COURSE GUIDE

PED121
CHILDHOOD AND ADOLESCENT PSYCHOLOGY

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Introduction

PED121: Childhood and Adolescent Psychology is a two-credit unit course. It is relevant to students offering primary education as teacher-interns. The course will expose learners to developmental changes, and the accompanying developmental tasks in children from infancy to adolescence.

Psychologists believe that development is a cumulative process and that many changes occur at every stage of human life, and every facet of human development. These changes come with age appropriate challenges and expectation of a child overcoming overcome them. The course will equally enable learners to have a firm understanding of the causes and complexes of human growth and development.

Overall, the course – PED121 consists of three modules. Altogether, there are sixteen units.

By the time you finish this course, you will be in a position to better guide the child during the process of teaching and learning.

The course guide tells you briefly what, how, and why about the course and the course materials. It also suggests the time management for each unit of the course to enable you to complete it successfully. The course gives detailed information on how to guide you on the in text self-assessments and how necessary it is that you attend e-facilitation classes or regular tutorial classes based on the course. We advise you to attend these sessions for your own good.

What You Will Learn in This Course

This course guide tells you briefly what to expect from reading this course. The study of childhood and adolescent psychology is not only for the fulfilment of the requirements for the Bachelor of Education degree, but it is also the basis for arming you to understand the changes in growth and development of children from infancy to adolescence in terms of physical, cognitive, social, emotional, and language facets of development.

The course will also help you to understand the specific changes at the various stages of development from infancy to adolescence and the accompanying developmental challenges and hazards.

This course begins by introducing you to the conceptual framework for studying growth and development. The conceptual framework examines the meaning and relevance of psychology to a teacher-intern. The

conceptual framework highlights the basic concepts in child development, the biological and environmental basis of human development, and the methods you may adopt when studying children.

The various facets of child development highlighted. – Physical, cognitive, psychosocial, and moral development. This is to make you aware that human growth and development is a complex process. You will understand that to guide development and make you pay attention to the different areas of the developmental needs of the child.

The course also examines the stages of child development from the pre-natal period to adolescence. The study of child development helps you understand the specific changes that occur in children at the various stages of their life, and the developmental challenges that children face during those stages. When you understand these changes and their challenges and hazards, you will better appreciate what the children under your care are undergoing. This way, you will be in a better position to guide development and learning.

Course Aims

The aim of the course is to inform you about a selection of current scientific knowledge about childhood and adolescent development. This will enable you to think as a professional about child development, child behaviour and learning.

The course aims to provide basic knowledge that will engender in you a heightened awareness of the events and processes that shape the individual child's development through the lifespan.

Course Outcomes

The overall course outcomes are that when you have completed the course, you would be able to:

1. State the meaning of psychology;
2. Explain the relevance of the study of psychology of childhood and adolescent for a teacher-trainee;
3. Outline the methods you will select when studying children's different problems;
4. Define the following basic concepts in child development: maturation, learning, development, perception, and motivation;
5. Outline the biological and environmental bases of human development;
6. Describe the trend of the changes that occur in the followingfacets of human development:

(a) Motor development
(b) Cognitive development
(c) Language development
(d) Psychosocial development
(e) Moral development

6. Examine the importance of physical and motor development to other facets of child development
7. Outline the specific changes in growth and development during the following stages of child development:
   a) Pre-natal
   b) Infancy
   c) Early childhood
   d) Middle childhood
   e) Adolescence
8. List the specific developmental tasks of each of the stages: (a) – (e) in (8) above;
9. Examine the educational significance of the changes and challenges the child undergoes in each of stages (a) – (e) in (8) above.

Working through this Course

For you to excel in this course, you are required to carefully read each unit, and understand the contents. You are also required to attempt each in-text self-assessment and submit your assignment for assessment purposes. Apart from studying the course material on your own, you also need to attend e-tutorial sessions for exchange of ideas with your facilitator.

As expected, you are to compile the questions that bug you and the grey areas in the course materials and bring these for discussion with fellow learners and the facilitator. You are also to carve out a specific time each day, every day for your study. Try to form good study habits. Remember that you are a self-learner. In other words, you are on your own. If you study hard every day and do your assignments, you will achieve your goal

Course Materials

We shall provide the following materials to you:

- The Course Guide
- The Course Material containing Study Units
- References as well as sources for further reading (textbooks)

Study Units

The study units in this course are as follows:

Module 1 Conceptual Framework

Unit 1 Meaning and Relevance of Psychology to the Teacher
Unit 2 Methods of Studying Psychology
Unit 3 Basic Concepts in Child Development
Unit 4 Biological Basis of Human Behaviour
Unit 5 Environmental Basis of Human Development

Module 2 Facets of Human Development

Unit 1 Physical Growth and Motor Development
Unit 2 Cognitive Development
Unit 3 Language Development
Unit 4 Emotional Development
Unit 5 Social Development
Unit 6 Moral Development

Module 3 Stages in Human Development

Unit 1 Pre-natal Development
Unit 2 Infancy
Unit 3 Early Childhood
Unit 4 Middle Childhood
Unit 5 Adolescence

The first unit of the course material introduces you to the meaning scientists give to psychology as a discipline. It further outlines for you three schools of psychology, and the relevance of studying psychology. The second unit outlines the different methods you can select and use to study children. The unit also gives you information on advantages and pitfalls of each method of study.

In unit three, explains the major concepts used most frequently in explaining changes in human development Unit 4 explains how the operation of genes and other biological systems of the human body determine human behaviour. Unit 5 describes the major aspects of the psychosocial environment that contribute in determining the behaviour of the child.

Module 2 unit 1 outlines the major trend in physical and motor development from infancy to adolescence. It examines the educational significance of physical and motor development. Unit 2 describes the

trend in cognitive development, and the educational importance of cognitive development. Unit 3 outlines the general trend in language development, and the significance of language development. Unit 4 outlines the progression of emotional development as children become older. The unit further examines the educational significance of emotional development. Unit 5 describes the social agents that influence social development. It outlines the trend in social development from infancy to adolescence. The unit further examines the educational significance of social development. The next unit – Unit 6 outlines the stages in moral development and the factors that influence moral development. The course material highlighted the educational significance of moral development is also.

Module 3 unit 1 describes the stages in pre-natal development of the child. It also outlines the major factors that influence pre-natal development. The second unit – unit 2 outlines the specific changes the child goes through during infancy, and the major landmark achievement and challenges of infancy stage of development. Unit 3 describes the psychomotor, the cognitive, and psychosocial landmark achievements of early childhood. It further outlines the challenges of this stage and the educational significance. Unit 4 outlines the landmark achievements and challenges of middle childhood. Also examined the educational significance. Finally, Unit 5 discusses the achievements and challenges of adolescence. In addition, examines the educational implications of achievements and challenges of adolescence are also examined.

Textbooks and References

The following is a list of sources for further reading/web sources:

Bandura, A. (1986). *Social Foundations of Thought and Action: ASocial Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.

Feldman, R.S. (1999). *Child Development: A Topical* Approach. New Jersey: Prentice-Hall.

Huvlock, E.B. (1972). *Child Development* (5th ed.). New York: McGraw Hill.

Muzi, M.J. (2000). *Child Development: Through Time and Transition*. New Jersey: Prentice-Hall.

Santrunk, J.W. (2004). *Educational Psychology*. New York: McGraw Hill.

The Assignments

Your assignments are computer based e assignments. There are three set of assignment containing ten questions each. You are to answer all ten question in each set of the assignment, which will be computer marked. At the end of each assignment submitted and you will know your score. Remember in answering the assignments you must attempt question 1 before moving to answer question 2 sequent or else question 2 will not open for you to attempt. The marks you obtain for these assignments will count towards the final mark you obtain for this course.. There are three sets of computer-marked assignments in this course; they are compulsory

Assessments

There are two types of assessment for this course: the computer based Assignment (TMA), the end of course examination and in text self-assessments

In tackling the assignments, expected of you to apply the information, knowledge and techniques you must have gathered during the course. The submission of the assignments for formal assessment inaccordance with the deadlines stated in the ***Presentation Schedule***.is compulsory. Your scores in the assignment count for 30% of your total course mark. At the end of the course, you will need to sit for a final written examination of three hours. This examination will count for 70% of your total course mark.

The Presentation Schedule

The presentation schedule in your portal page including the important dates for the completion, you are required to do all your assignments by the due date. You should guard against falling behind in your work.

Course Marking Scheme

The table below shows how the actual course marking is broken down.

Table 1: Course Marking Scheme

ASSESSMENT	**MARKS**
Assignment 3 (TMAs)	3 assignments each with ten questions = 10 x 3 = 30%
Final Examination	70% of overall course marks
Total	**100% of course marks**

Course Overview

This table brings together the units and the number of weeks you should take to complete them and the assignments that follow them.

Unit	Title of work	Week's Activity	Assessment (end of unit)
	Course Guide		
Module 1	**Conceptual Framework**		
1	Meaning and Relevance of Psychology to the Teacher		
2	Methods of Studying Psychology		
3	Basic Concepts in Child Development		
4	Biological Basis of HumanBehaviour		
5	Environmental Basis of Human Development		
Module 2	**Facets of Human Development**		
1	Physical Growth and Motor Development		
2	Cognitive Development		
3	Language Development		
4	Emotional Development		
5	Social Development		
6	Moral Development		
Module 3	**Stages in Human Development**		
1	Pre-natal Development		
2	Infancy		
3	Early Childhood		
4	Middle Childhood		
5	Adolescence		
	Revision		
	Total		

How to Get the Most from This Course

In distance learning, the study units are specially developed and designed to replace the university lecturer. Hence, you can work through these materials at your own pace, and at a time and place, that suits you best. Visualise it as reading the lecture instead listening to a lecturer.

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 integration with the other units and the course as a whole. Next is a set

of learning objectives. These objectives let you know what you should be able to do by the time you have completed the unit. You should use these objectives to guide your study. When you have finished the unit, you must go back and check whether you have achieved the objectives. If you make a habit of doing this, you will significantly improve your chances of passing the course.

The main body of the unit guides you through the required reading from other sources. This will usually be either from your set books or from a reading section. When you need to use a computer and guided through direction the tasks you must do You will be directed. The purpose of the computing work is two-fold. First, it will enhance your understanding of the material in the unit. Second, it will give you practical experiences of using programmes, which you could well encounter in your work outside your studies. In any event, most of the techniques you will study are applicable on computers in normal working practice, so it is important you that encounter them during your studies.

Activities are interspersed throughout the units, and answers are given at the end of the units. Working through these tests will help you to achieve the objectives of the units and prepare you for the assignments and the examinations. You should do each activity as you come to it in the study unit. There are also numerous examples given in the study units, work through these when you come to them, too.

The following is a practical strategy for working through the course. If you run into any trouble, telephone your facilitator or post the questions on the Web CT OLE's discussion board. Remember that your facilitator's job is to help you. When you need help, don't hesitate to call and ask your tutor to provide it. In summary,

- Read this course guide.
- Organise a study schedule. Refer to the course overview for more details. Note the time expected of you to spend on each unit and how the assignments relate to the unit. Important information e.g. details of your tutorials, and the date of the first day of the semester is available from the Web CT OLE. You need to gather all this information in 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 for working on each unit.
- Once you have created your own study schedule, do everything you can to stick to it. The major reason that students fail is that they get behind with their coursework. If you get into difficulties with your schedule, please let your facilitator know before it is too late for help.
- Turn to unit 1 and read the introduction and the objectives for the unit.

- Assemble the study materials. Information about what you need for a unit is given in the 'overview' at the beginning of each unit. You will always need both the study unit you are working on and one of your set books, on your desk at the same time.
- Work through the unit. The content of the unit arrangement is to provide a sequence for you to follow. As you work through this unit, you will be instructed to read sections from your set books or other articles. Use the unit to guide your reading
- Keep an eye on the Web CT OLE. Up-to-date course information posting will be continuously there.
- Well before the relevant due dates (about 4 weeks before the dates) access the Assignment File on the Web CT OLE and download your next required assignment. Keep in mind that you will learn a lot by doing the assignments carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the examination. Submit all assignments not later than the due dates.
- Review the objectives for each study unit and confirm that you have achieved them. If you feel unsure about any of the objectives, review the study material or consult your tutor.
- When you are confident that you have achieved a unit's objectives, you can then start on the next unit. Proceed unit by unit through the course and try to pace your study so that you keep yourself on schedule.
- 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 facilitator's comments. Consult your tutor as soon as possible if you have any questions or problems.
- After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit objectives and the course objectives.

Facilitators/Tutors and Tutorials

There are 8 hours of e-tutorials (one hour for each sessions) with audio-video for you to download in supporting this course. You will be notified of the dates, times and location of these tutorials, together with the names and phone number of your tutor, as soon as you are allocated a tutorial group.

The following might be circumstances in which you would find help necessary: when

- you do not understand any part of the study units or the assigned readings;
- you have difficulty with the self-tests or exercises;
- you have a question or problem with an assignment, with your tutor's comment on an assignment or with the grading of an assignment.

You should try your possible best to attend the tutorials. This is the only chance to have live video contact (synchronous and asynchronous) with your tutor and to ask questions which are answered instantly. You can raise any problem encountered in the course of your study. To gain the maximum benefit from course tutorials, prepare a question list before attending them. You will learn a lot from participation in discussions.

Summary

The course examines the contents of Childhood and Adolescent Psychology. The course designed and developed for your benefit as a professional teacher. By the end of studying the course, you will be able to answer the following comprehensive questions in order to review the course:

- Why is the study of psychology important to you as a professional teacher in training?
- Which of heredity and environment is more important in human development? Explain your answer.
- What method would you select to study the impact of good study habit on success in examinations? Explain the method you have selected.
- How does physical growth affect the child's behaviour?
- What is the importance of environmental stimulation on a child's cognitive and social development?
- How do emotions affect learning and school adjustment?
- What are the developmental landmarks and challenges of pre-school children?
- How does the adolescent differ intellectually and socially from the pre-adolescent?

We hope that you will find this course interesting and exciting. The course is a living course. As you go through it, you will develop more insight into your own behaviour. You will be a better human being after going through this course We hope you enjoy your acquaintances with the National OpenUniversity of Nigeria (NOUN). We wish you success in this course.

Note: Red colour in the Text highlights Key headlines while Blue colour is for Key words or sentences

Best wishes.

MAIN COURSE

CONTENTS

MODULE 1 CONCEPTUAL FRAMEWORK

UNIT 1 MEANING AND RELEVANCE OF PSYCHOLOGY FOR THE TEACHER

Unit Structure

1.1 Introduction

The great capacity of human beings to adapt to changes in their environment amazes every one of us. Human beings have immense capacity to change behaviour to suit their purpose. They have physical, psychological and social needs that must be met to enable healthy growth and development. The extent to which parents, the family, the community and the society are able to meet these developmental needs (or not) has long-term consequences for the kinds of adults they will become

Psychology, as a subject of study, is the product of the search to unravel what makes human beings different from other animals.

This unit will introduce you to the study of psychology. We will discuss the meaning of psychology as a science, and the different branches of psychology. We will discuss the various domains of human behaviour, and the techniques of studying human behaviour. Finally, we will discuss why educational psychology is a foundational course for teacher education.

1.2 Learning Outcomes

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

- Describe psychology as a scientific study
- Outline the major schools of psychology
- List, with examples, the different domains of human behaviour
- Examine the contribution of psychology to teacher education.

1.3 The Title of the Main Content

1.3.1 Psychology as a Science

In this unit, we shall discuss what science is. As we go along note not of underlined keys and green colour. Science is a method of study. It is not on itself a body of knowledge. It is systematic. This means that it follows a definite procedure for gathering information.

Psychology is a science because it follows the empirical method. The scientific status of any endeavour determined by its method of investigation, not what it studies, or when the research was done, and certainly not, by who did the investigation. All sciences use the empirical method. Psychology commonly recognized as a **social science.** Why is psychology a natural science?

Psychology is natural science of behaviour and often consists of observing the overt (physical behaviour) and covert (mental cognitive processes) behaviour

- **The Goals of Psychology**

In this sub-section of the unit, we will be discussing the four main goals of psychology, which are to describe, explain, predict and change the behaviour and mental processes of others

1. The first goal of psychology is to describe a behaviour or cognition of the problem. This can enable researchers to develop general laws of human behaviour. For example, through describing the response of dogs to various stimuli, Ivan Pavlov helped develop laws of learning known as classical conditioning theory.
2. Once researchers have described general laws behaviour, the next step is to explain how or why this trend occurs. Psychologists propose theories which can explain a behaviour
3. Psychology aims to be able to predict future behaviour from the findings of empirical research. If a prediction not confirmed, then the explanation it is based on might need to be revised. For

example, classical conditioning predicts that if a person associates a negative outcome with a stimuli they may develop a phobia or aversion of the stimuli

4. Once psychology has described, explained and made predictions about behaviour, changing or controlling a behaviour becomes the next step. For example, interventions based on classical conditioning, such as systematic desensitisation, used to treat people with anxiety disorders including phobias.

- **Methods used in scientific Investigation**

The method of science is logical and consequential presentation of facts. It is verifiable because data obtained do not depend on the peculiar character of the person collecting the data, which means in effect human factors and biases exclusion as much as possible, from the report. Finally, it is replicable which means anyone can follow the procedure outlined and systematically arrive at the same results.

Psychology is a scientific study of human behaviour because it follows the scientific method of study in gathering information. The scientific method is characterised by the following distinct steps:

1. Problem identification: A problem sensed and questions raised.
2. Hypothesis: Hypothesis is a tentative answer to the question.
3. Data: Relevant information is gathered and used to test the hypothesis
4. Data Analysis: Gathered Data collated and analysed inrelation to the hypothesis.
5. Conclusion: Conclusion is drawn from the results of analysis of data
6. The outcome of such a study must be supported by evidence. The evidence must be personal opinions or coincidence

For easy reference, we put these steps in a graphic format as follows:

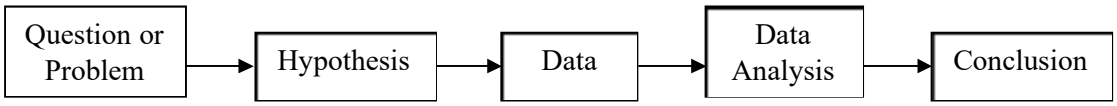

Figure 1.1: Adapted from Muzi (2000), p.2

Four Criteria to Test for a Study of Human Behaviour:

- **Objectivity**

By objectivity, we mean that the study results not affected by the biases or personal preconceptions of the persons carrying out the study. The researchers must not exaggerate data to support their preconceptions. They must not ignore relevant evidence that contradicts their hypothesis.

- **Validity**

Validity means that the study must measure what it sets out to measure. For example, a researcher who sets out to ascertain the average height of 12-year old boys and girls in a particular city, but goes ahead to use a weight measuring instrument to gather data and report findings in heights units will be reporting an invalid study. The researcher did not measure the attribute they set out to measure.

- **Reliability**

Reliability describes the stability and consistency of measures obtained in a study. This means that, for a study to be reliable, other workers should, using the same measuring instrument and procedure for gathering data, arrive at the same conclusions. For example, a battery of intelligence test administered to the same child by two or more researchers should produce the same or similar scores.

- **Replicability**

A study is replicable if different researchers, using similar techniques and similar subjects arrive at similar results and conclusions

In addition to the criteria specified above, if you are designing a research project, you must be careful to work with a representative sample. A sample is representative if drawn randomly from the same population of subjects. This implies that the subjects of the study must be typical of the kinds of people the researcher seeks to study. For instance, a study on the effects of television viewing on children's cognitive abilities might yield different conclusions depending on the age group or socioeconomic background of the subjects sampled for the study.

You must consider these basic criteria no matter what research technique you have selected. Whether naturalistic observational study or a controlled experimental study, these basic criteria must be respected.

1.3.2 Domains of Human Behaviour

Psychology is scientific study of human behaviour. The use of behaviour here describes a general concept, which covers a wide range of human activities. Some human activities are directly observable. If behaviour observed directly, it is an overt behaviour. We may cite some examples of overt behaviour. Eye blink, muscle flex are observable. They are overt behaviour. In addition, facial contortion and laughter are observable. Pounding *fufu*, driving a car, writing on the sheet of paper are observable. They are overt behaviours. They manifest and we see them.

Some human activities, on the other hand, may not be directly

observable. If you cannot directly observe behaviour, you describe it as covert behaviour. A covert behaviour is only an inferred from other observations. Examples of covert behaviour include thinking, reflection, insight, conceptualisation, problem solving. We can only infer these behaviours from some other body signs or activities of the individual engaged in the covert behaviour. Three main classification of human behaviour are into one of three main domains. These domains are cognitive domain, psychomotor domain, and affective domain. We discuss each in more detail.

- **The Cognitive Domain**

Human activities or behaviours are classified under cognitive domain if they generally, knowledge as a cognitive object. T h e cognitive domain aims to develop the mental skills and the acquisition of knowledge of the individual. The cognitive domain encompasses of six categories, which include knowledge; comprehension; application; analysis; synthesis; and evaluation. They may be concrete or abstract knowledge. We may cite some examples

Your teacher has taught you that is the Executive President of Nigeria, and you can recollect this knowledge in the cognitive domain. It is still possible for the teacher to show you the picture of the President of Nigeria; so when you see Muhammadu Buhuri in reality you recognise him. That knowledge is concrete knowledge in the cognitive domain.

Again, you are taught that the outer space is a void. The outer space contains no atmosphere. You are able to recall that knowledge. You have the knowledge as a cognitive object. It is not possible to take a real picture of the void of the outer space. Void does not exist as a sensory experience. It can only be conceptualised, not recognised. Voidance is unseen. The knowledge that the outer space is void is an abstract knowledge in the cognitive domain.

- **The Psychomotor Domain**

The psychomotor domain includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires, practice and measured in terms of speed, precision, distance, procedures, or techniques in execution. The psychomotor domains reflect production of skills. Skill production involves manual control using fine motor actions. We may cite examples of behaviour at the psychomotor domain.

Driving a motor vehicle is an activity in the psychomotor domain. So is typing on a computer keyboard. You should take note that when learning objectives are stated on the psychomotor domain; the instruction must specify the procedure the learner must adopt to reproduce the required skill. There is no tell tale instruction for skill acquisition. The learner must be seen to have reproduced the psychomotor activity or skill.

- **The Affective Domain**

This domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The affective domain involves our feelings, emotions, and attitudes. Such behaviours usually signal a latitude change in affections. We may cite some examples. Suppose you did not like children before. You undergo the course: childhood and adolescent psychology. You come to appreciate children. During your spare time, you take a walk voluntarily, without any promptings, to a neighbourhood children's playground. You unconsciously begin to enjoy the children and their activities. That change in attitude is behaviour in the affective domain. Emotions are involved. You can cite other examples involving development of aversion or even fear or empathy.

You should note that human behaviour is very complex. Behaviour may involve all three domains simultaneously. It may be difficult to classify strictly such behaviour belonging to the cognitive domain or psychomotor or affective domain.

For example, the behaviour of a motor vehicle driver who swerves into a gutter to avoid running over a small child who suddenly jumped onto the road involves more than one domain. There is the cognitive calculation of the speed and the distance of the approaching car from the child. There is the affective consideration that a human life is at great risk. There is the psychomotor skill in promptly swerving the car out of the obstacle on the road. Clearly, all the three domains come into play in that singular behaviour. Therefore, the classification scheme is for easy conceptualisation and understanding of behaviours.

1.3.3 Schools of Psychology

There are several schools of psychology. A school of psychology refers to a perspective, a view, or an interpretation of human behaviour from a standpoint. Different psychologists have interpreted human behaviour from different standpoints. The standpoint of a psychologist determines what aspect of human behaviour they study; what techniques they employ; the nature of information gathered; and the interpretation of data.

Psychologists who share similar standpoints make up schools of psychology. A school of psychology has a specific viewpoint, uses a specific technique, and interprets behaviour from a known standpoint. We shall discuss three schools of psychology, namely: the psychoanalytic school, the behavioural school, and the cognitive developmental school.

The Following are some of the Major Theories in Psychology.

- **Structuralism**: Wundt and Titchener's structuralism was the earliest school of thought, but others soon began to emerge.
- **Functionalism:** The early psychologist and philosopher William James became associated with a school of thought known as functionalism, which focused its attention on the purpose of human consciousness and behaviour.
- **Psychoanalysis:** Soon, these initial schools of thought gave way to several dominant and influential approaches to psychology. Sigmund Freud's psychoanalysis centred on how the unconscious mind influenced human behaviour.
- **Behaviourism**: The behavioural school of thought turned away from looking at internal influences on behaviour and sought to make psychology the study of observable behaviours.
- **Humanistic psychology**: Later, the humanistic approach cantered on the importance of personal growth and self-actualization.
- **Cognitive psychology**: By the 1960s and 1970s, the cognitive revolution spurred the investigation of internal mental processes such as thinking, decision-making, language development, and memory.

In this self-learning material, we shall discuss three major schools of psychology: Psychoanalytic, behavioural and cognitive schools of psychology

- The Psychoanalytic School

The father of psychoanalysis is Sigmund Freud. Freud (1965) proposed that the human mind was topographical and dynamic. By that, Freud meant that there are provinces or divisions in the human mind. These divisions are always moving and interrelating.

According to Freud (1965), the divisions of the human mind as conceived into three levels of consciousness. These levels are: the conscious mind, the preconscious mind, and the unconscious mind.

The conscious mind represents the part of the human mind where thoughts, feelings, ideas, and images that one is aware of reside. The preconscious mind refers to the part of the mind directly beneath the conscious mind. It is from the preconscious mind that thoughts and feelings brought easily to human consciousness.

The unconscious mind refers to the part of the human mind that is out of awareness. Thoughts, ideas, feelings, and images that reside in the unconscious mind hidden. It is here that human beings bury thoughts and feelings that cause them anxiety, guilt, fear, and other psychological discomforts, especially those that are the result of childhood conflicts.

The materials in the unconscious mind are deeply buried. They are not easily accessible. They can be inferred or understand only through, dreams, slips of the tongue, the jokes people tell, manner of dress, life choices, likes and dislikes, fantasies, and relationships with others.

Freud (1965) proposed that human personality was composed of three systems. These systems represent mental structures through which biological drives are mediated before they manifest as behaviour. These mental structures are the id, the ego, and the superego.

The id represents Freudian personality structure that deals with basic instincts. The id is the seat of psychic energy and biological drives such as hunger, thirst, sex, self-preservation. The id relishes the pleasure principle. That is, it strives for the immediate gratification of drives and needs.

The ego is the Freudian part of personality that deals with reality. The ego is the rational part of the mind. It regulates the biddings of the id for immediate gratification of needs. It delays of personality. It is the moral id gratification to an appropriate opportunity. The ego relishes the reality principle. That is, it instructs the id to choose an appropriate or best time and manner for the discharge of psychic energy.

The superego is the Freudian personality structure i.e. the moral part of human personality. The superego incorporates the society's rules and values. It is the agent of the society. It is the voice of authority or the police of personality. It is the moral arm of the world, and the values of one's culture. The superego mediates the biddings of the id, and the ego.

Note that the id, the ego, and the superego represent an organised whole. Personality is not made of distinct pieces. The three mental structures work together to produce one personality type. All three levels of consciousness or awareness flow through them.

