

**APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION**

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

**APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO
THE TEACHING OF RHYTHM/MELODY IN JUNIOR SECONDARY
SCHOOL (JSS) MUSIC EDUCATION**

BY

**ONWUEKWE, IJEOMA AGATHA (PhD)
DEPARTMENT OF MUSIC, NNAMDI AZIKIWE UNIVERSITY,
AWKA, ANAMBRA STATE**

and

**UDENSI, JOHNSON KELECHUKWU
DEPARTMENT OF MUSIC, FEDERAL COLLEGE OF EDUCATION**

OKENE, KOGI STATE

Abstract

In music education, theories of learning have contributed to an understanding of how the corresponding instructional theories have caused changes in instructional practices. These theories assist teachers in eliciting students' learning outcomes. Theories of child development govern the construction of age appropriate for different subject matters. These theories have contributed advances in thinking, educating and teaching the child in formal school settings. They have found acceptance and have also impacted music educators' thoughts on how to sequence instructions in the classroom. Different emphasis on behavioural/associative, cognitive, constructivist thinking, have shaped the models used to explain how a child learns. This study therefore, highlighted on how the music teacher in the beginners' class (JSS 1) can use Pavlov's associative learning theory to teach rhythm\melody using simple applausive clap which is the preferred knowledge paired with the musical notes to elicit interest in the teaching of rhythm\melody which is the non-preferred knowledge. The study adopted descriptive survey approach in gathering information for the study. Recommendations on how the teachers can guide students (learners) in identifying and associating the pre-existing\learned concepts or knowledge with some preferred learning variables(instructional materials) in order to elicit students' interest towards the discovery or acquisition of new concepts\knowledge; provision of conducive learning environment and engagement of the students in creative assignments were made.

**APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION**

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

Introduction

One of the guiding principles of education is to equip every citizen with knowledge, skills, attitudes, and values that would enable him/her to live a fulfilled life and contribute to the development and welfare of the community. Education is therefore, seen as a process in which the society deliberately transmits its norms, values, knowledge and skills from one generation to another by means of teaching and learning (Ogakwe,2012).

To achieve the objective and goals of educational system, requires a teacher who constitutes the pivot on which the teaching and learning activities rotate. The success of the learning process depends to a large extent on the teacher's potentials and effectiveness on the job prescription (Agwu, 2004).The Federal Republic of Nigeria (FRN, 2004) in her National Policy on Education (NPE), precisely in her philosophy of education sees the position of the teacher as central and states in equivocal term that "no educational system can rise above the quality of its teachers". Thus, it is necessary to state that the teacher interprets and transmits the educational theories and principles into practice in classroom situation.

In music education, theories of learning have contributed to an understanding of how the corresponding instructional theories have caused changes in instructional practices. These theories

assist teachers in eliciting students' learning outcomes. Theories of child development govern the construction of age appropriate for different subject matters. These theories have contributed advances in thinking, educating and teaching the child in settings of formal schooling. They have found acceptance and have also impacted music educators' thoughts on how to sequence instructions in the classroom. Different emphasis on behavioural/associative, cognitive, constructivist thinking, have shaped the models used to explain how a child learns. The paper therefore, highlighted on how the music teacher can use Pavlov's associative learning theory to teach rhythm\melody using simple applausive clap which is the preferred knowledge paired with the musical notes to elicit interest in the teaching of rhythm\melody which is the non-preferred knowledge. Finally recommendations such as guiding students (learners) in identifying and associating the pre-existing\learned concepts or knowledge with some preferred learning variables e.g. instructional materials in order to elicit students' interest towards the discovery or acquisition of new concepts\knowledge etc were made in addition to conclusion.

Concept of Learning

Learning is conceptualized in various ways by different authors. Hilgard in Bower (1998), defines learning as

APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

“a process by which an activity originates or is changed through reacting to all encountered situations, provided that the characteristics of the change in activity cannot be explained on the basis of nature, response tendencies, maturation or temporary state of the organism (3)”.

Several other authors and researchers such as Okonkwo (1989), Daniel (2008), Mbanugo (2006) and Onwuekwe (2014), see learning generally as a process which causes a change in behaviour of an individual as a result of experience from interaction between the individual and the environment. Before learning can take place effectively, there must be an individual (learner) who is willing and ready to learn. In addition, certain mechanisms such as the teacher, the environment and materials must be in place for the learning to meet its goal objectives (Azubuike and Nnaobi, 2012).

