Psychological Influences in the Curriculum Decision Making Process

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Abstract

This paper is a discussion on how psychology as a discipline influences the curriculum decision making process. Psychology provides a basis for understanding the teaching and learning process. Indeed, teaching the curriculum and learning the curriculum are interrelated and psychology cements the relationship. The argument advanced in this paper is that the curriculum decision making process cannot be undertaken effectively without adequate psychological considerations. The paper explores the psychological considerations on the basis of three broad theories of learning advanced by psychologists: Behavioral theories, cognitive and developmental theories and lastly the humanistic theories of learning.

Key words: Psychology, curriculum, teaching and learning theories

1. Introduction

Curriculum means the sum total of all the experiences that a pupil undergoes within the guidance of the school. On the other hand, curriculum decision making process is the process regarding the determination of the educational objectives, learning experiences and methods of evaluation in the curriculum building endeavor. This paper will utilize the definition of curriculum provided by (Wiles, 2005:7) that "Curriculum is a set of values that is activated through a development process and culminates in classroom experiences for students"

Educational Psychology as a discipline is concerned with the question of how people learn. (Ornstein and Hunkins, 1998). Psychologists are concerned with establishing patterns in human behaviour so as to be able to understand and predict behaviour (Shiundu and Omulando, 1992). Educational Psychology as a discipline advances principles of teaching and learning that influence teacher-student behavior within the context of the curriculum. This is because psychology is the unifying element in the learning process. For example John Dewey, a renowned educationist acknowledges that psychology is the understanding of how the individual learner interacts with objects and persons in the environment. The quality of this interaction determines the amount and type of learning.

On the other hand, Tyler's model of curriculum which was developed in 1949 has provided a basis for curriculum decision making process in many parts of the world. In this model, Tyler advances four fundamental questions which have to be answered if the process of curriculum planning is to proceed and these are:

(i) What educational purposes should the school seek to attain?

(ii) What educational experiences can be provided that are likely to attain these purposes?

(iii) How can these educational experiences be effectively organized?

(iv) How can we determine whether these purposes are being attained? (Tyler, 1949:1; Parkay & Hass, 2000:277)

Shiundu and Omulando (1992) translate the four questions into a four-step process by which a curriculum is planned and developed as follows: stating the educational objectives, selection of learning experiences, organization of learning experiences and selecting the evaluation measures to be adopted. Ornstein and Hunkins (1998) comment on Tyler's model and state that it gives a series of concise steps through which to plan a curriculum. That it depicts a rational, logical, systematic and sequential approach to curriculum making. It is important to note that the four steps cannot be undertaken effectively without psychological considerations. In fact, Tyler observes that psychology be considered as a screen for refining the curriculum objectives obtained in the first step.

The influences of psychology the curriculum decision making process should therefore not be underscored.

Psychology in general and educational psychology in particular contributes to appropriate decision making in curriculum regarding selection and organization of appropriate objectives, learning experiences and methods of evaluation as well as decisions regarding the scope of the curriculum. According to Ornstein and Hunkins (1998) psychology serves as the impetus for many curriculum decisions.

Psychological influences of curriculum can best be understood through theories of learning. These theories of learning are classified into three broad categories as follows: Behavioural learning, cognitive and developmental learning and humanistic learning theories. A follows discussion of how psychology influences curriculum decision making process under the three broad categories of learning theories.

2. Behavioral learning theories

The proponents of Behavioral learning theories include Thorndike, Skinner and Pavlov. Behaviorism is a philosophy of psychology based on the proposition that all things that organisms do like acting, thinking and feeling can and should be regarded as behaviors (Ornstein & Hunkins, 1998; Parkay & Hass, 2000). According to the behavioral theory, learning involves alterations or modifications in behavior. Behaviourists emphasize on the learners active engagement and reinforcements and rewards that encourage continuing effort over time (Ornstein, Behar-Horenstein, & Pajak, 2003). Behaviorists believe that what one learns is influenced by the environment. Some of the principles that govern the teaching and learning process under the behavioral learning theories are:

a) Practice improves learning and retention

Thorndike (1931) established that there's a relationship between environmental stimulus in a learning situation and the response to such stimulus and that repeated connection or pairing of the environmental stimulus and the response embeds the skill so learned in the learner's mind. Gabler, Schroeder and Curtis (2003) concur with this when they quote an ancient Chinese proverb that " I hear I forget, I see I remember, I do I understand'. In the teaching/ learning situation, the learners should be given the opportunity to practice the concepts learned because as Kochhar (1992) observes, practice makes perfect. The teaching methods adopted should allow the learner to learn by doing for example demonstrating, role playing, doing experiments among others. In this view, all teaching and learning should plan for practice.

