

# *Issues in Contemporary Evaluation*

Edited by

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## Foreword

*Issues in Contemporary Evaluation* is a product of collaborative efforts between the University of Ibadan Postgraduate School and the Institute of Education. It explores the current issues of best practices in evaluation in assuring the provision of quality education that meets up with contemporary global requirements of higher education. The original idea was to conduct a workshop on modern evaluation practices in higher institutions. However, when a training workshop was not feasible, it was agreed that a book should be developed at least in the interim for the use of postgraduate lecturers so that they could personally undertake some basic individual and corporate evaluation which consists of tests, measurement, assessment and evaluation for improved teaching and learning.

Topics discussed in the book include concepts like evaluation *for* learning and evaluation *of* learning, the principles and practice of continuous assessment, determining learning objectives and concomitantly evaluation objectives. Other topics covered are: item banking, test security and feedback mechanism for quality assurance in the higher education system, evaluation practices in the sciences and in the humanities and social sciences. Test construction and development and computer-based testing were also reviewed.

The book has made it very clear that evaluation is more than examining or testing, but a holistic approach to quality assurance and quality control while a number of often misconstrued concepts in evaluation were clarified. This compendium is recommended to Postgraduate teachers as a guide to evaluation practices.

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Dean, Postgraduate School,  
University of Ibadan, Nigeria  
March, 2013

## Preface

*Issues in Contemporary Evaluation* highlights the issues of best practices in modern evaluation. Basically, the book is designed to be a manual for lecturers and other teachers in tertiary institutions in Nigeria in particular and Africa in general. It is the modest contribution by the staff of the Institute of Education, University of Ibadan to enhance Postgraduate teachers' capacity in current trends in evaluation. It must be stated that this is just the first of such contributions as evaluation covers many facets of human endeavour and not just students' achievement. A well-designed and implemented comprehensive evaluation affects a whole lot of human endeavours and continues to engender holistic educational programme development. Thus, several important evaluation items are covered. Theories [principles] and practices were succinctly discussed by experts in various aspects of evaluation. A number of usually misconstrued concepts in evaluation such as measurement, assessment and evaluation were clarified. Various ways of carrying out tests as well as numerous types of tests were enunciated. The basic ways of determining learning objectives which invariably gives birth to evaluation objectives were brought to the fore.

The distinction between evaluation *for* and *of* learning was clearly stated. The fact that these concepts are however, congruent to the concepts such as 'formative' and 'summative' evaluation was stated. The principles and practice of continuous assessment [CA], which is a form of assessment or evaluation *for* learning, were clearly discussed in detail and the various components of CA were highlighted. The book obviously showed that for CA to be comprehensive, it has to take cognisance of the three domains of learning, if it were to achieve its objective of developing the total learner as well as improve learning outcomes. Other topics treated in this book include: Item banking, test security, feedback mechanism for quality assurance in the higher education system, evaluation practices in the sciences and in the humanities and social sciences.

## *Preface*

Test construction and development and computer-based testing were reviewed in every material detail. These topics were covered by renowned evaluators which include Professor T.W. Yoloje, Dr. Ifeoma M. Isiugo-Abanihe, Drs. J. A. Adegbile, Folajogun V. Falaye, J. G. Adewale, Modupe M. Osokoya, Eugenia A. Okwilagwe, Adams O. U. Onuka, Monica N. Odinko, B. A. Adegoke, J. O. Adeleke, Serifat F. Akorede and Ikmat O. Junaid. The book is a must read for teachers who desire to make meaningful impact on their students through unbiased assessment of their educational worth and for improving their educational worth. It is, therefore, commended to colleagues as an evaluation companion.

**Adams O. U. Onuka**

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## Notes on Contributors

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## Chapter 4

### Determining Learning and Evaluation Objectives (2)

Ikmat O. Junaid. & Ifeoma M. Isiugo-Abanihe

#### Learning Objective(s)

A learning objective answers the question: "What is it that your students should be able to do at the end of the lesson that they could not do before the lesson?" A learning objective makes clear the intended learning outcome or product of instruction, rather than what form the instruction will take (methodology). Learning objectives focus on students performance. Action verbs that are specific, such as list, describe, report, compare, demonstrate, and analyse, should be used to describe the behaviours students will be expected to perform.

Goals and objectives are similar in that they describe the intended purpose and expected results of teaching activities and establish the foundation for assessment, but they are not the same. Goals are statements about general aims and purposes of education that are broad, long-ranged intended outcomes and concepts, e.g.: problem solving skills, clear communication etc., while objectives are brief, clear statements that describe the desired learning outcomes of instruction, i.e. the specific skills, values and attitude students should exhibit that reflect broader goals. The characteristic which distinguishes goals from objectives is the level of specificity. Goals express intended outcomes in general terms while objectives express them in specific terms.