Learning can be negative or positive. Socially unacceptable, learning behaviour could be termed negative learning while socially acceptable learning behaviour could be termed positive learning. Learning behaviour can produce desirable or undesirable consequences. For instance, experience or intelligent member of a community may through learning, come out with an adventure that will bring progress and stability to the community. This kind of knowledge could be considered as positive development and worthwhile, whereas a gang of kidnapers may be

busy transmitting some information that will lead to kidnapping important leaders in the society or destroying some installations that may lead to their discovery of their hideouts within the community. Based on societal standards, this type of knowledge is considered negative and anti-society. Learning involves understanding, remembering, motivation, reinforcement, application and creativity.

Understanding: Understanding is the capacity to seek meaningful relationship between one fact and another. It is an important objective of the classroom teacher that his learner should understand what is taught in the class. Current practice in most of our classrooms does not aid understanding. Often, children operate so much at the level of memory. For understanding to occur, the learner must be made to realize that all learning is ineffective except when directed towards specific goals and this will happen if the learner is able to relate new learning with his repertory of knowledge. This therefore, implies that learning should be related to a learner's past experiences. Although certain things have to be committed to memory, (e.g. musical alphabets for the lines and spaces) one has no option than to learn them the way in which they are. In the same way, some theoretical formulae, scientific principles and laws, historical/documentary dates or poems, will very often be learnt by heart, even when a learner can point to the significance of what he learns. This necessity does not eliminate the problem of understanding. Finally in order to achieve understanding, the learner has to be

APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guldaa.org

allowed to develop underlying principles by himself (child centered) while the teacher guides him towards the “discovering”. When the understanding has been achieved, the learner is then in a position to apply the subject of the learning to the solution of problems which may occur in a context different from that in which the original learning was done (Tulving and Donaldson, 1992).

Remembering: Remembering is the ability to recall or reproduce the concept or ideas which he has acquired when the need arises; this is to say that the learner has remembered what he has learnt. A number of factors are taken into account when striving to make learners remember what they learnt. These factors include motivations, organization of the work, reinforcement, rehearsals and creativity (Cutietta & Booth 1996).

Motivation: Motivation is a powerful force in learning. Maslow in Udensi (1997) asserts that every one has basic needs to meet in order to achieve self-actualization. Motivation is seen as the inner state of mind that is responsible for organizing, directing or sustaining good oriented behaviour with reasonable and rewarding goals. It can as well be seen as that which acts as fuel that provides energy for human activities and spurs readiness to action. Ukeje, Nwagbara and Okorie (1992), observed that “motivation could make a mule dance”. Okeke (2014) also sees motivation as a powerful tool a dedicated teacher employs in arousing learners’ interest in

learning. Theories of motivation show that individuals are moved into action when their needs are met or when they expect favorable results. It is the most valuable instruments or tools that bring about change in quality. This therefore, means that music teachers in the classroom should be able to develop good attitude to work and at the same time participate in music activities in the cause of their teaching.

Reinforcement: When a response or exercise is performed in the right direction or appropriately, it rightly achieves the goals, and when it gets at the goal it is rewarding. This reward is reinforcement or an encouragement. It is closely associated with expectations and interest, setting rewarding goals and experiencing success in attaining such goals. The response which receives a reward is repeated and learned but the response which is not rewarded is eliminated and not learned (Okeke, 2014). The implication is that the teacher has to motivate or stimulate the child to want to learn.

Application: Application can be seen as the capacity of a human being to learn concepts and ideas and then to use them in solving further problems. This implies that if a student understands an idea, he is expected to use the idea in solving a related problem when the need arises. This therefore, shows that the learner has grasped (understood) the meaning of the idea and the purpose which the idea ought to serve. The learner who is able to abstract the essence of a generalization and apply it to a specific situation is

APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

said to be performing at the level of application (Bultram, 1996). This therefore means that the learner has grasped the meaning of a concept and should be able to utilize the knowledge of the abstraction in the solution of a new problem when such occurs.

Creativity: Creativity is a conscious and highly personal effort to evolve new and inspiring solutions to problems. It is an attempt to stimulate the mind in order to invent new approaches to the dilemmas of man (Gordon, 1997b). Such opportunity which enables the learner, particularly young ones to express new ideas should be provided in large measure especially in the field of music, dance and drama for which this seminar is being presented.

