement
- describe Gestalt's theory of learning
- describe Pavlov theory of learning
- differentiate between Classical and Operant conditioning theories
- state the implications of each school of thought for the classroom situation and the extension personnel.

3.0 MAIN CONTENT

3.1 Definition of a Theory

A theory can be defined as a provisional explanatory proposition or set of propositions, concerning some natural phenomenon and consisting of symbolic representations of;

(i) the observed relationships mainly independent and dependent variables
(ii) the mechanisms or structures presumed to underlie such relationships or
(iii) inferred relationships and underlying mechanisms intended to account for observed data in the absence of any direct empirical manifestation of the relationships.

3.1.1 Roles of a Theory

(i) A theory gives detailed systematised information of an area of knowledge
(ii) It serves as a guideline to conduct further researches in the area
(iii) It produces new facts
(iv) It gives an organised knowledge of the explanation of behaviour developed theories
(v) It serves to guide us to explore reality which is the ultimate goal of all sciences whether physical or social
(vi) Theory helps to summarise or describe and explain phenomena

3.2 Characteristics of a Theory

(a) **Testability:** A theory must be testable. If we cannot test a theory, then, we cannot say it is scientific. Testability increase further possibility of verification of the theory and can be helpful in rectifying any error.

(b) **Significance:** If a theory is not of any significance, then it is worthless. The theory must contain relevant explanatory mechanisms to explain its points of views. It must be able to predict future event successfully. For the theory to be significant, it must summarise prior empirical data or innovative features incorporated in the theory. A significant theory must help in understanding teaching – learning process. It must provide guidelines for effective learning. It must provide knowledge of all types of variables which affect learning process.

(c) **Parsimony:** Means that a theory must be comprehensive and must explain all aspects in simple language with brevity.

3.3 Major Theories of Learning

Theories of learning, according to Psychologists can be grouped into three major schools of thought. These schools include: behaviourism, cognitivism and phenomenalism.

Behaviourism

American psychologists such as, I.V. Pavlov, Thorndike, Watson, Skinner etc. belong to the group referred to as Behaviourism.
Behaviourism can be divided into two major groups;

(i) Stimulus response theories without reinforcement
(ii) Stimulus response theories with reinforcement

(i) Stimulus Response Theories without Reinforcement

3.3.1 S-R Classical Conditioning Theory (I.V Pavlov 1839-1954)

Pavlov experimental studies arose as a result of his doubt and objection on Wolfgang Kohler's work on the "Mentality of the apes" in which Kohler argued that the change in behaviour of an animal in problem-solving was an abrupt, sudden, completed and perfect insightful learning which could not be improved upon gradually and slowly through the process of reinforcement.

Pavlov argued that Kohler lost sight of the need to control the previous conditioning experiences of the apes, which he used in his studies. Pavlov maintained that it would not be possible for the animal to develop insightful learning without previous conditioning situations. In support of his stand, Pavlov carried out series of experimental studies, the first among these is his study on salivation with a dog. To carry out this study, Pavlov prepared an instrument for S-R classical conditioning. This instrument rested on a wooden platform, to which were attached two pairs of stands with the upper parts perforated for adjustment purposes. These stands were fixed towards the right hand section of the platform; one pair of the stand being kept separate from the other, reasonably wide enough to accommodate a dog to be strapped to them. In buttress the whole framework wooden bars were placed on top of these paired stands. On the second half of the platform were fixed, a chair-like wooden object which served as a one-way screen through which the experimenter could see and observe the dog, but through which the dog, could not see the experimenter. Near the experimental dog, was fixed a movable article, which could bring food to the dog at the experimenter's wish.

Behind the one-way screen was fixed a cup to which tubes were attached for sucking off the salivary flow from the dog. This cup and the tubes were connected to the dog's cheeks, so as to collect the salivary flow. Straps were affixed to the stands, for tying the dog firmly to the stands; (holding the neck, the shoulders, the waist and the forelimbs of the dog). In the course of the experiment, the experimenter had to present a bell, or a buzzer, or a metronome, to the dog. It was to this apparatus described above that Pavlov attached a dog whose checks were opened so as to expose the salivary glandular duct. The experimental room was made sound-proof with this dog firmly fixed to the apparatus, Pavlov sounded a tuning fork alone, and of course no salivation was elicited by the stimulus (the tuning fork) when used alone. This Pavlov did as a pre-test to make sure that the dog did not salivate on mere hearing of the sound of the tuning fork, ever before it was exposed to the experiment.

Secondly, as the sound of the tuning fork was being presented to the experimental dog, almost simultaneously, a second stimulus was presented to the dog-meat-powder which was blown into the dog's mouth. This simultaneous presentation of the two stimuli (the sound of the tuning fork. and the meat-powder) was done for several times.

Thirdly, Pavlov withdrew one of the stimuli the meat powder and presented only the sound of the tuning fork to the dog without being paired. He observed that although the stimulus that was originally presented (the meat-powder) had been withdrawn, yet the dog salivated

at the mere sound of the un-paired tuning fork alone. Hence a new stimulus response hierarchy of the tuning fork, which was nil when presented during pre-test, has now gathered hierarchy.

Pavlov then gave technical terms to describe the different processes involved in this experiment. Thus, the connection or bond existing between the new stimuli that were not paired (the tuning fork) and the response elicited by it, (salivation) as observed in the experiment, he called the conditioned reflex, by which Pavlov meant that the reflex reaction or response observed in the experiment was not inborn in the dog, but depended on previous training. In other words, it was conditional. Thus Pavlov called the original stimulus (the meat-powder) an Unconditional Stimulus (UCS); while the original response (salivation) arising as a reflex reaction, he referred to as an Unconditional Response (UCR.). On the other hand, the acquired stimulus quality of the tuning fork sound, he called the Conditional Stimulus (CS); while the response (salivation) elicited by the (CS), he called Conditional Response (CR).

Pavlov carried out series of further replication of this experiment with some modifications and found that response could be generalised as well as stimulus, although he observed that this generalisation occurred at a reduced level as compared with the occurrence elicited by the original Unconditional Stimulus. Pavlov, yet, put another interesting variation to his salivation experiment, by conditioning a dog to elicit saliva, to the beating of a metronome paired with food. After this dog had been well conditioned, Pavlov withdrew the food (original Unconditioned Stimulus). He replaced this food with a card containing a black square, and kept it in full view of the dog, before beating the metronome. He repeated this several times and observed that the dog began eliciting saliva on the card being presented alone in spite of the fact that this card was never presented alongside with the original Unconditional Stimulus (food). Pavlov therefore concluded that a conditioned response could be used to set up another conditioned response, thus producing what he referred to as higher order conditioning of the second order Conditioned Stimulus.

Once extinction was achieved, the dog was put out of the experimental apparatus, and was given two hours rest, after which the dog was brought back to the experimental situation, and was made to look at the meat powder once more. Surprisingly, the dog salivated. This indicated that the extinguished conditioned response had received spontaneous recovery, although, not to the same degree or strength as the original response.

From an extension of this experience, Pavlov observed that by presenting the Conditioned Stimulus alone further reduction in the strength of response could be effectively achieved. Therefore, he concluded that after a conditioned response has been extinguished completely, further presentation of the conditioned stimulus will weaken rather than strengthen that response. Pavlov called this phenomenon sub-zero extinction.

Pavlov emphasises essentially four components of classical conditioning:

1. Unconditioned Response (UCR) - salivation inborn automatic response.
2. Unconditioned Stimulus (UCS) - the stimulus that produces a response automatically without learning taking place (meat).
3. Conditioned Response (CR) - a learned response to the conditioned studies (salvation)
4. Conditioned Stimulus (CS) a neutral stimulus (Bell).