b) Learning is based on readiness

Readiness is the capacity and willingness to learn. Students should be emotionally, physically, intellectually and experientially ready to learn. Some kinds of defects in development, illness, physical, mental and social handicaps affect readiness and must be known and checked before actual teaching (Kochhar, 1992). This principle touches on teachers and guardians to undertake health checks on their pupils on a daily basis especially in the Early Childhood Centre and the primary school where the pupils are naive and may not report any cases of ill health. Schools should have trained nurses to deal with health issues. In addition, teachers need training on special education in order to be able to identify cases of impairment in the pupils. This is propelled more by the fact that in Kenya the pupils with special needs have been integrated with the rest of the pupils in schools.

c) Learning proceeds from simple to complex and part to whole behavior

Behaviorists consider that learning should be organized in such a way that students can experience success in the process of mastering the subject matter, and therefore the methods of teaching should be introduced in a step by step manner with proper sequencing of task. Ornstein and Hunkins (1998) concur with this and state that there should be step by step structured methods of teaching and learning. Actually, the best way of improving retention in the learning process is to give attention to what is learned initially and to how the learning is organized.

According to Kochhar (1992) teachers should keep up the interest of the pupils in the lesson by presenting easier and simpler materials to be followed later by complex and difficult material.

Teachers should also teach from whole to part. The learners should develop some kind of a frame of reference that will help them relate an aspect of what is learned to its other aspects as well as to their previous experiences. These concepts are both psychological and curriculum based.

Based on this principle, teachers should show the relationship among the curriculum content. What has been taught initially should be related to what is currently being taught. The curriculum content selected should be organized in such a way that simple structures are presented at the initial stages to facilitate the learning of the difficult concepts.

d)   Desired learning outcomes should be stated in advance by objectives

The scope of educational programs can be determined from the goal statements but it is the objectives that determine the true purpose of the curriculum (Wiles, 2005). Educational objectives are statements that describe the expected educational purposes. They are very crucial in the teaching and learning process as they provide the direction by stating the educational destinations. According to Shiundu and Omulando (1992:165) educational objectives serve the following purposes:

(i)   They are a justification for the need for providing education.

(ii)   They guide the education process.

(iii)   They provide a precise basis for evaluation

Tyler (1949) in his model of curriculum development emphasizes importance of educational objectives in the curriculum decision making process. In the first question in this model, Tyler asks: What educational purposes should the school attain? This first question directs us to the objectives that schooling and the curriculum should serve (Ornstein and Hunkins, 1998; Hewitt, 2006). Tyler (1949:5) states that "If we are to study an educational program systematically and intelligently, we must first be sure of the educational objectives". Actually, because of its emphasis on objectives, Tyler's model is sometimes referred to as the 'objectives model'. Tyler says that stating the objectives of the curriculum should be the first step in the curriculum development process and that all the other steps depend on, and are regulated by the objectives stated. Objectives determine the selection and organization of learning experiences and determine the methods of evaluation to be adopted.

In the same vein Bloom's (1956) argument for educational objectives was that they facilitated for the planning of holistic education and training. The taxonomy divides educational objectives into three domains: Affective, Psychomotor, and Cognitive. Within the taxonomy learning at the higher levels is dependent on having attained prerequisite knowledge and skills at lower levels (Orlich, et al. 2004). A goal of Bloom's Taxonomy is to motivate educators to focus on all three domains, creating a more holistic form of education.

Objectives are the guide for choosing the subject matter, for sequencing topics and for allocating teaching time. As Shiundu and Omulando (1992) observe, objectives define types of student behavior and products to be exhibited or produced as a consequence of experiencing the curriculum. Tyler (1949) identifies three main sources of educational objectives and these are: the nature and needs of the contemporary society, the needs and interests of the learners and the subject specialists and nature of subject matter (Henson, 2001). Henson (2001) in favor of the three sources of objectives proposed by Tyler asserts that considering the learner's needs, interests and abilities is paramount as it motivates the students to learn. That by considering the society it makes the students view the society as a learning laboratory. That the subject matter enables the curriculum planners understand its underlying structure.