The Classroom:

Learning cannot take place in a vacuum. Before learning can take place, there must be an individual who is willing and ready to learn (Learner). This individual must be in a place where teaching and learning objectives can be achieved (Mokwunyei, 20014). The classroom is therefore seen as the power-house where the success or failure of the learning processes is generated and sustained. The classroom can be an empty space, an art gallery, Museum, workshop, display center or special room designed for teaching and learning activities. The teacher is seen as the central pivot that coordinates all the variable components involved in the process of learning. These components include the students (learners), classroom,

curriculum, facilities and the instructional methods (i.e appropriate application of the theories and techniques) for the achievement of the educational goal objectives. No matter the nature of the classroom it has central purpose and that is to promote teaching and learning.

The Learning Theories:

There are several learning Theories which conscientious teachers should be able to adopt in their teaching to help the learners (students) acquire the necessary skills, knowledge, attitudes and develop interest in their learning activities. Some of these theories see learning as a process by which behaviour of an individual is changed, shaped and controlled while others view learning in a relation to growth, development and fulfillment of potentials (Radocy, 1990). Learning theories provide useful information on how various developmental changes in behavior and thinking occur in an individual. Theories can be perceived or learnt practically and scientifically. A good knowledge of how learners (students) think is essential to understanding their development as perception of life events affects them. Learning behaviour of the students is classified into three groups referred to as *domains*- Cognitive, Affective and Psychomotor domains.

Cognitive Domain: This deals with memory, recall, knowledge and development of intellectual abilities and skill (Schunk, 2000). This domain is arranged in hierarchy from simple to complex and

APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guldaa.org

from concrete to abstract. Cognitive domain has six major categories. These include knowledge which involves recall of specific factual information (previously learned material such as methods, procedures, basic concepts and principles); comprehension which deals with knowing of what is being communicated in oral or written form; application which refers to the ability to use learned materials (e.g. ideas theories or principles) in concrete situations; analysis which implies the ability to break down materials into their component parts for better understanding of their structure; synthesis which is the ability to combine component parts together to constitute a pattern not there before; and evaluation which involves quantitative and qualitative judgment.

Affective Domain: This part of the domain deals with interest, attitudes, emotions, feelings and values of the learner. Affective domain has five classifications which are arranged from simplest to the complex and from concrete to abstract. This component includes receiving, responding, valuing, organizing and characterization by value or value complex.

Psychomotor Domain: This domain deals with manipulative skills, neuromuscular coordination e.g. body movement. It is also classified into six categories which include reflex movement, basic fundamental movement, visual abilities, physical abilities, skilled movements and non-discursive communication. For an individual to perform, some

internal and external stimulus enables him to do so. He can be stimulated through one or more of the senses. This type of stimulation is referred to as sensation (Gordon, 1997b).

Sensation: The learner must be stimulated through one or more of the senses- sight, taste, touch, smell and hearing. Hence, sensation makes the learner to turn his attention to a particular situation. Whether he pays attention or not depends on several variables such as interest or attraction and needs or wishes. Although sensation is the first step in the process of learning, it is by no means evidence that learning has occurred.

Perception: Perception is the second step in the learning process. One can be stimulated to turn attention to a particular thing of interest, needs or aspirations but can easily back out if such thing is not pleasant or satisfactory to him. In other words, if he perceives a situation as satisfactory, he concentrates and learning begins.

Association: When the learner concentrates on the particular situation of his interest, he begins to relate the circumstances or situation with his previous experience. That is to say that the present situation must be related to past experience in order to facilitate understanding of the new situation. This is one of the reasons why effective teaching should always begin with the association of the new lesson with the previous knowledge (Onwuekwe, 2014).

**APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION**

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guldaa.org

The study however, concentrates only on the Associative Learning Theory of Ivan Pavlov, even though there are a host of other behavioural theorists such as Thorndike, Tolman, Skinner, etc. Therefore, the objective of this study is focused on the application of Pavlov's Associative Theory in teaching and learning rudiments of music at the junior secondary school level

Pavlov's Associative Learning Theory

The Associative/Programmed theory of learning otherwise referred to as Stimulus-Response (S-R) originated and developed by Ivan Pavlov (1849-1936), was an experiment performed with a dog. He noticed that the dog salivates on mere sight of food. This mere sight of food, he thought, had produced the response which had originally been stimulated by the dog's actually chewing the food. He then performed another experiments such as conditioning a dog to salivate when the bell rings. He did this by placing a hungry dog in a harness and rang a bell at the same time the food was produced. This process was repeated several times. After sometimes, the dog started responding or salivating at the sound of the bell alone. When the bell rang many times and there was no food presented, the response disappeared. The food represents stimulus (S) while salivation is the response (R). Powerful needs, when they are at work, automatically take care of the conditions necessary for learning. For example

Student may be actively restless and likely to keep his attention directed to things having to do with food.