What is important is that the dynamics of personality will depend on the distribution of psychic energy among the id, the ego, and the superego. If energy is concentrated on the id, the individual will be uncontrolled and impulsive. The id-controlled person will often find himself in trouble with the law.

If energy settled primarily in the ego, the individual's behaviour will be more realistic and socially appropriate. If the energy concentrates mainly with the superego, the individual's behaviour will tend toward the rigid and moralistic. Individuals with very powerful superego have difficulty living full and open lives. Superego persons cannot initiate changes in social structures. They are usually pro-establishment persons.

We shall not go into the details of Freud's psychosexual development. We will also not discuss Erik Erickson's psychosocial development here. However, the crux of the psychoanalytic school of psychology is that childhood experiences impact adult behaviour significantly. Predominantly pleasant childhood experiences lead to healthy adult personality. However, predominantly frustrating childhood experiences lead to difficulty with personality development. Individuals who have difficulty with their personality employ in adult life defence mechanisms to protect their weak ego.

- **The Behavioural School**

The behavioural school of psychology founded by John Watson (1930). To the school, the theoretical goal of psychology was the prediction and control of behaviour. The school focuses on the effect of learning on human development. The psychologists in the behaviour school seek to find out how children modify their behaviour as a result of experience.

According to Watson (1930), experience is the root of human behaviour. What a child learns, that the child becomes. Watson (1926) posited that a stimulus is the environmental situation or an internal condition that causes activity in human beings.

Behaviourists believe that the arrangement of evens or stimuli in the environment determine the child's behaviour. In other words, children learn what they become from the events they encounter. Events in the environment generate consequences. These consequences, as encountered by the child, determine their behaviour. What this means is that children are shaped by the environment in which they live. Therefore, the social environment has impacts on the child's development and behaviour significantly.

The behavioural school of psychology initiated the first scientific study of human behaviour. They studied how specific stimuli or events in the environment gave rise to specific observable behaviour. Behavioural psychologists maintained that all behaviours are observable, measurable, and therefore predictable.

- **The Cognitive Developmental School**

The father of the cognitive developmental school of psychology is Jean Piaget. The school focuses on understanding how mental structures promote thinking, reasoning, and purposeful or goal-directed behaviour. The psychologists in this school studied extensively how children come to know things.

The subject matter of study of the cognitive develop mentalists is human cognition. Piaget (1926) was specifically interested in understanding how children come to use images, symbols, concepts and rules to construct a worldview.

The cognitive developmental school of psychology is so named because one basic proposition of the school is that as people grow, change, and develop, so do their thought processes. Cognitive psychologists posit that as human beings develop intellectually, they build schemes or patterns of behaviour and thinking. That is, individuals construct their own diagrams of the world. Therefore, people's mental schemes determine the way they interpret experience.

Infants have limited schemes of the world. Experience, maturation, and learning elaborate those schemes. By adulthood, schemes have become very complex, encompassing such abstract ideas as love, peace, democracy, and justice.

They have physical, psychological and social needs that must be met to enable healthy growth and development. The extent to which parents, the family, the Community and the society are able to meet these developmental needs (or not) has long-term consequences for the kinds of adults they will become

1.3.4 Educational Psychology – Importance for Teachers & Education

a) Importance of Educational Psychology for Teachers

Teacher is like a philosopher who guides his student. He is responsible to e aware about growth and development of the students. It is educational psychology, which enables the teacher to use various techniques. The importance of educational psychology and teachers has the following points:

- Educational Psychology helps teacher to know that how learning takes place.
- It enables a teacher that how learning process should be initiated, how to motivate, how to memorize or learn.
- It helps teachers to guide the students in the direction of canalized student's abilities..
- It informs a teacher, about the nature of the learners and his potentialities.
- It helps a teacher to develop a student personality because the completely educational process is for student's personality development.
- It helps a teacher to adjust his methodologies of learning to the nature / demand of the learner.
- It enables a teacher to know the problems of individual differences and treat every student on his / her merit.
- It helps a teacher that how to solve the learning problems of a student.
- It helps a teacher that how to evaluate a students that whether the

purpose of teaching & learning has been achieved.

b) Importance of Educational Psychology in Education

Following are the points, which show the importance of education psychology in education. It also shows how educational psychology and education have importance for another.

❖ **Learner**

Educational Psychology studies various factors, which have impacts upon students, which may include home environment, social groupings, peer groups, his / her emotional sentiments, and mental hygiene etc. Various methods are used in order to get the desired data about the learner in order to know about him / her mentality and behaviour and its manifestations.

❖ **The Learning Process**

Here educational psychology investigates that how information and knowledge be transferred and what kinds of methodologies should be used for that purpose.

❖ **Learning Situation**

Educational Psychology studies the factors which are situational in nature that how environment like of classroom be managed and how discipline be maintained. Besides it, it studies various Audio Video Aids & its role in facilitating the teaching learning process.

❖ **Curriculum Development**

Educational psychology helps curriculum developers that what kind of curriculum should be made and what kinds of content be given to teachers to transfer to the next generation.

❖ **Evaluation Techniques**

Educational psychology helps educators that what kinds of evaluation techniques should be used to test the learner that to what extend information and concept have been transfer

Self-Assessment Exercises

1. Psychology is the study of ------ behaviour
   a) Inanimate b) human c) plant d) things
2. The method psychologists adopt for gathering information is -------- method a) scientific b) artistic c) creative d) oral
3. The characteristics of the scientific method include the following except----------
   a) Objectivity, b} validity, c) reliability d) irreplaceability
4. Classification of Human behaviours into three main domains include the following domains except -------- a) cognitive, b) psychomotor, c) affective d) attitudinal
5. Three main schools of psychology include the following except: a) psychoanalytic b) behavioural c) cognitive d) developmental school

1.4 Summary

- Psychology is defined as the study of human behaviour;
- The method psychologists adopt for gathering information is described as the scientific method;
- The characteristics of the scientific method include: objectivity, validity, reliability and replicability;
- Human behaviours are classified into three main domains, namely: the cognitive, the psychomotor, and the affective domains;
- Three main schools of psychology are: the psychoanalytic school, the behavioural school, and the cognitive developmental school;
- The study of educational psychology will empower the trainee teacher to be able to guide children's development and learning.

1.5 References/Further Readings/Web Sources

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1.6 Possible Answers to Self-Assessment Exercises

Answer
1. A) human
2. A) scientific
3. D) irreplaceability
4. D) attitudinal
5. D) developmental school

UNIT 2 METHODS OF STUDYING CHILDREN

Unit Structure

2.1 Introduction

A number of research methods are available for data collection in studying child. It is the responsibility of the researcher to select the appropriate methods to use. This unit introduces you to some of the more readily available research methods for studying the child. The following major strengths and weaknesses of each of the methods mentioned below

2.3. Learning Outcomes

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

- describe each of the following methods that are commonly used in child study: naturalistic observation, self-report techniques, case study or history, longitudinal method, cross-sectional method, and experimental method
- state the major strengths of each of the methods listed above
- list the major pitfalls of each of the methods listed above
- Identify three ethical considerations in child studies.

2.3 Title of the Main Sections

The most commonly methods of studying children used in Nigeria. This page introduces you to some of the more readily available research methods for studying the child. The major strengths and weaknesses of each of the methods are described

2.3.1 Naturalistic Observation

Naturalistic observation is a form of research in which the scientist observes and records the behaviour and interaction of people studied being in a specific setting. Usually, the setting is the natural place the subjects are found normally.. Examples of such a setting include school, hospital, home, or shopping centres or marketplace. The researcher does not manipulate the subjects or the environment. If one wants to study a 2-week old baby, the natural setting is the home. If one is studying play activities in children, the natural setting is the playground.

Limitations of naturalistic observation include the following:

- In the first place, it is difficult to replicate a study, as no two settings are the same
- Secondly, naturalistic observation only records observed behaviours; it does not explain the cause of the behaviour.
- Naturalistic observation is however; very useful in studying new-born babies and in studies of people from different cultural backgrounds, in which case the researcher would have to live among them.

2.3.2 Self-Reports

Self-report is a research method that allows the researcher access to the thoughts, feelings in addition, opinions of the persons studied. In self-report, the researcher asks direct questions from the subject about his thoughts, feelings, opinions or other behaviour, such as sexual behaviour. Techniques employed in self-report include interviews, and questionnaires. Interviews conducted in person. For example, if one applies for a child, one would be interviewed in person. One would answer direct questions about themselves and their experiences. Interview is a very powerful research technique for accessing very intimate experiences. A questionnaire anonymously distributed. That is, the researcher need not see the subject in person. Mailing the questionnaire to respondents or subjects. The questionnaire technique is particularly useful when the number of subjects is large. It is less expensive to execute than the interview.

Self-report, however, has a major limitation. Subjects tend to fake their responses. That is, subjects tend to give responses they believe are acceptable or pleasing to the researcher. This drawback affects both the interview and the questionnaire. Fake their responses is the social desirability factor.

2.3.3 Case Study or Case History

A case study is a study of one person or one entity. It studies one person in great depth. Case study or case history is very useful in reviewing or reconstructing an individual's history. The major drawback of case study is that its findings are not generalizable to other individuals and not replicated.

2.3.4 The Longitudinal Method

The longitudinal method focuses on a group of people and studies them over an extended period. Usually, the longitudinal method examines the same individuals at intervals in their lives. In this way, changes that occur throughout the course of individual development. The longitudinal method is very useful in investigating trends in cognitive, physical or language developments. Because the longitudinal method focuses on the same individual for an extended period, peaks, spots and levelling in the course of development from one stage to another. Longitudinal studies are however, very expensive. They are time consuming to conduct. They are also difficult to replicate. The attrition rate is high; that is many participants may drop out because of death, relocation or loss of interest in the study

2.3.5 The Cross-Sectional Method

In the cross-sectional method, subjects of different age groups examined at one point in time. For example, a study of moral judgement among children using a cross-sectional method may sample children aged 3 – 20 years at the same point in time. The sample may be representative of pre-school children (3 – 6 years), children in middle childhood (6 – 12 years), and adolescent children (12 – 20 years). The cross-sectional method has some advantages. It takes a short time to complete. It does not cost much. One major drawback of the cross-sectional method of studying the child is that it is prone to cohort effect. Cohort effect describes the impact natural disasters such as flood or accidents of history, e.g. wars could have on people living in a particular place at a particular time in history. The impact of such disasters or accidents will be specific to people living in that area. Hence, comparing the 3-year old, the 6-year old, and the 12-year old today presupposes that the 3-year old will be like the 12- year old in a 9 years' time. Of course, this pattern may not occur for many reasons relating to history and events. Therefore, the findings from a cross-sectional study have to be generalised with caution.

2.3.6 The Experimental Method

The experimental method is a powerful tool for obtaining information in research. Employed usually to establish a cause-and-effect relationship. The experimental method has some distinctive factors, which involves hypothesis testing; manipulation of events, and control of some events; it begins with a random sample; there is the experimental group; there is also the control group; there is the independent variable; and there is the dependent variable. A random sample is a group of subjects chosen at random from the population studied. The experimental group is the group of subjects that the researcher manipulates. The control group are subjects similar to those in the experimental group in all respects except not manipulated by the researcher. The event manipulated by the researcher in an experiment is the independent variable.

The characteristics in an experiment that change owing to the manipulation of the independent variable make up the dependent variable. The major strength of the experimental method is that it reveals cause and-effect relationship. The method also lends itself to replication. This means that other researchers can be verify the findings from an experimental research. The major limitation of the experimental method is that the laboratory conditions may be artificial and not obtainable in real life situations.

Note:

i) Using children for research studies has some hazards. Some persons have objected to the idea of using human beings as guinea-pigs. Using children as experimental animals has practical and moral implications. The questions that have been raised over using children for studies include the following:

ii) Is it proper to intrude into anybody's private life?

iii) Is it proper to manipulate the environment of children, perhaps by withholding some experiences from a control group?

iv. What would be the effect of depriving some children food or medication that they require? 4. Would studies of children not result in labelling some as abnormal?

v). is it morally right to interfere with God's own design of children?

vi), what ethical standards should be followed when studying human beings?

vii). in an attempt to address some of these issues, the American Psychological Association (APA) (1990) and the Society for Research in Child Development (1996) have outlined codes of ethics for psychology researchers. Therefore, you are expected to follow the ethical guidelines outlined below in any research involving children:

viii) Respect for Individuals. This means that you must obtain the

consent of children and parents or guardians of children to be used for any study.

ix) Respect the Principle of Beneficence. This means that you must ensure that children are not harmed physically or psychologically by your experiment.

x). Obey the Principle of Justice. You must give principled consideration for who should not participate in the experiment. The benefits derivable from the experiment by the participants should be explained.

xi). Respect the Principle of Confidentiality. This means that you must ensure that all information gathered about the children used in your study are kept strictly confidential. Individual children participating in your experiment must never be identified or singled out by their names

Self-Assessment Exercises

1. Naturalistic method includes the following except: a} observation, b) recording behaviour c) interaction of people studied d) unspecific setting
2. Self- reporting provides access to the following except a) thoughts, b) feelings c) behaviour d), language
3. A case study is a study involving a) one entity b) two persons c) three persons d) four persons
4. The longitudinal method focuses on a) studies over a short period, b) group of people c) specific time d) childrem
5. Experimental study establishes a) Cause-and-effect relationship b) hypotheses, c) correlational relation d) longitudinal study

2.4 Summary

This unit explains the methods that are commonly used in child study (naturalistic observation, self-report techniques, case study or history, longitudinal method, cross-sectional method and experimental met It also explains the major strengths and weaknesses of each of the methods. In addition, we identified three ethical considerations in child studies.

2.5 References/Further Readings/Web Source

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Society for Research in Child Development (1990, Winter). "Ethical Standards for Research in Children". *SRCD Newsletter, pp. 3 – 4*.

1.6 Possible Answers to Self-Assessment Exercise

Answer
1. D)
2. D)
3. A)
4. B)
5. A)

UNIT 3 BASIC CONCEPTS IN CHILD DEVELOPMENT

Unit Structure

3.1 Introduction

In this study of child development, some concepts keep recurring more frequently. These are basic concepts. The basic concepts in child development are concepts that help explain changes in children's behaviour that go with ageing.

In this unit, we introduce you to some of the basic concepts used in child development studies. They include growth, maturation, learning, development, perception and motivation. We advise you to study and understand the meaning of these concepts, and their appropriate usage. These concepts will help you to understand the contents of the other units in this course.

3.2. Learning Outcomes

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

- Explain the following terms/concepts: (a) physical growth, (b)motor development
- Outline the trend in physical growth
- Discuss the developmental trend in motor development
- Explain the following concepts: (a) growth, (b) maturation, (c)learning
- Outline the principles of development
- Explain how the various sensory modalities aid perception
- Examine three views on motivation offered by three schools of psychology

3.3 The Title of the Main Sections

3.3.1 Human Growth

Human growth describes increases in magnitude of body parts, organs, and systems. Growth involves changes in size, height, gait, or number of cell. Cell division is growth – it involves increase in number of cells. The body skeleton increases in length, and density, this is growth. The body muscles increase in gait and mass, this is growth.

While growth is one major, characteristic that differentiates living systems from non-living things. It describes the metabolic changes by which a child increases in size and changes in shape. Several factors influence growth changes.

Height, for example, is primarily a biological process influenced by genes. Genes direct the neural and hormonal activities that propel growth. Deficits in human growth hormone lead to stunted growth. Hyperactive functioning of the human growth hormone may lead to abnormal height. Other environmental related factors include malnutrition, teratogens, and severe psychological stress. (Muzi, 2000). We shall discuss these factors more detail under physical development.

3.3.2 Maturation

Maturation is the unfolding of the child's biological potential. The timing and the sequence of the unfolding of these biological potentials are prewired genetically. For an illustration, practicing reading with a child will not make the child read until the brain cells that control reading ability are mature enough to respond to such training. The body will not hold the neck erect or upright if the controlling muscles are not maturational and ready. The baby will not stand and walk erect if the muscles of the limbs are not maturational ready. Maturation, therefore, refers to readiness or the point at which a child is biologically prepared to undertake a *specific task.* It should be noted that it is the process of maturation that limits the time or age at which a child speaks, forms letters of the alphabet, understands relational concepts or propositional logic. In general, maturation prepares the child to undertake and benefit from any specific activity. Whether or not the child actually understands that specific activity will depend largely, on exposure or experience.

3.3.3 Learning

Learning means *changes in behaviour* due to *experience and practice.* Changes in behaviour that qualify as learning have to be *relatively permanent changes*. This means that the change in behaviour explained by temporary states in the child, such as fatigue, illness, or drug effect; and maturation or instinct are not learning

Changes in behaviour may be *observable*, in which case, they are overt behaviour. Examples of overt behaviour include changes in muscular dexterity. A child who could not write with a pencil now holds the pencil properly and writes some letters; or a child learns a new dancing step; or a child traps the football without losing its control to an opponent.

Changes in behaviour may also be *unobservable*, in which case they *covert behaviour*. Covert behaviours are discernible from other activities. Examples include change in attitude to other ethnic nationalities, implied from accepting relationships with such other ethnic nationalities; development or change of insight that is, seeing meaning in a relationship that was not obvious before.

Learning manifests in modification of behaviour. Learning is the major reason human beings are not stupid all the time. Learning makes it possible for a child to transfer the benefit of one experience to other situations. In this way, human behaviour is said to be adaptive.

3.3.2 Development

Development describes *progressive sequence of changes* in structure and organisation of body systems. Development involves changes in the *ability* of the organism to *function at a higher level*. The main attribute of development is that the changes are *qualitative* and result in *increased functionality*. Increases in motor skills, which permit the child to achieve higher level of proficiency in any particular games signal development. In specific terms, a child who earlier cried when thirsty now says "mummy, water". This is development. A child, who earlier was crawling, suddenly stands up and takes one or two hasty steps. This is development. When a child gains voluntary control of the muscles of the bladder such that they can empty the bladder contents at will, development has taken place. Usually, development involves a complex interaction between maturation and learning. Maturation itself involves growth. Therefore, development regarded usually as the *product of growth, maturation and learning*. Development occurs at all the facets of human functions is, development could be at the physical, cognitive, language dimensions of human functioning.

- **Principles of Human Development**

The *principles* that explain *human development* include developmental direction, continuity and sequence, individual differences.

- ***Developmental Direction***

The principle of *developmental direction* states that development follows a *predictable direction*. Development, for example, starts from *head* and proceeds towards the *toes*, as *cephalocaudal law*. At birth, the human head is the most mature part of the body. All the brain cells are there at birth. The head weighs more than the rest of the body. The baby gains control of the muscles of the neck before that of the chest. The baby also gains control of the chest before the waist, the arms and the limbs. There is a direction.

Development also proceeds from the centre to the *periphery*. This is the *proximodistal law*. The internal organs at the centre of the body – the heart, the lungs, the liver reach their adult size before the arms and the legs. The extremities mature last.

- ***Continuity and Sequence***

Development continues in a *predicable order* until maturity attained. This is not to say that there is a direct proportional increase in all aspects of development with corresponding increases in age. Development is *characterised by spurts* peaks, and plateaux. However, continuity implies that development does not get arrested or reversed unless something is biogenetically wrong. A characteristic sequence is followed by all children. The child sits before crawling. The child crawls before standing, and walks before running.

- Individual Differences

The time of unset, and the rate of appearance of different aspects of human development vary enormously from one child to another. This is the principle of individual differences because the genetic blueprint differs for every individual.

For example, one child may get the first set of teeth at seven months while the other child gets the first set of teeth at 12 months. One child may stand and take the first steps at 10 months, while the next child stands at 24 months. Though the timetable may differ, all children will attain the goal of development ultimately if the environment is cooperative.

3.3.5 Perception

Perception describes brain interpretation of sensory experiences. It is the brain's way of organising and making sense of the world. Perception includes, therefore, all the ways an individual has of getting to know their environment.

Without the ability to perceive changes in the environment, human behaviour would be stupid. Imagine plunging your hand into a pot of Human beings identify things by sight, smell, and sound. They detect if they have body contact with another object. They detect changes in temperature and pressure. They experience pain and cold. People are able to learn and know things because they have senses. They use their sensory modalities to pick sensations from the environment, and thereby learn and know things.

The major sensory modalities are vision, hearing, touch, smell, and taste. We elaborate briefly on each of these sensory modalities.

- **The Sense of Vision**

Vision is the most important of all human senses. Estimated 80 percent of human sensory information obtained through vision (Muzi, 2000). The main organ of vision is the eye. The eye receives light energy reflected as light rays from objects. The light energy transformation to nervous impulses and transmitted to the brain. The brain interprets these impulses as vision. Therefore, you are able to see objects and events.

- **The Sense of Hearing**

Hearing is a significant source of sensory information. It connects the individual with other people, and enables one to communicate. The main organ of hearing is the ear.

The ear collects sound energy in form of waves from various sources. It transforms these different sound waves to corresponding nervous impulses. These impulses are carried to the hearing centre of the brain. The brain interprets the nervous impulses as sound. Therefore, you are able to hear and differentiate different sounds.

Hearing is very important for children learning speech. Congenitally deaf Children become mute or dumb. They are unable to benefit from hearing their own vocalisation. It is the reinforcement children obtain from hearing their own voices that reinforces and engender speech development.

- **The Sense of Smell**

Smell describes the emission of a gaseous chemical, which irritates or is obnoxious, from a substance. The obnoxious chemical stimulates the olfactory nerves. The nerves send impulses to the olfactory centre of the brain. The brain interprets the tickling of this chemical as smell. Therefore, you are able to detect smell of different kinds.

- **The Sense of Touch**

Touch is a very important sense, which people use to explore the world.It is through touch that people learn about the texture of different substances. Touch also informs the individual about changes in pressure and temperature. The main organ of touch is the skin.

Nerve endings on the skin surface are sensitive to changes in pressure and temperature. The nerve endings transmit message about pressure and temperature changes to the brain. The brain interprets the message as touch, pain, cold or hot. Therefore, you are able to experience.

- **The Sense of Taste**

The sense of taste is innate. However, there is some evidence (Crook, 1987), that some aspects of taste learned prenatally. For example, most people savour the sweet taste. The uterine fluid is sweet, so people may have learned to prefer sweet because of their uterine experience.

The main organ of taste is the tongue. Taste buds are contained in the tongue. The taste buds contain nerve endings that are sensitive to the primary aspects of taste, namely: salt, sour, sweet, and bitter. These primary tastes describe the variations in alkalinity of different substances in solution.

Nerve endings in the taste buds transmit message about the alkalinity of the substance in contact with the tongue to the brain. The brain interprets the message as salty, sour, sweet, or bitter. Therefore, you are able to detect the taste of different substances.

3.3.4 Motivation

Motivation describes the internal processes that energise, direct and sustain behaviour. Motivated behaviour has some characteristics. The person involved exhibits a high level of ego-involvement. That is, the behaviour energised. The person involved shows a significant level of perseverance. In other words, the behaviour is sustained for a reasonable length of time. The individual who is engaged in motivated behaviour does not relent until the goal is attained. Motivated behaviour is purposive or goal-directed (Santrunte, 2004).

Motivation is that condition in you that makes you to keep going, even under extreme frustrations. That thing makes you keep trying when you fail. Motivation keeps your spirit high even when the task is obviously difficult and hurting.

Children's behaviour in the classroom explains why they are behaving in a particular way. It indicates the extent to which their behaviour is energised, directed and sustained. If children do not complete an assignment because they are bored, lack of motivation is involved. If

children encounter challenges in performing a task, but persist and achieve results, motivation is involved.

The answers to the question of what is it that motivates children are different by different schools of psychologists. We consider briefly three of these schools.

- **The Behavioural Perspective**

Behavioural psychologists state that external rewards and punishment determine children's motivation. According to this school of thought, children's behaviour is motivated by incentives. Incentives add interest, excitement and direct children's attention to appropriate behaviour (Emmer, Evertson, Clements, and Wersham, 2000). This means that extrinsic factors control motivation from outside the individual. We may cite examples of the kinds of incentives that teachers frequently use. They include the following:

- **Scores and Grades –** Teachers place a numerical score or a let ter grade on a child's work. This provides a feedback to the child about the quality of his/her work.

- **Recognition –** Teachers display quality work, produced by a child in a corner of the classroom. Classmates and visitors admire such work. Teachers give certificate of achievement to a child who excelled. Teachers also place an exceptional child on the honours roll. All these are tokens of recognition.

- **Privileges –** Teachers give outstanding children special privileges such as extra time during recess, exemption from sweeping the classroom or doing manual labour, extra time in the computerroom, a field trip to a resource centre, or even a party ticket.

- **The Humanistic Perspective**

The humanistic perspective holds that children have capacity for personal growth. Psychologists in this school of thought stress that personal growth engendered when personal needs are satisfied. Abraham Maslow is the chief proponent of this school of thought.

According to Maslow (1954, 1971), the needs of children can be arranged in levels of energy, or what he called hierarchy of needs. The hierarchy of needs is arranged in a sequence of the most basic need to the highest order needs.

According to Maslow's hierarchy of needs, children's needs must be satisfied in the following sequence:

- **Physiological Need –** This includes the need for food, water, sleep or rest, shelter.

- **Safety Need –** This includes the need for protection from physical or psychological harm, such as protection from ritual killers, kidnappers, child trafficking, child abuse, armed robbers, domestic violence, and road hazards.

- **Love and Belongingness Need –** This includes the need for affection, contact comfort, company, affiliation and attention.

- **Esteem Need –** This includes the need for recognition, feeling good about oneself, feeling liked and likeable.

- **Self-Actualisation Need –** This includes the need for achievement, accomplishment, excellence, competence, and actualisation of one's potential.

In Maslow's hierarchy of needs, the first four needs [(i) – (iv)] listed here are basic needs and referred to as safety needs. The last listed, self-actualisation, is a higher order or growth need. Children must satisfy their basic or safety needs before the higher need or growth needs appear. Most schoolwork have centre on academic achievement. Academic achievement is a higher need – need for self-actualisation. When safety needs are deprived, they hamper growth or higher needs or self-actualisation need.

The hierarchy of needs has implication for children's education. A hungry child or a worn out child will not concentrate on the mathematics lesson. The child will be preoccupied with how to satisfy the hunger or rest need. A child who is under constant threat at home, in school, or in the community cannot effectively benefit from school work. A child who is rejected by parents or peers, who is shown little affection will do badly in their school work. A fearful child will show very little creativity in an assigned task. Such children play it safe. Children who are preoccupied by safety needs show little progress in schoolw o r k . Teachers must ensure that basic needs of children are reasonably satisfied to pave the way for growth needs.

- **The Cognitive Perspective**

According to the cognitive perspective on motivation, children's thoughts, goals and purposes determine their motivation. To the psychologists in this perspective, human behaviour is purposive. This means that the goal or the target you have set for yourself determines the level of motivation that will propel you to attain the given target.