3.3.1.1 Application of Classical Conditioning Theory

Though most of the experiments on classical conditioning have been conducted on animals except a few on children, classical experiment does not have direct application to classroom learning. The principles of classical conditioning can be used in the following areas of animal and human behaviour:

1. Developing good habits: It can be used for developing good habits in children such as cleanliness, respect for elders and punctuality etc.
2. Breaking of bad habits and elimination of conditional fear such as anxiety and fear in maladjusted children.
3. Training of the animals: Animal trainers have been using the principles of Classical Conditioning for long time without being much aware of the underlying mechanisms.
4. Use in psychotherapy: The principles of Classical Conditioning are used in de -conditioning emotional fears in mental patients.
5. Developing positive attitudes: It can be used to develop favourable attitudes towards learning.
6. It can be used to teach alphabets and some fundamental principles of arithmetic by using some concrete materials.

3.3.2 Watson' Learning Theory (J.B Watson 1878-1958)

J.B Watson revolutionised the theory and practice of psychology by his radical ideas. Being convinced by his research on maze learning by rats,

he rejected the consciousness and introspection as methods of studying human behaviour as they could not be verified. He closed the gap between the study of animal and man. He defined psychology as the study of overt and observable behaviours which can be measured objectively. He had strong conviction that behaviour can be explained in terms of Stimulus Response (S – R) connections in the brain.

Watson's developed a simple theory of learning. He proposed that when a Stimulus and Response occur at the same time in close contiguity, the connection between them is strengthened. The strength of connection between Stimulus and Response depends upon the frequency of repetitions. The theory was like Thorndike's theory in respect of its claim that learning consists of strengthening (S-R) connections, but one difference that exists is that, for Watson there was no law of effect; there was no reinforcement but there was a very important law of frequency. He emphasised the importance of frequency or exercise in learning.

Watson theory was primarily a protest against Thorndike's theory, he said that Thorndike's law of effect was mentalistic in nature, nothing but an updated version of the old hedonistic principle of behaviour .

The 2nd law which he proposes is of recency. The most recent response is strengthened more by its frequent occurrence than an earlier response, for him, the basis of learning, is the shifting of old response to new stimuli.

3.3.2.1 Watson's Contribution

J.B Watson had great influence on America psychology. His greatest contribution to psychology is that he brought psychology out from mechanistic and mentalistic ice warfare. He emphasised the objective study of behaviour. He accelerated the pace of behaviourism. He popularised the concept that the nervous system can really explain all types of behaviour. He challenged all psychologists that for the explanation of learning, understanding of the brain and its functioning is very essential. He emphasised that all our behaviour is learned by interacting with external environmental stimuli. He over-emphasised the importance of environment. His theory of learning is based on the principle of stimulus- response (S-R) bondage, which is the basis of learning and that all types of learning can be reduced to S-R connections. He spread and motivated researches on conditioning in America. His theory of learning has great impact on the educational system in America. For instance, emphasis was laid on providing a conducive environment in schools for effective and permanent learning. Sufficient practice and exercise were given to make the bondages between S-R permanent.

ii. Stimulus Response Theories with Reinforcement

3.3.3 E.K. Thorndike's Theory-Stimulus-Response with Reinforcement

Thorndike was the first to formulate the basic theory of S-R. Prior to Thorndike's experimental studies, it was generally and wrongly believed that animals solve their problems either by instinct or reasoning. Thorndike held a contrary view and asserted that in animal problem-solving, neither reasoning nor instinct brought about solution and learning. Learning comes through the application of the Herbaria idea associations; Thorndike developed interest in physiological psychology. Hence, following this combination of ideas, he argued that there were two units or events guiding our behaviours, the physical and mental and that a blend of the two types of units or events will bring about learning. Thus, according to Thorndike:

ME + PE	=	L
Where ME	=	mental event or unit
PE	=	physical event or unit and
L	=	learning.

This bond or connection occurs as a result of biological changes taking place in the nervous system of the organism. Thorndike believed that these S-R connection occur as varied behaviour pattern, technically referred to as "trial-and-error" behaviour. To back up this, he conducted an experimental study on a cat in a puzzle-box. The cat was faced with a problem-solving situation. In this experiment, Thorndike locked up a hungry cat in the puzzle-box. He subsequently tantalized this hungry cat with an attractive piece of fish. The fish was kept within the cat's smelling reach, but kept outside the box in such a way that the cat could see the fish, but could not get hold of the fish. He could get the fish when it is passed through a close but adjustable door of the box. The door can be opened by pulling a particular hanging string within the box.

This hungry cat first smelt the fish placed outside the box. In trying to touch the fish, the cat started initially to display some trial and error random activities, like clawing, walking round the box, biting the wooden frames of the box, mewing and so on. However, after series of these random activities, the cat at last and by chance pulls the hanging string, and the door opened. With the door opened by chance, the hungry cats rushed out of the puzzle box, moved straight to the fish and help

itself with the fish. With this experimental cat in the puzzle box and it's activities or behaviour, Thorndike confirmed his stand and formulated his S-R theory which states that learning consists of an association between a given stimulus (S) and a given response (R).

3.3.4 Skinnerian Operant Conditioning

Operant conditioned theory is generally concerned with the effects of voluntary and un-provoked behaviour of a given organism, in terms of reinforcement. Skinner invented a box which is referred to as Skinner's box. This box was air-conditioned and sound-proof and contained three items used in the experiment: a lever,, a cup (for food), and a light. The lever was attached to an adjustable pen which automatically records some lines on a moving piece of paper. A vertical line drawn by this pen signifies a response by the experimental animal, while a horizontal line indicates non-response or not pressing the lever by the animal.

In order to bring about an operant conditioning situation, Skinner placed a hungry rat inside this box. Whenever the rat pressed the lever, it would be rewarded with food like "manna from heaven". As long as this lever-pressing rewarded this rat with food, the rat increased the frequency of pressing the lever. This showed that the food had reinforced the act of bar pressing (lever-pressing).

On the other hand, it was found that if the food-supplying apparatus of this box happened to be dismantled, so that bar or lever pressing no longer rewarded the rat, that rat reduced the frequency of pressing the lever or bar, which eventually leads to extinction of that act of level or bar pressing, arising from non-reinforcement. This experiment was also varied by pairing the food with light, so that the response was reinforced when the light was switched, while if the response was made in the dark, then the response was not reinforced.

Skinner extended this experiment to the study of punishment, to determine the effect of punishment upon the lever-pressing response in the Skinner box. Here, punishment was represented by a sharp slap on the paws of the rats. This slap came from the same lever that used to reward them with food. Skinner thus concluded from this experiment that the effect of punishment on the behaviour of an organism was merely temporary, because although the punished rats displayed much slower response after the slap, yet the over-all observation showed that in the final analysis, both the punished and un-punished rats made the same number of extinguished responses.

According to Skinner, operant behaviour implies activity on the part of the organism, while respondent behaviour implies passivity. Skinner

further tried to explain operant conditioning in contrast with respondent conditioning. The former occurs when a given SCR bond is strengthened, by backing up the response (R), immediately after, with stimulus (S) that is found rewarding. The latter refers to a process of conditioning where the organism passively responds to a conditioned stimulus (CS), and is eventually followed up by Unconditioned Stimulus (UCS). Thus, Skinner worked out a paradigm for his S- R operant theory.

For Skinner, reinforcement is the achievement of a goal, which can satisfy a given drive or urge; hence, acquiring food reinforces a thirsty organism. These drives according to Skinner need not be restricted to only physiological drives, it should be extended to the whole gamut of human activity.

Consequences on Behaviour:

There are three main consequences:
Positive reinforcement: Positive reinforces is any stimulus whose presentation increases the probability that the behaviour will occur e.g. praise, commendation or reward.

2. **Negative reinforcement:** A negative reinforces is a stimulus whose removal increases the probability that the behaviour will occur. Note with positive reinforcement, the organism emits a behaviour to obtain a secure relief from an aversive stimulus e.g. failure and hard work.
3. **Punishment:** A punisher is a stimulus whose presentation decreases the probability of a behaviour occurring e.g. shock in Skinners' experiment, fine, spankings etc. Note if the stimulus increases the frequency of a response, it is a reinforcer. If a stimulus decreases the frequency of a response, it is a punisher.

3.3.5 Basic Laws of Learning

The behaviourists' stimulus response theory gave rise to four laws to be obeyed for people to learn well. These are called laws of learning:

1. law of effect
2. law of exercise
3. law of readiness
4. law of association.

