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THE THEORY OF INSTRUCTIONAL OBJECTIVES AND ITS PLACE IN A SCHOOL'S EVALUATION PROCEDURES

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Abstract

A Teacher's role is not limited only to setting goals and assigning tasks and monitoring learners to realize the Instructional objectives. He is expected to account for the achievement by the learners, of the stated behavioural objectives. To realize this, a teacher embarks on evaluation procedures to determine the extent to which learners can be said to attain such behavioural objectives. Hence, a teacher need a 'blue print to effectively carryout this function. This paper, therefore, examines the Bloom's taxonomy of cognitive, psychomotor and affective domains so as to help teachers to clearly outline the experiences they are to measure as far as classroom evaluation is concerned.

Introduction

Measurement and Evaluation, in fact testing process to be specific are integral part of the teaching process. A teacher employs the testing process for a variety of reasons among which are: to determine his students' levels of entry behaviours, to provide continuous assessment/evaluation on his students; and to motivate his students. Determining the extent to which learners can be said to have attain or not the relevant instructional objectives constitutes the major task of a teacher in the teaching process.

However, teacher's role in this respect cannot be easy or fruitful if he forgets or lack the knowledge of the theory of instructional objectives. Therefore, the main objective of this paper is to discuss the theory of instructional objectives as propounded by Bloom (1956) and expatiated by other authorities in the area of measurement and evaluation. The intention is to remain teachers on what the theory offers as far as Achievement testing is concerned. Hence, this paper briefly defines the key concepts within the topic, Evaluation; Achievement Testing; and Instructional Objectives. It further examines in detail the Bloom's taxonomy of instructional objectives. At the end, the paper attempts to justify the relevance of the model in school's evaluation procedures.

Evaluation

From the instructional point of view, evaluation is defined as "a systematic process of determining the extent to which instructional objectives are achieved by pupils/students/learners". (Gronlund, 1976 P.4). The process

further entails differentiating the extent of the attainment of the instructional objectives by students. Evaluation in this context includes both qualitative and quantitative description of learners' behaviour plus other value judgements concerning the desirability or otherwise of such behaviour.

Meaning Of Achievement Testing

From the school's settings, achievement testing is defined as a process of testing which is concerned with the measurement of the extent to which a student/learner has developed or has attained the expected behaviours relative to a particular subject matter (Owie, 1997). Expected behaviours' in this context, implies "Instructional objectives". Therefore, it can be seen vividly that instructional objectives can not be separated from evaluation. Hence, it is pertinent to talk about instructional objectives.

Meaning Of Instructional Objective

The meaning of Instructional objective can best be comprehended if the word objective is clearly defined. Objective is defined as a statement of purpose of any intended action or activity. As such, instructional objective is a statement of desired outcome instructors (teachers), educationists and stakeholders want the learners to achieve. Instructional objectives are constructed from the curriculum or syllabus designed for a particular subject.

Taxonomy Of Instructional Objectives

Objectives to be realized in the teaching/learning processes are many. This is because there are many subjects being taught in schools. Similarly skills and knowledge to be learnt are many. Therefore, experts classified objectives to be learned across subjects and by skills into broader categories. This classification is known as taxonomy of instructional objectives. Example of some known works on this included: Bloom's (1956), Gagne's (1963), Ebel's (1965), and taxonomies of instructional objectives.

Bloom's Taxonomy of Instructional Objectives.

Bloom (1956) categorized all experiences to be acquired in teaching situations in to 3 domains:

- Cognitive Domain
- Psychomotor Domain
- Affective Domain

These domains are explained below:

Cognitive Domain:

This domain deals with the quality, quantity and flexibility of thought process. In this domain, of more particular concern is the general level of

understanding and intellectual functioning an individual shows after learning experiences. This domain appears in almost all school subjects. The cognitive domain consists of six (6) hierarchical categories:

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Knowledge: Knowledge relates to what learners ought to know on terminologies, facts, trends, conventions, classifications, universal ideas, principles and theories concerning the subject matter.

Comprehension: This entails three aspects: Translation; interpretation; and inference. Translation deals with the learner's ability to effect change from one thing to another. Interpretation is concerned with the ability of the learner to explain ideas and relations. Inference denotes learner's ability to predict (i.e. draw probabilistic conclusions from probabilistic statements) on the basis of given information from the subject matter.

Application: This refers to the learner's ability to practically utilize or apply ideas, principles, methods, formulae, generalizations, theories, conventions etc learnt during teaching – learning processes.

Analysis: This is the ability of the learner to breakdown communication or information into its constituent components or parts, such that the relative hierarchy of ideas, facts, or artistic creation is made clear.

Synthesis: It is the learner's ability to manifest imaginative representation of ideas and materials such as to result into something unique being it in the areas of communication, operations, aesthetic or abstract relations.

Evaluation: This refers to the ability of the learner to judge, appraise or assess ideas and materials by emphasizing their objectivity, consistency or precision or by contrasting them against certain standards, objectives, goals or requirements.

Psychomotor Domain

Psychomotor domain relates to what the learners ought to know in the form of physical actions or activities or movements. The school subjects

where psychomotor domain fits include physical education (including sports and athletics), Gymnastic, dancing etc. Like the cognitive domain, the psychomotor domain is divided into six major hierarchical domains by Harrow, (1977).