The implication is that children have internal motivation to achieve. External pressures or external incentives do not control children behaviours. Therefore, children are to be given adequate opportunities and responsibilities to control their own achievement outcomes. The main duty of the teacher is to help children to select important, realistic, and achievable goals. The teacher should encourage children to plan their work with specific time schedule. The teacher is to help monitor progress toward goal attainment

Self-Assessment Exercises

1. Growth involves changes in the following except: ------ A) size. B. height. C. gait. D. weight of cell
2. Motor development follows these patterns except---------- A. sequential B. systematic C. predictable D. identified trend
3. Maturation is the unfolding of the child's - - - - - - - - potential. A) Social. B) biological C) Psychological D) Physiological
4. Maturation, therefore, refers to or the point at which a child's readiness to undertake a -------- task. A) general (B mental C) specific D) Definite
5. Perception describes the brain interpretation of ---------experiences A. Mental B) sensory C) biological D) Physical

3.4 Summary

This unit examines the concepts of growth, maturation, and learning. It also looks at the principles of development and how the various sensory modalities aid perception. Finally, we examined three views on motivation offered by three schools of psychology.

3.5 References/Further Readings/Web Sources

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3.6 Possible Answers to Self-Assessment Exercise

Answer
1. D.
2. D.
3. B)
4 C)
5. B)

UNIT 4 BIOLOGICAL BASIS OF HUMAN BEHAVIOUR

Unit Structure

4.1 Introduction

A major problem that bothered early scientists and psychologists was why one child in a family would have brown eyes while the other child has blue eyes. Psychologists wondered how individuals acquired their unique physical structures and traits. The answer to the question relates to the biological makeup of the human beings. A person's heredity determines their unique characteristics. In this unit, we shall consider genetic transmission. We will discuss genetic abnormalities. We will also discuss the contributions of the nervous system and the endocrine system to human behaviour.

4.2 Learning Outcomes

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

- Outline how genetic materials are transmitted from parents to offspring
- Explain how the nervous system contributes to differences in human behaviour
- Discuss the role of the endocrine system in determining human behaviour

4.3. Title of the Main Sections

4.3.1 Heredity

We shall discuss heredity under the following sub-topics:

- **Gene Operations**

The basic unit of human life is the cell. Groups of cells organise to form different structures such as: organs, muscles, tissues. Every cell has a nucleus. The nucleus contains 46 chromosomes arranged in 23 pairs. However, the reproductive cells contain 23 units of chromosomes.

Chromosomes are threadlike molecules of Deoxyribonucleic acid (DNA). The DNA carries the genetic instruction.

One of each pair of the 23 pairs of chromosomes in each human cell is from the father, and the other from the mother. These chromosomes carry coded instructions called genes. The gene is the basic unit of heredity, or genetic blueprint.

During reproduction, each parent contributes 23 units of chromosomes. When the sperm cell fertilises the ovum, the chromosomes from both parents pair up. They make 23 pairs, reproducing the human cell. A new life begins.

- **Trait Transmission**

Trait transmission is a process by which definite structures or genes transmission is from parents to offspring. The gene for any specific trait is transmitted in pairs of alternate states called *gene alleles*. Genes operate either *dominantly* or *recessively*.

When opposing or alternate characteristics, such as brown and blue eye colour,are transmitted through genes, one overrides the other and becomes the trait evidenced. The trait evidenced operates *dominantly*. This means that its dominant features observed in the physical appearance of the individual.

In the specific example of brown and blue eye colour, when brown and blue gene alleles pair to determine eye colour, brown overrides blue. The eye colour of the individual is observed to be brown. The brown trait is dominant over blue. However, this same child with brown eyes carries the genes for the blue eye, hidden in the genetic makeup.

The blue eye trait cited here is swamped or hidden. It is less potent than the brown eye trait. The blue eye trait here operates *recessively*. Briefly,

a *dominant trait* is a trait transmitted through genes that overrides an opposing trait and expressed in the physical features. A *recessive trait* is a trait transmitted through genes that is less potent than an opposing trait. It therefore remains hidden or unexpressed.

When an individual has a pair or *identical gene alleles* determining a trait, the individual is having homozygous for that trait. However, when a trait determined by a pair of *dissimilar gene alleles*, the individual is said to be *heterozygous* for the trait.
Note that a dominant trait is only dominant when in a heterozygous condition. In addition, a recessive trait is equally recessive only in a heterozygous condition. It holds therefore that in a homozygous condition, a recessive trait will express itself; there being no potent trait swamping or overriding it.

The features of a recessive trait appear in the observed physical appearance of the individual when the recessive trait is in the homozygous condition. The *sickler* is an example where a recessive blood trait is in a homozygous condition. The carrier of the *sickle cell anaemia* is an example of a pair of gene alleles determining a trait being in a heterozygous condition. The carrier has the trait hidden but does not manifest the sickness.

In the examples cited here, the brown-eyed child, and the sickler are examples of outward appearance, or observable manifestation of inherited traits. The *brownness* or *sicklerness* indicate the way genes express themselves in the structure of the individual. Such outward expression of inherited traits known as phenotype. However, behind the outward appearance of the actual *genetic composition* or *genetic constitution* known as the genotype.

Note that the phenotype may not reflect the underlying genetic structure or the genotype as is the case with the brown eyed child and the carrier of the sickle cell anaemia.

Note: **Genes do not cause behaviour**
Note that genes do not directly cause behaviour, thoughts, or emotions. Genes instruct the making of proteins and hormones. That is, genes instruct the making of chemicals that may make a child prone to behaving in certain ways, such as being anxious, impulsive, depressed. Take the emotion of anxiety as an example, the proteins and hormones produced by DNA carries messages between brain cells. Some of these messages deal with the response to dangers. The chemicals in the brain cells that make individuals respond to dangers may be coded to make one person highly responsive to danger. This person is then easily anxiety-provoked. The same chemicals in the brain of another person may

be coded to cause a low-level reaction to dangers. This individual then expresses less anxiety. Therefore, even when the environment presents the same danger to these two persons, their responses will be quite different. The same explanation goes for observed individual differences in most human behaviours.

- **Genetic Abnormalities**

The *genetic code* of every individual is like a computer *software program*. The software program tells the computer what to do. The genetic code is the child's personal *biological programme*. This personal biological programme is constructed from the software of both the father's and the mother's sides of the family. Like a software program, the biological program sometimes gets *hiccup* or goes *awry*.

As a result, a substantial number of children are born with *congenital defects* or *genetic abnormalities*. Estimation of about five percentof infants are born with genetic abnormalities, and approximately three percent of new-borns have birth defects (Plomin, De Fries, and McClearn, 1990). Some of these conditions can be serious and debilitating. Genetic abnormality affects deeply families by the birth of a child

Most causes of the notable *genetic diseases* are by *dominant genes while recessive genes* caused *s*ome of the diseases. Causes of some are by *sex-linked genes*. Still some other genetic diseases are caused by structural defects in chromosomes (too many or too low chromosomes). We shall discuss some of the more commonly genetic diseases here.

- **Sickle-cell Anaemia**

Sickle-cell anaemia transmission is through *recessive genes* from both parents. Both father and mother must have the sickle-cell disease trait in their genotype, as either carriers or sicklers, for their offspring to suffer sickle-cell anaemia. The consequence of sickle-cell disease is a defect in the red blood cell structure. The red blood cells therefore disabled and cannot effectively carry oxygen to body tissues and organs. Individuals with sickle-cell anaemia have regular severe pain in their limbs and joints. They are also easily fatigued. In extreme cases, death occurs from heart or kidney failure due to oxygen shortage.

- **Haemophilia**

Haemophilia is a blood diseases transmitted through a *sex-linked recessive gene*. The disease is carried on the X-chromosome. Haemophilia is more prevalent in male children. The sex genotype of females is XX; that of males is XY pair. Thus, males lack the second X chromosome that can counteract the genetic information that produces the disorder. The consequence of the disease, haemophilia, is inability of the blood to clot. This is why some call it the *bleeder's disease*.

- **Down syndrome**

Normal human beings have 46 chromosomes, arranged in 23 pairs. In Down syndrome individuals, there is an extra chromosome on the 21st pair of chromosomes. Thus, Down syndrome is a disorder produced by the presence of one extra chromosome on the 21st pair, so there are three instead of two chromosomes. The term *chromosome trisomy* describes this situation. Down syndrome referred to as *mongolism*. It is an example of a genetic disease caused by a structural defect in chromosomes.

The consequence of Down syndrome is mental retardation. Sometimes there is evidence of arrest in physical growth. Significantly, greater number of Down syndrome babies are born to mothers above 45 years of age. Very old fathers have also been cited as contributing significantly to the birth of Down Syndrome babies.

Turner's syndrome

This is a genetic disease caused by *abnormal sex chromosomes*, found among females. The female has only one X chromosome instead of two. The genotype if expressed as XO. The consequence of Turner's syndrome includes lack of functioning ovaries; inability to develop secondary sex traits; short physical stature, and poor spatial perception. Heart problems are also common complications.

Klinefelter's Syndrome

Klinefelter's Syndrome is a genetic disease resulting from the presence of an extra X chromosome in the sex genotype. That is, the sex genotype expressed as XXY. The disease caused by abnormal sex chromosome. The consequences of Klinefester's Syndrome include: underdeveloped genitals – small testicles with no sperm; feminine appearance – enlarged breasts and high-pitched voice.

4.3.2 The Nervous System

The *nervous system* is made up of the brain, the *nerve cells* (the neurons), the *synapses*, and the *specialised sensory modalities*. The sensory modalities include the visual, the auditory, the olfactory, the tactile, and the taste organs. A complex network in the nervous system brings about feelings, the movements and the thoughts a child may experience

The infant is born with between 100 and 200 billion neurons or nerve cells. No new neurons created after birth. The number the child is born with lasts them a lifetime. The amazing capabilities of the brain achievement is by increasingly more complex connections created between the neurons and a pruning down process of unused neurons. That is, neurons that do not become interconnected with other neurons, in the

course of the child experiencing of the world, become unnecessary. The unused or unnecessary neurons eventually die out.

Thus, according to Kolb (1995), the development of the neurons system proceeds most effectively through the loss of cells, and not cell multiplication or division like other aspects of human growth.

The *sensory modalities* or sensory organs, the eye, the ear, the nose, the skin, and the tongue receive input information from the child's environment. The *sensory organs convert* the *stimulus* from the environment into *electrical activity* or *nerve impulses*. The *chemical substances* in the synapses and the neurons *transmit* nerve impulses to the brain; and from the brain to target organs.

Any child's *speed of reaction* to environmental stimulation will depend on the nature of the chemical substances that transmit messages in the nervous system. Genes instruct the making of chemical substances in the nervous system. In other words, genes determine any child's speed of reaction to environmental stimulation. Therefore, the efficiency of the functioning of the nervous system is genetically determined.

One can see how the malfunctioning of some of the sensory organs (for example, *long sightedness* and *short sightedness* of the visual organ) attributed to genetic makeup. Malfunctioning of sensory organs leads to perceptual impairment. This has implications for the child's behaviour, school adjustment, and achievement.

- **The Endocrine System**

The *endocrine system* consists of the *ductless glands*. These glands secrete chemical substances (*hormones* or *enzymes*) that regulate *body chemistry* and activities. Among the import ductless glands are:

- ***The Pituitary Gland*:**

The pituitary gland known as the *master gland*. It secretes the hormone that controls all other glands. Primarily, the pituitary gland secretes the growth hormone that regulates the physical growth of the body parts.

- ***The Thyroid Gland***:

The thyroid gland secretes the hormone, *thyroxin*. This hormone is responsible for the control of food metabolism and the sensitivity of the nerves.

- ***The Adrenal Gland***:

This gland secretes the hormone commonly known as the *emergency hormone*. This hormone controls the body systems that regulate the body's reactions to changes and danger signals.

- ***The Pancreas***:

The pancreas secretes the hormone known as *bile*. This hormone regulates sugar metabolism and sugar levels in the tissues and the bloodstream.

- ***The Gonads***:

For males, the gonad is the testes, which produce the male gametes or male sex cells. For females, the gonad is the ovary. The ovary controls the maturation of the female sex cells or the ova. The gonads also regulate the development of secondary sexual characteristics.

Hyper-activity or hypo-activity of any of these glands will hamper body systems activities. Logically, therefore, malfunctioning of the endocrine system will hamper normal growth and development of the child. This will in turn hamper normal behaviour and adjustment.

The genes instruct the making of the enzymes or hormones ofthe endocrine system. Therefore, the level of functioning of the endocrine system has a biological origin. The endocrine system contributes significantly to human behaviour.

Self-Assessment Exercises

1. The basic unit of human life is the -------- which organise into groups to form different structures such as: A organs B. muscles C. tissues D. cell
2. The nucleus contains ---------- chromosomes arranged in 23 pairs A. 46 B. 45 C. 40 D 48
3. A dominant trait is only dominant when in a --------condition A. homozygous B. heterozygous C. genotype D phenotype
4. The -------is a disorder produced by the presence of one extra chromosome on the 21st pair A) Down syndrome B. Klinefelter's Syndrome C. Turner's syndrome D. Turner's syndrome
5. The pituitary gland known as the ----------A. ductless gland B. *master gland C. thyroxin D. gonad*

4.4 Summary

This unit is about heredity. We examined how genes operate either dominantly or recessively. We discussed dominant genes in relation to how they express themselves both in the heterozygous and homozygous conditions. We described genotype and phenotype.

You must have learnt that genes do not cause behaviour but instruct chemicals that cause behaviour. We stated that genetic abnormalities are caused by damaged genes. Finally, we explained that genes direct the chemicals that regulate nervous system and endocrine system activities.

4.5 References/Further Readings/Web Sources

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4.6 Possible Answers to Self-Assessment Exercise(s)

Self-Assessment Exercises
1. D
2. A
3, A
4. A
5. B

UNIT 5 ENVIRONMENTAL BASIS OF HUMAN BEHAVIOUR

Unit Structure

5.1 Introduction

Two general factors determine human behaviour. They are heredity and environment. We discussed the factor of heredity and other biological aspects of heredity in Unit 4. Heredity provides the raw materials while the environment is the cook who prepares the actual menu.

The environment plays a crucial part in determining human behaviour. It interacts in a complex and intricate manner with hereditary forces to produce what manifests as human behaviour.

Environment is important for physical growth; it is important for development, and learning. To some extent, even maturation may be delayed if the environment is not cooperating.

In this unit, we discuss the various aspects of the child's environment that significantly effect on the child's growth, development, learning and behaviour.

The outlined critical elements in the physical and logical environment. We also discuss the psychosocial environment of the child.

5.2. Learning Outcomes

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

- Describe the critical aspects of the physical environment of the child that impact on development and learning
- Outline the various aspects of the child's psychosocialenvironment that contribute in determining behaviour

- Discuss the importance of stimulating the environment for child growth and development.

5.3 Titles of the Main Sections

5.3.1 The Physical Environment

The physical environment of the child is all the concrete animate and inanimate objects within the child's experiential reach. These are living things and the non-living things that the child can have direct acquaintance.

Living things with which a child can have direct concrete experience include human beings parents, siblings, peers, neighbours. They also include domestic and wild animals. Domestic animals may include cows, goats, dogs, chicken and other pet animals. Wild animals may include rats, monkeys, birds of the air, insects, and other pests; then plants.

Non-living things a child may have direct concrete experience with include food and feeding materials, clothing, toys, farm implements, radio and television, book materials, and others. There are also houses for different purposes, and places for different purposes.

Physical objects and persons in the child's environment are not important just because they are there either as accumulated property or as just artefacts. Psychologically speaking, physical things in the child's environment are important to the extent that they engender growth and development. Physical things are important to growth and development if the child can access them and perform actions on them.

A child's actions on objects of experience may include sucking, biting, chewing, feeling, cuddling, dismantling, assembling, and others actions a child performs on objects of knowledge help the child to name them discover their texture, and their uses.

The child, for example, learns that some objects are smooth, some are soft, some brittle, some course, some rattle, some are sweet, only by touching, feeling, shaking, or tasting them.

A mother loves to the child because she is present for the child to hold and cuddle. She loves because she is present to produce the breast for the child to suck and be nourished. She loves also because the child can feel her soft body and get contact with comfort. It is difficult for any child to imagine an absentee mother who loves.

In essence, the physical environment of the child engenders growth and development by acting as sources of sensory stimulation. Sensory stimulation for the child constitutes physical experience. Therefore, physical experience provides the basis for meaning, making of the child's complex world.

Physical experience provides the basis for the development and refinement of gross motor skills, and coordinated actions of the fine motor skills. The refinement of motor skills promotes the development of important life skills. Important life skills include self-care, reading and writing, creative arts, perceptual abilities, and cognitive functioning. You can now appreciate how physical experience contributes significantly to child growth and development.

- **Logical Experience**

Logical experience is different from physical experience**.** Logical experience is not an object of physical acquaintance or sensory experience. It is a deduction or a logical necessity drawn from actions effected on the object of experience (Ngwoke and Eze, 2004). Logical experience is not an attribute of the object of experience.

We may illustrate a logical experience with an example. Suppose a child arranges ten counting beads, first in a row. The child counts and obtains the number ten. The child then counts down and obtains again the number ten. Suppose this child rearranges the beads in a circle.

Marking a starting point, the child counts clockwise and obtains the number ten. The same child again counts the circular beads in the anti-clockwise direction. Again, the number ten obtained. Finally, the child counts the beads into the container cup. Again, the number ten obtained. The child discovers that whatever the arrangement or direction of counting, the number of beads remained unaltered – the number is ten.

The discovery above is not an intrinsic property of the beads. Neither is linear or circular order a property of beads. Number and order are properties arising from the actions performed by the child. They are deduced from the child's actions on the beads. In general, objects do not have sum or order.

The experience the child gained is a logical experience. Most derived quantities of physical objects such as speed, velocity, density, gravity are logical necessities arrived at through actions on those objects. The lessons embedded in home videos children watch are not explicitly observable in the movies. They are derivable from the plot or the theme. Some are thematically absurd, anyway. Social display rules states that

children learning are also logical experiences. They are derived from actions of models. In essence, logical experience arises from the child's actions or debate when confronted by a cognitive conflict. The development of insight is an example here. Logical experience is the basis for abstract reasoning and other forms of formal reasoning, which you will learn in Unit 7 and Unit 15 of this course.

5.3.2 The Psychosocial Environment

We shall discuss this topic under the following sub-topics:

- **The Family**

The family is the first psychosocial environment the child encounters. Although the family is a small social unit comprising persons who usually have blood relations, the psychodynamics of the family system is complex. Every family has its own unique structure or configuration. What goes on in this structure impacts greatly on the child's development and behaviour. We outline briefly some of the critical elements in the family social structure that have implications for children's development.

- **Parenting Style**

Different parents have different parenting styles. Some parents use authoritarian parenting style. Authoritarian parents demand absolute respect from children. They insist that children must follow parents' directions. Authoritarian parents place firm limits and control on their children. They rarely tolerate verbal exchange from the children. According to Santrunck (2004), children of authoritarian parents often behave in socially incompetent ways. They lack initiative, and have poor communicating skills.

There is democratic parenting. Democratic parents encourage children not to be independent. However, they still place reasonable limits and control on children's actions. Verbal communication flows in both directions without inhibitions. Rules and regulations are explicitly explained and their values for all to understand. Children whose parents have democratic tendencies are often competent socially. They tend to be self-reliant, and get along with peers and adults. There is the neglectful parenting style. This is a parenting style in which the parents show virtually no involvement or commitment in the children's lives. Often times, neglectful parents do not know the whereabouts of their young children even in the night. Children of neglectful parents often behave in socially incompetent ways. They tend to have poor self-control and low achievement motivation.

There is also indulgent parenting. This is a parenting style involved parents in the lives of their children highly. However, indulgent parents place few limits or restrictions on children's behaviour. Children do whatever they like and get away with it. Children from indulgent parents are often indolent. They are unable to control their own behaviour, and have poor social skills.

- **Changing Family Structure**

Increasing number of children are now being raised in divorced families, step-parent families, and families in which the mother works outside the home, or families in which parents are working in different states. Divorce in particular, has become epidemic. A great number of children are living in single-parent families. In addition, some children are living in extremely poor families. . The effects of these factors on child development are not easy to determine. What is clear is that they influence negatively on growth and development.

- **Peers**

Peers are children of about the same age or maturity. Peers play powerful roles in children's development. One of the most important functions of the peer group is to provide a source of information and comparison about the world outside the family.

According to Rubin (2000), good peer relationship is necessary for healthy development. Social isolation, resulting from peer rejection is linked with many behaviour problems, ranging from delinquency, drinking, violent crimes, and depression (Kupersmidt and Coie, 1990). Good peer relationships can enhance self-esteem, self-concept, and general well-being of children. All these are psychological traits that inked with other indices of self-actualisation.

- **The School**

Children spend many years as members of a small society called school. The school exerts a tremendous influence on children's socio-emotional development. Social contexts vary through pre-school or early childhood, elementary school or middle childhood, and secondary school or adolescence.

The early childhood school setting is a protected environment. The boundary usually is the classroom. Here children interact with one or two teachers. These teachers are very powerful authority figures in their lives. Peer interaction, at this age, is in dyads or very small groups.'

In elementary school, the classroom remains the main social context. Children experience elementary school classroom as a more intimate social unit than is the case in pre-school classrooms. The teacher

symbolises authority. The teacher establishes the climate of the classroom, the conditions of social interaction, and the nature of group functioning. The peer group becomes more significant in the lives of children than in the pre-school. Children begin to have close friends in the elementary school. Friendship relations help children to elaborate social and emotional skills.

As children move into the secondary school, the school environment increases in scope and complexity. The social field is now the entire school rather than the classroom. Now adolescents, children meet people from more diverse social and cultural backgrounds, and also more varying interests. The behaviour of the adolescent tilts more towards the adolescent standards and norms.

Note: The psychosocial environment of children is mutually interacting. As people influence their behaviour on children, the behaviour of children also affects theirs. The consequence of this mutual interaction is what shapes children's development and behaviour.

Social intercourse involves extensive use of complex language, thought and symbolic representations. Therefore, the impact of the psychosocial environment on development can be pervasive. Sometimes, the psychosocial dynamics may overshadow genetic endowments.

The child, for example, will not develop language if they lived isolated from a social language environment. In addition, without language skills intellectual, social, and emotional skills will be hampered. What this means is that without adequate psychosocial environment, the development of the child's most basic life skills and social roles will be hampered. It is hoped that you, as a member of the child's psychosocial environment, will develop the awareness and sensitivity that fruitful social intercourse is a game of give-and-take.

5.3.3 Educational Implications of Physical Growth and Motor Development

Physical growth and motor development have some *implications* for the *educational practice*.

Firstly, physical growth affects behaviour. Behaviour in turn influences growth and development. Hence, an *understanding* of the *patterns* of *physical growth* of children is *vital* to *understanding* their *behaviour* at various stages of development.

Secondly, physical *growth* and motor *development* constitute the *basis* for the development of *motor skills* and *various abilities*. Hence, physical growth and motor development *affects social adjustment*.
Thirdly, a child's rapidly changing physical structures in terms of height, weight, and physical appearance affect their *attitude to self* and *others*. Attitude to self and others contributes to *self-concept* formation. Self-concept influences *school achievement*.

Fourthly, vigorous play activities are predicated on well-formed physique and proper motor control. Vigorous *play* is a *vital safety valve* for built up *aggressive behaviour* of children. It is also a *source of social recognition*. These are important *components* of *healthful development*.
Finally, children show extensive *individual differences* in physical growth rate and motor control. The teacher of children must internalise the reality that individual differences aside, the *goal of development* is the realisation of every *child's potential*.

Self-Assessment Exercises

1. Physical environment of the child engenders growth and development by acting as sources of ---------- stimulation A) motor B) sensory C. biological D genetic
2. Logical experience is a --------- or a logical necessity drawn from actions effected on the object of experience A) deduction B) prediction C) self-concept D) reasoning
3. Logical experience is the basis for ------ reasoning and other forms of formal reasoning A) concept B) abstract C) concept D) overt
4. One of the most important functions of the peer group is to provide a source of ---------- and comparison about the world outside the family. A) information B) data C) research d) development
5. The consequence of this mutual interaction is what shapes children's development and ---------- A) action B) behaviour C) maturation D) growth

5.4 Summary

In this unit, you probably have learnt the critical aspects of the physical environment of the child that impact on development and learning. You also probably learnt the various aspects of the child's psychosocial environment that contribute in determining behaviour and the importance of a stimulating environment for child growth and development.

5.5 Reference/Further Reading/Web Sources

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6.6 Possible Answers to Self-Assessment Exercise(s)

Self-Assessment Exercises
1. B
2. A
3. B
4. A
5. D

MODULE 2 FACETS OF HUMAN DEVELOPMENT

UNIT 1 MEANING OF PHYSICAL GROWTH AND MOTOR DEVELOPMENT

Unit Structure

1.0 Introduction

Physical growth and motor development begin immediately after conception, progresses through the pre-natal period, and continues to maturity at adolescence. Physical growth and motor development are important because they give every human being their size, poise, and dexterity. They are the basis of human locomotion.

In this unit, we discuss the meaning, trends, and factors that influence physical growth and motor development. We also discuss the educational significance.

1.2 Learning Outcome

- Explain the following terms/concepts: (a) physical growth, (b) motor development
- Outline the trend in physical growth
- Discuss the developmental trend in motor development
- Describe two major factors that influence physical growth and motor development
- Examine the educational significance of physical growth and motor development.

1.3 Title of the Main Section

1.3.1 Meaning of Physical Growth and Motor Development

- **Physical Growth**

Physical growth describes increases in body height, mass or weight, gait, and body size. The organs, tissues, and systems of the body all experience growth. At birth, the average weight of children is about 2.5 kg. By the age of 16 years or late adolescence, the weight reaches about 55 kg. At birth, the average child is under 50 cm or about 0.50m. By the age of one year, the average child is about 0.75m.Medical practitioners describe the baby weight and height not just in absolute units of kilogrammes or metres, but as a percentile. If a child's height is, for example, in the 80th percentile, then the child is taller than80 per cent of children, their age, or shorter than 20 per cent of children, their age. Increases in height and weight indicate changes in size and mass of the body tissues, muscles, and the skeleton. These changes do not tell much about the development of the child if not accompanied by changes in functions.

- ***Motor development***

Motor Development generally signals changes in the *functionality* of body tissues, muscles, and the skeleton. Motor development describes the baby's greater *control* of their *voluntary motor actions*. Voluntary motor actions include reaching for things, grasping, manipulating objects, crawling, standing, and walking. These actions indicate *effective coordination* among tissues, organs and systems of the body.

The following changes indicate motor development in the baby: At birth, an infant's eyes roam about haphazardly. After a few days, the baby can stare at an object for a brief period. This indicates that there isa patterned connection between the muscles that move the eyes and nerve impulses

in the brain. By four weeks of age, an infant can followa dangling object with its eyes. At four months, the same baby can simultaneously hold and look at a rattle. This means that the eyes and the hands are doing teamwork. *Motor development* therefore describes more *effective control* and *coordination* of body organs and systems. Researches categorise motor development into three areas: *postural control*, ability to stand upright; *locomotive control*, ability to move around; and *manual control*, ability to manipulate objects (Keogh, and Sugden, 1985).

1.3.2 Trends in Physical Growth and Motor Development

We shall discuss the trends in physical growth and motor development under the following sub-topics.

1.3.3 Physical Growth

Physical growth follows a predictable pattern. That is, growth obeys two *developmental principles*. These principles of development are: *cephalocaudal* principle, and *proximodistal* principle.

The cephalocaudal principle states that growth and development proceed from head (cephalo) and move downwards to the feet (candal for tail). This is why the head of a new-born is bigger and heavier than the rest of the body. All the human brain cells are there at birth. After birth, the brain cells do not divide further or regenerate.