1. Law of Effect

Learning occurs if and only if the response has some effect on the environment. That is when response to a stimulus is accompanied by a satisfied feeling, so that it tends to be repeated, then it is desirable but when it is accompanied by unsatisfied feelings, it tends to be eliminated. The effect produces the result; hence, at times the law is called law of result.

People get satisfied when either needs or motives are met or achieved. They like to adopt or learn behaviours, activities or practices, which contribute towards achievement and avoid those that fail to achieve goals.

Application in Classroom Situation

i. Guidance, praise and encouragement that give pleasure and satisfaction of knowing that a student is on the right path should be properly used.
ii. The learner must be helped to see the fruit of his efforts and to know the success and errors of the activities.
iii. The extension agent must help farmers fix goals in advance and keep the goals in focus all through the learning process.

2. Law of Exercise

This law is divided into 2 parts

i. law of use
ii. law of disuse

Law of use states that other things being equal, the more frequently a modifiable connection between stimulus responses (S-R) is made, and the stronger the connection will be.

The law of disuse states that other things being equal, when a modifiable connection between stimulus-Response (S-R) is not made over a period of time the strength of that connection is weakened.

Application in Classroom Situation

The teacher must help the leaner to practice and review the desirable behaviour repeatedly, as found necessary so that it can become a habit. If habits are desirable, they help in developing good personality traits in learner. After each practice, the learner must improve the quality of behaviour which will lead to the ideal and not just doing the same thing

the same way every time. The repeated practice will create chances of over learning, which helps in creating retention.

3. Law of Readiness

States that once an attractive or desired goal is identified or achieved, to move towards it is very pleasant, not to move towards it is annoying. This law is emphasising the need to prepare farmers or learners before presenting new behaviour or changes. They become ready to learn when they feel that learning the new behaviour will satisfy their motives.
Readiness is dependent upon both maturation and experience of the learner.

Classroom Implication

Teachers must wait till the learners are ready to learn and should give those experiences that will help to enhance readiness.

Extension agents should help farmers fix goals based on their felt needs. This will stimulate the farmers to be ready to learn.

4. Law of Association (Belonging)

This states that when one is able to perceive relationship between one thing and the other, the speed of learning and permanency of retention are greatly increased.

Classroom Implication

The teacher should help the learner perceive relationship very well, e.g. cause leads to effect, known to unknown, part to whole, old to new, specific to general.

When introducing an idea to farmers or group, the learner should not be treated in isolation, you have to compare ideas or things together so that they can perceive the relationship and can remember e.g. local cassava and improved cassava variety; new technique compared with old one.

3.3.6 Cognitive Development Theory

Cognitive development refers to all the processes of acquiring and staring knowledge. It also refers to the development of the mental processes which aid the formation and storage of knowledge from conception to death. Cognitive development theory presents the cognitive development of human at different ages or stages of life. The theory makes attempt to emphasise the important components of

cognitive development that has to be taken into consideration while measuring how children's experiences affect their behaviour at different phases of life.

3.3.6.1 Jean Piagets Cognitive Theory

Jean Piaget, a Swiss psychologist was a pioneer' in the area of cognitive or intellectual processes (the way we learn, remember. perceive and reason). He divided the life of the child into stages:

i. sensori-motor stage 0-2 years
ii. pre-operational stage 2-7 years
iii. concrete operational stage 7-12 years
iv. formal operational stage 12 years and above.

Each stage denotes a level of thought and to attain the level of thought, there is the need to have some experience.

Piaget uses chronological age range which is not rigidly applicable to all because of individual differences; it is possible for one to attain an age level and not attain the level of thought corresponding with the age.

Piaget used natural setting in his experiment by observing his children and friends (French children).

1. Sensori-motor Stage (0-2 years)

The child at this stage thinks and uses his senses as he relates with the world around him He uses the touch, feel, vision, smell, tastes and movement organs. His learning at this stage is acquired through simple motor movement and sensory perception. The child at this stage is able to differentiate himself from objects around him. He gradually becomes aware of the relationship between his actions and their effects on the environment, so that he can act intentionally and make interesting events last longer (if he shakes a rattle, it makes noise, this interests him and he will repeatedly carry out the action).

Two different mechanisms involved in the learning patterns of the child are that of assimilation and accommodation. The function of the mechanism of assimilation involves the absorption and incorporation of new experiences into what he has already established. There is also the mechanism of accommodation which involves modifying further what has been established earlier in the light of fresh experiences.

Learning becomes more meaningful at this stage if the child is taught with colourful big toys.

2. Pre-operational Stage (2-7years)

At this stage, the child is highly egocentric and to him, only his point of view is correct. The child reasons/thinks intuitively, he does not think deeply or logically. During this stage, the child wrestles with other problems in the interpretation of the environment; there is a great stability in his mental images. He runs into what Piaget called intuitive judgment about relationship. The term intuitive thought means that the child's thinking is such that conclusions (actions) are based on what he feels or what he likes to believe. The child can only grasp one relationship at a time, attends to only one property of experience at a time and cannot see how two or more properties can interact with each other. The child does not understand reversible operations', that is, rearrangement of materials does not change them. Bell (1990) maintained that occurrence of this reversible operations allows the child to conserve number, volume, space, weight, etc.

The child at this stage has imaginary friends that he converse with, he tells seeming lies and treat his toys as if they are human beings. This stage is very important in language development of the child. The parents and others around the child should talk more to the child at this stage.

Appropriate learning materials/aids must be provided for the child. The mistakes made by the child must be corrected and should not be mimicked.

3. Concrete Operational Stage (7-12 years)

The thought of the child becomes logical at this stage, he measure and test things before giving answers to them. The child has a fair understanding of conservation of volumes, weights, numbers, concepts, reverse operations, as in giving opposite of words and can separate facts from fantasies but not separating facts from hypothesis. He understands and obeys rules and regulation of every law. He could solve mathematics problems and therefore must be given many problems to solve.

The child requires necessary assistance at this stage and so should be provided with appropriate teaching aids or concrete objects and must be exposed to ample practical experiences through experiments.

4. Formal Operational Stage (12 years +)

This stage concise with the adolescent stage (secondary school age). The child can now think logically in abstract terms, problems can now be

solved from the head. He can understand hypothesis at this stage, his thinking span through the three periods of past, present and the future; he now has a comprehensive view of the world. His language development is high; he can understand similes, metaphors, give and explain proverbs, jokes, riddles etc.

Hypothetical thinking should be encouraged. They should be given problems that will make them to make projections. Further abstract thinking should be stimulated by exposing the child to games, film-clips, movie arts, drama etc. that are educative and stimulating.

3.3.6.2 Principles underlying the Cognitive Theory

1. Learning is seen as a gradual process.
2. Experiences are relevant to cognitive development.
3. Relationship with the environment is vital to cognitive development.
4. The child must be actively involved in the learning process.
5. There is continuity in intellectual development i.e. intellectual development is a continuous process.
6. Learning occurs through existing cognitive structures.

3.3.6.3 Educational Implications of Piaget's Theory

1. There is the time specification for learning.
2. Lessons must range from simple to complex.
3. The theory as a vital tool for curriculum development should ensure that educational experiences provided for the child is appropriate with his level.
4. Teachers should understand the stages of development and encourage appropriate activities relevant to the age and needs of the child.

3.3.7 Gestalt Theory of Learning

A German psychologist Wolfgang Kohler carried out an experiment on chimpanzee and he was able to come up with a learning theory called insightful learning. It is believed by the theorist and others belonging to the Gestaltic school such as Koffka that the learner sees a problem in its entirety or as a whole. To these psychologists, trial and error method is only employed when the problem is two difficult.

A chimpanzee in the experiment, restricted to a box was able to pull down a banana hung up somewhere after he studied the environment and was able to gain an insight into how to bring down the banana.

Learning as viewed by the Gestalts consists of:

I. the learner perceiving the problem as a whole or entity
2. recognising the relationship of the separate parts of the whole
3. stepping back to size up the situation
4. determining how all the elements fit together to achieve a solution. The whole in their view is greater than the sum of a part. Unlike the behaviourist, the Gestaltists belonging to the cognitive school see learning as a chain.