Pavlov viewed behaviour as responses initiated by stimuli, and his interests were strictly to do with physiological reflex actions: the salivation of dogs in particular (Child, 2004). From this finding he set about intentionally teaching dogs to associate salivation with neutral stimuli, a process known as classical conditioning. Findings from Pavlov's associative conditioning can be gainfully applied to the teaching and learning of music rudiments by pairing or conditioning abstract musical ideas with those musical experiences that elicit positive responses. Similarly, a student who has an increased desire and interest in becoming a professor of music will become lively when things concerning music are being discussed. These areas are important and teachers should not neglect them.

**Applying this theory to the teaching of
rhythms/melodies in rudiments of music**

The art of learning music includes learning to perform, analyze, create, rearrange, and evaluate music. The theory of classical conditioning centers on the critical basic skills which form the foundation on which the new lesson is to be taught and learned. The teacher is to identify these critical basic skills required by the learner and breaks them down into sub-skills.

In the case of rhythmic/melodic writing in rudiments of music, it is a well known fact that a good number of beginners in music show interest in the

APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
 RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

subject when it comes to mere singing or dancing but are scared when it involves the Art music such as theory, applied western instrumental performance and ear training. At this level, the teacher can stimulate their interest by asking a simple question such as the number of quavers in a semibreve. A response to this might make the teacher ask the entire class to clap for the one that has answered it correctly thus:



The teacher writes the clapped rhythm notes on the board and makes them to understand that what is there on the board is the musical representation of the clap which can also be beaten on a drum or even tapped on the table. The teacher then makes a follow up of this by asking a student to divide the free rhythm represented on the board in equal measures of two crotchet note values with musical bar lines thus:



The learner now discovers that the simple clap applause has become a musical rhythm. The teacher can go further to add pitches to each of the notes of the rhythm to make it a melody thus:



The teacher can also add text as an additional reinforcement to stimulate their interest further.



This simple clap has now been transformed into a rhythm and from rhythm to melody and a musical score. This implies that the teacher has used the known (simple clap) to teach the unknown (rhythm) and from melody to a score by associating the hand clap with the musical notes to produce rhythm and melody respectively.



Students could then be asked to sing or score it on staff using any of the clefs as shown above. Pavlov's theory shows that learning is enhanced by relating the past experience with the present situation. Hence, this teaching approach lays emphasis on the learners' prior ideas (clap) or what he/she knows (preferred) to elicit (stimulate) interest towards the acquisition of new knowledge (Mokwunyei, 2014). A good teacher should be able to make use of this type of associative conditioning in his classroom teaching to change and enhance learning as in the above examples. Teachers should also use sequences of stimuli and responses to make students acquire such skill which could be

**APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION**

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

shaped as a permanent knowledge. This theory was as well designed to illustrate the shaping of habits and to illustrate on how reinforcement could be used in the classroom to ensure effective learning. One of the advantages of this theory is that it gets the students actively involved in the teaching and learning process (students' centered). It is students' centered in that they are made to pair musical notes which are not much familiar to them with the preferred clapping. Hence, the non-preferred rhythm/melody begins to elicit the same learning response with the preferred clapping S – R (Stimulus – Response bond). This situation is also be applied in the teaching of class singing using didactic and folk songs, and the introduction of simple musical instruments the learner can adapt to with ease (Okeke, 2014).

Conclusion

In other to achieve the set objectives in the classroom, the teacher is required to devote attention to the four vital aspects of learning which include understanding, remembering, application, and the creativity. These are essential ingredients of teaching and learning process which call for conscious efforts on the part of the teacher so that they can be obtained in order to ascertain whether learners usually benefit from the learning process.

Recommendations

In view of series of problems music teachers often experience in the cause of music instruction especially at the beginners' level, the following recommendations have been made.

In the first instance, the music teacher should be able to guide the students (learners) in identifying and associating the pre-existing\learned concepts or knowledge with some preferred learning variables such as relevant instructional materials in order to elicit the learners' interest towards the discovery or acquisition of new concepts\knowledge.

Secondly, the school has to create conducive environment for teaching and learning processes. These include adequate and well ventilated music classroom free of distortions, musical equipment and instructional materials such as music software and computers etc, to motivate and facilitate the music students' interest in the teaching and learning of music. This is similar to Onuora-Oguno (2009) and Onwuekwe (2010) who raised the imperatives of computer for music education in Nigeria.