When stating curriculum objectives, curriculum planners and teachers should address three domains advanced by Benjamin Bloom (1964) and these are: the cognitive (intellectual) domain, the affective (emotional) domain and the psychomotor (physical) domain. By considering the three domains, curriculum planners can define the learning outcomes more clearly. In addition, the objectives stated should be Specific, Measurable, Attainable, Realistic and Time Bound commonly abbreviated as SMART

e)   Reinforcements are essential in the teaching/ learning process

Behaviourists contend that reinforcement, whether positive or negative, are essential to the learning process. The teacher's function, according to the behavioral learning theory, is to make use of negative reinforcers to end unwanted behavior and positive reinforcers to strengthen wanted behavior. Reinforcers may also be used to teach new skills.

In his research, Skinner (1972) cited in Parkay and Hass (2000) concluded that pleasant experiences (such as rewards or praise) are positive reinforcers. They cause learners to make desired connections between stimuli and responses. Also, unpleasant experiences (such as punishment) are negative reinforcers. They cause learners to avoid undesirable responses to stimuli. In addition, continuous reinforcement increases the rate of learning. Teachers use praise in the classroom to reinforce learners (Wiles, 2005; Ornstein, Behar-Horenstein and Pajak, 2003).

Shiundu and Omulando (1992) concur with this when they note that children respond better to learning when teachers put emphasis on rewards than when emphasis is put on punishments. Teachers should plan in built rewards when organizing learning experiences to facilitate positive responses from students in the teaching/learning process. Rewards make the correct response more likely to be retained (Kochhar,1992). They

are important for learners who have a strong desire to win self respect and approval from superiors.

Following the behaviourist learning theories, curriculum planners and teachers should break down the skills and information to be learned into small units; check student's work regularly and provide feedback as well as encouragement (reinforcement). They should increase rewards and reduce punishments.

f) Attitudes affect learning

Attitudes are the predispositions that individuals have towards something. They can be positive in which the person likes something or negative in which the learner dislikes something. Kochhar (1992) states that the child's readiness to learn is determined by his/her attitudes to school and school subjects. When students have a positive attitude to school or school subjects, they will be willing to spend time and efforts in achieving success. Teachers should also have positive attitudes to school and school subjects in order for them to transfer the positive attitudes to their students. One way is by teachers talking to their students on the importance of school and school subjects. They should encourage the pupils to remain in school and to work hard. The teaching methods used should cultivate an interest in the learners in order for them to understand the content clearly. Failure to understand the curriculum content can cause failure and feelings of frustration in the students thereby generating negative attitudes in them.

In favour of this, Shiundu and Omulando (1992) say that learning is influenced by the individuals past experiences, attitudes and values. This is because each individual brings along with him/her a unique personality and characteristics that have developed from prior experiences. Curriculum planners should understand the influence of the learners past experiences, attitudes and values in orders to plan and provide appropriate curriculum experiences for specific groups of learners.

3. Cognitive and developmental learning theories

Another category of learning theories that influence the curriculum decision making process are the cognitive and developmental theories of learning.

3.1 Cognitive theories of learning

Cognitive theories of learning deal with questions relating to cognition, or knowing. They focus their attention on how individuals process information and how they monitor and manage thinking. For the cognitive theorists, learning constitutes a logical method for organizing and interpreting learning. Learning is exemplified by practices like reflective thinking, creative thinking, intuitive thinking, discovery learning, etc. Some proponents of cognitive learning theories include Jean Piaget, John Dewey and Lev Vygotsky.

Anderson (1985) postulates some characteristics of teaching and learning based on the cognitive paradigm as follows:

(i)   Learning is active.

(ii) Students explore various possible response patterns and choose between them.

(iii) Learning is intrinsically rewarding.

(iv) Knowledge is a matter of acquiring information.

(v) Understanding is a matter of creating new patterns.

(vi) Applications require the learner to see relationships among problems.

(vii) Students direct their own learning.