Gestalt believed that experience does not play a significant role in learning. The factor experience they claimed does not adequately explain the phenomenon of originality. An individual is often times confronted by situation which has no precedent in ones past and one is able to solve it through insight. They felt that experience play little part in thinking. When the past appears irrelevant to a problem on hand, one is bound to seek solution.

3.4 Implications of Learning Theories to Extension Personnel

Following the stimulus response principle, we should elicit the skills, habits and attitudes that we want our clients to learn.

The conditioning models show us how to give cues needed to make the correct and desired responses in our extension teaching. Parts of complex concepts and skill should be arranged chronologically in extension learning programmes. Presentation must be pleasant and entertaining.

- Practice brings about learning so encourage practice.
- Formulate activities around farmers needs, activate them in a way that brings out expected behaviour and make available positive reinforcement.
- Take advantage of the different types of reinforcement to encourage persistent and permanent learning.
- Extension teaching programme should be spread through the year in order to teach all that is required.
- Client should be encouraged to solve their own problems and be motivated to do so.
- Learning situation should be arranged to permit social interactions by facilitating discussions among farmers.
- Clients should be given opportunity to make their own choices and seek new experiences.

4.0 CONCLUSION

This unit has enabled you to understand the various schools of thought on learning theories and the implications of the theories to both the classroom situation as well as the extension personnel. It has exposed you to various Psychologists, their view and relevance to the present day teaching-learning situations.

5.0 SUMMARY

In this unit, you have learnt:

- what a theory is
- a theory gives details symbolic information of an area of knowledge, guideline for further research and services to guide us to explore reality
- the characteristics of a theory include testability, significance and parsimony
- stimulus response theories without reinforcement
- cognitive field theories
- the implications of learning theories include developing good habit , sued in psychotherapy and teaching alphabets
- and to the extension agents personnel that practice brings about learning taking advantage of the different types of reinforcement to encourage persistent learning
- using awareness of extinction to combat forgetting and reduce the frequency of undesirable behaviour
- clients should be given opportunity to make their own choices and seek new experience.

6.0 TUTOR-MARKED ASSIGNMENT

1. State the importance of theory
2. State the characteristics of a theory
3. Explain Stimulus -Response theory with reinforcement
4. Describe Gestalt's theory of learning

7.0 REFERENCES/FURTHER READING

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UNIT 4 TRANSFER OF LEARNING

CONTENTS

1.0 INTRODUCTION

Human beings cannot learn without being affected by their past experience. Various subjects in school curriculum are included on the basis of their utility and wide applicability to the situations of an individual life in the society. Whatever we teach in the schools were assumed that children will use that knowledge, skills and information after completing their formal education to solve problems of life. In this unit, we shall learn how knowledge learned/acquired in a given situation can be transferred to another situation, the various theories of learning and the roles of classroom teacher in transfer of learning.

2.0 OBJECTIVES

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

- define transfer of learning
- state the significance of transfer
- explain the various forms of transfer
- expatiate on the theories of:

- mental discipline
- identical elements
- generalization

- explain the role of teachers in transfer of learning.

3.0 MAIN CONTENT

3.1 Definition of Transfer of Learning

Transfer of learning means that experience or performance on one task influences performance on some subsequent task.

O'Connor (1973) defines transfer of learning as the effects of the lists of prior learning on later learning of other special/similar situations.

Hill-gard (1956) refers to transfer of learning as "effects of old learning in new situation"
All definitions have much in common in underlying the role of previous or prior learning and the ability to carry across or transfer the previous learning in the solution of a new task.

3.2 Significance of Transfer

Transfer of learning according to Dese (1958) is the most important topic in the psychology of learning for the following reasons;

1. Our reactions to later situations in life are influenced by our previous experiences. For example the responses those young children make when entering a new school maybe influenced by their previous experiences at home.
2. Almost all educational and training programmes are based on the assumption that what is taught in the classroom or in the training programme will transfer to new situations. The existence of our school is based on the premise that the knowledge, skills and attitudes developed in school will be transferred to life situations.

3.3 Forms of Transfer

Transfer of learning can be grouped into the following forms:

1. Positive transfer
2. Negative transfer
3. Zero transfer
4. Lateral or horizontal transfer
5. Sequential transfer
6. Vertical transfer
7. Bilateral transfer

3.3.1 Positive Transfer

When the learning of one task aid or facilitate the performance of a second task, it is called positive transfer. For instance the knowledge of how to play tennis can facilitate the playing of baseball. This is because in learning the game of tennis, one must have to learn certain skills like agility, psychomotor manipulation, directing the ball towards a set target, observing the movement of ones opponents and being quick enough to forestall one's opponent's playing strategies. These skills acquired during tennis playing, can easily be transferred to a base ball situation, and these facilitate the learning of how to play baseball.

Positive transfer can also occur where the learning of a new skill facilitates the retrieval of another previously acquired skill. For example if one learns to ride motorcycle well, later when he is faced with learning how to drive a car, some skills associated with car driving will facilitate the retrieval of the skills involved in riding a motor cycle and so proactively facilitate driving a car.

3.3.2 Lateral Transfer

Lateral transfer occurs when an individual learner applies the initially acquired learning in solving a different subsequent task of about the same level of complexity and difficulty as the initial task encountered in a learning situation. For instance suppose a child is taught the addition and subtraction "facts". Certainly if he can understand that 12-7 = 5 in the content of blocks, counting sticks or any other object used in the classroom, by the teacher, it is believed that this understanding would transfer to other life situations especially at home if the child is to remove 7eggs from 12eggs (at home) he should be able to say that the eggs remains five. So also initial learning of how to type with a typewriter that facilitates the operation of computer is a form of lateral transfer.

3.3.3 Sequential Transfer

Most of the subject matter taught in schools is arranged into broad disciplines, the content of which is taught sequentially, that is idea taught today will have some relation to an idea to be taught tomorrow and both ideas will have some relationship to the ideas of be taught the next day.

The positive facilitation of present learning through past learning is called sequential transfer, when learning at one level of behaviour facilitate new learning at a comparable level of behaviour e.g. addition helps multiplication.

3.3.4 Horizontal Transfer

Lateral and sequential transfers are called horizontal because the learner stays within the same behavioural category in making the transfer.

3.3.5 Vertical Transfer

This occurs when learning at one behavioural level facilitates learning at a higher behavioural level. For instance the comprehension of additions and subtractions of facts should facilitate the subsequent solution of problems utilising these operations.

3.3.6 Bilateral Transfer

The human body is divided into 2 laterals: right and left. When training imparted to one lateral automatically transfers to another lateral, this is called bilateral transfer. For instance if we train our right hand to write, this can automatically be transferred to the left hand, this is called bilateral transfer.

3.4 Theories of Transfer

The history of the concept of transfer of learning dates back to the time of philosophers when the nation is deeply imbued with the philosophical views of great men.

There are 4 major theories of transfer namely;

(i) Theory of mental discipline
(ii) Theory of identical elements
(iii) Theory of generalisation
(iv) Theory of transposition
(v) Theory of learning how to learn.

3.4.1 Theory of Mental Discipline

The classical curriculum was dominated by a particular philosophy and point of view known as the theory of mental discipline.

The theory was based on the premise that mind substance can be trained like other parts of the body by physical exercise. The theory emphasised that there were 2 forms of mental discipline.

a. Classicism of place which states that mind was best trained by studying the classical languages.

b. The second form of mental discipline termed as faculty psychology believed that mind was composed of several facilities and was analogues to muscles and that exercise tend to strengthen them. The essential requirement of this theory is to provide hard intellectual work to the learner to train his mental facilities. According to the theory of mental discipline, transfer is automatic. All that would be required would be that the various facilities be exercised and strengthened. Forms of the matter should be difficult and that vigorous exercise of the difficult matter would enhance mental facilities.

