

IMPROVING TEACHER-LEARNER ASSESSMENT THEORY AND TECHNIQUES IN HIGHER EDUCATION: CASES OF MAKERERE, KYAMBOGO AND UGANDA MARTYRS UNIVERSITIES OF UGANDA

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ABSTRACT

One of the most important aspects in Higher Education (HE) is assessing learners in order to ascertain their levels of achievements. This study on Improving Teacher-Learner Assessment Theory and Techniques in HE: the Case of Makerere, Kyambogo and Uganda Martyrs Universities of Uganda shows the meaning of assessment, techniques and the need to assess holistically the educational domains in order to attain reliable and valid results. The researcher used both qualitative and quantitative approaches of research with case study as the research design where 200 respondents (students and lecturers) from Makerere, Kyambogo and Uganda Martyrs Universities of Uganda were contacted. The study reveals the common methods of assessment used by lecturers as examinations, tests, course works, research projects, class attendance and presentations which were largely rated good because they were examination oriented with its merits notwithstanding weakness particularly of assessing majorly the cognitive domain. The study concludes that holistic assessment is vital for producing right graduates and therefore recommends that continuous and final assessment should reflect the taxonomy of education (cognitive, affective and psychomotor) with 50% as pass mark for all before a learner is pronounced to have passed.

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KEYWORDS: assessment techniques; educational domains; higher education; uganda

INTRODUCTION

Assessment in Higher Education (HE) is essential in determining levels of achievements of learners. In education, the teaching-learning process is complete when we see results which are a product of assessment. This makes assessment a strong tool in any education system and it requires review. This study looks at assessment in Higher Education (HE) in terms of theory, practice and the way forward in Ugandan Universities; the cases of Makerere University-public (1922), Kyambogo University-public (2003) and Uganda Martyrs University-private (1993). It aims at establishing HE's assessment techniques, their operations and effectiveness in producing valid and reliable results in line with the taxonomy educational domains (cognitive, affective, and psychomotor).

LITERATURE REVIEW

The study that looks at assessment in HE, theory, practice and way forward aimed at establishing HE's assessment techniques, their operations and effectiveness in producing valid and reliable results in line with educational domains. It was carried out in three universities of Uganda: I) Makerere University (Mak) the oldest in Uganda (founded in 1922) now with the largest number of staff, students and programmes. II) Kyambogo University (KyU) founded in 2003 with huge number of students, staff and programmes second to Mak. III) Uganda Martyrs University (UMU) founded in 1993. It is one of the

leading private universities in Uganda with many students, staff and programmes, besides being the first chartered private University in Uganda. In education, assessment refers to the process of judging/delivering a learner's achievement and performance (ITEK, 1999; Taba, 1962). There are several methods that are used to assess learners in education like: examinations, tests, coursework, field work and reports (Gipps, 2002; Worthen & Sanders, 1987). After assessment, one evaluates and in education, evaluation refers to the systematic process of determining the effectiveness of education endeavours in the light of evidence (Ahmann & Glock, 1987; Ureubu, 1991; Gipps, 1994; Worthen & Sanders, 1987). There are two major types of evaluation in education namely; formative and summative evaluation.

Formative evaluation takes place as the unit, course or sequence progress (Collahan & Clark 1983). It is in form of continuous assessment with the major purpose of establishing how learners are performing at every stage. In brief, the functions of formative evaluation are to:

- 1 Determine which objectives individual learners have achieved.
2. Indicate student's attainment of specific instructional objectives
3. Concentrate on a limited number of objectives to ensure that they are thoroughly achieved in proportions

4. Ensure that a student has learnt certain things before s/he progresses to the next level (ITEK, 1999; Ureubu, 1991; Davis, 2001; Gipps, 1994; Worthen & Sanders, 1987).

While summative evaluation sums up the results of instruction and progress of the group (Collahan and Clark, 1983). In other words, summative evaluation determines whether to promote, or maintain or demote a learner at a given level of education normally at end of either a semester or year, or term, or module. In brief, the functions of summative evaluation are to:

1. Determine the learners overall knowledge of the subject.
2. Determine the learners standing position in the group.
3. Cover a large amount of subject matter
4. Indicating a student's degree of success in learning (ITEK, 1999; Ureubu, 1991; Davis, 2001; Gipps, 1994; Worthen & Sanders, 1987).