The *proximodistal principle* states that growth and development proceed from the centre of the body and move outward to the periphery or the outermost parts of the body. The major internal organs of the body – the lungs, the heart, the liver are complete and functional at birth. They show very slight increases after birth. The arms and legs continue to increase until late adolescence.

Physical growth is more *rapid* in the *first year* of a child's life. According to Durojaiye (1976), the average birth weight of the African child is 2.5 kg; and the average height is 0.5m. By the end of the first year of life, the average weight would have reached 7.5 kg (3 times) while the average height would be about 0.75m (half as much). By the end of two years, a child reaches approximately half their adult height.

A noticeable pattern in human growth is that it is *characterised* by *spurts*, *plateaux*, and *peaks*. There are periods of very rapid growth, slow growth, and rounding off. Human growth does not take place steadily. Lampl Veldhius and Johnson (1992) discovered that infants and toddlers grow in spurts, not steadily. Their research findings indicated that babies can grow as much as 0.01m in a day, and then go for days or weeks without any growth.

Between the ages of 3 years and 6 years, rapid physical growth continues. Children within this period gain on the average 0.1m in height, and 2.9 kilogrammes in weight per year (Durojaiye, 1976). Between the ages of 6 years and 12 years, growth proceeds at a very slow rate. The average annual increase in height is about 0.06m. The annual increase in weight is about 2 kg.

At *puberty*, the period of physical growth and development that brings to an end childhood and enables the child to achieve adult physical size, growth spurt reappears. The average age children enter puberty is 12 years. This marks the beginning of *adolescence*. The period of adolescence is between 12 years and 20 years. It is characterised by rapid and dramatic changes in growth.
The adolescent period is also characterised by increased growth of the internal organs of the body. There is an increase in the size and capacity of the lungs. The size of the heart doubles, and the total volume of blood in the body increases. There is a noticeable increase in the capacity of the digestive system (Berger, 1986).

1.3.4 Motor Development

Motor development follows a *sequential*, *systematic* and *predictable* trend. It follows a *definite sequence – the cephalo-canal principle*. Motor control is achieved first in the head, then the arms, hands, upper part of the trunk, lower part of the trunk, and finally the legs and feet (Hurlock, 1972; Shirly, 1933). Thus, infants first lift their heads; then gain control of the shoulders; then sit up; then stand before they finally walk.

Motor control also proceeds in the *proximodistal direction*. The child gains control of the structures nearest the centre of the body before those at the periphery. For example, the child gains control of the muscles in the arms earlier than the muscles in the fingers.

In general, *motor control* proceeds from *gross manifestation* to *specific* or fine control. At birth, the child has little control of the chest and the arms. However, within four months, the child can hold themselves up while face down, using their arms as props. Thereafter, the infant can sit up with support. Then, the child can hold on to an object and rollover. These activities involve *large-muscle control*, and *gross motor skills*.

Activities that involve the use of *small-muscle groups* appear followed by gross motor skills. By 10 months of age, the child can grasp an object between their fingers and the palm. By the first year, the child is able to pick up small objects without dropping them. Activities that involve

small-muscle groups are called *fine motor skills*. Fine motor skills are required for reaching and manipulating objects, such as in grasping, throwing, writing, catching, and using tools.

1.3.5 Factors Affecting Physical Growth and Motor Development

Two major factors *influence physical growth* and *motor development*. They are *genetic* factors, and *environmental* factors.

1. Genetic Factors

Everybody inherits a set of *genes* from the parents. Genes contribute significantly to physical growth and motor development. Genes determine the child's *potential* for growth and development. The eventual height a child attains, the skeletal formation, the general musculature, and neural system coordination depend, largely,on their inherited potential (Thomas, 1991). The *rate of maturation* of bodily structures and the muscles determine the rate of physical growth and motor control. The rate of maturation is wired. *Genetically* Thus, the kind of *motor skills* an individual develops depend on *genetic potentiality*.

Hormonal functioning is an aspect of genetic factor in proper functioning of the *growth controlling hormonal glands* is necessary for normal physical growth and motor development. *Malfunctioning* of growth controlling hormonal glands may lead to *stunted growth* or *overgrowth*.

2. Environmental Factors

Many aspects of the environment can affect physical growth and motor development. They include nutritional status, health status, psychological or emotional state, and training/practice be seriously affected

- **Nutritional Status**

Every child requires *food nutrients* provided in the needed proportion for them to realise their genetic potential for physical growth and development. If there is *significant lack* of *food nutrients*, and the child is *severely malnourished*, physical growth and motor development will be seriously, affected .their physical growth or will be delay in the appearance of important motor skills or they may fail ultimately

- **Health Status**

Good health is a *pre-condition* for normal physical *growth* and motor *development*. If a child's *health* is *severely poor* and *long duration*, physical growth and motor development will suffer. There may be loss in weight and reduction in *growth rate*. Severe *ill health* can result in

distortion in the growth of *bones*. These may lead to *hampered size at maturity* of the skeleton.

- **Psychological or Emotional State**

Findings from research studies suggest that *emotional disturbance* arising from repeated parental conflict or divorce, maltreatment, child abuse and neglect, overcrowding, and other *negative emotion-inducing circumstances* may make *children lose weight* without being ill. Evidence shows that children from *broken* and highly *stressful homes* manifest *slower rate* in physical *growth* and motor *development*.

- **Training/Practice**

Maturation is the basis of development of motor control. However, the *refinement* and *improvement* of *fine motor skills* require considerable *training* and *practice*. Training and practice produce *star performance* exhibited in sports and athletics such as running, jumping, throwing, catching, footballing, and others. Training and practice are most efficacious when introduced at a time the child is biologically ready for the skills.

1.3.5 Educational Implications of Physical Growth and Motor Development

Physical growth and motor development have some *implications* for the *educational practice*.

Firstly, physical growth affects behaviour. Behaviour in turn influences growth and development. Hence, an *understanding* of the *patterns* of *physical growth* of children is *vital* to *understanding* their *behaviour* at various stages of development.

Secondly, physical *growth* and motor *development* constitute the *basis* for the development of *motor skills* and *various abilities*. Hence, physical growth and motor development *affects social adjustment*.

Thirdly, a child rapidly changing physical structure in terms of height, weight and physical appearance affect their attitude of self and others. Attitude to self and others contributes to self-concept formation .Self-concept influences school achievement

Fourthly, vigorous play activities predicated on well-formed physique and proper motor control. Vigorous *play* is a *vital safety valve* for built up *aggressive behaviour* of children. It is also a *source of social recognition*. These are important *components* of *healthful development*.

Finally, children show extensive *individual differences* in physical growth rate and motor control. The teacher of children must internalise the reality that individual differences aside, the *goal of development* is the realisation of every *child's potentia*.

Notwithstanding wide individual differences among children in physical growth and motor development, each child's pattern may be normal. Each child's pattern will reflect their unique genetic, and environmental given. Your goal, as a caregiver, is to provide a conducive environment for each child to be able to realise their potential.

Self-Assessment Exercises

Fill in the blank

1. Physical growth describes increases in body height, mass or weight, ----------
2. Motor Development generally signals changes in the - - - - - - of body tissues, muscles, and the skeleton
3. The two principles of development are: *cephalocaudal* principle, and ---------- principle
4. Genes determine the child's ---------- for growth and development.
5 Two major factors *influence physical growth* and *motor development* ----------factors, and *environmental* factors

1.4 Summary

You have, in this unit, considered the physical growth of children in terms of height, size, gait, and weight. We also considered motor development, physical growth, motor control, as well as cephalocaudal and proximodistal laws. You should note that there is mutual interaction among physical growth, motor development and human behaviour. While physical growth and motor development school influence school adjustment and school achievement, the goal of growth and development is the realisation of the child's potential.

1.5 References/Further Readings/Web Sources

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1.6 Possible Answers to Self-Assessment Exercise(s)

Answers to Self-Assessment Questions
1) Gait
2) Functionality
3) Proximodistal
4) Potental
5) Gentic

UNIT 2 COGNITIVE DEVELOPMENT

Unit Structure

2.1 Introduction

The child is born with primitive reflexes. These reflexes help the child deal with the immediate problem of survival. With age, primitive reflexes gets elaborated into patterns of behaviour that help the child adapt to changes in the environment.

As the child grows, various perceptual abilities develop. The child increasingly understands the environment. Many wonder where the child's knowledge comes from.

In this unit, we discuss cognitive development. We examine the meaning of cognition. We outline the trends in cognitive development. We also outline the factors that influence cognitive development. Finally, we examine the educational significance of cognitive development.

2.2 Learning Outcomes

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

- Explain cognition
- Cognitive development
- The process of cognitive growth
- Outline the trend in cognitive development from childhood to adolescence
- Highlight and explain three major factors that influence cognitive development
- Examine the educational significance of cognitive development.

2.3 Title of the Main Sections

2.3.1 Meaning of Cognition and Cognitive Development

The term *cognition* describes the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. As a product, cognition refers to an individual's view of the world. This view may include the child's knowledge of self, their beliefs, prejudices, superstitions, fears, realities, memory, aspiration, and current and future perspectives.

As a process, the manner knowledge acquired refers cognition. It refers to how a child gets to know and understand the world; the manner children process information. It describes how children make judgements and arrive at a decision. Cognition as a process describes how a child explains his or her knowledge and understanding to another person.

A child's cognition is a mirror of the structure and organisation of their world. A child's cognition naturally changes with increasing maturation and experience. A child's cognition is fluid, not static.

The term *cognitive development* means development involving the ways that *growth* and *change* in *intellectual capabilities* influence a child's behaviour. Cognitive development examines learning, memory, problem solving, and intelligence. Cognitive development seeks to specify children knowledge and the organisational structure of such knowledge.

2.3.2 Cognitive Process

Jean Piaget attempted an answer to the question: where does children's knowledge come from? He proposed that *knowledge* is the product of a child's direct *motoric action* on the environment. Piaget emphasised th e fact that the knowledge children acquire is not from facts other people communicate to them. Knowledge is also not acquired from sensations and perceptions. *Knowledge is constructed* as a direct consequence of a child's actions on his environment.

Piaget assumed that all children passed through a series of *universal stages* of cognitive development in a fixed order. As the child progressed through the stages, the *quantity of knowledge* they acquire increased. The *quality of knowledge* and understanding also grows. What this means is that with increasing *maturation, mastery of principles* regarding the way the world operates.

Piaget noted that initially the new-born deals with the world using *basic primary reflexes*. These primary reflexes include sucking, rooting, grasping, kicking, biting, and others. Piaget called them *schemes*. A *schema* is an organised *pattern of sensorimotor functioning*. It is a *script* or *framework* representing in the nervous system the child's action upon the world. The newborn schemes are *physical activity*. However, as the child develops, their schemes become *elaborated* and move to a *mental level*, reflecting thought. According to Achenbach (1992), schemes may be likened to *computer programmes*. They direct and determine how input information perceived, categorised, interpreted, and dealt with. In this way, schemes help the child to *cognitively organise experience*. Hence, the child's experienceof the world is characterised by *organisation* – a process of grouping isolated behaviours into higher-order more functional cognitive system.

The elaboration of schemes continues throughout life. However, optimum level is reached at *adolescence* when the individual attains*adult-level thought pattern*. According to Piaget, two processes explain cognitive development. They are *assimilation*, and *accommodation*.

Assimilation is a *mental process* that occurs when a child *incorporates new knowledge* into existing knowledge. In assimilation, a child understands an experience in terms of their current stage of cognitive development and a way of thinking. That is, a stimulus acted upon, perceived, and understood in accordance with existing pattern of thought. For example, a child who tries to understand a new rattle toy by sucking it just like they suck the feeding bottle are using assimilation to incorporate the rattle toy into their *sucking scheme*.

Accommodation refers to changes in existing ways of thinking that occur in response to encounters with new stimuli or events. When *existing way of behaving*, thinking, and understanding become altered to *fit novel experience*, accommodation takes place. In the sucking scheme example cited above, the child may notice that sucking scheme does not fit the rattle toy characteristic. The child then alters the sucking scheme to a *shaking scheme*. The shaking scheme reveals to the child the special characteristic of the rattle toy. The rattle toy rattles. The altering of the sucking scheme to a shaking scheme is accommodation. If the child goes on to shake and rattle other rattle toys, then *adaptation* of the shaking scheme has taken place. The processes of assimilation, accommodation, and then adaptation go on throughout every individual's lifetime.

2.3.3 Trends in Cognitive Development

This topic explains under the following sub-topics.

- **Stages in Cognitive Development**

Cognitive development progresses in an orderly sequence through *four major stage:* from birth through adolescence. The following stages: *sensorimotor, preoperational, concrete operational* and *formal operational*.

Each of these stages is age-related and consists of distinctive ways of thinking that is qualitatively different from the earlier or the next one. It is to be noted, however, that cognitive development is a gradual process. Infants do not suddenly shift from one stage of cognitive development to the next.

There is a steady shift in behaviour as a child moves towards the next stage. Indeed, there is a period of transition in which some behaviour reflect an earlier stage, while at the same time, other behaviours reflect the next more advanced stage. Movement from one stage to the next accomplished when the child attains an *appropriate level of maturation*, and exposed to *relevant experience*.

- **The Sensorimotor Stage**

The *sensorimotor stage* lasts from birth to about two years of age. Sensorimotor is a compound word combining two activities – sensory experience and motor activity. Thus, the main characteristic of the sensorimotor stage is that infants construct an understanding of the world by *coordinating sensory experiences* with *motor actions*. For example, on seeing a brightly coloured toy, the child reaches with the hand to grasp it. The eye seeing is coordinated with the hand reaching. The infant progresses from reflexive, instinctual actions at birth to the beginning of symbolic thought towards the end of this stage.

The Pre-Operational Stage

The *pre-operational stage* lasts from two years to about seven years of age. This stage marks the beginning of *symbolic thought*. That is, the ability to represent an object not present develops. The child begins to represent the world with *words* and *images*. This ability facilitates by the emergence of *language* and *pretend play*. The child's use of words and images reflects increased symbolic thinking. This is a leap beyond the connecting of sensory information and physical action. *Intuitive thought* also appears during this stage. The child begins to use *primitive reasoning*.

Children at the pre-operational stage typically want to know the answers to all kinds of questions. For example, on arrival of another baby, the pre-operational child would want to know: where the baby came from; who brought the baby; when the baby will go home, and other such questions. Symbolic and intuitive thought stretch the child's mentalworld to new dimensions.

The Concrete Operational Stage

The *concrete operational stage* lasts from about seven years to about eleven years of age. Concrete operational thought involves using *operations*. Piaget refers to operations as *reversible mental representation*. Operations are organised, formal, *logical mental processes*. At this stage, he thinks operationally on real *concrete objects* and events. Children at this stage can do mentally what they previously could only do physically. For example, simple additions and subtractions that children did by counting their fingers, they are now able to do mentally. Logical reasoning replaces intuitive thought but only in concrete situations. *Classification skills* appear. Children also begin to achieve *conservation* of number, quantity, and volume in that order. However, abstract problems present difficulties.

- **The Formal Operational Stage**

The *formal operational stage* emerges at about eleven years to fifteen years of age. It is the final cognitive stage of development. Formal operational stage corresponds to the adolescent period. Thought formal resemble *adult level thought*. Individuals move beyond reasoning only about concrete, current situation to what might or could be. Thought is more *abstract, idealistic*, and *logical*. At this stage, the individual is able to keep in their head a variety of relative terms, as opposed to absolute terms. They can generate several possible solutions to anyone problem.

2.3.4 Development of Cognitive Abilities

Several cognitive abilities appear and develop with increasing age and maturation of the child. Among these are:

- **Control of Attention**

The ability of a child to tune in to certain stimuli, while at the same time tuning out of others, is termed ***cognitive control of attention***. As children get older, attention span improves. Older child are more able to hold their attention longer on one particular activity than younger children.

- **Planning**

Planning is cognitive *allocation of attentional resources* on the basis of goals mapped out for attainment. With increasing age, children not only learn to control their attention in the face of distractions, they also

become more proficient at mapping out or devising strategies for using their attention effectively. They become better at planning. This means that the ability to consider what one must do, and at the same time, what one must not do, increases as the child becomes older.

By the time adolescence is reached, most children would be able to not only to control their attention; they would also be able to allocate their attentional resources to more than one stimulus at a time. For example, it is common to find an adolescent student listening to their favourite music track on the compact disc and at the same time studying for their examination.

- **Memory**

Memory is the ability to remember past events. Evidence from literature indicates that the basic processes that underlie memory, *retention* and *recall*, are similar throughout one's lifespan. People, regardless of their age, gradually lose memories. They however, regain them if reminders are provided. In addition, the more times a memory is retrieved, the more enduring the memory becomes (Rovee-Collier, 1993).

Working Memory Capacity

The *working memory capacity* improves with age. This is due mainly to improvements in the *operating efficiency* or *executive control* of the working memory (Case and Okamotor, 1996). In practical terms, the number of *chunks of information* held in the *working memory* increases with age.

Speed of Information Processing

As the child attains higher maturational levels, their *speed of information processing* increases rapidly. The efficiency of information processing also improves. That is, less effort is needed to process any bit of information.

- **Memory Control Strategies**

With increasing maturation, the child's *memory control strategies* become more sophisticated. The child's conscious and intentional use of *memory tactics* increases. There is evidence of increasing use of *rehearsal*, *repetition* and *practice* to aid memory as children become older.

- **Growth of Meta-memory**

Meta-memory increases with age and increasing maturation. Meta-memory is the understanding and knowledge children have about memory and memory process. As children become older, they become more aware that memory can fail (Lewis and Mitchell, 1994). They realise that *forgetting* occurs frequently when children come to this

awareness; they consciously spend more time studying or rehearsing any material they wish to remember in future.

- **Content Knowledge**

With age, the quantity of information a child stores and recalls in virtually all *domains of knowledge* increases remarkably. Increase in *content knowledge* leads to increases in how children recall as well as what they can remember. As the amount of information on a given topic stored in the memory grows, it becomes easier to learn new, but related material. Prior memories provide a context for new information (Harris, Durso, Mergler and Jones, 1990).

2.3.5 Factors that Influence Cognitive Development

Several factors influence cognitive development. We discuss three factors, namely: maturation, experience and social transmission.

Maturation

Maturation is the natural unfolding of a person's biological potential. It is a sequence of changes in the body systems that are governed by a genetic blueprint. Maturation defines the *readiness* of an individual to develop *specific tasks*. Thus, the level of maturation delimits the level of cognitive functioning. This means that the nature of the cognitive tasks a child is able to benefit from at any stage of development will depend on their biological readiness or maturation. Maturation is important because before any stimulus can set off a response, the child must be capable of exhibiting that response.

As stated earlier, the child's initial schemes of the world develop from the child's motor actions. Primarily, motor actions are genetically pre-wired. Maturation gets them expressed. Equally, the appearance of some specific mental operations, such as *conservation, relativity, proportional* and *propositional reasoning* requires some level of maturation.

More specifically, the five-year-old child cannot represent their route to the school on paper. The same child goes to and returns from the school without an escort. A ten- y e a r - o l d child can mentally represent their route on paper. A seven-year-old child will not grasp the significance of Newton's *first law of motion*:

An object that would move on a physical surface and not experience friction does not exist in the seven year old's experiential world. The task is a propositional problem. Also, the seven year old child can only memorise the definition of *density of an object*. Density is a *derived quantity* – the ratio of mass to volume of the object. Most adolescents

would understand these concepts. This means that some *basic mental structures* must exist in a child's schemes before they are able to benefit from some kinds of knowledge. In other words, maturation limits what cognitive abilities a child develops and when they are developed.

- **Experience**

Experience has to do with *environmental stimulation*. Experience of the physical world is crucial to cognitive development. As earlier stated, knowledge is constructed from the child's actions on the environment. That is, schemes are constructed through experiencing. The child's ideas about the attributes, uses, and relationships among different aspects of the environment are arrived at through their own experiences. For example, the child comes to know that the breast nipple is soft and pleasant through their experience of sucking; that a piece of stone is coarse through their experience of rubbing or biting; that a concrete block is heavier than a block of wood through theirexperience of lifting. These experiences and the child's abstractions from them constitute the building blocks for cognitive growth and development. Maturation may have taken its course but without *relevant experiences, specific behaviours* will not appear.

- **Social Transmission**

Children live and grow up in more than one *social setting*. What happens in the child's family, school, neighbourhood, the peer group, and society at large is very crucial in defining the course and content of cognitive development.

What this means is that the *social* and *cultural contexts* in which the child lives, and the people they live among markedly influence their development.

Bronfenbrenner's *ecological theory,* details *social systems*, ranging from close interpersonal interactions to broad-based influences of culture that define what is knowable and what behaviours are allowable within the child's social setting (Bronfenbrenner, 2000). The ecological theory draws attention to the critical role *social transmission* plays in child development.

In considering *family influence* on cognitive development, one examines the impact of the *family psychodynamics*: the presence for the child of one or both parents; the family size; family cohesion; poverty level of family; language structure; religion; urban-rural location; family values and aspiration, and others. The question would be: how does the interplay of these forces in the family system impact on the child's cognitive development? The valence of the interaction will determine the direction of influence.

Culture, in the ecological theory, defined broadly in terms of *ethnicity, values* and *customs*. In Nigeria for example, some ethnic groups are battling with low enrolment of the girl child in schools; while some other ethnic groups are battling with low boy child enrolment in school. This reflects different values placed on *gender role*. Also, some ethnic groups in Nigeria place more premiums on inordinate quest for material wealth; while some place more premiums on education. Still some ethnic groups are laissez-faire about life generally. These are reflections of different customs and worldview. Nevertheless, they affect what is transmitted socially and same impacts on *child rearing practices*. Child rearing practices influence cognitive development.

A very important aspect of Bronfenbrenner's ecological theory is what he called *socio-historical conditions* of children's development. Children growing up in the present generation have some historical events peculiar to their own cohort. These include: increasing dual career marriage; and day-care for children; increasing poverty among families; increasing divorce and family disruption; decline in societal values; information and communication technology, and globalisation. Children born ten years ago were not exposed to some of these influences in their childhood and these impacts on cognitive development.

Concisely, social transmission is a critical factor in determining not only the content but also the course of cognitive development. We should look at a child's cognitive development as affected by several socio-cultural factors.

2.3.6 Educational Implications

From our discussions, so far, it is obvious that cognitive development is a very important aspect of human development. The amazing capacity and plasticity of the human cognitive system differentiates human beings from other beings. We note some important points here for educational practice:

- It is important that those who work with children become aware of the general stages of cognitive development, and the sequence ofappearance of significant cognitive abilities. This awareness will encourage them to provide appropriate materials and experiences for children.
- Instruction should be based on evaluation of the current level of development and the next higher level to provide adequate challenge for cognitive development.
- Instruction should be individualised to accommodate individual differences in the rate of development.
- Since direct activity is the basis of knowledge construction, instruction should be activity-based.

- Knowledge is culturally situated. Therefore, provide many opportunities for effective interaction between the child and the various social systems that affect cognitive development.
- Cognitive growth often results from confronting errors, and cognitive conflicts. Hence, children allow to make mistakes and learn from resolving such errors.

Self-Assessment Exercises

Fill in the Blank

1. The term---------- describes the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses
2. *Jean Piaget Knowledge is* ---------- as a direct consequence of a child's actions on his environment
3. The --------- directs and determines how input information perceived, categorised, interpreted, and dealt with
4. The ----------*operational stage* lasts from about seven years to about eleven years of age
5. Knowledge is ----------situated

2.4 Summary

This unit has explained cognition, cognitive development and the trend in cognitive development from childhood to adolescence. Three major factors that influence cognitive development were highlighted and explained, and the educational significance of cognitive development was examined.

1. Outline the sequence of cognitive development in children from childhood to adolescence.
2. Highlight and discuss the three major factors that influence cognitive development.
3. Examine the educational implication of changes in cognitive abilities that follow maturation and experience.

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2.6 Possible Answers to Self-Assessment Exercise(s)

Answers to the Self-Assessment Exercises

1) Cognition
2) Constructed
3) Schema
4) Concrete
5) Culturally

UNIT 3 LANGUAGE DEVELOPMENT

CONTENTS

 3.1 Introduction

Everybody uses language to communicate. It might be to communicate a thought; to give directives or command or to make a request or complaint. Language is so important in our lives; it differentiates humans from non-humans.

Human beings are able to communicate in diverse ways. In this unit, we trace how language develops from childhood to adolescence. We discuss the major factors that influence language development. We also examine the educational importance of language.

 3.2 Learning Outcome

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

- State the meaning of language
- Explain the process of language development from childhood through adolescence
- List and explain at least four factors that influence language development
- Outline major educational implications of language development

3.3 Title of the Main Sections

3.3.1 Meaning of Language

Language is a form of *communication*. It is a systematic, meaningful *arrangement of symbols, which* provides the basis for communication. Language either *spoken, written, or signed*.

All human languages are generative. This means that there is no end to the ways in which new meaningful or novel sentences in generating a finite number of words and rules. It is for this reason that human languages very creatively.

Language serves a number of purposes. It enables the child to express their thoughts and understanding of the world. It enables the child reflect on people, objects, and events. That is, language is involved in thinking, memory, reasoning, planning, and problem solving. Through language, a child can convey their thought to others.

Language has three main characteristics. These are *phonology, morphemes* and *semantics*.

- *Phonology*: refers to *basic sounds* of the language. *Phoneme is t*he basic sounds. The combination of production of words and sentences forms phonemes of a language.
- *Morphemes*: refer to the smallest language units that have meaning. Words are examples.
- *Semantics*: refer to the rules that govern the meaning of words and sentences. The arrangement of words in a meaningful sentence followsa certain order.

Children must master these language characteristics as they achieve linguistic competence. We note, however, that children do not necessarily master these characteristics of the language in the sense that they have the knowledge as a *cognitive object*. They do not know that they know these characteristics. They master these characteristics only as a *cognitive vehicle*; an instrument for manipulating language for effective communication.

There are two aspects to language development. They are *linguistic comprehension*, and *linguistic production*. Linguistic comprehension refers to the process of *understanding speech*. The process of *using language to communicate* is known as linguistic production. Comprehension of speech appears before speech production. Children begin to understand instructions and directions long before they utter their own words. During infancy, comprehension proceeds more rapidly than speech production.

3.3.2 Trends in Language Development

Language development follows, more or less, a predictable trend or sequence of increasingly more complex levels of comprehension and production of speech. Thus, the following stages of language development are identifiable:

- **The Pre-linguistic Stage**

The earliest sounds infants produce are non-speech utterances like whimpers, cries, grunts, burps, gestures, imitations. Children use them to communicate discomfort, satiation, or positive emotions. They are termed *pre-linguistic communication*. Thus, children communicate linguistically through crying, cooing, gurgling and babbling long before they say their first word. Babbling is a speech-like but meaningless sound. It involves repetition of vowel sounds, example ee-ee, aa-aa, oo-oo. These sounds may appear meaningless. However, they are the most obvious manifestation of pre-linguistic communication. They play an important role in linguistic development.

- **The One-word Stage**

The generally child's first words spoken is between 12 months and 18 months. A child utters their first word when they give a clear, consistent name to a person, event, or object. For example, *mama* is to first word if the child uses it consistently to label the same person in a variety of circumstances.