The first psychologist who authorised the theory was William James who tested the theory at the end of 19^{th} century. He and his students practiced learning section of paradise lost, Book 1for exercising memory. The result of the experiment lead to the conclusion that practice in memorising did not improve the memory. Result of his experiment contradicted the view of formal discipline. Others such as Thorndike, Wesman and Broyler also conducted experiment by studying the gain on intelligence test score made by students. Thorndike concluded that there was no greater gain in intelligence by students who studied Latin or French than by students who had studied physical education. He concluded that the subjects studied are of little importance in transfer of training.

3.4.2 Theory of Identical Elements

Thorndike defined identical element as those mental processes that have the same cell action in the brain as their physical awareness. Theory of identical elements was developed by Thorndike to explain the occurrence of transfer. The theory held that transfer could occur from one learning situation to another as far as the 2 functions had elements in common. As the similarity increases between two different situations, the amount of transfer increases. As the similarity decreases, the transfer lessens in percentage.

When two activities have common factors and the total situations have important characteristics in common, the maximum transfer occurs. According to Thorndike, two factors play important role in the process of transfer. These are matter and method. Identical elements may be in the stuff, the data concerned in the training or in the attitude, the method taken with it. The former may be called identities of substance and the later identities of procedure. The theory gave birth to a new concept in the field of education that is known as utility theory of education.

Educators and curriculum developers took special care while formulating curriculum for various classes instead of selecting courses

to discipline the mind, they started selecting material and those experiences which are identity either in matter or method. Materials were selected from life experiences, arithmetic processes used by parents in their daily buying and selling were introduced into the curriculum. All topics from different subjects were selected on the basis of their utility in daily life. As the experiences of school are similar to day life situation, the greater is the amount of transfer.

The theory of identical elements was criticised on two points. Firstly, the body assures that lives problems remain static and their solutions are predetermine and fixed. In present day dynamic society, this assumption is difficult to justify. Secondly, the theory assures that all school learning should lead to useful results in daily life activities. This is not so.

The second criticism comes from Allport, who is of the opinion that it is possible to identify elements in objective reality but the human personality as it responds and interacts and reality does not respond in any elementary way. He further emphasised that it is impossible to find any element of experience identical in two situations.

In spite of the criticisms, the theory still holds good and is not invalidated by recent researches.

3.4.3 Theory of Generalisation

Theory of generalisation was developed by Judd in 1908. The theory emphasised that transfer of learning can be facilitated by teaching students general principles rather than specific solutions. He emphasised that human intelligence plays a major role in helping an individual to understand and apply knowledge of principles from one situation to another.

3.4.4 Theory of Transposition

Theory of transposition was developed by Max Wertheimer and other Gestalt psychologist. To a Gestalt, the behaviour of characteristics is not determined by that of its individual elements but where the part processes are themselves determined by the intrinsic nature as a whole.

To learn is to form or to complete a Gestalt pattern or configuration which has meaning. Wertheimer points out that a number of mental operations are involved in the process.

a. There is a grouping, reorganisation and structuralisation of material

b. Process of inner relatedness of form and size
c. Inner structure
d. Consistent thinking

3.4.5 Theory of Learning how to Learn

Theory of learning how to learn was developed by Harlow. It was based on the premise that individuals improve in their ability to learn tasks when they have practiced a series of related or similar tasks. For e.g. if a person solves linear equations in algebra for a no of days, he becomes progressively more efficient in solving linear problems. He not only becomes more accurate in his work, but also solves the problem much faster. The progressive improvement in performance is a form of transfer known as learning to learn.

3.5 Transfer and the Role of the Teacher

The teacher can help students in the process of transfer to a great extent if he uses the following techniques in his teaching;

He must keep in mind that transfer is not automatic but requires effort on the part of the teacher and learner.

The teacher must maximise the similarity between teaching and the ultimate testing situation. This can be done by providing identity of method and matter. He must be definite and clear as to which learning experiences are transferred to life situations.

The teacher must provide experience with the original task. This can be achieved by regular and extensive practice on the original task at the early stage of developing new skills and concepts. This will increase the likelihood of positive transfer to a subsequent task.

The teacher must provide a variety of examples, specifically when teaching concepts and skills. Examples strengthen the student understanding of new concepts and he is able to see its applicability to life situations.

The teacher must help the student identify important feature of task. He should label important features and pay increased attention to different features.

The teacher must ensure that student’s understand the general principles.

When the learning can be conceived of as a hierarchy, of sub skills of differing difficulty and in which the more difficult portion of the task

contain easier portions, the teacher must ensure that the students has mastery of the pre-requisite skills by attempting the more difficult or higher order tasks.

The teacher must make use of discussions; invite questions from the students on different aspects of the problem to clarify the difficult areas. Opportunities should be provided for free discussion in the classroom for better understanding of the subject matter.

3.6 Factors Affecting Learning

Human beings could be affected positively or negatively during the process of learning. The factors that can affect them include the following:
Heredity, socio-economic factor, environment, teaching aids, health and nutrition, school management, motivation, relevance of course and government policy.

- **Heredity:** Heredity plays a major role in child learning. Genes are usually inherited/transfer from parents to offspring. These genes occur in alternative called alleles, for instance tall and short, bright and dull. Only one of these can be transferred to the offspring. If a child is favoured by inheriting the bright gene he will perform well in the class and vice versa.
- **Socio-Economic Factors:** Such as religion, the type of family, residential area, type of school, family income/standard of living, learning environment all may affect learning either positively or negatively.
- **Learner's Personality:** His perception, state of readiness and person characteristics all affects learning.
- **Types of School:** The head of school, principles, behaviour of the teacher and the management style of any school goes a long way in affecting learning.
- **Health and Nutrition:** A healthy child learns well or effectively. The types of food consumed by the learner affects his normal development. It determine the speed and quality of individual learning
- **Motivation:** Originates from motives to satisfy a want or need. It forms the drive for an action. Both extrinsic and intrinsic motivation set off the learner to learn.
- **Government Policy:** Government at Local, State and Federal levels formulate policies that may affect learning at any point in time.
- **Environment:** Include the beliefs, culture, value, roles, peer group, weather condition all affects learning.

- **Relevance of Course Content:** Learning takes place more effectively when course content meets societal needs.
- **Teaching Aids:** The use of relevant instructional manual enhances learning.

4.0 CONCLUSION

This unit has enabled you to understand the concept of transfer of learning and that transfer of learning could be in several forms. It has exposed you to various theories of transfer and their application to day to day life and that the teacher has a great role to play in order to ensure successful transfer of learning.

5.0 SUMMARY

In this unit, you have learnt that:

- transfer of learning means the effect of the list of prior learning on later learning of other special /similar situations
- almost all educational training programs are based on the assumption that what is taught in the classroom will transfer to a new situation
- transfer of learning could take several forms which are positive or negative transfer, zero transfer, lateral, horizontal, sequential, vertical or bilateral transfer
- there are five major theories of transfer of learning some of which still applies to the classroom situation today
- for effective learning transfer to take place, the teacher has a pivot role to play
- several factors can affect learning among which are socio-economic, environment, health, motivation and host of others.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define transfer of learning.
2. Differentiate between positive and negative transfer, vertical and horizontal transfer, sequential and bilateral transfer.
3. Expatiate on the roles of the classroom teacher in ensuring effective transfer.

7.0 REFERENCES/FURTHER READING

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MODULE 3

Unit 1 Motivation
Unit 2 Emotions related to Extension Education

UNIT 1 MOTIVATION

CONTENTS

1.0 INTRODUCTION

The problem of motivation is the central problem in psychology which has been the subject of interest and inquiry for all those who dealt with human relation since the existence of man on earth. Business men, politicians, social workers, engineers, as well as teachers are all very much concerned about the problem of human motivation. The teacher is faced daily with varieties of problems in his teaching learning situations. Such problems create anxiety and curiosity in the mind of the teacher in understanding the underlying factors which explain such type of behaviour in his student. For answers to all these questions, the teacher turns to psychology for guidance. Hence in this unit, we will discuss the meaning of motivation, theories of motivation and types of motivation, to extension agents.

2.0 OBJECTIVES

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

- define motivation
- explain motivation theory
- differentiate between intrinsic and extrinsic motivation
- describe how extension workers can use the knowledge of motivation to help farmers improve their productivity.