Piaget (1985) proposes that children progress through an invariant sequence of four stages: sensory motor, pre-operational, concrete operational and formal operational. Those stages are not arbitrary, but are assumed to reflect qualitative differences in children's cognitive abilities. Being controlled by the logical structures in the different developmental stages, learners cannot be taught key cognitive tasks if they have not reached a particular stage of development.

Piaget's theory intends to explain the psychological states that children pass through at different points in their development and the mechanisms by which they pass from one state to another as well as how changes in children's thinking occur. Piaget (1985) suggests that learning process is interactive, in which new information is shaped to fit with the learner's existing knowledge, and the existing knowledge is itself modified to accommodate the new information. The major concepts in this cognitive process include:

i)   *Assimilation*: This occurs when a child perceives new objects or events in terms of existing schemes or operations. Children and adults tend to apply any mental structure that is available to

assimilate a new event, and they will actively seek to use a newly acquired structure. This is a process of fitting new information into existing cognitive structures.

ii) *Accommodation:* This occurs when existing schemes or operations must be modified to account for a new experience. This is a process of modifying existing cognitive structures based upon new information.

iii) *Equilibration*: This is the master developmental process, encompassing both assimilation and accommodation. Anomalies of experience create a state of disequilibrium which can be only resolved when a more adaptive, more sophisticated mode of thought is adopted.

Cognitive theories have the following impacts on learning and instruction:

a) *The learning environment should support the activity of the child*

Children acquire knowledge through their actions, and thinking is considered to be action-based. Thus, a learning environment should be created that encourages children to initiate and complete their own activities. Teachers and curriculum planners should ensure that the curriculum allows active participation of the learner in the teaching and learning situation. In addition the curriculum should provide opportunities for self-discovery and play. In the early Childhood Centers and the primary school for instance, play should be used to teach all the areas of the curriculum because children in such stages are very explorative. In addition, play nurtures the holistic development of the child (Hughes, 1999). According to Hewitt (2006) teachers should provide an environment with adequate curriculum materials. In addition teachers should prepare the content in such a way that they maximize the opportunity for creating mental learning processes as the students construct heir own knowledge. The curriculum should no be prepared to guide but to facilitate mental construction.

Learning is most effective when the learner is actively involved in the learning situation (Shiundu & Omulando, 1992; Kochhar, 1992). The teacher should provide opportunities for students to participate actively in the learning process. Pupils are motivated when they are active partners in an enterprise. The feeling of active association makes them interested in the activity. According to Ornstein and Hunkins (1998) each learner must participate in generating meaning. The task of learning is not to passively accept information by mimicking the wording and conclusions of others but students should engage themselves in internalizing and reshaping information through active consideration. Some examples of teaching methods that permit active participation of the learner in the teaching/learning situation are discussions, problem solving approaches, question/answer, and demonstrations among others.

b) *Children's interactions with the surrounding social agents such as parents, teachers and more competent peers are an important source of cognitive development*

Interactions are essential in helping children move beyond egocentric thought (Vygotsky, 1978). Students should be given the opportunity to interact with their peers, parents and teachers. Vygotsky (1978) asserts that learning should be a reciprocal experience for the students and the teachers. That students and teachers should collaborate with each other in the teaching and learning process. Based on this argument, the school curriculum should be designed in such a way that it allows adequate interaction between the learner, the teacher, the peers and others. An example based on this principle is that discussions, debates, play and games should be encouraged in the teaching/ learning situation.

c) *Adopt instructional strategies that make children aware of conflicts and inconsistencies in their thinking: equilibration*

According to cognitive theories, children must experience disequilibrium, or an imbalance between their current cognitive structures and new information to be assimilated, in order for them to move to a new stage of development. Problem solving methods of teaching are encouraged. New learning should constantly be connected with already existing knowledge that is prior experiences. Parkay and Hass (2000) contend that students' prior knowledge about curriculum content should be used as a starting point for instruction. Prior knowledge should build on present/new knowledge presented to the learners.