Halophrases.is one-word uttered. They are one-word but they express complex intentions and meanings. Usually, the one-wordis a label for a person, an object, or acts. For the child, the one-word stands for naming the person, or object; for describing an action; to serve as an imperative, or a request; or even to express an emotional state. The actual meaning of a child's one-word depends on the context of use. For example, the word *mama* may mean any of these:

Mama is back;
Mama is going out;
Mama beat Johnny;
Mama see, Johnny is crying
The word *ball* may also mean any of these:See, I have a new ball;
My ball has rolled into the mind;Johnny has taken my ll; Let us play ball.

The one-word stage ends around 18 months of age. Once children begin to produce words, vocabulary expands methodically. The one-word stage is followed by a sudden spurt in vocabulary expansion.

- **The Two-word Stage**

The build up of vocabulary towards the end of the one-word stage brings about linking or combining of words. Children usually form their first sentences by linking two words. The two-word sentence conveys a single thought. Two-word utterances refers to as ***telegraphic speech***. They are telegraphic because they are coded like telegrams. They contain only keywords – no articles, and no prepositions.

However, they convey a meaningful thought. Examples are: Mama come;
Mama eat;
Mama water;
See Dadi.

We note that two-word utterances follow the rules that govern grammatical construction. The subject, verb, and predicate in the two-word phrase follow the correct order of arrangement in complete sentences.

- **Complete Sentence Stage**

By the time most children reach 48 months, they have acquired the rules of grammar. They are able to make complete and correct sentences. They generate their own sentences; and not merely repeat or imitate other persons' sentence. Language development reaches its peak at adolescence. Adolescents are able to manipulate language for all kind of abstract thinking, inferences and judgements.

It is important to note that children vary enormously in their rate of language development. Therefore, chronological age may not be a good index of a child's linguistic level. Psychologists use Mean Length of Utterances (MLU) in a morpheme that is the average length of morphemes in utterances, to assess the index of language level of children. Ordinarily, an infant should exhibit some of these abilities as an indication that language development is progressing normally:

- Understanding of at least some things the child hears. This indicates that the child has some receptive language, and that the child can hear.
- Production of some sounds around six or seven months of age. Deaf children cease production of pre-linguistic speech around this age.
- Using gestures such as pointing, and babbling. These are forerunners of language.

3.3.3 Factors that Influence Language Development

Language development does not just occur. Some factors influenced the development of language. We discuss here some of the major factors that influence language development:

- ***Maturation***

Somebody's structures and organs facilitate speech production. The vocal cords, the lips, and the brain centre that controls speech must be sufficiently maturational ready before the child can engage in speech production. The rate of maturation of these organs and tissues are wired genetically. When there is delay in the development of these organs and structures, speech production might shows retardation. In this sense, maturation delimits language development.

In addition, Chomsky (1978) argues that there is a genetically determined, innate mechanism that directs the development of language. According to Chomsky, the human infant is born with an innate capacity to use language. The human brain is wired with a neural system called the *language-acquisition device* (LAD). This device permits the child to understand automatically the language structure, and provides them with a set of strategies and techniques for learning language. The language-acquisition device unfolds with increasing maturation. This explains why children at specific ages show amazing facility to understand and learn different languages without formal instruction.

Language Background or Language Model

Early exposure to language, in terms of quantity variety, and structure or language code plays a significant role in language development in the child. Different families use different language codes. The two major *language codes* are the *elaborated*, and the *restricted*. The elaborated language code is more mature and advanced, involving explanations for actions, directives, instructions, prohibitions, and rules. Children are spoken to and within a conversational speech. The elaborated code is richer and encourages more robust language development.

On the other hand, the restricted language code resembles military language. It involves top-down speech. In such a language background, children listen to instructions and carry them out. Language development is thereby hampered. In a nutshell, the available language model influences language development.

- Family Income

According to Hart and Risley (1995), the rate at which languages addressed to children varied significantly accordingly to the economic level of the family. Their findings indicated that the greater the *affluence*

of parents, the more they spoke to and with their children. There was also significant difference in the language code used by the affluent and impoverished families. While children from the affluent families were engaged in conversations with their parents, children from impoverished families heard more of prohibitions – do's and don'ts or imperatives. The *quality time* spent with children also varied. Children of the affluent parents had more quality time with their parents. In essence, the family psychodynamics favoured language development of children from the affluent families but hampered it among children from impoverished families.

- **Bilingualism**

Bilingualism is the use of more than one language. Most Nigerian children are exposed to more than one language. The language that is spoken in most homes is vernacular, the language of the immediate community, or the ethnic language. The language spoken in the school is English – the medium of instruction. This can pose a great challenge both to the teachers and the children themselves.

Bilingualism poses a challenge to the teacher and the children in situations where most of the children are not fluent in the language of instruction. If the children have not yet mastered the structure of the language of instruction, communication is hampered. For example, the child who speaks English haltingly is forced to *think in vernacular*, and then to *transliterate* and communicate in English. The result is slow progress in the mastery of the language.

However, if children allowed gaining mastery of the first language before they are exposed to the second, they gain from the experience. There is increasing evidence that there are some cognitive advantages for bilingual children. According to Romaine (1994), children who speak two-language show greater *cognitive flexibility* than their one-language peers do. They have a wider *range of linguistic possibilities* to choose from as they assess any situation. For this reason, they are able to solve problems with greater creativity and versatility than their one-language peers. In addition, according to Genesse (1994), bilingual children often have greater *meta-linguistic awareness*. They, therefore, understand the rules of language more explicitly.

Thus, whether bilingualism facilitates or hampers language development will depend on the timing of the exposure. Children exposed to a second language after mastery of the first are likely to have their language development facilitated. However, haphazard exposure of children to different languages will most likely slow down language development.

- **School Experience**

The school language environment will also play a significant role in language development. A school with adequate library resources for language teaching, and a school with good language model will foster language development. Conversely, a school with impoverished language environment will not encourage fast rate of language development. In a second language situation, teachers are strong models for language development. If teachers are inefficient in their use of language, there will be a ripple effect on the children's language development.

3.3.4 Educational Implications

The educational implications for language development are as follows:
Language is the means by which the child expresses complex information about their thought and understanding of the world. A child with good *language facility* is able to communicate more effectively than the child with poor language facility. Effective communication results in more fruitful social intercourse. Fruitful interpersonal experience helps in *confidence building*. Self-confidence is related to self-esteem. Self-esteem is related to self-efficacy beliefs. Indeed, adequate language facility should help the child develop *appropriate sense of values*, and a *healthy attitude* towards people and life. These are important *socio-cognitive variables* that are related to *school adjustment* and *academic achievement*.

- **Language is involved in thinking, memory reasoning, planning, and problem solving**. Therefore, adequate facility in language usage will also engender faster development of these cognitive abilities. These cognitive abilities are positively related to school achievement.
- **Since children understand language before they speak the language, teachers are reminded that concrete experiences enhance children's interaction with their environment**. Adequate experiences provided early in the child's life stimulate **schema elaboration**. The child's understanding of things and events in their immediate environment will facilitate language development.
- **The language model in the child's immediate environment influences language development**. The school authorities are advised to provide rich language environment to foster language development of school children.
- It is important that early childhood education providers implement the National Policy on Education provision that the language of **instruction should be the vernacular, and that the second language should be taught as a subject**. This will ensure

that children master the first language before being exposed to the second language. In this way, children will reap the benefit of bilingualism..

3.4 Summary

You should have learnt that language is a form of communication using a system of symbols; you should also have learnt the definition, process of language development from childhood to adolescence. You should be familiar with the factors that influence language development and the educational implication to language development.

Self-Assessment Exercises
Fill the Blank

1. It is a systematic, meaningful arrangement of, which provides the basis for communication symbols
2. Language has three main characteristics namely phonology, morphemes and semantics
3. Factors that can influence language include the followings except maturation, language ---------- and school experience
4. Bilingualism is the use of more than ---------language
5. Halophrases.is ----------uttered

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3.6 Possible Answers to Self-Assessment Exercise(s)

Answers to Self-Assessment Exercises
1. Symbols
2. Semantics
3. Model
4. One
5. One-word

UNIT 4 EMOTIONAL DEVELOPMENT

CONTENTS

3.1 Introduction

Human beings are said to be creatures of emotions. Emotions provide the force that enable human beings to deal with different circumstances of life. **Emotions provide the motivation for action under difficult situations. Emotions add pleasure to our experiences**.
On the other hand, emotions could also becloud one's enjoyment of life's opportunities. Indeed, emotions add colour and spice to one's life. In this unit, we examine the meaning of emotions, and types of emotions. We discuss the sequence of emotional development. .We also outline some factors that influence the development of emotions. Finally, we examine the educational significance of emotions.

3.2 Learning Outcomes

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

- Define emotions
- List two types of emotions, and list examples of each type
- Outline the pattern of emotional development in children
- Describe two major factors that influence emotional development
- Explain the role of emotions in human learning and adjustment.

 4.3 Title of the Main Section

4.31 Meaning and Types of Emotions

The discussion will be under the following sub-heads.

- **The Meaning of Emotions**

The nonprofessional conceives emotions as the outward expression of fear, anger, terror, embarrassment, disgust, sorrow, jealousy, shame, laughter, joy, grief, and others. Psychologists in agreement that emotion originate from *internal processes* that involve the nervous system, the endocrine system, and the psychological situation. According to Durojaiye (1976), emotion is an *expression of inner feelings, which* aroused by one's own behaviour or the behaviour of others.

Emotions can trigger a variety of behaviours in the individual feeling the emotion. In new-borns, emotions trigger *facial expressions* of smiling, anger, or sadness. In older persons, emotions can trigger *affective experiences*, indicating pleasure or displeasure. Emotions can stimulate an individual to generate *cognitive explanation*, an attribution for the cause of the event.

Emotions can trigger *internal adjustment*, such as increased heart rate. Emotions can produce *expressive behaviour*, such as laughing or crying. Emotions can also generate *goal-directed behaviour*, such as helping or rescuing a person whose life is threatened. The usefulness of any emotion will depend on the type of the emotion, its intensity, its frequency, and its duration.

- **Types of Emotions**

There are two major types of emotions. They are *pleasant emotions*, and *unpleasant emotions*.

Pleasant Emotions include the emotion of pleasure, happiness, love or affection, delight, and others. These emotions are characterised by *pleasant body sensations*, warmth and a general feeling of wellness. Pleasant emotions can be a source of goal-directed activities. They can enhance *achievement motivation*, and overall accomplishment in life. In new born, pleasant emotions trigger *attachment bonding*. Attachment bonding is a psychological process that describes an infant's connection with caregiver, providing a sense of safety and security.

Unpleasant Emotions include emotions such as grief, fear, worry, anxiety, guilt, jealousy, shame, and others. Unpleasant emotions are characterised by *distressful behaviours* such as muscular tension, facial contortions, and

general agitation. In new-borns, unpleasant emotions are expressed in *hysterical crying*. Intense, frequent, and long lasting unpleasant emotional situations can produce in infants, *relational disengagement*.

Relational disengagement is a psychological process by which the infant is unable to achieve attachment behaviour due to absence of *affectional bond* with the caregiver. The dynamics of relational disengagement may influence negatively on future development of social and cognitive skills. We discuss below in details some specific emotions that may significantly influence school adjustment and academic success. They include the emotions of love or affection, fear and jealousy.

- **Love or Affection**

Love or affection is a psychological need of man. It is an emotion characterised by friendliness, warm regard, empathy, acceptance, and care. Children express their love by hugging or patting the object of love. Children develop affection through affectional bonding. Children develop strong attachment behaviour to close *significant adults*, such as parents or caregiver who supply their nutritional needs, warmth, and security. Building affection is gradually through the experience of pleasant emotions.

Every child craves the feeling of *recognition* and *acceptance* in school by teachers and peers. Recognition and acceptance can have tremendous impact on a child's school adjustment and academic achievement. Teachers should show genuine affection for children under their care. Teachers should encourage *classroom environment* that nurtures *reciprocity of affection*.

- **Fear**

The emotion of *fear* is aroused when an individual faces with an *impending danger*. When the individual realises that they are unable to bring the threatening situation under control, they respond with the fear emotion. *Fear responses* include withdrawal, wild apprehension, and paralysing terror. Fear invoked by a concrete situation. For example, the sudden appearance of a strange cat can frighten a child. Invocation of fear may also by circumstances that are not very obvious. For instance, worry and anxiety may provoke fear elicited by loud noises. During infancy, loud noises, strangers, animals, being alone, and sudden displacement elicit fear. The kind of things that frighten children will depend on the child's age, past experiences, and level of cognitive development.

Durojaiye (1976) identified some common fears among African children to include fear of witches, ghosts, thunderstorms, heavy rain, and fire outbreak. Others are fear of something bad happening to their mother,

fear of being late to school, fear of failure at school. We may add, for the Nigerian child of today, fear of ritual murderers, fear of being kidnapped, fear of rape and fear of being abandoned by one parent. *Imagined fears* are most devastating to children. The great danger of imagined fear is that it lasts for a longer time, and the child requires only recalling the *fear-producing stimulus* to trigger off the fear.

Prolonged fear affects a child's school adjustment and academic achievement. Advice to parents and teachers is to remove, as much as possible, fear-producing stimuli from children environment. Children's environment should be reasonably safe, secure, and stable. Fear generates anxiety. When anxiety persists in children, concentration span and memory diminish. Safe, secure environment encourages curiosity and creativity in children.

- **Jealousy**

Children's affectional bond is a relatively enduring tie, which intuitively children do not wish it replaced by another. The emotion of *jealousy* is aroused when a child imagines the possibility of losing the affection or approval of a loved one. Jealousy is an emotional response to actual, imagined, or threatened *loss of an affectional bond*. It takes the form of an outburst of anger or resentment. Jealousy accompanied by a feeling of insecurity in a relationship, unhappiness, and maladjustment.

In childhood, jealousy is most noticeable when another child arrives in the family. The arrival of another child provokes in the older child an anxiety that someone else has come to take their cherished position. Sometimes, the fear is real because of the *differential attention* the older child now receives. *Sibling jealousy* can be very intense. There have been instances where the older child strangled the newborn. .In school, a child may exhibit the emotion of jealousy towards classmates or the class teacher. A child who excels in schoolwork or other school activities and gains special recognition and attention may become an object for jealousy from other mates. A situation where a teacher has some pupils as pets, or where a teacher makes some *unfavourable comparison* between schoolchildren can breed jealousy. Jealousy is an emotion usually charged with tension. This tension, most often, discharged through aggression, hostility, or *withdrawal behaviour*. All of these are manifestations of maladjustment. Therefore, jealousy can be a drag on normal social and cognitive development of children. Teachers and parents should resist the temptation of showing favouritism or giving privileged attention to some children at the detriment of others.

4.3.2 Trends of Emotional Development

Emotional development follows the directional law of human development. Emotional behaviour first appears as *gross manifestation of emotions*, and then proceeds to *specific emotional responses*. The newborn's emotions first appear as *general excitement* which is aroused by strong stimulation, like a loud noise. The diffuse general excitement is followed by some *differentiated emotions* of delight or distress.

The delightful response is exhibited when the child is suckling, being rocked, generally warm and comfortable. Distressful responses are exhibited when the child is hungry, when there is a sudden loud noise, or when the diapers are wet. Although emotions of delight and distress are not sufficiently specific, at this age, the child's basic facial expressions indicate the general feelings of the child. For example, in situations we expect the child to be happy, they seem to smile. When we expect the child to be frustrated, the facial expression shows anger. And when we expect the child to be unhappy, the facial expression will look sad. These non-verbal expressions of emotions in another words n o n - *verbal encoding*.

As children get older, they experience and display a wider range of emotions. At about six months of age, *stranger anxiety* appears. Stranger anxiety is the fear response or the anxiety a child displays when they encounter a strange person. Typically, at this period, when the child encounters a strange person, the face crinkles up with a frown, and the child sharply turns away from the stranger as if they are encountering a ghost. Stranger anxiety is an indication that there is increase in cognitive ability. It is recognition that this person is not familiar; a sort of question mark: "I do not seem to know you?" At about nine months of age, *separation anxiety* appears. It is an emotion of distress displayed by children when the usual care provider suddenly departs. Separation anxiety is also the result of increasing cognitive ability. The child appears to be asking the question: "Where is my mother going?"At about the sixteenth month, *jealousy* and *affection* towards caregivers and other children begin to manifest. By the age of 18 months, *social smile* becomes very distinctively used for familiar persons, and more frequently used especially to caregivers. In other words, by the end of second year of life, children quite purposefully use smiling to communicate their positive emotions. They also become very sensitive to other persons' emotional expressions (Toda and Fogel, 1993). In general, as the child grows older, specific emotions identifiable by adults as anger, joy, hate, fear, happiness, jealousy, envy, and others begin to manifest.

4.3.3 Factors that Influence Emotional Development

Two major factors identified as influencing emotional development are *maturation* and *learning*.

- **Maturation**

This is the unfolding of biological systems in the body, which bring the child to a point of readiness to undertake specific behaviours. The development and expression of emotion appear to depend on biological maturation of some parts of the brain and the endocrine system. In particular, the development of *cortical control*, especially the *frontal lobe* affects the development and expression of emotions. It has been reported (Hurlock, 1972) that the removal of the frontal lobe in human beings had resulted in emotional behaviours that lacked depth, and were quite unstable. In essence, mature emotional behaviour depends much on development of the brain's cortex.

In addition, mature emotional behaviour depends much on the development of the endocrine system. The endocrine system secretes the chemical that regulates bodily functions and the emotions. The secretions of the *adrenal glands* regulate the body systems that are involved in emotional reactions.

- **Learning**

Learning plays a significant role in emotional development. As a child interacts with people and events in the environment, their range of expression of various emotions also widens. An infant, for example, has no inborn fears of snakes, darkness or fire. Fear of these acquired through experience. Conditioning and imitation play significant roles in the acquisition and expression of emotions. The common expression that emotions are contagious tends to confirm that much of emotions learnt through observing other persons' emotional reactions to specific situations in life. The specific process that brings about this type of social learning is termed *social referencing*. The child searches and obtains clues for the meaning of uncertain circumstances. When the same circumstances occur again, the child's response is similar to the adult's response in the first instance. In other words, social referencing permits the child to decode other person's emotional responses. Children not only learn to decode other person's emotions, they also learn the *display rules* that guide emotional responses. Display rules are guidelines that govern the social appropriateness of non-verbal shows of emotions. Display rules help to minimise, exaggerate, or mask emotional expression as deemed appropriate for different circumstances. For example, sometimes we are forced by the specific circumstance to smile, when in fact the emotion we feel is the emotion of sad3ness. Such *pretend emotions* are learned. They help us to avoid insulting others, and thereby help us to preserve relationships.

4.3.4 Educational Implications

The changes during early childhood in the various facets of development and the accompanying developmental tasks have some significance for educational practice. We outline some of the educational implications of development at early childhood here:

- It is impossible to separate health issues for children from social issues. Malnutrition, cramped and miserable living conditions, and childhood diseases generally coexist. Policy issues in early childhood education approached from multi-sectoral directions, involving stakeholders in education, health and social welfare.
- Caregivers should be sensitive to provide developmentally appropriate and growth fostering responses to prompts or signals of children. This will help to enhance the give-and-take in a mutually rewarding exchange with children.
- If parents and caregivers are encouraging creativity and exploration, children see the world as full of opportunities. When parents and caregivers are discouraging or punishing, feelings of guilt can arise and children may be inhibited in their striving to achieve personal control of their world.
- Brain lateralisation is responsible for handedness in children. The preference to perform motor activities using the right or the left hand depends on whether the right or the left-brain hemisphere is dominant. Forcing a child to change handedness confuses the child's brain functions. On no account should parents or teachers force a child to change handedness.
- The attitude of caregivers is significantly influences. Caregivers during childhood help the child in self-esteem develop and positive and caregiving attitude towards the child impresses on the child that the child is import of special and loved. This way, children build a positive self-image
- We note that an important part of friendship and any close emotional relationship is the ability to put oneself in another's place, and vicariously experience the other person's emotions. Children learn to be helpful and caring when parents and caregivers are invited to model the skills of empathy feeling.
- In general, caregivers should see children as imaginative and creative creatures that are capable of increasingly sophisticated in thinking and skills if appropriate stimulation and prompts are provided.

Self-Assessment Exercises
Fill the Blank

1. Psychologists in agreement that emotion originate from *internal processes* that involve the nervous system, the---------- system, and the psychological situation
2. Emotional behaviour first appears as *gross manifestation of emotions*, and then proceeds to ---------- *emotional responses*
3. The specific process that brings about this type of social learning is termed *social* ----------
4. There are two major types of emotions namely ---------- *emotions*, and *unpleasant emotions*
5. Jealousy accompanied by a feeling of ---------- in a relationship,

4.4 Summary

This unit examines the major motor, cognitive and psychosocial achievements of children in early childhood. We listed and explained the major critical tasks early childhood children are expected to master, and finally, we discussed the educational implications of changes that accompany development during childhood.

1. major achievements of children in motor, cognitive and psychosocial skills during early childhood.
2. What are the major developmental tasks children are expected to master during early childhood stage of development?
3. Discuss the significance for educational practice of the major changes and challenges children go through during early childhood.

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4.6 Possible Answers to Self-Assessment Exercise(s)

Answers to Self-Assessment Exercise

1) Endocrine
2) Specific
3) Referencing
4) Pleasant
5) Insecurity

UNIT 5 SOCIAL DEVELOPMENT

5.1 Introduction

A common adage has it that "no man is an island entirely on his own or to himself". This statement summarises the fact that human beings are social animals. We live in a community of human relationships. Although from infancy it appears everyone strives to carve for themselves a unique personal identity of self, any individual's uniqueness is a product of their interactions with other selves in a social environment. We all share the awareness that somehow human beings inter-depend on one another for meaningful living. The unique qualities that make us human are acquired through social interaction in the family, and other social systems. In this unit, we discuss the meaning of socialisation, and agents of socialisation. We examine the pattern of psychosocial development. We will also examine the educational significance of social development.

5.2 Learning Outcomes

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

- Define socialisation
- List and describe the key agents of socialisation
- Outline the pattern of social development
- Discuss the educational importance of social development.

5.3 Title of the Main

5.3.1 Meaning of Socialisation

Socialisation is the process by which the child acquires the ability to behave in socially acceptable ways or in accordance with social expectations.

Socialisation entails the following:

- **Learning to behave in socially approved ways.** This may mean modelling behaviours that are appropriate for different social settings.
- **Playing approved social roles**, for example, playing appropriate gender role, child role, student role, or even parental role.
- **Developing appropriate social attitudes.** This may involve learning various display rules that guide social acceptance or rejection as may be appropriate.

Socialisation is involved in *social development*. That is, socialisation explains the way in which individual's interactions with others and their social relationships grow, change, and remain stable over the course of life.

The process of socialisation may produce three categories of people, namely:

(i) **Pro-social People:** Pro-social people are persons whose behaviour pattern conforms to group expectations and norms. They are fully accepted within the membership of the social group.

(ii) **Unsocial People:** These are persons whose behaviour pattern falls short of social expectations. Their behaviour is non-conforming. They are therefore; rejected within the social group they wish to identify with, the social expectation owing to their own *ignorance* of what is acceptable behaviour.

(iii) **Anti-social People:** Anti-social persons know what the acceptable pattern of behaviour is. However, because they are antagonistic to group norms, they willingly violate group expectations. They are rejected usually among the group they wish to identify with.

Socialisation may be achieved through any of the three ways: A child may become socialised through *modelling* the behaviour of parents or significant others. if parents constituted authority, their law abiding as the other are law- abiding and respectful children may model their behaviour and in other hand if parents are rebellious play public hypocrisy or take liberties with the law, their children may also model their anti-social behaviour.

A child may also become socialised through *contingency management*. This is a system of rewarding a child for obeying rules, and withholds reward when rules are broken. In other words, rewards for rule-regulated behaviour can get children to conform to rules even in the larger society. For the same reason, parents who reward rule breaking behaviours of children should expect anti-social behaviours from those children.

Children may also become socialised through social cognition. As children's maturation increases, their cognitive abilities also expand; so they begin to understand display rules that guide social actions. Social referencing facilitates learning of display rules. In this way, children begin to understand intensions behind specific actions and they pattern their behaviour accordingly.

5.3.2 Agents of Socialisation

Children's relationships with parents, family members, peers, friends, teachers, mentors, and others in the various social systems that they (the children) are exposed to can profoundly affect their social development. Social development is neither simple nor automatic, but it is crucial the bonds that grow between the child and the parents, family, and other significant persons provide the foundation for a lifetime's social relationships. We classify the important sources of socialisation into three social agents: primary, secondary and tertiary social groups.

- **The Primary Socialisation Agent**

The *family* is the *primary socialisation agent* and the seat of learning for *social skills*. The family is the source of nurturance, warmth, contact comfort, security and trust. There are the ingredients that engender the child's initial affectional bonding. Human beings generally like those who provide and care for them. Thus, prosocial and unsocial patterns of behaviour are established during the early formative years in the family. Early social experiences significantly influence what sort of adults children grow to become. The critical factors in the family that influence social development include: the family demographic characteristics, the child-rearing practices, and provision of specific experiences at home.Family Demographic ducation are more likely than less-educated parentsto believe that parental involvement in the child's education is important. Educated parents are more likely also to actively provide intellectually stimulating experiences and materials at home (Schneider and Coleman, 1993). When parents' time and energy are largely consumed by attention to parents' other concerns or people other than the child, then the child's social development suffers. Living in a single-parent family, having parents who are consumed by their work,and living in an over-crowded family can undercut children's development.

- **Child-rearing Practices**

According to Eccles, Wigfield and Schiefele (1998), child-rearing practices impact greatly on a child's social development. The critical aspects of the child-rearing practices relate to the following:

1. Parents knowing enough about the child to provide the right amount of *challenge and support*, and to have realistic expectation from the child.

2. Parents providing *positive emotional climate* to motivate the child to internalise parents' values and goals.
3. Parents' modelling *motivated achievement behaviour*, including working hard and persisting with effort at challenging tasks.
4. Parents adopting a firm, consistent discipline style that encourages the child to internalise the values of discipline and achieve *self-control*.

- **Provision of Specific Experiences at Home**

Specific experiences at home that will positively influence social development may include:

- Talking to and with the child.
- Explaining nuances, display rules, and other non-verbal gestures that guide social intercourse
- Allowing the child to go out and explore the world rather than "imprisoning" the child in the house in the name of protection.

In all, satisfactory relationship with family members encourages children to strive to develop and enjoy fruitful social relationships with people outside the home. It helps children to develop healthy attitude toward people, and to learn to function effectively in peer associations.

- **Secondary Socialization Agent**

The secondary socialization agent is defined as the social groups outside the home whom the child has continuous social contact with on a daily basis. They include the peers, organised playgroups, school clubs, classmates, the teacher, the church members and members of the neighbourhood. Throughout childhood, the child spends significant amount of working hours with members of this social group. These groups outside the home encourage the child in their desire to gain independence from the parents and the family. The peer group and the teacher influence greater influence on social development among the other secondary socialisation agents.