Evaluation objectives are otherwise known as learning outcomes. These are specific observable behaviours evidenced by students who have achieved the teacher's learning objectives. Learning outcomes are stated operationally, and describe the observable evidence of student's knowledge, skill, ability, attitude or disposition. Well-developed learning and evaluation objectives must be learner-oriented, observable and measurable. When writing learning and evaluation objectives, the teacher should use action verbs that are observable and measurable, such as perform, define, identify, list, etc. Verbs that are difficult to observe and measure should be avoided e.g.: understand, familiar,

learn, appreciate, etc. When a teacher writes correct learning outcomes, his/her evaluation of the learning objectives writes itself. Example of a learning objective stated in observable and measurable terms are:

- **Learning Objective:** At the end of the lesson, students should be able to define Curriculum Evaluation.
- **Evaluation of learning Objective:** What is Curriculum Evaluation?

Intended learning objectives define the skills, knowledge and /or attitude that the learner should be able to demonstrate, following the learning experience. Learners need to be informed about these intended learning objectives before and during the activity. Learning and evaluation objectives are the foundation for planning instruction, measuring progress, obtaining periodic feedbacks and making final assessments. The teacher therefore is expected to check to ensure that the objectives are:

- well-stated and unambiguous;
- adequate in scope;
- measurable to a large extent;
- exhaustive in terms of knowledge, skills and attitude to be acquired; and
- attainable and realistic.

#### **Higher level versus lower level objectives**

The benefit of Benjamin Bloom's (1956) taxonomy is that it allows the teacher to focus his/her attention on higher levels of learning. Most instructional specialists argue that effective objectives and well - designed lessons should always include some higher order objectives and not centre exclusively on retention and understanding. However, it is understood that in most curriculums, there are foundational knowledge and comprehension requirements that must be achieved before higher order objectives can be addressed.

#### **Reasons for developing learning and evaluation objectives**

Objectives help the teacher to reduce complaints because:

- The lesson is organized. With objectives, the lesson fits together and has direction.

- It makes students know what to study and what they are expected to do after the instruction.
- Your assessment materials (tests) will correspond with the stated learning objectives i.e. once the teacher has written his/her learning objectives in observable and measurable terms, then s/he has defined the assessment materials.
- Learning objectives communicate what the teacher or instructor is trying to teach. What students are expected to do at the end of the lesson, how their achievement will be measured and what will be accepted as evidence that they have achieved the goals?

### **Characteristics of good learning and evaluation objectives**

Learning and evaluation objectives must have three distinguishing characteristics thus:

- The specification by the learners must be observable.
- The specified action by the learners must be measurable.
- The specified action must be done by the learners.

The ultimate test when writing a learning objective is whether or not the action taken by the learners can be assessed. If the action cannot be assessed, then the outcome probably does not meet all three of the characteristics. Simple evaluation objectives must have these three elements:

- Who is to perform?
- Which actions they are to take, and
- Some results that must come from their action(s).

### **Types of Learning Objectives**

There are three types of learning objectives which reflect different aspects of student learning:

- **Cognitive Objectives:** what do you want your students to know?
- **Affective Objectives:** what do you want your student to care or think about?
- **Behavioural/ Psychomotor Objectives:** what do you want your students to do?

Objectives can reflect different levels of learning

- **Mastery Objectives:** these are typically concerned with the minimum performance essentials: - these learning tasks that must be mastered before moving on to the next level of instruction.
- **Developmental Objectives:** these are concerned with more complex learning outcomes. They are the learning tasks or skills that expect students to demonstrate varying degrees of progress.

### Activity I

- What is a learning objective?
- Differentiate between goals and objectives.
- Define evaluation objectives.
- What should guide a teacher in stating good objectives?
- Highlight the reasons for developing learning and evaluation objectives.
- Mention the types of learning objectives.

### The Role of Verbs in Learning and Evaluation Objectives

A statement about the content to be learned in a lesson; e.g. Nature of Curriculum in Curriculum Evaluation does not indicate what students are supposed to be able to do with the content. It does not show whether they are supposed to define or list or explain or apply nature of curriculum. Hence, in order to write effective learning and evaluation objectives, it is suggested that; "Action Verbs" that clarify what the learner will do to demonstrate understanding should be used.

### Importance of Action Verbs

Since learners' performance should be observable and measurable, the verb chosen for each learning and evaluation objective statement should be 'an action verb' which results in overt behaviour that can be observed and measured. Some sampled action verbs have been listed above for use. However, certain verbs are unclear and subject to different interpretations in terms of what action they are specifying. Such verbs call for covert behaviours which cannot be observed or measured. The following types of verbs should be avoided when writing learning and evaluation objectives:

- Know;
- Appreciate;

- Understand;
- Familiar, and
- Learn.