3.0 MAIN CONTENT

3.1 Motivation

Psychologists are not only interested in the differences in intellectual abilities, but are also greatly concern in why it is that a man works hard at several tasks and even persists in the face of difficulty, while another is rather less enthusiastic, has few interests, and may even quit in the face of disenchantment. Individuals who are poorly motivated can be found in all spheres of life, not only among farmers or other professionals. Therefore, a study of the basic motive of which underlie human behaviour is of the greatest importance.

Motivation is a proof of initiating a conscious and purposeful action. Motives mean an urge or combination of urges to induce conscious purposeful action. It is ordinarily a component of feelings, appetites, inclinations and instinctive impulses.

Motivation is what arouses learning, sparks off or triggers off behaviour, activates behaviour, gives strength to behaviour or give direction to behaviour. Motivation becomes objectified as an interest and unless impeded by external or internal obstacles, leads to action in pursuit of that interest.

In psychology, the word motivation could mean ‘drive”, “need”, “goal”, “urge”, “impulse” or “incentive”. It explains why people do things that they do. It influences a person to do a thing, a certain way.

When motivation is applied in Agricultural extension, it is what pushes the farmers to learn. Motivation in Agricultural extension means getting the farmer to apply himself to the learning at hand or getting the farmer wants to learn. With a desire to learn, there is almost no limit to what the extension worker can accomplish.

3.2 Motivation Theories

Motivation theories attempt to answer basic questions such as, what initiate behaviour or action? What direction does such action take? How strong is the action? When does the action terminate? Why are some actions observable while others are not?

3.2.1 Instinct Theory

Proponent of instinct theory state that all behaviours are inborn or are innate tendencies. These theories derived their root from Charles Darwin theory of evolution. The proponent Mcdougall (1908) posits that, "the human mind has certain innate or inherited tendencies which are the essential springs or motive powers of all thought and action", he lists the main instincts as "parental instinct, escape, pugnacity, repulsion, gregariousness, self assertion and submission mating, acquisitiveness and a number of minor ones".

The instinct theory has been greatly criticised by other psychologist, that what Mcdougall referred to as instinct are actually learn after birth.

3.2.2 Psychoanalytic Theory

Freud (1856-1939), Adler (1870-1937) and Jung (1875-1961) are eminent investigators in the field. Before one can understand how human motivation is said to be explained by psychoanalytic theory, one must understand two terms, "unconscious mind" and "regression". The farmer connotes mental tendencies and traces of past examples which once acted in full consciousness. These are known to affect human behaviour without entering into consciousness. According to Lovell (1978), Freud explained that the unconscious mind consists mainly of repressed sentiments and has its foundations formally laid in infancy. Regression here means the exclusion of painful and unpleasant material from consciousness. Though, according to Lovell, Adler and Jung have their own slightly different views on the nature of the unconscious mind, they all agree that human behaviours are frequently influenced by motives and attitude of which one is quite unaware, although such influences are said to be brought into consciousness by psychoanalytic techniques.

3.2.3 Social Theory

Social theory suggests that the methods of bringing up children depend on the type of work one is engaged in or the social class to which one belongs. Thus, individual's motivation and behaviour are likely to be dictated to some extent by their social status as boy or girl, husband or wife, farm labourer or teacher. Researchers have shown that, children who enjoyed much affection and less rigid discipline grow to become co-operative and generous adults who are less aggressive whereas children who are denied affection and who are frequently rebuffed, grow up to be apathetic or evasive or bad – tempered adults.

3.2.4 Drive and Need Theory

The theory proposes that all behaviour of individuals are different upon the needs of the individuals and the degree of individual's learning is a function of the degree of needs satisfaction. Both physiological needs (thirst, hunger, sex, rest, defecation, urination) and social needs (attention, affection and social approval) are likely to influence the behaviour of the individual in relationship to the level of their being satisfied. The extension personnel must guarantee the satisfaction of the duo.

3.2.5 Cognitive Theory

The proponents of this theory argue that, every individual has the potential to act or behave in a particular way depending on how much one believes he will benefit from such behaviour. Where a particular technology is not relevant to individual farmers, for instance, the level of adoption of that technology will likely be low. The extension personnel must therefore ensure that the innovation he plans to disseminate to the users is appropriate for the needs and the perception of the farmers. When the farmer recognises that he has much to benefit, he will not hesitate in adopting it.

3.3 Types of Motivation

Two kinds of motivation have been identified. These are the intrinsic motivation and extrinsic motivation.

Intrinsic Motivation: This arises when an individual desires internally to learn or achieve a particular goal to his advantage. In this case he does not expect any external reward in return and does not need any assistance or influence to achieve a goal. This exhibits natural likeness

or interest in children, e.g. they may want to read a book or do a task for personal pleasure not for any external reward.

Extrinsic Motivation: Occurs when an external reward is attached to a particular behaviour or goal. Children display extrinsic motivation in their academic pursuit for rewards, prizes and scholarship. The activity or learning of the child here is attached to wining prizes, getting good grades and awards.

However, intrinsic motivation is preferable to extrinsic because when the material motives are rewarded, the action will terminate, where as in intrinsic, the action does not terminate because it is inborn.
The extension personnel should therefore emphases those motives that are in the interest of the farmers and for which they are curious.

3.4 Classes of Motivation

There are two classes of motivation, these are drives and incentives.

Drives: Drives have their origin in identifiable internal organic process and are called primary or unlearned drive. Examples of unlearned drive are hunger, sleep, sex etc. Other drives acquired through learning and competition are learned or secondary drive, such as approval motive, achievement motive and task motive .Where these organic needs are not met, it becomes difficult to make the farmers to learn.

Incentives: Incentives are objects or conditions in the environment that stimulate behaviour. They are inducement to action. Drives and incentives are two sides of the same coin (identical), hunger for instance is drive, when it occurs it causes the individual to look for food and when food is found, it invites the individual to eat.

Incentives can also arouse to action without the presence of the drive. For example, one may not be hungry ordinarily, but the sight of food can stimulate one's appetite, or one may not be feeling erotic but the sight of an attractive opposite sex can stir one's sexual interest.

The implication of this to extension is that, when farmers identify their problems (drive), they may seek for solutions (incentives), but even when such needs are not identified; good extension teaching can stimulate farmers to seek for solutions.

3.5 Motivation of Farmers on the Farm

The role of extension personnel in this perspective is firstly, to try to satisfy the deficiency needs, for example the physiological needs. Farmers who are hungry or tired for instance, will be difficult to teach to make them understand. What to do at this circumstance is to give the farmers time to have break at intervals to eat, rest or ease themselves..

Secondly, goals that are realistic, realisable and attainable in terms of available inputs, income or knowledge should be pursued. When goals are bogus and unachievable, it constitutes a Herculean task and farmers may lose interest in such efforts.

Thirdly, farmer's curiosity, interest and achievement should be manipulated to achieve set objectives. An astute and shrewd extension worker, at introduction stage, will attract the interest of his clients through impressions of the problems at hand and equally making such problems solvable even by the clients themselves.

Fourthly, farmers past experience should be used as a launching pad for the new activities to be taught. A detachment of the present from the past makes independence of such efforts and so makes linkage of knowledge by the farmers difficult to comprehend. Emphasis must therefore be placed on the revision of past learning activities and also stress the relationship between them.

Fifthly, there must be provision of feedback from the farmers to extension workers. More importantly, farmers must not be seen as passive participants in the learning process, they must be allowed to aid their own views on the subject and ask questions where they are confused.

This will give them confidence and a sense of belonging to what goes on around them. This opens more opportunities for greater participation.

Finally, where the farmers deserve praises or reward, he should be encouraged to have it. Praise and material reward must not however be the emphasis or over used, because the farmers will develop false impressions about themselves and begin to win or learn only for praise or reward.