Finally, it is essential that music teachers in our institutions of learning instead of presenting music learners primarily with assignments and other activities which entail learning and recalling of already known facts, be encouraged to include the

APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

development of creativity amongst students by reinforcing and stimulating their interest. Though it is a challenging task, it is definitely rewarding and would in no small measure boost their interest and commitment to music studies.

in West Senatorial District of Kogi State. *Journal of Teacher Education*, 9, 8-16.

References

Agwu, S. N. (2004). *Professionalization of teaching in Nigeria*: A paper delivered at the first professional induction of graduating students of the Faculty of Education, Ebonyi State University. Oct 31st

Azubuikwe, P. N. and Nnaobi, A. F. (2012). Teaching students with learning disabilities in inclusion science and mathematics classroom. *The state of Education in Nigeria*. Onitsha: West and Solomon pub. Coy.

Bower, H. G. (1998). *Theories of learning*. (5th ed.) Englewood Cliffs New York: Prentice-Hall.

Bultram, J. B. (1996). *Learning theory and related developments. Overview and applications in music education*. In D. H. Hodges (Ed.), *Handbook of Music Psychology* (401-467). San Hutton, Texas: IMR Press.

Child, D. (2004). *Psychology and the teacher*. (7th ed.). London: Continuum Pub.

Cutiotta, R. A. and Booth, G. D. (1996). The influence of meter, mode, interval type, and contour in melodic free recall. *The Psychology of Music*. 24(2), 222-236.

Daniel, F. (2008). Assessment of the language policy implementation at the primary school level

Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality and development*. Philadelphia: Psychology Press.

Federal Republic of Nigeria, (2004). *National Policy on Education*. Lagos: NERDC.

Gordon, E. (1997b). *Learning sequences in music: Skill, content and patterns*. Chicago: GIA. Pub.

Mbanugo, C. E. (2006). Music learning principles for individual performance studies: The of Nnamdi Azikiwe University, Awka Approach. *Interlink: A Journal Research in Music*. 3, 41-55.

Mokwunyei, J. (2014). Rhetoric to the implementation of a musical arts education curriculum: A Review of Teacher's Guide for 9 year Universal Basic Education (UBE) Programme in Nigeria. *Journal of Nigerian Music Education*, 6, 133-147.

Ogakwe, V. N. & Isife, T. C. (2012). *The Problems and innovations of education in Nigeria*: The state of education in Nigeria. Onitsha: West and Solomon Pub. Coy. Ltd.

Okeke, I. N. (2014). Applying Piaget's "Critical Period" to Music Education in Nigeria: A Study of Selected Schools. *Awka Journal of Research in Music and the Arts (AJRMA)*, 10, 45-54.

Okonkwo, C. E. and Ozurumba, N. M. (1989). *Fundamental concepts in education*. Owerri: Totan Pub. Ltd.

APPLICATION OF PAVLOV'S ASSOCIATIVE LEARNING THEORY TO THE TEACHING OF
RHYTHM/MELODY IN JUNIOR SECONDARY SCHOOL (JSS) MUSIC EDUCATION

BY

ONWUEKWE, IJEOMA AGATHA and UDENSI, JOHNSON KELECHUKWU

www.guildaa.org

.Onuora-Oguno, N. C. (2009), Applying Computers to Music Pedagogy in Nigeria. *Interlink: A Journal of Research in Music*. 4.

Onwuekwe, A. I. (2014). Monographs and Notes delivered in Ph.D. lectures in Department of Music, Nnamdi Azikiwe University, Awka. Jan-Dec.

Onwuekwe, A. I. (2010).The computer as an indispensable aid to the music composer in the global world of computer technology: In A. B. C. Chiegboka, T. C. Utoh-Ezeajugh and G.I. Udechukwu (Eds). *The Humanities and Globalization in the third Millennium*. 442-447.

Radocy, R. E. & Boyle, D. (1990).*Psychological Foundations of Musical Behaviour*. New York: Charles, C. Thomas Pub. Ltd.

Schunk, D. H. (2000). *Learning theories: An educational perspective*. (3rd ed.). Upper Saddle river, New York: Prentice-Hall.

Udensi, J. K. (1997). *Impact of welfare services on moral and productivity of academic staff in colleges of education*. M.A. Thesis, University of Nigeria, Nsukka.

Ukeje, B. O. Nwagbara, C, and Okorie, B. N. (1992). *Educational Administration*. Enugu: Fourth Dimension publishing Co. Ltd.

Tulving, E. and Donaldson, W. (1992). *Organization of memory*. New York: Academic Press