### Types of Learning Outcomes

There are many types of objectives. While some are easy, only requiring the simple recall of a definition, others are more complex, requiring problem solving or evaluation. Research indicates that although most teachers think they teach toward higher-level objectives, in reality most instructions, even at the university level, favour only lower-level learning. The benefit of Bloom's taxonomy is that it allows us to focus our attention on the higher levels of learning. That is, if we write our objectives at these levels, we are more likely to teach creative instruction that helps learners accomplish these objectives. Benjamin Bloom's (1956) Taxonomy of Objectives for Cognitive Domain is a type of Categorization Scheme which has six levels. They are:

- **Knowledge:** this is primarily concerned with students' ability to memorize or recall certain specific facts. Action verbs such as define, list, name, describe, tell, identify, label, quote, etc. can be used to state the objectives.
- **Comprehension:** this involves the ability to interpret, paraphrase, and extrapolate, thus demonstrating students' basic understanding of ideas that they did not originate. Action verbs such as explain, describe, summarise, interpret, contrast, predict, distinguish, estimate, give examples can be used to state the objectives.
- **Application:** this includes activities in which the student applies concepts and principles to new and/or practical situations. Action verbs such as relate, determine, apply, demonstrate, calculate, examine, modify, discover and show can be used to state the objectives.
- **Analysis:** it is concerned with breaking down a piece of information into its constituent parts, differentiating and denoting. Action verbs such as identify, analyse, explain, arrange, discriminate can be used to state the objectives.
- **Synthesis:** involves the blending of elements and parts to form a whole. Students should be able to create a structural pattern that was not previously present. Action verbs such as integrate,

modify, rearrange, plan, create, design and compose can be used to state the objectives.

- Evaluation: at the highest level, students might judge the value of a work, the logical constituency of written data or the adequacy of someone else's conclusion. Action verbs such as decide, rank, convince, judge, summarise, and evaluate can be used to state the objectives.

### **Difference between Objectives and Outcomes**

Objectives are intended results or consequences of instruction, curricula programmes or activities. Outcomes are achieved results or consequences of what was learnt i.e. evidence that learning took place.

- Objectives are focused on specific types of performances that students are expected to demonstrate, at the end of instruction (lesson).
- Objectives are written more in terms of teaching intentions and typically indicate the subject (content) that the teacher intends to cover.
- Learning outcomes on the other hand, are more student-centred and describe what it is that the learner should learn.
- Evaluation objectives otherwise known as Learning Outcomes are statements that specify what learners will know, or be able to do as a result of a learning activity. Evaluation objectives are more precise, specific and measurable than goals.

### **Questions which Evaluation Objectives address include:**

- What knowledge, skills, abilities and dispositions should the ideal learner/student demonstrate at the end of the lesson?
- How will the students demonstrate these capacities?
- How well does the lesson prepare students for careers and the future?
- What assessment can we use to demonstrate growth in students' knowledge, skills, abilities and dispositions as they progress in the subject?



**Table 4.1: Action Verb List**

SUGGESTED VERBS TO USE IN EACH LEVEL OF THINKING SKILLS					
KNOWLEDGE	COMPREHENSION	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
Count define describe draw identify labels list match name outlines point quote read recall recite recognize record repeat reproduces selects state write	associate compute convert defend discuss distinguish estimate explain extend extrapolate generalize give examples infer paraphrase predict rewrite summarize	Add apply calculate change classify complete compute demonstrate discover divide examine graph interpolate interpret manipulate modify operate prepare produce show solve subtract translate use	analyse arrange breakdown combine design detect develop diagram differentiate discriminate illustrate infer outline point out relate select separate subdivide utilize	categorize combine compile compose create derive design devise explain generate group integrate modify order organize plan prescribe propose rearrange reconstruct relate reorganize revise rewrite summarize transform specify	Appraise assess compare conclude contrast criticize critique determine grade interpret judge justify measure rank rate support test

### Checklists for Learning Evaluation Objectives

- Are the objectives aligned with the mission, vision, values and goals?
- Do the objectives clearly describe and define the expected abilities, knowledge, values and attitude?
- Are the objectives simply stated?
- Is it possible to collect accurate and reliable data for each outcome?
- Are the objectives distinctive and specific to the lesson?
- Are they stated in such a way that it is possible to use a single method to measure the outcome?
- Are they stated in such a way that the outcomes requiring different assessment methods are not bundled into one statement?
- Are they stated so that one's measurement method can be used?
- Can they be used to identify areas to be improved?
- Are written action verbs used to specify definite observable behaviours?
- Does the language describe the student rather than the teacher's behaviour?
- Does the language describe a learning outcome and not a process?

### Steps to take when determining students' learning outcomes

- Examine the programme mission.
- Determine what learners of that programme should know, what skills they should be able to demonstrate and what professional values they should hold.
- Convert the list of expected outcomes for learners into a list of general objectives.
- Convert the general objectives into statements of specific learning outcomes (may have more than one for each objective)

### Hints to guide the teacher

- Describe learner performance, not teacher performance.
- Describe learning product, not process.
- Be specific without simply stating the subject matter to be learned.

- Stick to one type of result for each objective (e.g., do not say “**Know** the scientific method and apply it effectively”).
- Each learning outcome should start with an action verb that indicates observable and measurable behaviour.
- Group similar outcomes into one (e.g., “Describe functions of the heart” and “Describe functions of the liver” to “Describe functions of major body organs”).

In conclusion, learning and evaluation objectives provide necessary specificity which allows students to know what they need to learn.

### Activity II

- Give five examples of action verbs each that can be used in stating objectives on the six levels of Bloom’s Taxonomy of educational objectives for cognitive domain.
- Differentiate between learning objectives and learning outcomes.
- List the steps that a teacher should take when determining students’ learning outcomes.

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