- Reflex Movements
- Basic Perceptual movements
- Perceptual Abilities
- Physical Abilities
- Skilled Movement
- Non discursive Movements

These six domains were elaborated in detail bellow:

It is important to note that there is no need for a teacher to develop instructional objectives in the first two major classifications (given above) for normal classroom learners. This of course, is because most of the school age learners have developed adequate proficiency in the two basic skills prior to entry into formal school system. Hence, the two basic skills are not measured in the formal achievement testing within the school setting. However, if teachers are dealing with special learners (physically handicapped plus others of similar disabilities) they have to programme their instructions towards the achievement of these two basic movements.

Reflex Movements: Reflex movements relate to those actions elicited without conscious control on the part of the individual. The actions tend to be automatic.

Basic Fundamental Movements: These movements relate to those inherent movement patterns of an individual that are formed from complex combinations of reflex movements. Example: walking, running, jumping, climbing, pushing, pulling, bending, twisting, gripping etc.

Perceptual Abilities: These relate to those individual's motor movements that are as a result of learner's responses to stimuli. The actions are done for necessary adjustment in the environment. Example: maintaining body balance while standing on the palms; dodging flying object; jumping over a rope/fence; catching a flying object etc.

Physical Abilities: These relates to those motor movements that are of functional and essential to the development of highly skilled movements: example; long distance running, weight lifting, backbend etc. Endurance and strength plus stamina are the basic requirements for physical abilities.

Skilled movements: These relates to such motor movement that are very complex in nature and are as result of high degree of efficiency and proficiency. Example: huddles, dunking, dribbling etc.

Non discursive Movement: These concern those body movements intended for communications. They range from facial expressions to sophisticated free movement activities example: gesture; skilled dance movements etc.

Affective Domain

This domain deals with what the learner ought to internalized as values within the mind and body. The major question of concern is what interest, values, responses, beliefs, attitude and or practices do teachers expect learners to develop at the end of a particular instruction? School subjects of concern include: Religious knowledge/studies arts; music, social-studies, etc. The affective domain is classified into five domains which were elaborated by Krathwohl et al (1964). They includes:

- Receiving
- Responding
- Valuing
- Organization
- Characterization

Receiving: This is the ability of the learner to receive and attend to certain stimulus/phenomenon. Receiving denotes awareness of; willingness to receive; and provide selective attention to the stimulus/phenomenon.

Responding: This is the learners ability to respond to a phenomenon and even beyond. That is to be sufficiently motivated to actively attend to and receive the phenomenon. Responding further entails compliance in; willingness to; and satisfaction in responding.

Valuing: This is the ability of the learner to accept/recognize/believe that the phenomenon or desired behaviour has some important VALUE for him as an individual or someone else, or for his society at large. Valuing entails acceptance, preference and commitment to the desired behaviour.

Organization: This is the ability of the learner to assimilate various values so as to integrate them into his value system. Organisation entails integrating the desired behaviour into one's value system; determining its relationship among other values already integrated; and placing it among the dominant pervasive values.

Characterization: This is the learner's ability to form world view or philosophy of life using the integrated value system. That is, the individual acts consistently in accordance with the values internalized. Characterization also entails total submission to and characterization of the figured value.

Relevance Of The Model In School's Evaluation

The details provided on the Bloom's taxonomy of instructional objectives made it clear that its importance in school evaluation can not be overemphasize. Below are some of the key areas worth mentioning:

⇒ The model provides an outline of areas where teachers are expected to measure their students whenever dealing with any form of achievement measure. The various domains given constitute those behaviours expected of learners to attain during course of instructions. Therefore, the domains outlined in the model clearly defined those areas to be covered in achievement tests.

⇒ The model is used as a blue-print in the construction of any teacher made test. Preparation of a blue-print is one major requirement in test construction. The major objective behind preparation of a blue-print is fairness in evaluation. Fairness entails treating learners (in terms of assessment) according to their abilities and weakness. Bloom's model provides an elaborative ability areas that match learners variability.

⇒ Fairness in school evaluation is not only determine during test construction but during test scoring as well. Bloom's (1956) taxonomy of instructional objectives provide key areas scorers of achievement test can use as guide when scoring learners responses to examination questions. Since the domains represent behaviours expected to be attain by learners and behaviours require for testing as well, they form key points for scoring.

⇒ Finally the model provides those standards, objectives, goals and requirements needed for contrast in the students' evaluation. That is, the model provides those qualities or capabilities or ability areas used to qualify an individual in evaluation.

Conclusion

The theory of instructional objectives as propounded by Bloom (1956) provides details on the expected experiences a learner is supposed to acquire after being exposed to different skills and subject matter. The specific behavioural domains clearly defined the content areas teachers are expected to cover when attempting to determine the extent to which the learners can be said to have attained or otherwise, the intended outcome of classroom instructions. As such, the model is quite relevant to achievement testing and

school evaluation. This is because it serves as a blue print for constructing valid and reliable teacher-made-test. In addition it outlines varied ability areas that provide for various learners' variability. This quality of the model makes it appropriate and adequate criterion for students' evaluation. Testing procedure for the purpose of evaluation that ignores the Bloom's taxonomy may be regarded as unreliable and unfair.

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