The background to this is that many students are graduating with degrees but their contribution to national development, professional and personal growth is wanting hence the question whether they were assessed correctly/ holistically in order to graduate!

METHODS

The study used both qualitative and quantitative approaches of research with case study as the research design where 200 respondents (students and lecturers) from three Universities of Makerere, Kyambogo and Uganda Martyrs of Uganda were contacted. The contact was through questionnaires and interview guide. Given the nature of the research, respondents and geographical scope, the two approaches were able to produce results in time. The study was analytical with the view of establishing HE's assessment techniques, their operations and effectiveness in terms of producing valid and reliable results in line with educational domains. The study used greatly education literature and theories of Curriculum studies and Educational psychology in general and teaching, learning and assessment in particular. The entire work is well sectioned in the order of abstract, introduction, assessment techniques, taxonomy of education, conclusion, recommendations and references. This representative sample in terms of respondents, institutions and design makes the study transparent, reliable and explicit.

RESULTS AND FINDINGS

Assessment Techniques used in Higher Education

The study aims at establishing the various methods of assessing learners in HE and their effectiveness in producing reliable and valid results. The following were discovered as the most common techniques of

assessing in HE: Examination, Test, Course work, Research Projects, Class attendance and Presentations.

Examination: This technique was the most mentioned by 200(100%) respondents out of whom, 120 rated it very good, 69 good, and 11 as poor. This method normally in form of summative evaluation is given to the learners normally in form of written examinations at the end of the semester. It was rated very good because it is common and the most acceptable way of assessing people in Uganda (Ministry of Education Information Desk, 2007), in this era of formal education in which people must use results (Academic transcripts) as a proof that they studied and passed. The examination helps to sort out brilliant from less brilliant and streamlines the intellectual abilities of learners. There is less cheating or no cheating of examinations if invigilation is strict; besides it involves the learner's personal presence. The examinations are marked according to stipulated marking guidelines and results released. The method should continue respondents said and the study concurs. However, critics to the method said that written examination alone in three hours are inadequate to assess one's ability for the subject work done in 15 weeks of a semester that is; 60 hours of teaching contact if the course is of 4 Credit Units (means every week you study 4 hours of lecture time for that course). Further, they assert that this examination does not take care of other life challenges that people may encounter during examination period for example fear, sickness, and stress. In the event of cheating and unfair marking, less reliable and valid results are given to learners. Learners with handwriting difficulties and memory retention challenges are not favoured by this system. Furthermore, the ways exams are set in Uganda are not fully able to assess the three domains of education that is; cognitive, affective, and psychomotor.

Course Work: This technique of assessment was mentioned by respondents as happening in two ways namely individual course work and group course work assessment.

Individual coursework assessment is where the lecturer gives a question to every individual to research and hand in on agreed date. This method, 60 said it was very good, 90 good and 11 poor thus mentioned by 161 (80.5%). It was rated good because individuals are able to do research in the library, interview respondents and observe phenomenon in the community and write a study for submission. The demerit of it is that lecturers have too much to mark if learners are many, thus the results produced may not be reliable and valid enough. Further, some learners would copy other peoples' coursework and hand in or even hire professionals to do for them

hence earning free marks. The lecturers have limited abilities and time to detect plagiarism and therefore punish such candidates.

Group course work assessment was mentioned by 76 (38%) respondents where a lecturer gives various questions or same question to the learners in groups to research and submit. When the lecturer marks all, the marks attained apply to those group members. In response, 5 rated it very good, 30 good and 41 poor. The merit in it is that it encourages learners' interaction, discussion and discovery by themselves in their groups. The method presents critical challenges of abuse by learners in groups where not all participate, but often times, one or a few individuals do the work and write names of others and they earn 'free marks'. Another challenge is other groups plagiarising other groups' work and present, consequently, all affecting the quality of assessing learners. One respondent, a lecturer from KyU told the researcher of how he gave a coursework in political economy in 2005 and noted that 17 learners had plagiarised other learners' course work. Fortuitously he was able to detect because the group was small coupled with his professional keen interests. At another and different level of plagiarism, he narrated how he gave a coursework, to be done in two weeks, and all learners compiled and submitted. What surprised him was to read about one of his student in the newspaper doing some activity in USA for three weeks in which he had given the coursework and this student had submitted on time. To make more investigations, this student had asked his friend to do the coursework for him, and the hand writing of the student in USA was totally different from the handwriting in the coursework submitted. This reveals weakness in coursework assessment.