3.2 Developmental theories

Developmental theories of learning have to do with the additional learning tasks individuals can accomplish as they mature mentally, emotionally, and physically. This maturation actually progresses slowly and proceeds in stages. Proponents of developmental theories include Levinson and Erickson. Curriculum planners and teachers can borrow from developmental theories in curriculum decision making in various areas as follows:

a)   *Provide*   *instruction*   *appropriate*   *to*   *the*   *learner's*   *level*   *of*   *development.* The curriculum content should rhyme with the learner's level of development. This is because the age and abilities of learners affect learning. The emphasis among developmentalists is to essentially fit the curriculum to the students' needs and interests as they mature (Hewitt, 2006). The curriculum should emphasize personal development; the students' interests and development should cue the kinds of knowledge a curriculum might offer. Shiundu and Omulando (1992) contend that curriculum should be planned in accordance to different age groups, corresponding to different age – grade levels. This is because different age groups have unique problems which require that the curriculum is planned to account for both the common problems of all the youth and the specific problems occurring in the lives of individual students. Ornstein, et al (2003:167) opinion that:

> The aim of education is growth or development, both intellectual and moral. Ethical and psychological principles can aid the school in the greatest of all constructions: the building of a free and powerful character. Only knowledge of the order and connection of the stages in psychological development can insure this.

b) Age and abilities of the learners affects their readiness to learn

Parkay and Hass (2000) contend that learners have different rates of intellectual growth. Individual differences on abilities occur in the learners thus teachers should considers them. Educators should match curricula to the level of children's mental abilities. Learning experiences should be developmental appropriate and the curriculum materials should be introduced only after the learner has attained the level of mental ability needed to master them. This means that the curriculum must be studied and analyzed to determine the level of mental ability that is required to comprehend them. This is because learning involves assimilation of new experiences with prior experiences.

In language classrooms, the teachers should assess learner's readiness to read and write. The learner's readiness to read is determined by his/her success in listening and speaking skills. The learner's readiness to write is also dependent on his/her ability to read. The development of these language skills occurs according to the learner's stage of development.

c)Understand that all humans pass through stages of development. The students are in their various stages of development and thus teachers should be patient with them.

d)Respect individual differences based on developmental stages. Different individuals progress differently in their stages of development. Students should thus not be compared.

 e)Be aware of the strengths and limitations of learners at different stages of development. This way the teachers can guide the learners on how to deal with the developmental issues detected.

4.   Humanistic learning theories

This is the learning theory of self actualization advocates (Hewitt, 2006). The main proponents of humanistic learning theories are Abraham Maslow and Carl Rogers. Abraham Maslow has been considered the father of humanistic psychology. He is famous for proposing that human motivation is based on a hierarchy of needs. Abraham Maslow set forth a classical theory of human needs. Ornstein and Hunkins (1998: 125) list the needs in order of importance as follows:

     i)   Basic psychological needs – needs necessary to maintain life like food, shelter, sleep and water

     ii)   Safety needs – needs necessary for routine and avoidance of danger

     iii)   Love and belonging needs- those related to affectionate relations with people.

     iv)   Self esteem needs – those related to receiving recognition as a worthwhile person.

     v)   Knowing and understanding needs – those more evident in persons of high intelligence than those of limited intelligence like wanting to learn and organize intellectual relationships.

     vi)   Self actualization needs – those related to becoming the best person one can be, to develop one's fullest potential.

These needs have obvious implications to teaching and learning. A child's whose basic needs like love or esteem are not met may not be interested in acquiring knowledge of the world. The child's need for love or esteem takes precedence over learning. From Maslow's perspective, the drive to learn is intrinsic. The following principles of teaching and learning can be derived from humanistic theories.

a) Learners are individuals with diverse needs

Curriculum planners and teachers should consider the needs and interests of the learners in the curriculum decision making process. In the school and classroom step ups Maslow's needs can be exemplified as follows:

(i) Basic physiological needs – students being well fed, being able to sleep well, being physically comfortable, good seating arrangement, room temperature among others.

(ii) Safety needs – in the classroom safety means a non judgmental atmospheres that accompanies all responses from the students. Students should be free to participate in the teaching/learning situation. Wrong answers should not be disapproved without explanations as to why they are wrong.

(iii) Love and belonging needs – teacher, peer and parental approval. Students' ideas and   efforts should be approved.

(iv) Self esteem needs – Teachers should build self confidence in students by giving them roles to undertake and trusting and encouraging them to do the roles correctly. They should avoid intimidation or threatening students.