4.0 CONCLUSION

In this unit, one have learnt that motivation refers to drive, need, goal or incentive, which explains why people do some things in a particular way and that there are several theories of motivation. Motivation may be intrinsic or extrinsic. The extension agents need to understand the needs of the farmers and help in solving how those needs can be met, he must set achievable goal and manipulate farmer curiosity and interest to achieve such goal, feedback is an essential ingredient in extension work and may be rewarded for effective extension work.

5.0 SUMMARY

In this unit, you have learnt that:

- motivation is a process of initiating a conscious and purposeful action. Motivation could mean drive, need, goal, urge, impulse or incentives
- there are two types of motivation

a) **Intrinsic:** When an individual desire internally to learn or achieve a goal.

b) **Extrinsic:** When an external reward is attached to a particular task or a goal.

- extension agents should satisfy the deficiency needs of the farmers by:

a) setting realistic goals.
b) manipulating farmers' curiosity, interest and achievement to achieve set goals.
c) encouraging the use of praises and reward in extension work.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define Motivation.
2. Give in brief the theory of need and drive
3. Highlight the significance of motivation to extension workers

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UNIT 2 EMOTIONS RELATED TO EXTENSION EDUCATION

CONTENTS

1.0 INTRODUCTION

In this unit, you will learn that emotion is a complex state of an individual in which ideas, feelings of love, hate, joy, etc are expressed. You will also come to know that emotions can affect our health, memory, reasoning, interpretation of situations, surroundings etc and that fear and anxiety need to be removed from the extension worker so that success will be made out of their extension activities.

2.0 OBJECTIVES

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

- explain what emotion is
- discuss the theories of emotion
- identify the causes of fear and anxiety
- explain frustration and reactions to frustration.

3.0 MAIN CONTENT

3.1 Concept of Emotion

The word emotion describes feelings such as love, hate, joy, sorrow, fear, hope, curiosity, wonder, pity, amusement and such like. They give meaning to one's experience. They influence one's judgments about people and things and influence one's decisions and actions.

Emotion is a complex state of an individual in which ideas, feelings and usually motor expression combine to produce a condition recognisable as such by the individual and frequently by others. Emotions are modes of being conscious, in which the feeling elements are predominant. That is, when one feels for someone, one develops emotions. Emotion also involves feelings or impulses, physical or physiological reactions. It must also be noted that intense feelings give rise to emotions.

3.2 Theories of Emotion

Emotions constitute adjustments which favours the execution of instinctive activities. There are four theories of emotions:

a) Theory of Creative Impulse

By this theory, it states that emotion leads to creativeness, an attempt to do what others have not done before. This theory is responsible for the reactions of innovators to an innovation. They have strong desire to adopt first before other people within the community or in a society. This is a positive emotion helpful to extension.

b) Theory of Emergency Equipment

This is a state in which a strong emotion produces changes insides the body, particularly when an individual is frightened or angry, certain glands, known as the adrenal glands, become more active than usual and release adrenaline (chemical substance) into the blood stream. This makes the heart beat faster, quickens the rate of breathing and causes extra supply of blood to the muscles to prepare the individual for flight from the troubled spot or for combat.

c) Theory of Emotional Excitement

During emotional excitements, the muscle responsible for involuntary movements become very active and sometimes leads to uncontrollable

behaviour. An example is when one meets a beloved one after a long period of time. If innovation excites a farmer particularly a long awaited remedy for a very devastating farm malaise his interest in the innovation can be intensely aroused.

d) Theory of Arousing Stimuli

This theory emphasises that emotions may be aroused either by stimuli outside (perception of objects) or by organic change inside e.g. when one sees a sick or dead body and he is unable to eat, or through the consumption of alcohol or drug. By this the extension officer must be sensitive to identify his clients' reaction through the influence of either of these. For instance, if a farmer is bereaved, the extension worker must not expect much active participation from him.

3.3 Effects of Emotions

Effects of emotions are stated as follows:

1. **Health:** emotions of fear and anger may be beneficial when it involves situations that require physical strength like fleeting or combating but may be harmful if it becomes frequent. Frequency of fear and anger causes some changes in the body which may result to tiredness, stomach trouble, sleeplessness and loss of weight because the individual lives on reserved energy.
2. **Memory:** emotion plays a vital role in one's ability to remember past events. Whenever an event is associated with a pleasant event, one is likely to remember and vice-visa.
3. **Reasoning:** emotion can be embarrassing when a situation requires thinking and mental effort. A farmer who is asked to make a speech, for instance, for the first time in his life may be so frightened that he is unable to recall what he intends to say or a person who looses his temper during an argument is likely to lose the argument as well, because his anger will interfere with his reasoning ability.
4. **Surroundings:** strong emotions are capable of claiming one's attention and therefore hinder one's perception and other things in one's surroundings. For example a student who is anxious about an examination may forget to read the instructions on that examination paper.
5. **Interpretation of Situations:** emotions may make one to misinterpret what is happening around him. For example, the one who is having an emotion of fear may believe that there is something dangerous in his surrounding or read suspicion on the faces of those who are not suspicious.

6. **Understanding of Other People:** having a feeling of emotions that another person is feeling, makes one to understand the person's situation. This type of understanding which arises from sharing another person's emotions is known as empathetic understanding. The extension worker is not likely to have much understanding of the farmers unless he puts himself in their place and try to imagine how they live.
7. **Decisions and Actions:** emotion influences individual's decisions and actions. Knowledge of a thing that does not arouse emotion has but very little influence on one's action. If farmers are experiencing some great losses with their harvest, unless this is able to cause pity, he may not be prompt about helping the situation.
8. **Sentiments:** the association of a certain emotion with a person or thing is known as sentiment. When one associates the emotion of hate to something then he has sentiment of hate for that thing. For example, if farmers associate an emotion of dislike to an extension agent, resulting from his first impression, which may be an outcome of treating the farmers with contempt, they may develop the sentiment of this respect for him. Strong and intense emotion may give rise to fear and anxiety.

3.3.1 Importance of Emotion to Extension Education

The extension worker as a teacher can achieve greater success in his work by arousing emotions of the learners (Farmers). Without emotional appeal, teaching – learning situation cannot be interesting. An uninteresting meeting will remain ineffective.

The emotionally excited farmers or learners per se, can do extra-ordinary things. Therefore, the extension agent should utilise this to enhance his work. This can be achieved by whipping up the farmers' sentiments to hate practices that do not help their advancement in production. For instance, the extension worker could have suffered for not adopting a particular innovation to control a particular harmful condition by so doing, the farmer now realising that, there is a way out of the distressful situation might embrace the innovation.

The extension worker must remember that, strong emotion may help to break up some other crude and undesirable emotions. He should therefore try to identify appropriate emotions that will enhance his work.

Emotion motivates forces of action, and should therefore be used for the preparation of objectives for the farmers and also relate these to extension programmes and designs.

3.4 Fear and Anxiety

Fear and Anxiety are emotions which play an important role in human motivation.

The individual in the state of fear is driven to do something that will reduce uneasiness and discomfort. A little dose of anxiety impels the individual to an action that is constructive, for instance, creativity problem solving and invention, but strong anxiety may be emotionally crippling. Fear may arise as a result of frustration encountered.

3.4.1 Causes of Fear and Anxiety

Fear by adults may result from:

1. **financial embarrassment for the family:** this is a situation when the man cannot fulfill his financial obligations to the family, such as buying input or paying children school fees etc
2. **children's rebellion:** when the man is faced with waywardness and other forms of vices that brings shame to the family
3. **children's non-achievement:** the man may have anxiety over his children's non-performance in their education, their joblessness and or even their marital failures
4. **business or farm failure:** fear may come through the failures of the man's or family ventures
5. **childlessness in the family:** marital unfruitfulness, which is usually associated to all evil powers, may be a source of anxiety
6. **isolation:** a man may become anxious as a result of isolation from friends, relations or family especially from a broken home
7. **polygamy:** where polygamy is practiced particularly polygyny, it may become a source of worry for the members of the family particularly in the face of intense rivalry
8. **nagging, wife/husband unfaithfulness:** this can be a source of anxiety at home because of the lost love and impaired harmony
9. **tragedy:** a sudden tragedy in the family particularly when it is irreparable may create fear in the family
10. **insecurity:** when an adult feel insecure he may become anxious
11. **incurable or persistent sickness:** when a particular ailment becomes prolonged or incurable, adults may entertain fear.