- **The Peers**

In child development, peers are children about the same age or maturity level. Same age peer interaction plays a unique role. Peers provide avenues for *social comparison*, and *social competence* training through *peer co-learning* and *peer influence*. According to Eccles, Wigfield and Schiefele (1998), positive social comparison usually results in higher *self-esteem*, while negative social comparison results in lower self- esteem.

Children who are accepted by their peers and who have good social skills often do better in school (Wentzel, 1996). Children who are rejected by peers, especially those who are more aggressive, are usually at risk in a number of school-related activities. For example, they obtain low grades, and often dropout of school.

- **The Teacher**

Children who have negative interactions with a number of their teachers do not do well in school (Stipete, 2002). They do not pay attention; do not complete assignments on schedule; and generally act out in the class. In general, school is an unpleasant place for such children.

The school should not be an unpleasant place for any child. According to Noddings (1992:2001), children are most likely to develop into competent human beings when they feel cared for. Teachers are invited to develop the skill of knowing the children under the care fairly well. Indeed, children get to know that a teacher cares for them. They report that those teachers who care for them talk to the individual child. A teacher who cares listens; pays attention; is honest and fair to all; seeks to know each child's problems; addresses them by their names; and makes effort to make the class interesting. On the other hand, the teacher who does not care for the children teaches in a boring way: he keeps talking even when the children are not paying and attention; he ignore embarrassment children; he forgets their names ; and does nothing which child does something wrong (Wentzel, 1997).

In essence, the *social climate* of the entire school affects significantly on children's social development. We often talk about the *school tone*. The tone of the school refers to the general spirit, character, morale, and social climate of the school. When the tone of the school is excellent, it is supportive to the general *developmental needs* of the children. Children are motivated and challenged to develop self-control through identification with and internalisation of the school values and norms. Children learn to get along well with others without external force.

- **The Tertiary Socialisation Agent**

The tertiary socialisation agent includes groups children are generally transitory – people the child may have contact with on their way to school, church, or market; contact in magazines and newspaper; contact on radio, television, internet, and the World Wide Web. The strength of influence these groups have on social development will largely depend on type of presentation, sensual appeal or attraction, and the contrasting theme with what the child ordinarily encounters. The *television* and the *cyberspace* stand out among these groups.

- **The Television and the Cyberspace**

In Nigeria today, the *television* has become a ubiquitous household item. In rural communities, households that are so impoverished they do not have a toilet facility own television sets. In highly urbanised areas such as Lagos, families that cannot not afford a rented apartment, but are squatters in uncompleted buildings and kiosks own television sets. *Television viewing* is a valued pastime for children and adults alike in Nigeria.

It may be true that the television, the *Internet*, and the *World Wide Web* are among the great frontiers of high technology. People predict that they will change the lives of everybody in the global village. However, educators are regarding these *untamed information media* with great caution. This is more so with regard to their effect on children's social development.

Children have increasingly become targets for *all manner of advertisement* and *pornography* on television screens, and the Internet. Educators worry about the extent to which parents are able to monitor children's television viewing, and their hook-on to the internet. The

Type quality and educational v value of what children view on the , The television are sources of concern, type of materials and information the children access on the internet, an person(s) with whom they enter into personal interactive sessions are major sources of concern. Of no less concern also is the amount of time children spend on these ubiquitous *media of uncertain consequences*. Some issues relating to children's access to information and communication technological media are not contentious. For example, in many homes, children spend more time watching the television than talking to adults or parents, playing with siblings, attending school or working on class assignments. Research findings (Wright, Huston, Reitz and Piemyat, 1994) suggest that young children do not fully understand the plots of the stories they view on the home video. Most children are not able to recall significant details of the stories they have viewed. Very often, the inferences children make about the motivations of the key characters in the stories they have viewed are limited, if not completely wrong. In addition, children have difficulty separating fantasy from reality in television programmes. In summary, the consequencesof children viewing television so much are not quite clear. Parents are therefore cautioned about the potential hazards existing in children's unfettered or *untamed access to television* and home computers. The direction of their impact on children's social development is not very clear.

5.3.3 Trends in Psychosocial Development

Erikson (1963), in his *psychosocial theory*, argued that social development starts at infancy and continues across the entire lifespan. His theory considers how the children come to understand themselves, and the meaning of their behaviour and the behaviour of others. Erikson's theory explains how society and culture present *challenges* that shape the child's social behaviour. According to the theory, social developmental changes may be conceived as a series of eight stages. Each stage presents a *developmental task* or a *crisis*. Each stage crisis is a turning point with positive and negative poles. The individual is

expected to resolve each stage crisis. The more successful a child is in the resolution of a stage crisis, the more *psychologically healthy* the child will be. Unsuccessful resolution of a stage crisis leads to *pathology*. Pathology means that the individual finds it increasingly difficult to deal with the demands of the next stage of development. In other words, unsuccessful resolution of a stage crisis leads the individual to be more prone to *maladjustment* and *behaviour problems*. We outline below the first five stages of Erikson's theory. The first five stages cover social development from infancy, through childhood, to adolescence.

Erikson's Stages

- **Stage One Trust versus Mistrust**

Erikson's first stage of psychosocial development occurs in the first year of a child's life – that is, during infancy. The development of *basic trust* requires warm, nurturing caregiving. The positive outcome is a feeling of comfort and minimal fear. *Basic mistrust* develops if the infant is deprived of nurturing and *contact comfort*.

- **Stage Two – Autonomy versus Shame and Doubt**

The second stage of psychosocial development occurs between late infancy and toddler years, that is, the second year of life. After gaining trust in their caregivers, children begin to move freely, and explore the immediate environment. They begin to discover that their behaviour is their own. They start to assert their *independence*, and to realise their will. Caregivers might mistake this and interpret the child's actions as *stubbornness*. If restrained or punished, too harshly the infants develop a *sense of shame and doub*t.

- **Stage Three – Initiative versus Guilt**

This stage is the early childhood or pre-school years, ages 3 to 5. Young children begin to explore the neighbourhood. Their social world begins to widen. Children experience more challenges as they strive to know more about their widening social circle. In order to cope with these challenges, children engage in more active and *purposeful behaviour*. Children begin to insist on doing their own things. For example, at this stage, children begin insisting on bathing themselves, putting on their dresses, their shoes, combing their hair, and even washing their clothes. They want to be responsible to themselves.

Developing a *sense of responsibility* increases children's *initiative*. If thwarted children efforts at caring for themselves, and made to feel that they are not yet capable of being responsible for their bodies and their belongings, they feel *discomfort*. They begin to develop *guilt feelings*.

- **Stage Four – Industry versus Inferiority**

This stage corresponds to middle and late childhood or the elementary school years (between 6 years and puberty or early adolescence). The sense of initiative developed at the earlier stage brings children in contact with greater wealth of practical experience with tools and people. Children's energy now directed toward *mastery of knowledge* and *intellectual skills*. Children at this stage, show great enthusiasm for learning. Their imagination is expansive; the negative polarity for this stage is the danger of developing *a sense of inferiority* unproductiveness, and incompetence. This may happen if the primary school experience lacks intellectual challenge.

- **Stage Five – Identity versus Identity Confusion**

This stage corresponds to the adolescent years (between 10 and 20 years). Adolescents want to answer questions like Who am I? What is life about? Who am I going to become?

The adolescents confronted with many new roles to explore. These include gender role (being a man or a woman), romantic role, vocational role, and a definitive outlook on life. They seek to gain a *healthy self-identity*. If adolescents do not have adequate opportunity to explore these different roles, they may develop *confused identity*.

5.3.4 Educational Implications of Social Development

The educational implications of socialisation to social development include the following:

- Behaving in socially appropriate and responsible ways is valued in its own right as an important educational objective. The development of *citizenship skills* and other important *life skills* such as cooperation, communication, self-care, and home making is entrenched as an objective of education in the national policy on education (Federal Republic of Nigeria, 2004).
- Social responsible behaviour helps to create a *classroom climate* conducive for instruction and learning.
- Anti-social behaviour can be highly detrimental to classroom learning by distracting students from academic activities.
- Social conduct impacts teacher's preference for students, which in turn influences the quality of instructional exchanges.
- Children tend to dislike classmates who start fights and break rules. Therefore, schoolchildren who display anti-social behaviours are at disadvantage in reaping the benefits of peer co-learning.
- Children who display anti-social behaviours are more likely to be labelled disabled academically.

Self-Assessment Exercises
Fill in the Blank

1)	A child may become socialised through ---------- the behaviour of parents or significant others
2)	The *family* is the ---------*socialisation agent* and the seat of learning for *social skills*.
3)	The ----------agents of socialisation include the peers, organised playgroups, school clubs, classmates, the teacher, the church members and members of the neighbourhood. Secondary
4)	Tertiary agents of socialisation is ----------in transit or to school, church, or market; in magazines and newspaper; or on radio, television, internet, and the World Wide
5)	Erikson's Stages two. ---------- versus Shame and Doubt

5.4 Summary

This unit has taught the following:

- Children learn social rules, norms and nuances throughsocialisation;
- Socialisation may produce prosocial or anti-social persons;
- Modelling, contingency management and social cognition help children acquire prosocial behaviour;
- Family demographic characteristics, and parenting style impact on children's behaviour;
- Social comparison and peer co-learning aid social development;
- Untamed access to the television and the internet is a potential hazard to children's social development;
- The psychosocial theory states that society and culture present challenges that shape social behaviour;
- Warm, nurturing caregiving helps develop basic trust in infants;
- Children should be given opportunity to explore social relations among peers;
- The school is expected to model acceptable behaviour for children;
- Anti-social behaviour may impact negatively on school adjustment Explain the roles of the three key social agents to socialisation.

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5.6 Answers to Self-Assignments Exercise

Answer

1) Modelling
2) Primary
3) Secondary
4) Contacts
5) Autonomy

UNIT 6 MORAL DEVELOPMENT

Unit Structure

6.1 Introduction

The word "moral" derived from the words "mores". Mores refers to customs, folkways and conventions of a social group. Moral behaviour refers to a behaviour that tends to the good and rejects the evil. Behaviour is evil if it is unacceptable to and abhorred by a social group. Developing morality therefore signifies understanding and following a society's rights and wrongs.

Moral development describes changes in children's sense of fairness, of what is right and what is wrong. Note that when the child's behaviour in this context compared to the moral standard of the social group.

6.2 Learning Outcome

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

- Describe the nature of morality
- Outline the sequence in the development of moral judgement
- List and discuss the major factors that influence moral development
- Discuss the educational significance of moral development.

6.3 Title of the Main sections

5.3.1 The Nature of Morality

It is difficult to give a precise definition of the nature of morality. Different perspectives define morality differently. According to Emmanuel Kant, a moral act is an act done from duty. An act done from duty differs from an act done in accordance with duty. An act done from duty when the person acting does so because they feel some sense of obligation. Indeed, the individual has the option, and may choose not to act that way.

Act done in accordance with duty carries with it some sense of compulsion. There is fear of punishment. If we define a moral act as an act done from duty or from a sense of obligation, it follows that a moral act is an act that applied to anybody. For example, the proposition "I help my neighbour in distress because I help anybody in distress" qualifies to be a moral act. It can be applied to anybody including oneself. In this sense, *morality* is a *universal principle* guiding human conduct.

Morality is *conduct* or behaviour arising from some *internalised standard* without reference to any group's standard of behaviour, or to some possible consequence to the individual. A moral behaviour is *not selfish*. It is *not prudential*. It is *not random*.

Sociologists, however, define morality in relative terms. They conceive morality from the viewpoint of a *reference group standard*. To them, an act is moral, if it conforms to the particular reference group standard. This is, group mores, customs or expectations.

Therefore, sociologists define morality as behaviour that respects the rules and institutions of a society. They lay emphasis on *obedience to rules* and regulations. To sociologists, there is no moral act that can be applied to anybody. There are no *moral universals*. In this unit, we examine the nature of morality. We discuss the development of moral judgement, and the sense of justice. We outline the major factors that influence moral development.

Developmental psychologist consider morality in terms of children reasoning when face with moral issues and their attitude to moral transgressions. To them morality is the ability to discriminate between right and wrong.

Development of Moral Judgement
It is amazing to consider the great capacity of human beings have for good and evil. The question: "where does morality come from?"

We consider here two perspectives on the development of moral judgement, namely: the perspectives of the social learning theorists and the cognitive-developmental theorists.

The Social Learning Perspective
Social learning theorists focus on how *prosocial behaviour* evolves. Prosocial behaviour is a *helping behaviour* that is directed to benefit another person. Social learning theory emerges in children as a result of their *interaction with people* in their immediate and wider environment.

The key issue in social learning relates to how *rewards and punishments* have been managed to engender morally appropriate behaviour in children. The children are members of society. Therefore, expected to have regard to *approvals* and *disapprovals* or *generalised reinforcers* of society. It is by anticipating such generalised reinforcers that the child exerts self-control over their behaviour. Therefore, morality originates from *reinforcements* provided by *significant others* in society (Bandura, 1986).

Observation of *models* play a significant role in children learning of prosocial behaviour. *Abstract modelling* explains how this learning occurs. In abstract modelling, the child identifies with the model. Thus, when the model rewards directly for a pro-social behaviour, the child is indirectly rewarded also. abstract modelling, therefore is the process in which modelling paves the way for the development of more general rules and principles of behaviour. What this means is that, not all pro-social behaviours have to be emitted and rewarded directly for watch child for the child to learn general rules. Observing a model receive reinforcement is adequate indirect reinforcement for learning to occur.

6.3.2 Piaget's Cognitive-Developmental Perspective

Piaget (1994) reasons that moral development follows a *developmental pattern* indicating increasing understanding of the meaning of justice.

Moral development, therefore, may be conceived as unfolding through three main levels:

- **Level One – Heteronomous Morality**

Children aged 4 to 7 years are found operating under the *heteronomous morality* level. Children at this level believe in *imminent justice*. Misconducts should be punished immediately. Rules are seen as unchangeable, and never varying. The rules have been created by an authority.

- **Level Two – Incipient Cooperation**

Children 7 – 10 years fall in this level of morality. Play for children at this level becomes a clear social activity. They are capable of learning *formal rules*, and play their games according to this shared knowledge. Rules are still seen as unchangeable though they understand the rules.

- **Level 3 – Autonomous Cooperation**

Children 10 years plus are found in the *autonomous level* of morality. Children at this level become aware that those who play it may modify formal game rules. They now know that rules of law are created by human beings. .Therefore, rules are subject to change as the players may wish.. Issue of rules and *reasoning on justice* are no longer bounded in the concrete. Taking Intentions now into account in matters of justice and morality.

Kohlberg's Cognitive-Developmental Perspective

Kohlberg (1994) contends that children pass through a series of stage in evolving a sense of justice and reasoning on moral issues.

6.3.3 Factors that influence Moral Development

Several factors influence moral development. Among them are: maturation, rules and regulation, modelling and rewards.

- **Maturation**

The cognitive-developmental perspective maintains moral judgement unfolds with increasing maturation. The quality of a child's moral reasoning is related to the quality of cognitive capacity of the child. Cognitive development is predicated on level of maturation.

- **Rules and Regulations**

Rules and regulation serve as guidelines for prosocial behaviour. They specify general expectation; therefore serve as source of motivation to the child to conform to social expectation. They specify general expectations, and thereby serve as a source of motivation to the child to conform to social expectation. The specific purpose for each rule or regulation when explained is an invaluable guide to behaviour. It serves as internalised reasons to conform.

- **Modelling**

Moral development of children is not a matter of instruction and preaching. Significant others must also model the prosocial behaviours that they expect children to exhibit. Indeed, there is great need that parents and caregivers, in addition to instruction, should also "*walk the talk"* for the children to emulate.

- **Rewards**

The child needs a confirmation whenever their behaviour conforms to expectation. Effective *contingency management* helps in engendering prosocialbehaviours of children, and discouraging anti-social behaviours.

6.3.4 Educational Implications of Moral Development

The educational implications of moral development are as follows:

- Morality is not inborn or given by the creator. It is acquired through living in a community of human relations. There is need for both formal and informal education (the school and the family) to provide adequate opportunities for children to observe others acting a cooperative, helpful manner.
- Children should be encouraged to interact with peers in joint activities in which they share a common goal.
- Though society prescribes rules, regulations and standards for conduct, children should not be made to harbour a feeling of vileness or guilt for minor infractions on the standards of conduct. For one thing, children's understanding and interpretations of standards of conduct is at best, relatively naïve.
- Education in morality should not emphasise the intrinsic rightness or wrongness of actions. Children should be led to see that there are always alternative explanations for others' behaviour. Children should be made to understand that the behaviour of their peers has several possible interpretation
- While a child's level of maturation may limit their understanding of moral precepts, the school should not just sit back and wait for maturation to occur. Intellectual discourse on moral issues may speed up the appearance of relevant cognitive structures that permit the child to reason about morality. Therefore, the school should provide a good setting in which values; beliefs and opinions may be critically examined.
- It may be true that contingency management engender prosocial behaviour, however, parents and teachers should be wary in the use of punishments or reproach to instil moral behaviour. The value of punishment in changing behaviour is very uncertain. Parents and teachers should rather select the appropriate behaviours exhibited by the child and nurture these through a system of rewards.
- Parents and teachers should make effort to explicitly teach children moral reasoning and self-control. Rules and regulations should be explained and understood in terms of their value for all stakeholders in a community of relations. Rules and regulations are no absolutes designed to tame

Self-Assessments Exercises
Fill in the blank

1. Mores refers to ----------, folkways and conventions of a social group
2. Moral development describes changes in children's sense of----------, of what is right and what is wrong
3. Morality is *conduct* or behaviour arising from some ---------- *standards* without reference to any group's standard of behaviour
4. The quality of a child's moral reasoning is related to the quality of ------- capacity of the child
5. Piaget (1994) reasons that moral development follows a ---------- *pattern* indicating increasing understanding of the meaning of justice

6.4 Summary

This unit has explained the nature of morality, the sequence in the development of moral judgement, major factors that influence moral development and the educational significance of moral development.

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6.6 Answers to the Self-Assessment Exercises

Answer

1) Customs
2) Fairness
3) Internalised
4) Cognitive
5) Development

MODULE 3 STAGES IN HUMAN DEVELOPMENT

UNIT 1 PRE-NATAL DEVELOPMENT

Unit Structure

1.1 Introduction

The word *pre-natal* means the period of development before birth. Conception takes place when a male sperm cell unites with or fertilises the female egg cell. Conception marks the beginning of the pre-natal period of development.

1.2 The Learning Outcomes.

By the end of this unit, you should able to outline the three major stages in pre-natal development describe the critical periods in pre-natal development explain why some periods in pre-natal development are regarded as critical list at least five factors that influence pre-natal development discuss the educational significance of pre-natal development.

1.3 Title of the Main Sections

1.3.1 Stages in Pre-natal Development

The pre-natal period consists of three distinct stages, namely: the germinal, the embryonic and the fetal stages. We discuss each of these stages in more detail.

- **The Germinal Stage** (Fertilisation to 2 weeks)

The germinal stage starts when the male sperm cell fertilises the female egg cell. It is the shortest stage of the pre-natal period of development. It lasts for about two weeks following conception. During this stage, the new organism, now called the *zygote* travels towards the uterus. On reaching the uterus, the zygote becomes implanted in the wall of the uterus. The wall of the uterus is very rich in nutrients, which nourish the zygote.

During the germinal stage, significant changes occur in the internal structure of the zygote. The stage is characterised by *rapid cell division*. In addition to increasing number, the cells of the zygote become increasingly specialised. The mass of cells separate into the outer and inner parts. Some of the cells form a protective layer around the mass of cells. Others begin to establish the rudiments of a *placenta* and the *umbilical cord*. When fully developed, the *placenta* serves as a conduit between the mother and the developing organism. The placenta provides nourishment and oxygen via the *umbilical cord*. In addition, waste materials from the developing child are removed through the umbilical cord.

- **The Embryonic Stage** (2 weeks to 8 weeks)

The stage of the embryo starts from the end of two weeks after conception and extends to the end of the second month. Week the organism becomes firmly secured to the wall of the mother‘s uterus. At the point, the child is called an embryo. The major highlight of this stage is the differentiation and development of the major organs and the body systems. The embryonic disc first differentiates into three layers: the *ectoderm*, the *mesoderm* and the *endoderm*. Each of these forms a different set of structures as development unfolds.

- ***The Ectoderm.*** The outer layer is the ectoderm. The *ectoderm* forms the epidemic of the skin, hair, ails, teeth, sense organs, the brain and the spinal cord.
- ***The Mesoderm.*** The middle layer is the mesoderm. The *mesoderm* produces the dermis or the inner layer of the skin, the muscle, bones, blood, the circulatory system and the reproductive system.
- ***The Endoderm.*** The inner-most layer is the endoderm. The *endoderm* produces the digestive system, the pancreas and the thymus.

Every part of the human body is formed from the three layers of the embryo mentioned above. The stage of the embryo is characterised by very rapid and orderly changes. By the end of the embryonic stage the organism resembles a miniature human being. All the basic organs and

features of the human being have been formed. However, the sex of the baby cannot be known at this point. Beyond this stage, no other changes in the features take place. The only further changes are in the relative size of the different parts of the body.

- **The foetal Stage** (8 weeks to birth)

The foetal stage is the longest stage in the pre-natal period of development. During this stage, the child is instantly recognisable. The stage starts at about 8 weeks after conception and continues until birth. The organism, now called the *foetus*, undergoes outstandingly rapid changes. It increases in length about 20 times. Its proportions also change dramatically. At about the beginning of the foetal stage, the head is about one-half of the foetal size. At the time of birth, the foetal head is only about one quarter of the total size of the foetus.

The foetal stage witnesses increased complexity of the organs and systems. The organs and systems become more differentiated and operational. For example, at 3 months, the foetus swallows and urinates. Arms develop hands. Hands develop fingers. Fingers develop nails. The foetus can now turn, do somersaults, cry, hiccup, clench its fist, open and close its eyes and suck its thumb (Smotherman & Robinson, 1996). The foetus responds to a variety of sensory stimulation such as: taste, smell, sight, touch and sound. Indeed, it has been reported (Leacanuet, Granier-Deferre and Busnel, 1995) that the foetus heard and responded to sounds it had heard repeatedly.

During the third trimester, the brain grows rapidly, expanding its abilities. The heart and lungs strengthen, making it possible for the foetus to survive on its own if birth comes. The foetus stops growing about 5 to 7 days before birth. It drops into position for delivery. A good number of normal, full-term fetuses end in birth 259 to 273 days after fertilisation (Rosenblith and Sims-Knight, 1985). We note that good nutrition on the mother's part increases the chances of normal delivery, and a healthy baby.

1.3.2 Critical Periods in Pre-natal Development

Critical periods in pre-natal development refer to periods when delicate and important organs and systems of the body are being formed. These periods are considered critical because if the uterine environment is not conducive major structural abnormalities or pre-natal death occur.

Such abnormalities may include central nervous system deformities, organ or system deformities involving the heart, arms, legs, eyes, teeth, palate, external genitalia, or the ear. The effect of adverse uterine environment is most potent at the critical periods of pre-natal development.

The critical periods are: the first trimester or the first three months after conception, the seventh month, and the ninth month. We discuss in more detail each of these critical periods.

- **The First Trimester**

As has already been noted, the first three months of pregnancy includes the germinal and embryonic stages of pre-natal development. During this period, delicate organs and systems of the body form and differentiate. Structural abnormalities and physiological defects of the heart, the central nervous system, the spinal column, the eyes, the ears, the arms and the limbs are most likely to occur during the first trimonthly of pregnancy.

- **The Seventh Month**

By the seventh month pregnancy, the foetus would have attained sufficient development to be viable. The foetus has a chance of survival outside the uterus if delivered *pre-term*. For a pre-term baby to survive, the central nervous system and the brain must have developed sufficiently to support partial regulation of breathing, swallowing and body temperature. If for whatever reason, the brain and the nervous system failed to complete their development, a pre-term baby affected negatively

- **The Ninth Month**

The end of 9 calendar months or approximately 280 days of pregnancy should deliver a child delivered without much problem. However, environmental conditions could introduce complications and make the birth process problematic.

Conditions such as a weak womb, a narrow pelvis, improper position of the foetus, maternal illness or malnutrition could result to prolonged labour. A convergence of several health factors, namely: poverty, poor antenatal care, low levels of immunisation and unsanitary delivery conditions make the ninth month and the birth process a very critical period in developing countries and especially in Nigeria (World Health Organisation, 2002).

1.3.3 Factors influencing Pre-natal Development

Foetal environment exerts significant influence on foetal development. The degree of influence depends on the nature of the factor, the intensity and the time of exposure to factors. Among the factors are the following: mother's diet, mother's age, mother's illness and mother's drug use.

- **Mother's Diet**

A mother's diet plays an important role in sustaining the rapid development of the foetus during the pre-natal development. Studies indicate that a mother who takes diet high in nutrients has fewer complications during pregnancy. Labour is also easier, and the baby generally healthier than a baby whose mother had a diet poor in nutrients (Morgane, Austin-LafFrance, Bronzino, Tonkiss, Diaz-Cixtra, Cintra, Kemper and Galler, 1993). It has been reported that protein and vitamin deficiencies in the mother's diet can result to eye and internal organs defect, and an increase in a number of malformation of the baby (Vasta, Haith and Miller, 1992.

- **Mother's Age**

The age of the mother at conception is an important factor that influence pre-natal development. Babies born to teenage mother are exposed to greater risks than babies born to mothers in their twenties. The mortality rate of infants and premature deliveries are higher in babies born to adolescent mothers than in babies born to mothers in their twenties (Cnattingius, Berendes and Forman, 1993).

Furthermore, the risks involved in pregnancy are greater, not only for teenage mothers, but also for unusually old mothers. Older mothers are more likely to give birth prematurely, and their children are more likely to have low birth-weights. The incidence of children with *Down syndrome*, a form of mental retardation, is more among mothers who are more than 40 years at the time of conception (Gaulden, 1992).

- **Mother's Illness**

Infectious diseases abound in the African environment. This is more so in the slum areas of the cities. These diseases include: rubella virus, genital herpes, human immune deficiency virus (HIV), some sexually transmitted diseases such as: syphilis and gonorrhoea; chicken pox, measles, tuberculosis, polio, cholera, leprosy and others.

When a pregnant woman contracts any of these diseases, it may not only affect her health, but transmitted to the unborn baby. Depending on when it strikes, an illness in a pregnant woman can have very serious consequences for the unborn baby. The onset of *rubella* in the mother prior to the 11^{th} week of pregnancy is likely to cause in the baby blindness, deafness, heart defects, or brain damage (Sevev, 1982). Chicken pox may produce birth defects. Infants born to mothers with HIV/AIDS (Acquired Immune Deficiency Syndrome) may have birth abnormalities, including small, misshapen faces, protruding lips, and brain deterioration (Frenkel and Gaur, 1994).

- **Mother's Drug Use**

Mother's use of drugs poses risks to the unborn child. Even drugs prescribed by medical professionals have sometimes posed serious consequences. In the 1950's, many women who were told to take ***thalidomide*** for morning sickness during their pregnancies gave birth to children with stumps instead of arms and legs (Vasta, Haith and Miller, 1992). The physicians who prescribed the drugs did not know that the thalidomide inhibited the growth and development of limbs that normally would have occurred during the first three months of pregnancy.