(v) Knowing and understanding needs- Having the students develop an interest to advance their studies or e general interest in learning something new.

(vi) Self actualizing needs- for the teacher it may include watching the students blossom, or anti risk taking students starting to participate in class. Learning experiences should help students to obtain joy in learning.

According to Parkay and Hass (2000) the curriculum should equip students with the knowledge, skills, values and disposition that they will find useful both inside and outside the school.One way of achieving this is by choosing learning experiences that are interesting to students because they allow students to be much more involved in the learning process and to be more enthusiastic about being in school (Shiundu & Omulando, 1992; Parkay & Hass, 2000; Henson, 2001).

In addition, the main aim of education should be to produce competent, caring, loving, and lovable people. Like adults, learners have their own interests and aspirations. Learner's interests and aspirations are an important determinant of the curriculum structure and content and hence influence learning effectiveness. An understanding of the interests of learners and the shifting nature of their aspirations enhances the schools ability in developing the creativity and individuality of learners (Shiundu & Omulando, 1992). Humanistic learning theories emphasize the individual and his/her development through reason and encounters with the knowledge of human culture (Hewitt, 2006). Humanistic teachers highlight the personal and socil dimension of education (Ornstein, et al, 2003).

On this issue, Kochhar (1992) says that learning experiences have to be related to what children know, what they have done, and what they have seen. This is how the teacher's can create interest in the learning experiences. Learning should be based on warm, friendly and democratic student, teacher interactions. Coercive and strict disciplinary measures should be minimized. The learning atmosphere should be stress free. There should be a conducive climate for learning such as arranging facilities, providing materials, managing social relationships. The classroom climate can stimulate or retard learning.

b)The learners' self concept and self esteem are considered essential factors in learning

Humanistic Psychology is concerned with how learners can develop their human potential. Shiundu and Omulando (1992) contend that a learner's nervous condition has an effect on his mental readiness. Motivation is essential in boosting the learners self concept and self esteem. Motivation is the driving force felt or demonstrated by an individual in carrying out a task. To be motivated means to be moved to do something. Unlike unmotivated people who have lost impetus and inspiration to act, motivated people are energized and activated to the end of a task.

Hastings (1996) quoted in Croll and Hastings (1996:55) argue that motivation appears to explain so much that it is important in schools and should be given a priority concern for educational research. They postulate:

Motivation seems to explain why some children engage enthusiastically with their work, some misbehave and others sit quietly and do little; why some persevere in the face of difficulty and others give up as soon as the going gets tough; why some make good progress and others make little or none; why some take care with their work and others seem not to care.

Ornstein and Hunkins (1998) agree with this and state that a student who is frustrated, distraught, or emotionally upset will learn very little rather he/ she will withdraw or resist. Students self esteem and self concept must thus be recognized as essential factors related to learning. Without good feelings for oneself and without a sense of motivation there's little chance for effective learning.

According to Henson (2001) teachers should build self confidence in learners as students need it to live in a future that will place new demands for them. Students should learn how to deal with uncertainty and ambiguity.

In the classroom this can be enhanced by taking risks, making mistakes, using mistakes to learn something instead of hiding from them.

Henson (2001:271) gives suggestions through which teachers can boost self confidence in the pupils as follows:

> Accepting total responsibility for learner's self concept, focusing on the positive, monitoring the comments that they make, using students support groups in the classroom, identifying strengths and resources, clarifying learners' vision, setting goals and objectives, taking appropriate action, responding appropriately to feedback, basing the learning on life experiences, discovery, exploration and experimentation.

Gabler, Schroeder and Curtis (2003) also suggest that teachers should encourage learners to be independent learners, self initiators, active learners, problem solvers, seekers and finders, a learner learning how to learn and who knows that mistakes are an essential part of the learning process. The teacher role is that of a well prepared facilitator, mentor, and catalyst; someone who learns along with the students.

5.   Conclusion

This paper has discussed the influences of psychology in the curriculum decision making process. Psychology in the unifying element of the learning process: it forms the basis for the methods, materials and activities of learning. The discussion is centered on three broad theories of learning: behavioral theories, cognitive and developmental theories; and humanistic theories. From the discussions advanced it is clear that psychology continues to be a key basis for curricula thought and action.

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