3.5 Mechanisms for Coping with Emotional Problems

Fear and Anxiety by the Victims

Projection: This is a state of attributing one's undesirable actions or thoughts to someone else. A farmer, for instance may attribute his crop failure to weather changes or ill-advice from the extension worker.

Withdrawal: This refers to evidence or flight from a threatening situation or people. The adult may also separate himself from friends, relations or group and pretend to be engaged in something else.
Uncompromising Attitude: When one adheres rigidly to an ideology is regarded as the escape from complexity of life. A farmer may develop this posture, where he is expected to practice to buy the innovation, and because he has no money to buy the input, yet, he doesn't want it known that it is because of the financial implication; he may stand firmly to defend the old practice at the expense of the new better practice.

Denial: This is a state in which the anxiety arousing event is taken to be untrue. For instance, to escape from the agony of having lost a beloved one, one may take the death of the beloved as having traveled.

Asceticism: One may become excessively devoted to religion or depriving himself of any pleasure to escape anxiety. A farmer for example may become devoted to church going to escape from being in a group of friends where his problem could be the subject of discussion and ridicule.

Rationalising: This term means finding untrue reasons to justify something about what brings fear or anxiety to individuals. A farmer who refused to use fertilizer on his crop like other farmers may argue when confronted on why his crop failed to march others; that rain was inadequate when he planted whereas the reason was because of the fertilizer he did not apply.

Repression: In this case, the individual refuses to remember or think about the anxiety reproducing events.

The mechanisms are designed by the victims of emotional problems, fear and anxiety. Strong dependence on these mechanisms may however be associated with frequent and gross distribution of reality and failure to cope with or be adaptive to psychological problems and with the real world used that way, the mechanism may have adverse effect on mental

health and emotional adjustment. It may result in hallucination and other gross emotional imbalance.

3.6 Frustration

Frustration is a feeling or experience a person has when he finds that he is unable to do or have something which he very much desires. But when the individual finds that he lacks the ability to do things which other people can do and which he feels he ought to be able to do, he experiences a feeling of inferiority. Feelings of frustration and inferiority are painful. They cannot always be avoided, but sometimes the difficulties which give rise to them can be prevented or removed. A frustrated farmer is difficult to be assisted. The extension worker must therefore make effort to assist in removing those factors which may lead the farmer into that state.

3. 6.1 Reactions to Frustration

There are several ways through which people react to frustration.

An extension worker once organised a competition for farmers in a community to choose the best farmer of the year through the display of their individual farm products. The person who would emerge as the best farmer would in addition receive farm inputs for the following year. Eventually the best farmer emerged and the others became frustrated. Let us see the seven different ways in which seven different farmers reacted to their frustration.

The first farmer as a result of his frustration worked extra harder, adopting new technologies and practices and he did not only increase production but emerged as the best farmer the following year. His frustration has resulted in increased effort.

The second farmer became so discouraged that he lost interest in the competition. In this case his frustration has resulted in depression.

The third farmer did not allow depression but substituted his interest in the competition with something else, cutting fuel woods from which he makes a lot of money and with which he was able to buy more than the input that are normally given to the winner of the competition.

The fourth farmer in reaction to the frustration, and to be able to escape from the reality of the frustration, began to imagine how he wins the competition and was not only awarded the best farmer of the year but was recognised by the government and was given national award. In his own case he has resulted today dreaming.

The fifth farmer became angry and displays his anger by being rude to the extension worker who judged the competition. This man reacted to frustration by being aggressive.

The sixth farmer got home and showed his anger on his wife and children. He too, has allowed his frustration to result in aggression which he extended to those who were not involved in the competition.

The seventh farmer resulted to finger nail biting, vexed within himself and would not talk to anyone. He too has reacted to frustration but by being bitter to himself.

Severe frustration may, however, result into more serious reactions such as physical illness, mental illness (fugue) and in children, it may result to severe regression. Feeling of frustration may also be accompanied by a feeling of inferiority. Feelings of inferiority are caused by the fact that there is a gap between a person's attainment and his ambitions. The more fulfilling his ambition, the more he will suffer from feelings of getting rid of their feelings of inferiority. One of these means is the use of defense mechanism which is a less satisfactory way of dealing with feelings of inferiority by trying to hide the weakness of which one feels ashamed or inferior. Among the lot, few of the types of defense mechanism are: boasting, belittling oneself, precautionary rationalising and identification and reversal formation.

(a) **Boasting:** Contrary to the false accusation that the person who boasts is feeling superior to others, the person who boast is the person who feels inferior and therefore tries to cover up his inferiority by boasting about the things he can do well. The extension worker must not take every boast from his clients as sign of superiority. He may actually be covering up some weakness.

(b) **Belittling oneself:** The contrast of boasting is belittling oneself. A person who belittles himself, in a way employs a defense mechanism. Instead of covering his weakness through self praise he gets others to praise him. He agrees he is a failure and tells others so, with the intention of making others to refuse it for him and praise him instead.

(c) **Precautionary Rationalising:** This takes place when an individual feels that an incoming event will reveal his weakness and therefore rationalise before that event takes place. An example is the farmer who knowing fully that he will fail in a competition, goes round to tell others that the exercise is a futile one, and that after all, the reason he farms is to feed his

family. Also, he said that rain and pest affected his product. This farmer is making precautionary rationalising.

(d) Identification: Another way by which one defends himself against feelings of inferiority is through identification with someone who is successful. So when one identifies with someone or group, he feels a satisfaction which he could not gain by relying on his own effort alone.

(e) Reversal Formation: Reversal formation takes places when one develops an attitude which is contrary to the desire which has been repressed. For example, a farmer who felt ashamed after being sanctioned for passing uncomplimentary remarks on the extension worker may develop an over-protective attitude towards the extension agent after reporting the experience of the sanction.

3.7 Ways of Helping Farmers Suffering from Frustration

Firstly, the extension agent must recognise that the farmer is suffering from frustration and inferiority as we have discussed earlier. For instance one must not take the farmer belittling himself or boasting as being pleased with himself.

Secondly, after recognising the signs of frustration, the extension worker must identify the causes. If it is because the ambition is not achieved for instance, extension officer can re-orientates the farmers towards new ambition that will give equal satisfaction with the unachieved one.

Thirdly, the farmer should be encouraged to regard difficulties as challenges and that men are born to face challenges. They should be reminded that others before them and some in their position do face such difficulties and many do triumph.

4.0 CONCLUSION

Farmers like any other human beings are controlled and affected by emotions, and are faced with situations that bring about fear, anxiety and at times frustration. The Extension worker should note this and device means of coping or helping farmers to handle their emotional problems, remove fear and anxiety and adjusting to their situations in order to make success of extension activities.

5.0 SUMMARY

In this unit, you have learnt that:

- emotion describes feelings such as love, hate, joy, sorrow, fear, hope, curiosity, wonder, pity, amusement
- there are four major theories of emotion. These are theories of creative impulse, emergency equipment, theory of emotional excitement and arousing stimuli
- emotions can affect our health, memory, reasoning, surroundings, interpretation of situations, decision and actions as well as our sentiments
- fear and anxiety are emotions which play important role in human motivation and might result from financial embarrassment, children's rebellion, business failure, barrenness, isolation, polygamy, tragedy, insecurity etc.
- farmers may react to frustration in so many ways
- extension agents must recognise when any farmer is being affected and should help in proffering solutions to the problems.

6.0 TUTOR-MARKED ASSIGNMENT

1. Write short notes on emotion, fear, anxiety and frustration
2. Explain the theory of emotional excitement
3. Describe five major causes of fear to farmers
4. What are the ways in which the Extension workers can help the farmers to cope with their emotional problems?

7.0 REFERENCES/FURTHER READING

Alfred, S.D.Y. (2001). *The Advanced Psychology for Extension Personnel* (Unpublished lecture notes).

Chaucer, S. S. (1989). *Advanced Educational Psychology*. Vikas Publishing House PVT Ltd.