Pregnant mothers who used illicit drugs much a marijuana and cocaine gave birth to infants who are irritable nervous and easily disturbed (Feng 1993) In particular, cocaine use was found to produce intense restriction of the arteries leading to the foetus, causing a significant reduction in the flow of blood and oxygen This process increased the risk of foetal death

In addition, mother's use of ***alcohol*** and ***tobacco*** can have profound consequences for the unborn child. Studies have found that children whose mothers consumed substantial quantities of alcohol during pregnancy had below average intelligence and had problems in behaviour and other psychological functioning (Feng, 1993; Shriver and Piersel, 1994). It is because of the risks associated with alcohol and tobacco smoking that physicians today counsel pregnant women to avoid any alcoholic beverages and tobacco smoking.

1.3.4 Educational Implications

The knowledge of the developmental process that takes place during the prenatal period is important for the following reasons:

- The uterine environment plays a significant role in shaping the course of development during pregnancy and after birth;
- The presence of ***teratogenic agents*** in the uterine environment has the most profound consequences on the child. A ***teratogen*** is an environmental agent such as drug, chemical, virus, atomic radiation, or other factor that produces a birth defect;
- The timing of exposure to a teratogen is important. At some state of prenatal development, exposure may have minimal effect; at some other stage, exposure may have profound effect. For example, the child's brain is most susceptible to teratogen from 15 to 25 days after conception. The heart is most vulnerable from 20 to 40 days following conception (Needleman and Bellinger, 1994)
- There is need to create awareness on the effects of teratogenic agents on children before and after birth for the benefit of women expecting to have babies. There is need to optimize the prenatal

environment;

- Prescribed caregivers should be sensitive to signs of behavior problems, and malfunctioning of organs and body systems of children. Early detection of abnormalities helps in appropriate referral and adequate intervention.
- Many pregnant women in Nigeria live in extreme poverty and in unhealthy environments. How would these affect the urborn child?

Self-Assessment Exercises

1) The ---------- stage starts when the male sperm cell fertilises the female egg cell.
2) The ------- stage starts from the end of two weeks after conception and extends to the end of the second month
3) The ----------stage starts at about 8 weeks after conception and continues until birth.
4) The first three months of pregnancy includes the germinal and embryonic stages of pre-natal development is called first ---------
5) Among the factors are the following: mother's diet, mother's age, mother's illness and mother's ------- use

1.4 Summary

In this unit, we considered the major stages in prenatal development; the critical periods in prenatal development. We also considered some periods in prenatal development that are regarded as critical.

We discussed the five factors that influence prenatal development and the educational significance of prenatal development.

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1.6 Possible Answers to Self-Assessment Exercises

Answer

1) Germinal
2) Foetus
3) Embryonic
4) Trimester
5) Drugs

UNIT 2 INFANCY

Unit Structure

2.1 Introduction

Infancy covers the period of development from birth to two years. It is the earliest time of life for children. Newborns, called *neonates*, come into the world programmed for physical growth, emotional reactions, locomotion, speech, social interaction, thinking and reasoning. Babies possess unique personalities that will greatly influence the course of their lives. During infancy, tremendous changes in motor and sensory abilities bring children closer to maturity. In this unit, we discuss changes in physical structure and dexterity, changes in perceptual and language abilities, and changes in psychosocial behaviour of children during infancy. We also outline the tasks these children are expected to master, and the educational significance of those changes.

2.2 Learning Outcomes

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

- Outline the major developmental landmarks in physical and motor, cognitive and psychomotor facets of infant development
- List and explain the major developmental tasks infants are expected to master
- Discuss the educational significance of the changes that accompany development at infancy stage.

2.3 Title of the Main Sections

Developmental Landmass
Developmental landmarks would be discussed under the following the sub-topic

2.3.1 Physical Growth and Motor Development

Children are born with many reflexes. These are built-in physical responses. Primitive reflexes ensure the survival of the baby after birth. Examples of primitive reflexes include crying, grasping, and sucking reflexes. Postural reflexes, such as: stepping and swimming, help new-borns adapt to the new world. Stepping and swimming reflexes help the baby to become oriented to the environment.

Generally, new-borns are pre-wired to breathe, to respond to temperature changes, touch and noise. They are pre-wired to respond and take in nourishment. These reflexive responses are important determinants of healthy development.

Physical growth and motor development follow a direction. Physical growth and motor development start from the upper areas of the body to the lower areas. This is *cephalo-candal direction*. At birth, for example, the head of a newborn is much bigger than the rest of the body.

Physical growth and motor development also proceed from the centre of the body to the peripheries. This is *proximodistal direction*. For example, the chest and the trunk develop and reach adult status before the limbs.

Children do not grow steadily. Growth takes place in *spurts*. According to Lampl, Veldhuis and Johnson (1992), children may grow as much as one centimetre in a day and then go for days or weeks without any growth.

Physical growth is more rapid in the first year of life than at any other point in time. By the end of the first year, children's weight has tripled their birth weight. Infants do not just grow physically; there is also a discernible pattern of changes in motor changes. We can cite some examples of these changes. At birth, the infant's eyes roam about without direction. A few days later, the infant's eyes are able to stare at an object for a brief period. By four weeks, the infant's eyes are able to follow a dangling ring. By four months, a baby is able to hold and look at a rattle.

The examples cited above indicate a patterned connection between muscles that move the eyes and impulses in the brain. This signifies that there is a teamwork between the eyes and hands. There is coordination of motor actions and voluntary control of muscles. Increasing voluntary control of muscular movement helps the child to acquire greater mobility. The more control children gain of their voluntary motor actions, the greater is their ability to venture the environment. The motor achievements of children at the infancy stage of development include:

1. **Postural Control** – Postural control is the ability to stand upright. This ability may be observed progress from lifting head, lying on stomach, rolling over, lying, sitting propped up, to standing holding on to something. 90 per cent of children achieve postural control by the end of the first year of life.
2. **Locomotive Control** – Locomotive control is the ability to move.. This ability is observed progress from rolling on stomach, crawling on buttocks, creeping on arms and knees, climbing stairs, walking when led to walking alone. 90 per cent of children achieve locomotive control by the end of 15 months.
3. **Manual Control** – Manual control is the ability to manipulate objects. It involves the use of *fine motor skills*. Fine motor skills appear when the child is able to coordinate sensory information with motor actions. An example of manual control is shown in *prehension*. Prehension is the controlled act of reaching for and grasping an object. Reaching and grasping is achieved through *eye-hand coordination*. Prehension appears around four months. Prehension signals a move from gross to fine movements and paves the way for gross and fine motor coordination.

Frankenburg, Frandel, Sciarillo and Burgess (1981) summarised motor achievement of children during infancy as follows:

S/N	SKILL	AGE IN MONTHS
1.	Lift head when lying on stomach	3 months
2.	Rolls over	5 months
3.	Sits propped up	4 months
4.	Sits without support	8 months
5.	Stands holding on	10 months
6.	Walks holding on	13 months
7.	Stands momentarily	13 months
8.	Stands alone well	14 months
9.	Walks well	14 months
10.	Walks backward	22 months

These figure indicate average, that is when the average healthy, child achieves the skill. Many children will fall between or above the average. Increasing manual and locomotives dexterity demands that caretakers provide a safe environment for the child to explore

2.3.2 Cognitive Development

Physical growth and motor development are at the heart of cognitive achievements at infancy. As locomotive and manual control increases, children venture into the environment of their world. The things they find and the experiences they have significantly influence the course of cognitive development.

Cognitive development at infancy stage of development involves the development of *sensorimotor activities*. An organisational process typifies the process of knowledge during infancy. The major landmarks in cognitive development during infancy include:

i. Organisation of Reflexes

At infancy, the child's inborn reflexes become organised into *schemes*. Schemes action patterns for understanding the environment. Schemes are self-initiated activities. Examples of schemes include sucking, kicking, grasping, crying, hitting. Building of schemes become increasingly more complex as the child's development progresses.

ii. Object Permanence

Perceptual abilities develop rapidly during the first year of a child's life. The child achieves object permanence during the first year of life. The child comes to know that an object exists even when it is removed from their *field of vision*. The object continues to exist in time and space outside the child, even when the child cannot access it. The evidence for the development of object permanence is when children begin to actively seek or search for a hidden or missing object which they want.

iii. Active Experimentation

Active experimentation follows the child's achievement of object permanence. Children begin to explore and discover new properties of objects. Instead of mere fitting of existing schemes to new situations, children new actively vary their actions to produce different outcomes. Their actions resemble that of scientists gathering information through trial and error.

iv. Mental Representation

Between 18 months to two years, children begin to use mental representation. Objects that are not seen can be mentally represented and manipulated using worlds symbols gestures and mental images

Use of symbols is the basis of pretend play or make-believe plays of children. Thus, mental representation signals the beginning of thought.

v. Language

Many children utter their first word by the age of 12 months. From this time onwards, children begin to use language to identify things, speak with others, construct past events, and to influence actions in the future.

2.3.3 Psychosocial Development

During infancy, the transformation from a helpless newborn to a baby capable of forming close relationships with others takes place. The landmark achievements in psychosocial development of the infancy stage of development include:

- **Attachment Bonding**

An attachment bond describes a child's connection with a caregiver. This connection provides the child a sense of safety and security. As children grow older, attachment with a caregiver ensures that caring for them. The emotional relationship that develops between the child and the caregiver enables the child to venture with confidence into the world feeling loved and secure. Bonding begins at birth, and is strengthened by reflexive smile and crying.

a) Social Smile

Social smile follows attachment bonding. Eye contact with a human face provokes social smile as distinct from reflexive smile, which occurs mainly when the baby is asleep. Social smile ensures that the caregiver will continue to look at, pick up, hold, stroke, and feed and love the baby. It makes caring for the child enjoyable and rewarding.

b) Crying

At birth, crying is reflexive. Crying is the reflex response to choking which allows the child to take in their first breath. Crying elaborates into a scheme when it becomes melodious, signifying different states such as wet, hot, and hungry, uncomfortable, seeking attention or in pain

Crying generally increases until about six weeks age to two months. According to Milgrom, Westly and McCloud (1005) crying in children declines as they get older and peak again between 12 and 19 months. Crying peak when children begin to display negative emotion and may reach the point of *temper tantrum* Infants cry for many reasons. Their reasons for crying change with age. Babies cry when they are uncomfortable. As they get older, children may cry when they are afraid – at the sight of a stranger or an animal. They may also cry when frustrated – when the mother is out of sight. In all, crying has a survival value. It ensures that the attention of the caregiver is drawn to the child's problem.

c) Laughing

Laughing in children appears at about six months of age. Physical stimulation such as ticking; and visual stimuli like the mother's own laughing provoke infant's laughing. By the end of the second year of life, children are able to participate in fun-making activities like pulling on the mother's ear, or biting the mother's nipple.

d) Social Referencing

Social referencing appears in the first year of life. Social referencing is the ability to seek out emotional cues from trusted adults. Children use social referencing to know how to react to new situations. Social referencing ensures that children understand facial expressions, and voice tones that signify various emotional states. Children are able, for example, to differentiate emotions such as anger, happiness, approval, and disapproval. Social referencing impacts considerably on a child's social behaviour. For instance, social referencing is the basis of the development of *empathy feeling*.

e) Self-awareness

By 18 months, self-awareness has appeared in children. Self-awareness describes the sense of oneself as distinct and different from other persons. Self-awareness makes it possible for the child to experience secondary emotions such as; pride, shame, guilt, embarrassment and jealousy. Self-awareness paves the way for children to see peers as individuals. It aids them in forming friendship based on trust and shared interest.

2.3.4 Developmental Tasks

To attain the goal of development the child must to become worth risible adult the process of attaining this goal demands that the child performs some *critical tasks* at certain times of their life. Havighurst (1982) called these critical tasks *developmental tasks*.

When a child masters developmental tasks for any stage of development, they feel a sense of satisfaction. The child is encouraged to go on to new challenges. Difficulty with developmental tasks slows a child's progress towards future accomplishments. This inability to master developmental tasks leads to unhappiness and social disapproval. Difficulty affects negatively on the attainment of personal independence.

The number of developmental tasks, and the nature of these tasks that a child must master at different age levels, depend on the child and the particular culture the child finds him/herself in.

However, some tasks are typical and cut across individuals and cultures. We outline below the typical developmental tasks of infancy.

- **Learning to Walk**

The child at this stage of development is expected to master the skills of walking. Mastery of these skills ensures that the child learns during subsequent stages to run, jump and skip.

- **Learning to Talk**

The child utters their first word between 12 and 18 months. With the first word uttered, talking begins. Speech is engendered by the forces of maturation and learning.

Mastery of speech ensures that the child succeeds in achieving effective communication and social intercourse during subsequent stages of development.

- **Learning to Eat Solid Food**

At this stage, the child is expected to master the skills of taking solid food and be weaned from the breast. The nature of the weaning process, the age at weaning, and the schedule of feeding during weaning, all have profound impact on later development of personality Learn to defecate at socially acceptable times and places. Toilet training is the first moral training the child receives. The stamp of this first moral training may persist in the child's later character.

- **Elimination of Body wastes**

Learning to defecate at socially acceptable times and places. Toilet training is the first moral training the child receives. The stamp of this first moral training may persist in the child's later character.

- **Learning to Trust Self and Others**

The child is expected during infancy to learn to trust caregivers as providers of contact comfort, nourishment and security. The child must also learn to trust self as an efficient system capable of self control. Trust in infancy sets the stage for a lifelong expectation that the world will be a safe and pleasant place to live.

2.3.5 Educational Implications

The educational implications of infancy development are as follows:

- Early attachment behaviour has significant implication for adult personality. Children form an internal working model of their social world. This model is patterned after the relationships pattern between the child and the caregiver, especially during feeding, toileting and cleaning, and contact comfort. Children

carry this model through life, and it influences school experience, career and social relationships.

- Parents and caregivers must take note that malnutrition in infancy results in stunted growth, cognitive delays and motor retardation. Infant malnutrition is a significant public health and educational issue in Nigeria.
- The ability to reach for and manipulate objects is important for the infant's motor and cognitive development. Caregivers should provide adequate opportunity for children to move around and manipulate objects in a safe environment.
- The development of any skill depends on both maturation and experience. Caregivers should be sensitive to match experiences provided with the level of maturation children have attained.
- The goal of parenting and education is creating an enabling environment to aid children master life skills. Parenting and education should not constitute an obstacle to children's activities that lead to personal independence
- New-borns are especially prone to childhood diseases. Parents are encouraged to take advantage of immunization to protect children against various childhood diseases
- Emotional health of an infant depends on a continuous warm and intimate relationship with the caregiver.

Self-Assessments Exercises
Fill the Blank

1. Infancy covers the period of development from birth to -------- years
2. The ---------- is the controlled act of reaching for and grasping an object
3. Manual control is the ability to ---------- objects
4. Physical growth and motor development are at the heart of ------- -- achievements at infancy
5. Social referencing is the ability to seek out ---------- cues from trusted adults.

2.4 Summary

In this unit we examined the major developmental landmarks in physical and motor, cognitive and psychomotor facets of infant development. We also listed and explained the major developmental tasks infants are expected to master. Finally, we discussed the educational significance of the changes that accompany development at infancy stage.

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2.7 Possible Answers to Self-Assessment Exercise(s)

Answer

1) Two
2) Prehension
3) Manipulate
4) Cognitive
5) Emotion

UNIT 3 EARLY CHILDHOOD

Unit Structure

3.1 Introduction

Early childhood covers the period between two and six years. During this period, children's development is visible as dramatic succession of remarkable changes and milestones in the development of motor skills, cognitive abilities and psychosocial skills. Early childhood is the period children are able to move around in the immediate environment.

Because early childhood children move around exploring and manipulating objects in the environment, there is tremendous stimulation of all the sensory modalities. Perceptual abilities develop further, cognitive functions change, and the appearance of language improves communication. The years between two and six years appear to be a period of newfound authority and control over the world.

In this unit, we outline the changes children undergo in physical structure, cognitive abilities and social relationship during early childhood.

We also outline the critical tasks children at this stage of development are expected to master. Finally, we discuss the educational significant of those changes

3.2 Learning outcomes

- Outline the major motor, cognitive and psychological achievement of children in the early childhood
- List and explain the major critical tasks childhood children are expected to master
- Discuss the educational implications of changes that accompany development during childhood.

3.3 Title of the Main Sections

Developmental Landmarks
The developmental landmarks would be discussed under the following sub-topics:

3.3.1 Physical Growth and Motor Development

During early childhood, physical growth continues at a steady pace. The growth rate at early childhood is, however, slower than at infancy. In the main, children change significantly in shape and size.

In early childhood, the body becomes less rounded. It becomes more muscular. Towards the end of early childhood, the body fat is less than 50 per cent of body fat at one year of age. The head to body proportion reduces from 25 per cent at birth to about 12 per cent at the age of six years. By the end of early childhood, children's arms and legs lengthen. Their physical structure becomes more adult-like.

By the end of early childhood, the brain has attained its adult weight. The brain has generated significantly more neural connections. Neural communication becomes faster and more efficient, especially in the brain areas controlling movement, emotion and thought processes.

Brain lateralisation appears in early childhood. That is, the brain divides into two hemispheres – the right hemisphere and the left hemisphere. Brain functions such as: language, logic and formal thoughts are controlled by the left hemisphere. Mainly the right hemisphere controls other brain functions such as music, art, creativity and spatial perception.

Take note that children's height and weight are usually described in terms of *percentile*. If, for example, a child's height is in the 80th percentile, it means that the child is taller than 80 percent of all children of their age or shorter than 20 percent of children. We also note that, the findings of Oyedeji, Olamijulo, Osinaike, Esimai, Odunusi and Aladekomo (1996) indicate that Nigerian children aged one to six years fell below international standard in height and weight measurements. Nigerian children averaged only 67 per cent of standard height, and less than 60 per cent standard weight. This finding may be related to childhood malnutrition, and impoverished socio-psychological environment which most children in Nigeria live with.

During early childhood, the phenomenal increase in gross motor and fine motor skills take children far from the world they have known. Refinements in gross motor development enable children to move

around, while refinements in fine motor, development enables children to grasp and draw.

According to Beaty (1986), Knobloch & Pasamanick (1974), milestones of motor achievement in early childhood include:

- **Climbing** – By the end of early childhood, most children are able to climb down stairs, alternating feet with each step.
- **Drawing** – By six years of age, most children are able to copy a square.
- **Pedaling** – By the end of childhood children who have the opportunity are able to ride a two-wheel bike.
- **Self-care** – Most children at this age are able to bathethemselves, dress without help and fasten buttons and shoe laces.
- **Writing** – By the end of childhood, most children are able to copy numbers and letters.

The acquisition of motor skills follows a developmental sequence. First is the *cognitive stage*. Children discover the type of physical skill required to perform a task. This is followed by the *associative stage*. Children engage in trial and error to correct their own mistakes. Finally, children reach the *autonomous stage*. In this final stage, children exhibit a fine motor skill without making mistakes. According to Schmidt (1982), this sequence is played out for each new motor the child learn

3.3.2 Cognitive Development.

Early childhood coincides with Piaget's pre-operational period of cognitive development. It is marked by profound gains in cognitive and linguistic development. Increased brain growth broadens and deepens cognitive skills. However, as Piaget had pointed out, at this stage, children's cognitive structures do not permit them to do mentally what they are able to do physically. We outline here the major landmarks in cognitive achievement of children in early childhood stage of development.

- **Mental Representation**

Early childhood children continue to elaborate on the cognitive ability of mental representation that they achieved toward the end of infancy. The evidence for this may be observed in their love of *pretend play*.

Pretend play is a play in which children flexibly device all kind of make-believe objects and events to represent the real objects and events. Children pretend to talk on telephone, for example. They act like one of their parents. They pretend to be asleep. They imitate a television character.

In all of these, children pretend to do things and act as if imaginary objects exist.

- **Egocentric Thinking**

Egocentrism is a form of self-referencing. It is the belief that others think and fell as one does. Children in the pre-operational stage are unable to consider the positions of others. They view the world from their own perspectives. Their actions are characterised by *centration*; focusing on only one aspect of a stimulus situation; and constrained by appearance.

- **Language**

Language develops rapidly during early childhood. Sentence length and complexity, vocabulary, syntax and grammar improve tremendously. With increased facility in language use, information processing speed increases. Memory and attention span improve. By childhood, children begin to form rudimentary concepts, such as: big and small, boy and girl, day and night. They are unable, however, to understand concepts relating to the physical world.

Rudimentary Concepts such as: space, size, shape, number time and age. The cognitive achievements outlined above help to improve children's communication skills. By the end of early childhood, children are becoming beings that are more social.

3.3.3 Psychosocial Development

Early childhood is a critical period for social expansion. Children venture into the world of their peers. They build new relationships, and thereby begin to uncover their true selves. We outline in this section, the major psychosocial achievements of children during early childhood.

- **Self-recognition**

Early in this period, around 24 months, children begin to recognise themselves in mirrors, photos and videotapes.

- **Self-definition**

Self-recognition engenders the process of self-definition. Self-definition is the ability to notice difference between oneself and others. By early childhood, children are able to notice the characteristics that make them unique. They are able to achieve this through increased interaction with peers and peer-comparison.

- **Self-esteem**

As children interact with other children of their age and compare their unique qualities, a feeling of self-esteem appears. Self-esteem describes the child's evaluation of self as "good, sweet and likeable" or as "bad and unlikable". Self-esteem is the root of self-concept which appears and elaborates in the next stage, middle childhood.

- **Gender Identity**

Gender identity describes a child's sense of being male or female. It is an awareness and identification of oneself as male or female. By the end of early childhood, most children have achieved gender identity. Usually, parents assign roles to children based on gender expectations.Performing the gender roles help children to define their own gender. What this mean is that by the end of early childhood children have incorporated into their identity so society expectations of what maleness or femaleness Gender identity influences children's patterns of play, lifestyle, career choices, parenting beliefs and indeed, the entire worldview of children.

- **Initiative**

By the end of early childhood, most children's activities indicate purposefulness. Children are capable of setting goals and planning their activities. They are able to make plans, set goals, and strive to achieve those goals. For example, they are able to take a wall clock apart to see how it runs; they are able to make a phone call and chat a while; they are able to do the dishes or help a parent wash the car. Play becomes more constructive and cooperative, and social skills become important and continue to bolster.

3.3.4. Developmental Tasks

As children venture into the new worlds of social relationships, they face new challenges. They are expected to master new tasks that are appropriate for their age. We outline here the major developmental tasks of early childhood stage of development as suggested by Havighurst (1982).

- **Learning Sex Differences and Sexual Modesty**

The kinds of sexual behaviour the child learns and the attitudes and feelings they develop about sex in these early years may have an abiding effect upon their sexuality throughout life.

By the end of early childhood, children are expected to master gender roles. They are expected to internalise and the significance of these behaviourally, morally and socially.

- **Achieving Physiological Stability**

It takes training for the child to achieve physiological stability. The way the child's body settles and stabilises during early childhood will impact on later poise and elegance. By the end of early childhood, children are expected to master good pose in posture and stepping out.

- **Forming Simple Concept of Social and Physical Reality**

Maturation and learning aid the child to form a stock of concepts. The child is expected to master sufficient vocabulary to be able to name and forming Simple concepts of Social and physical Reality identify the different aspects of the social and physical world around them. This forms the basis for conceptual schemes development during middle childhood.

- **Learning to Distinguish Right and Wong, and Developing a Conscience**

During early childhood, the child is expected to master the warning and punishing voices, and the peculiar displays of affection and punishment of parents. This forms the basis of the child's conscience and later structure of values and moral character.

3.3.4 Educational Implications

The changes during early childhood in the various facets of development and the accompanying developmental tasks have some significance for educational practice. We outline some of the educational implications of development at early childhood here:

- It is impossible to separate health issues for children from social issues. Malnutrition, cramped and miserable living conditions, and childhood diseases generally coexist. Policy issues in early childhood education should be approached multi-sectorally, involving stakeholders in education, health and social welfare.
- Caregivers should be sensitive to provide developmentally appropriate and growth fostering responses to prompts or signals of children. This will help to enhance the give-and-take in a mutually rewarding exchange with children.
- If parents and caregivers are encouraging creativity and exploration, children see the world as full of opportunities. When parents and caregivers are discouraging or punishing, feelings of guilt can arise and children may be inhibited in their striving to achieve personal control of their world.
- Brain lateralisation is responsible for handedness in children. The preference to perform motor activities using the right or the left hand depends on whether the right or the left brainhemisphere is dominant. Forcing a child to change handedness confuses the child's brain functions. On no account should parents or teachers force a child to change handedness. This way, childrenbuild a positive self-image.
- The attitude of caregiver towards a child significantly influence the child's self-esteem. Care givers should develop a positive attitude towards the child and caregivers to impress on the child that the child is important special and loved

- We note that an important part of friendship and any close emotional relationship is the ability to put oneself in another's place, and vicariously experience the other person's emotions. Children learn to be helpful and caring when parents and caregivers are invited to model the skills of empathy feeling.
- In general, caregivers should see children as imaginative and creative creatures that are capable of increasingly sophisticated in thinking and skills if appropriate stimulation and prompts are provided.

Self-Assessment Exercises

1) Mainly the ---------- hemisphere controls other brain functions such as music, art, creativity and spatial perception.
2) The ---------- *stage* is the final stage, children exhibit a fine motor skill without making mistakes
3) Concepts of ---------- and physical Reality identify the different aspects of the social and physical world around them
4) Learning to distinguish right and wrong, help the child developing a ----------
5) The ----------describes the child's evaluation of self as "good, sweet and likeable" or as "bad and unlikable

3.4 Summary

This unit examines the major motor, cognitive and psychosocial achievements of children in early childhood. We listed and explained the major critical tasks early childhood children are expected to master, and finally, we discussed the educational implications of changes that accompany development during childhood

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3.6 Possible Answers to Self-Assessment Exercise(s)

Answer
1) Right 2) Autonomous 3) Social 4) Conscience 5) Self-Emotion

UNIT 4 MIDDLE CHILDHOOD

Unit Structure

4.1 Introduction

The transition to middle childhood involves a steady growth process. Physical growth and motor development continues. Great achievement and advancement in cognitive development. Middle childhood is the school age; children are now in the primary school. Their social circle expands tremendously. Language and communication skills differentiate further. Children in the middle childhood captivated by their physical selves generally. They are curious about how far their changing bodies will take them. In this unit, we outline the major developmental landmarks of middle childhood. We also outline the critical developmental tasks of this stage of developmental tasks of this stage of development and the educational implications.

4.2 Learning Outcomes

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

- Outline the major landmark a physical growth and motor development, cognitive and social development of children in the middle childhood children are expected to achieve
- Highlight the critical developmental tasks middle childhood children are expected to achieve
- Discuss the educational implications of developmental changes at middle childhood

4.3 Title of the Main Sections

4.3.1 Developmental Landmarks

Development landmarks discussion will be under the following sub-topics:

4.3.1.1 Physical Growth and Motor Development

Between the ages of six (6) and twelve (12) years, children grow physically and change in many ways. Physical growth is steady and moderate during middle childhood. However, there are great variations in children's growth between six (6) and eleven (11) years, due to differences in genetics, nutrition and emotional health. The average height of children at eleven (11) years is about two metres.

The facial features of school-age children gradually take on a more mature expression resembling adult facial structure. The face becomes larger, the forehead flattens, the nose enlarges and the jaw widens. Children lose their baby teeth. Permanent teeth appear. The number of bones in their hands, feet, wrist and ankles increases. Reaching Visual maturity is between six and seven years.

During middle childhood, the heart increases in weight, but heart rates decline. The size of lungs expands. The respiratory system becomes more efficient. By the end of this stage of development, the child's brain is almost its adult size and weight.

Observation of sex differences in physical growth could be between 11 and 12 years. Girls become slightly taller and heavier than boys do. Girls tend to accumulate more body fat than boys do. This gives the girls more curved and flowing contours. Boys develop more muscles. They gain an edge over girls in strength and speed.

Children do not only grow physically during middle childhood. They also develop mastery and control of their muscles. Gross motor and fine motor skills significantly improve. *Reaction time* improves. That is, children react faster to a stimulus.

During the stage, children are able to learn how to bike, swim, weave baskets, build and fly kites, play soccer, write, type, draw, paint, throw ball, use household tools, mould animals from clay, balance on one foot and generally, help with household chores.

Studies (Lansdown and Walker, 1991) indicate that there are gender differences in gross motor and fine motor activities. Boys are superior

to girls in activities involving gross motor movements such as:

Throwing catching and hitting balls**.** Boys also tend to be **stronger and more muscular than girls are. Girls however, better coordinated more flexible and have superior balance. Girls do better in areas like gymnastics and rope jumping**

4.3. 1.2 Cognitive Development

Children change dramatically in cognitive abilities during middle childhood. Organised school experience afford children enhanced intellectual options and a greater range of social intercourse. Thus, they are able to develop skills they would need to transit to adolescence.

Middle childhood is the *concrete operational* stage of the cognitive development. During this period, children learn the *principles* by which the world operates. Children begin to use mental activities called *operations* in which *images* or *mental representations* are manipulated or reversed. School-age children perform operations only on *concrete objects* or concepts. *Intuitive thinking* gives way to more *logical thinking*.

Major cognitive achievements or landmarks or middle childhood include:

- **Conservation**

Conservation describes the principle that changing the quantity or appearance of an object or substance does not affect its quantity. Mastery of the different aspects of conservation appears in a progressive and specific sequence. *Number conservation* appears first, followed by *conservation of quantity* or mass. *Volume conservation* appears last.

The development of three related concepts helps children to attain conservation. These concepts are:

- ***Identity*** – the principle that an object remains stable regardless of a change in its appearance.
- ***Reversibility*** **–** the ability to reverse mentally the steps in a sequence of operations.
- ***Decent ration*** **–** the ability to concentrate on more than one dimension of physical change at the same time.

Classification

Classification describes the categorisation of items into a particular class or set. Putting oranges, grapes, mangoes, pawpaw, sour-sup, applies in the category of fruits is an example of classification. Categorising goats, bat, dog, cat, earthworm, sparrow as animal is classification

Seriation
Seriation describes the mental action of imposing order, hierarchy or levels within a classification. For example, a family of father, mother, brother, sister can be ordered from biggest to smallest; tallest to shortest; oldest to youngest.

Concept Formation
This describes the mental action of classifying objects according to use or function. This involves knowing the differences among the objects. Middle childhood understand the concept of mother or father; the concept of boys and girls. They also understand physical properties such as: space, time and number concepts.

At this stage, spatial concepts appear. Children begin to develop *cognitive mapping skills*. That is, they are able to mentally represent the environment by combining landmarks and routes.

Problem Solving
Problem solving involves thinking through questions and issues in an attempt to gain insight or come to solution. School-age children develop various *metacognitive skills* and *memory strategies, which* aid them in school work involving reading, writing, comprehension, evaluation and problem-solving.

Sense of Humour
Sense of humour is the ability to joke, laugh, display wit and understand *Incongruities in behaviour* or word use.

Children's sense of humour develops along with their cognitive abilities during middle childhood.

Meta-communication
This is the ability to talk about language or *linguistic awareness*. At middle childhood, children's language skills – vocabulary, grammar and pragmatics become increasingly refined. These enhance effective conversation and fruitful social intercourse**.**

4.3.1.3 Psychological Development

Children's social circle expands; children continue to discover who they are in relation to others, especially peers. Among the developmental landmarks of this stage are the developments **of:**

Sense of Self
At this stage, children refer to their psychological traits – abilities, competence, and attractiveness – to define themselves. Sense of self differentiates through a process of *comparison to peer* and significant others. *Social comparison* helps a child to understand their standing and identify based on social reality.

Industry and Competence
Middle childhood is stage children strive to master social skills and achieve competence. Children get to believe in their own ability to initiate activities, learn new things, and accomplish their goals. It is a crucial time for children to learn the *tools of culture*. Children establish work habits that will carry them through life.Self-esteem

At this stage, self-esteem grows and differentiates. A sense of *self-efficiency*, an appraisal of what one can and cannot do, develops.

Psychological Self
School-age children's description of themselves becomes more complex. Description of self-moves from an external psychological description to a more external psychological description. Children, at this stage, are able to differentiate various aspects of their selves. They are able to understand that a person can have inner self and outer self. This is the realisation that a person may appear outwardly different than they really feel inwardly.

Self-Concept
Middle childhood children are able to separate their self-concept into four dimensions: academic, emotional, physical and social.is able to understand that they are good in athletics, A child is able to feel good about their peer the same time, feel bad about their appearance. They are able to view themselves from different perspectives.

Social Cognition
Social cognition describes the child's ability to think about and understand three key components of social relationship, namely: *perspective taking*, *information processing* and *social knowledge*. By middle childhood, children are able to understand another's point of view. They are able to process information adequately so that they are able to enjoy peer relationships. They are also able to understand the dynamics of forming relationships and learning the schemes by which positive relationships are formed.

Conventional Morality
Middle childhood children approach moral problems from the perspective of maintaining social respect and acceptance of what society defines as right.

4.3.1.4 Developmental Tasks

The transition to middle childhood confronts the child with new interpersonal tasks and additional pressures to achieve. The typical developmental tasks of middle childhood include:

- Learning physical skills necessary for ordinary games
- To enjoy peer association and friendship, and a happy childhood, middle childhoods must learn the physical skills and physical activities that are valued in childhood. Such skills include: throwing and catching, kicking, tumbling, swimming and handling simple tools.
- Building wholesome attitude towards oneself
- At this stage, children are expected to develop habits of care of the body, of cleanliness and safety. They are expected to develop a realistic attitude to self, which includes a sense of physical normality and adequacy, and a wholesome attitude to one's sex
- Learning to get along with age-mate
- Children in childhood stage are expected to learn the give and take of social life peers to learn to make friends and to get along their mates

Getting along with age mate

Getting along with age mate are expected to learn the give-and- take of social life among peers; to learn to make friends, and to get along with perceived enemies; to develop a social personality.

Learning an appropriate gender role

At this stage, children have to learn and act the appropriate gender role – learn to be a boy or a girl, and act the expected and rewarded boy-child and girl-child behaviour.

Developing fundamental skills

The child must master the skills of reading, writing and arithmetic. These are fundamental skills necessary for getting along well in school and society.

Developing concepts necessary for daily living

The middle childhood task here is to acquire a store of concepts sufficient for thinking and acting effectively in occupational, civil and social matters.

Developing conscience, morality and a scale of values

The task here is to develop an inner moral control, respect for moral rules and the beginning of a rational scale of values.

- **Achieving Personal Independence**

The task here is to become an autonomous person, to be able to make plans and to act in the present and immediate future independently of one's parents and other adults.

4.3.4 Educational Implications

Below are the educational significance or implications of the middle childhood period:

- As children in middle childhood acquire greater coordination of gross and fine motor skills, they engage in more rough, vigorous and dangerous sports and pastimes. However, immature cognitive skills such as errors in judging danger or inability to foresee consequences may put children at risk for fatal accident provide more sensitive support in sports participation
- Parents and teacher should provide more sensitive supervision of the children at this stage
- Though the paucity exists, motor abilities will fold on their own. Schools should make physical provision of facilities and time for children to engage in vigorous physical activities to increase quickness, vigour, coordination and stamina.
- The current trend is that school age children are becoming increasingly engaged in television viewing and computer games. Parental role model in physical exercising is poor. As a matter of educational policy, school-age children should enjoy a daily schedule of strenuous physical activity.
- Facts children learn through simple repetition do not aid cognitive development. Instructional process should pose age-appropriate problems to children rather than deliver solutions to problems. Schools should lay more emphasis on developing specific intellectual skills and critical thinking rather than simple rote memorisation of facts.
- No cognitive skill has a more profound lifelong effect than reading. All children need explicit, systematic instruction and exposure to rich literature (fiction and non-fiction) to become skilled readers. Incorporated reading into the child's daily life.
- For middle childhood children, all instructional activities should be experiential – involving play, sensory experience and social interaction.
- Achievement behaviour of parents and teachers help define children's achievement orientation. Parents and teachers' attitude to work and accomplishment is the key to children's own attitude. Parents and teachers should be models of hard work, competence and accomplishments.
- The social and cultural setup defined competence at middle childhood Children need helped to master the tools of their own culture and schemes for forming peer relationships.
- Because competence is an important component of self-esteem and general well-being, parents and teachers should aid children identify their unique talent. Children need help to develop their talents and find personal fulfilment.

- Middle childhood is successfully past to the way teachers has the task of bridge across which children must world beyond childhood. Parents and helping children interpret the world outside the home and assisting them in meeting the demands of the school.

Self-Assessment Exercises

1) Middle age great variations in children's growth between six (6) and eleven (11) years, due to differences in genetics, ---------and emotional health
2) During middle childhood, the heart increases in weight, but heart rate----------
3) Middle childhood children approach moral problems from the perspective of maintaining social respect and ----- of what society defines as right
4) Social cognition describes the child's ability to think about and understand social relationship, in terms of perspective *taking*, ---------- *processing* and *social knowledge*
5) The middle child expected to develop a realistic ------- to self, which includes a sense of physical normality and adequacy, and a wholesome attitude to one's sex

Friendship becomes important in middle childhood. What skills influence friendship development?

4.4 Summary

This unit discusses the major landmark a physical growth and motor development, cognitive and social development of children in the middle childhood.

We also outlined the critical developmental tasks middle childhood children are expected to achieve while we discussed the educational implications of developmental changes at the middle childhood.

4.5 References/Further Readings/Web Resources

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4.6 Possible Answers to Self-Assessment Exercise(s)

Answer

1) Nutrition
2) Decline
3) Acceptance
4) Information
5) attitude

UNIT 5 ADOLESCENCE

5.1 Introduction

Adolescence is the period between 12 and 18 years. The unset of puberty marks the beginning of adolescence. Puberty is the culmination of the physical changes that lead to sexual maturity.

Adolescence is the bridge between childhood and adulthood. It is a stage in development marked by amazing spurts in physical, cognitive and social development. Sometimes, the sudden burst in all aspects of development, especially the altered body, overwhelms the adolescent.

Naturally, the adolescent questions these changes, and makes effort to understand them. The answers the adolescent finds help to define their identity. Although physical changes during this stage are universal, psychological and social reactions depend on each individual, the context they find their self and the culture.

In this unit, you will learn the developmental landmarks that define adolescence. You will also learn the critical tasks the typical adolescent is expected to master and the educational significance of the changes and problems children encounter at adolescence.

5.2 Learning Outcomes

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

- Outline the physical cognitive, and social changes that typically accompany adolescence
- Highlight the major developmental tasks adolescents are expected to master
- Examine the educational significance of changes during

adolescence

5.3 Title of the Main Sections

5.3.1 Developmental Landmark

We will discuss the above topic under the following sub-topics:

5.3.1.1 Physical Growth and Motor Development

Genes programme human beings for developmental changes. At puberty, the *endocrine system* secretes *hormones*. Hormones are powerful regulating chemicals. They regulate physical growth and sexual maturation**.**

- **Hormonal Changes**

The *pituitary* gland is primarily responsible for the *adolescent growth spurt*. The growth spurt begins when the pituitary secretes increased levels of growth hormone. The pituitary gland, also sometimes called the *master gland*, secretes hormones that cause other endocrine glands to produce their own hormones. Hormones from the pituitary controls *Thyroid* gland. The thyroid secretes hormone that also contribute to normal growth and body functioning.

The pituitary gland also secretes *gonadotropin* hormone. In males, the sex gland is the *testes*. In females, the sex gland is the *ovaries*.

The male testes produce the sex hormone called *testosterone*. The testosterone level rises significantly at puberty. The female ovaries produce the sex hormones called *oestrogen* and *progesterone*. The levels of these hormones rise significantly at puberty.

One bother some problem of adolescence associated with rise in hormone levels is *acne*. There are pimples and black heads on the face and neck in this skin disorder. Acne is more common in boys than girls. This is because it is caused by the primarily male sex. This hormone occurs in both males and females. Boy produce more androgen than girls do.

- **Physical Changes**

In boys, physical growth spurt peaks at about 14 years of age. Primary and secondary sex characteristics appear. *Primary sex characteristics* include enlargement of the testes, and production of sperm cells. *Secondary sex characteristics* include growth of hairs on body surface, especially pubic area, underarm and face; and deepening of voice.

In girls, physical growth spurt peaks around 12 years of age. Primary and secondary sex characteristics appear. Primary sex characteristics include maturation and shedding of ova – the female sex cells. Secondary sex characteristics include enlargement of the breast and pelvis, feet deposits on the hip, growth of body hairs on the pubic region and underarm and appearance of *menarche*. Menarche is the first menstrual period and the first sign of female fertility.

- **Motor Development**

A major concern of adolescents is weight, appearance and physical fitness. By the age of 17 years, almost 90 percent of muscular-skeletal structure of the adolescent had been built (Amscheler, 1999). Limbs and muscles have strengthened. The typical physique of a man or a woman appears.

Physical endurance increases dramatically at adolescence. However, in most adolescents physical activities decline considerably. Adolescents get most of their physical activities through organised sports.

5.3.1.2 Cognitive Development

The dramatic changes in cognitive abilities marks transition into adolescence. It may appear to a detached observer that adolescents suddenly acquire new ways of thinking. We note however that the changes in the ways adolescents' process information are the result of a steady building of intellectual skills that have root in earlier stages of development.

Adolescents are able to display advanced forms of thinking called *formal operations*. The major cognitive achievements of adolescent we would consider include:

- Abstract Thinking

Adolescents are able to think about things that are unseen or known directly. Adolescence is a stage in development when children are able to imagine what might exist. Adolescents no longer rely intellectually on what already exists. Abstract thinking involves complex mental juggling of symbols and rules to transcend concrete reality. Thus, adolescents are able to mentally experiment with ideas rather than rely on concrete things done.

- **Reasoning on Hypothesis**

Adolescents are able to think hypothetically. That is, they are able to consider many possible ways to solve a particular problem and the possible forms each variable in the task situation might assume. They

are also aware when they have exhausted the possibilities.

- **Constructing Propositional Logic**

Adolescents are able to use self-consciously deductive reasoning processes. They are able to divide their attention to different aspects of a task situation. They are also able to monitor their own thought processes through meta-cognition. Adolescents' thought process is relative, not absolute. Adolescents are able to reveal inconsistencies in the thinking

- **Combinatorial Reasoning**

Adolescents are able to organise and combine abstract rules to solve a class of problems. They are able to generate, for example, a complex algebraic equation combining the different operations of addition, multiplication, division and subtraction to solve higher order problems.

- **Increased Memory Span**

Adolescents are able to retain a greater amount of information in the short-term or working memory (Jenkins, Myerson, Hale, and Fry, 1999). Attention span also increases remarkably. Adolescents are able to consciously remember and think about more items of information at a time.

- **Increased Memory Strategies**

Adolescents are able to use more memory strategies to aid learning and remembering. For example, the use of rehearsal, chunking, clustering and elaboration strategies improves remarkably during adolescence.

5.3.1.3 Psychosocial Development

The search for identity comes to the forefront of development during adolescence. The social environment changes. Relationships with parents, siblings and peers change. Heightened pressure for autonomy and independence emerges. This stage is Erik Erikson's fifth stage of psychosocial development – the stage of identify achievement versus role confusion. Young people begin to get a sense of who they are through the roles they adopt, the kinds of relationships they are building with peers, and the beliefs they are having about their own potential. Adolescents gradually incorporate adult roles and responsibilities.

Some of the major achievements outline in the psychosocial phase of development:

- **Creating an Identity**

At this stage, an adolescent strives to define their self in a new way by creating an identity that they could be comfortable. Identity refers to an individual's sense of uniqueness and belonging. According to Baumeister

and Muraven (1996), identity builds on an integrated, goal- directed understanding of self. Males emphasise intrapersonal identity,a sense of self as separate and unique. Females emphasise interpersonal identity, a sense of self as connected to others (Douvan and Adelson, 1966). Sexuality assumes a particularly important role in identity formation as heightened interest in the opposite sex develops.

According to Adams and Marshall (1996), achieving identity serves several purposes in the life of the adolescent, namely:

- Identity provides the structure for understanding who one is;
- Identity provides the meaning and direction in life through values and goals clarification;
- Identity provides a sense of personal control and freewill;
- Identity enables the recognition of potential through a sense of future perspectives and possibilities of choices in life.
- Inability to achieve a sense of identity results to role diffusion. When this happens, the adolescent doubts their sexual identity, psychological identity and social identity. Behaviour problems such as acting out with sex, and experimenting with drugs and alcohol may manifest. School truancy, other delinquent behaviours and eventually, dropping out of school may follow.

- Concept and Self-Esteem

Self-Concept refers to a person's belief about their self. Self-esteem refers to feelings of self worth based on beliefs about self. Self-concept and self-esteem are tied to identity while self-concept becomes organised and more accurate at adolescence, self-esteem grows and differentiates further.

- **Egocentricism**

Adolescents develop increased self-consciousness. They harbour the belief that others are concerned with their looks as they themselves are. This increased self-awareness leads dolescents to begin to find faults with their parents and adult authority. They become argumentative and fight valiantly to defend their viewpoint. Popularity issue also becomes acute concern to adolescents.

- **Post-conventional Morality**

Adolescents are able to base their moral judgement on an internal set of ethical principles. Moral judgement is determined by a belief in universal codes of respect, justice and equality for all. Self-sanctions, rather than social sanctions, are the controlling force in moral decisions at this stage.

- **Developmental Tasks**

The transition adolescence in marked by new challenges. The spurt in cognitive abilities and social sensitivities is accompanied with new demands, especially as the adolescent moves toward greater

independence. We outline below the major developmental tasks of the adolescent stage of development. According to the University of Florado, Institute of Food and Agricultural Science (UF/IFAS) Fact Sheet FCS 2118 (2007), adolescence developmental tasks may be categorised as follows:

- **Achieving new and more mature relations with others, both boys and girls, in their age group**

The goal here is that the adolescent is expected to learn to look upon girls as women and boys as men. They are expected to become adults among adults. They are expected to learn to work with others for a common purpose, disregarding personal feelings and prejudices. Adolescents are expected to learn to lead without dominating.
Achieving a Masculine or Feminine Social Roles
Adolescents are expected to master and accept a socially approved adult masculine or feminine social role. They are expected to develop their own definition of what it socially means to be a male or a female.

- **Accepting one's physique and using the body effectively**

Whether or not an adolescent's body achieves the "goodness-of-fit" of the stereotype definition of a perfect body for a young woman or a young man, they are expected to become proud, or at least tolerant, of their body.

They are expected to accept, use and protect their body effectively with personal satisfaction.

- **Achieving emotional independence of parents and otheradults**

Adolescents are expected to be free from childish dependence on parents. While retaining their affection for parents, adolescents are expected to move toward self-reliance.

- **Selecting and preparing for an occupation**

Adolescents are expected to select or enter into an occupational area for which they have necessary ability. To cut an adult status, the adolescent is expected to be able to support their self financially.

- **Preparing for marriage and family life**

Adolescents are expected to develop a positive attitude toward family life and having and supporting children. They are expected to gain mastery of knowledge and skills required for home management, child rearing and parenting.

- **Developing intellectual skills and concept necessary for civic competence**

Adolescents are expected to develop adequate conceptual framework, language skill and reasoning ability necessary for dealing effectively

with the problems of the global community. Acquiring a set of behaviour values and an ethical system as a guide to Adolescents are expected to develop their own set of values and beliefs, an ideology about life. They are expected to develop reasonable interest and motivation for realising those values. Adolescents are expected to define man's place in the physical world and relation to other human beings. They are expected to keep their worldview and values in harmony with each other.

- **Desiring and achieving socially responsible behaviour**

Adolescents are expected to participate as responsible adults in the life of the community. They are expected to take account of the values of society in their personal behaviour.

5.3.1.4 Educational Implications

Adolescence, being the peak of all aspects of child development – physical, cognitive, psychosocial-- has several implications for the two key educational agencies, namely: the family and the school.

- Owing to the turmoil of the adolescent stage of development,there is need for sensitivity, patience, understanding and opencommunication on the part of teachers and parents, and indeed, other persons involved in the care of children this age.

- In early adolescence, children need help in adjusting to hormonal changes that tend to overwhelm them. In late adolescence, they need help in resolving problems relating to peer relationships,sexuality, identity and plans for future.

- Often, mood swings characterise adolescence. One strategy for combating mood swings is acquiring skills in an area of human endeavour, especially skills in sports. Adolescents need encouragement to actively participate in sports and physical exercises. Physical exercises help raise feelings of self-worth and general well-being.

- Factors relating to home experience (example, poverty, divorce, alcoholism) and school experiences (model of deviant behaviour) predispose adolescents to high risk behaviour. Poverty and adult delinquency are significant social and educational issues in Nigeria Serious social, health and educational cents need a good deal of knowledge re is need for schools to time both maturation and information about sexuality for adolescents.

- Much of thinking and problem-solving as a general habit of behaviour is facilitated or hindered by historical and cultural contexts. They develop in response to cultural demand for them. There is need for

schools to teach logic or thinking as method of approaching issues.

- Formal operational thought is a model of adult thought pattern. It does not represent the actual performance of adolescents at all occasions. Indeed, research evidence indicates that most adolescents and adults do not achieve formal operational thinking and remain concrete operational thinkers for life (Ohuche, 1988; Overton, 1990). The adolescent, therefore, needs special encouragement, stimulating home environment, enriched school experience and opportunities to encounter intellectual challenges to be able to reach formal level thought habit.

- In Nigeria today, the school curriculum is fragmented and regimented. Indeed, most schools base their instruction on examination syllabuses. This type of superficial arrangement of learning experiences does not encourage adolescents to do deep analysis of ideas and intellectual debate to push thinking beyond the concrete. There is need for a continuing debate for a rethink on secondary school curriculum in Nigeria.

- Many adolescents transit from school to work. The school should prepare them sufficiently to be able to make realistic career choice based on interests, attitudes, personality and future work opportunities.

- Adolescence coincides with a time important choices are made concerning schooling, career, worldview, lifestyle, social relationships and sexual activity. The choices adolescents make depend significantly on how they see themselves. Home and school experience should help children develop positive self- image.

- The physical appearance of adolescents sometimes misleads parents and teachers to perceive adolescents as adults. Actually, they are no adults. They still need a lot of room and opportunity to explore themselves and their world. Parents and teachers needf their needs and provide them with to lt roles.

- As children move into adolescence, their quest for autonomy can create tensions, disagreements and conflicts with parents. There is need to renegotiate family roles and rules. Parents should show understanding and sensitivity.

- Identity is often discovered in social contexts of clubs, gangs, cliques and other groups. Adolescents should be encouraged to participate in school recognised clubs and associations. Schools are invited to expand the co-curricula activities to accommodate the interests of majority of students.

- The job market today demands increased education and specialised skills. The educational process should encourage the adolescent to stay on in school and attain higher education. School should impress it on adolescents that better educated adults have a wider range of job opportunities, and ultimately, earn higher income.

Self-Assessment Exercise

Fill in the Blank

1)	Hormones from the pituitary controls ---------- gland
2)	The pituitary gland also secretes ----------hormone.
3)	The female ovaries produce the sex hormones called *oestrogen* and ----------
4)	Primary sex characteristics include ---------- and shedding of ova – the female sex cells.
5)	Identity refers to an individual's sense of ----------and belonging

5.4 Summary

This unit examine the Physical cognitive and social changes that typically accompany adolescence. We highlighted the major developmental tasks adolescents are expected to master. Finally, we examined the educational significance of changes during adolescence.

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5.6 Possible Answers to Self-Assessment Exercise(s)

Answer
1. *Thyroid* *2.* *Gonadotropin* *3.* *Progesterone*. *4.* Maturation *5.* Uniqueness

KEY TERMS

- **Bilirubin** —A pigment produced as the liver processes waste products. Foetal bilirubin is eliminated from the fetus by placental transfer into the mother's plasma. At birth, the infant's liver takes over the elimination of bilirubin.
- **Central nervous system (CNS)** —In humans, the system that consists of the brain, the cranial nerves, and the spinal cord.
- **Cognitive skills** —Skills required to perform higher cognitive processes, such as knowing, learning, thinking, and judging.
- **Endocrine system** —The endocrine system is the collection of glands that produce hormones. Endocrine glands release hormones directly into the bloodstream, where they are transported to organs and tissues throughout the entire body.
- **Frontal lobes** —The frontal lobes of the brain are responsible for higher cognitive processes, meaning the mental processes of knowing, learning, thinking, and judging.
- **Hormone** —Specialized substances required for normal body functions and produced by the glands of the endocrine system. Hormones regulate metabolism, growth, and sexual development.
- **Human growth hormone (hGH)** —Hormone produced by the pituitary gland in the brain. It is usually released during sleep in response to positive and negative signals from the hypothalamus. Also known as the master hormone of the body, hGH affects growth, development, immunity, and metabolism.
- **Hypothalamus** —The hypothalamus is located in the brain, connected to the cerebral cortex, thalamus, and other parts of the brain stem so that it can receive impulses from them and send impulses to them. It thus functions as a link between the nervous and endocrine systems, being controlled by the central nervous system and controlling, in turn, the pituitary gland.
- **Immune system** —The system that defends the body against infection, disease, and foreign substances.
- **Motor activity** —The physical activity of an individual.
- **Motor cortex** —The area of the frontal lobes of the brain concerned with primary motor control.
- **Motor skills** —Skills required to perform complex motor acts, meaning acts that produce physical movement.
- **Nervous system** —The nervous system is the entire system of nerve tissue in the body. It includes the brain, the brainstem, the spinal cord, the nerves, and the ganglia.
- **Placenta** —An organ that joins the mother to the foetus and provides endocrine secretions as well as the capacity to exchange blood borne substances, such as nutrients and waste products.

- **Psychomotor skills** —Skills that develop with the maturation of the central nervous system and include both motor and cognitive skills.
- **Puberty** —The period during which the secondary sexual characteristics begin to develop and at which the individual becomes capable of sexual reproduction.
- **Sense** —A perception by the sensory organs of the body. The major senses are sight, smell, hearing, taste, and touch.
- **Sensory organs** —Organs that allow the body to see, smell, hear, taste, and touch.

Resources

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ORGANIZATIONS

Human Growth Foundation, 997 Glen Cove Ave., Glen Head, NY 11545. hgf1@hgfound.org.

National Institute of Child Health and Human Development, Building 31, Room B2B15, 9000 Rockville Pike, Bethesda, MD 20892.

OTHER

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