Test: In education, a test refers to a collection of items developed to measure some human educational or psychological attribute (Worthen & Sanders, 1987). According to Crombach (1970), a test is a systematic procedure for observing a person's behaviour and describing it by means of a numerical scale or a category system. This definition is broader and includes many things that occur in testing. In education, tests are normally administered in order to find out how much knowledge, and skills candidates possess and further what values and attributes they have developed. The psychological attributes tested include intelligence, anxiety, introversion, and aptitude. Therefore a test in HE becomes very essential to collect data from learners in order to see areas that they have mastered, that need to be improved or strengthened. In education, there are four common types of tests used to achieve the above namely classroom tests, standardized tests, essay tests, and objective tests.

I) Classroom tests are normally called teacher made tests simply because the teachers constructs them

themselves and determine the objectives and conditions under which to be administered.

II) Standardised tests are set by a few expert teachers who determine its scope, conditions in which it should be administered, directions for scoring and techniques for interpreting the scores to various classes.

III) Essay tests require responses which have to be composed (designed) by the examinee. The questions allow freedom of response; require a creative type of responses, in addition, the degree of creativity dependence on the structure of the question.

IV) Objective type question tests ask questions that follow a given order and the answers are specific that is to say either right or wrong and there is no room for variations as in essay tests (Kline, 1987; Worthen & Sanders, 1987; Pratt, 1980; ITEK, 1999; Davis, 2001; Gipps 1994). Each of the above tests has specific objectives, require specific competences in construction and have specific strength and weakness and therefore care is needed in administering a test.

The study reveals that generally the lecturers were merely setting tests to fulfil their duties of assessing learners and followed the available routine with less specific competences needed and over 70% confessed limited knowledge of the types of tests and their objectives. This is because they are not trained teachers although even those with knowledge of constructing tests, put little or no care in constructing the correct test. This substantially affects the reliability and validity of the results that tests set by lecturers produce. Nonetheless, 129 (64.5%) respondents alluded to the use of tests in assessing them during the course and 91 rated it very good, 31 good and 7 poor. The merit is that learners are required to be present themselves in the test room and there is limited plagiarism if well invigilated. However, the testing method may not be fair to learners with examination fear, and anxiety as well as to those with stress and life challenges at the time of the test which may affect their performance, besides those with handwriting difficulties and weak memory retention. The study also revealed that if the test is not professionally set; its results are may be less reliable and valid.

Research Reports: Here a lecturer may give a particular work for learners to research on and bring a report at the end of the term. It could also be a dissertation on given topic in which learners submit at the end of their course as partial fulfilment. It has a merit of encouraging research, discovery and enabling the student access information in this knowledge revolution. It enables learners go into the field and do research, which gives them an opportunity to learn the community development dynamics so that when they graduate, they will have a fair starting point. The challenge of this method in universities is large numbers to supervise visa via

limited staff which lowers the quality of supervision and subsequently values and skills learnt by the student. Because of this, learning institutions have made research projects and dissertations optional instead of making it a core curriculum for all learners to enjoy and learn how to search and write knowledge. The other challenge is that research is increasingly being abused by research bureaus in towns where learners take their topics, they do the work and learners submit for marking. In some cases, learners merely go to the library and plagiarise other peoples' dissertations and present, respondents attested. While in some cases, other learners do not go to the field to collect data and interact with the community, they just sit in their halls of residence, imagine for the respondents with guidance of some research fellows and produce a report. Lecturers are less able sometimes to detect such plagiarism and learners end up earning 'free marks'. These challenges have affected the quality of research in learning institutions and the nation at large because such graduates are less capable of researching so as to create, preserve and disseminate knowledge besides the vice of academic plagiarism that goes unpunished and may suffice in their field work reports at work.

Presentations: This technique was mentioned by 59 (29.5%) respondents of whom, 21 rated it as very good, 23 good and 15 poor. In presentation sessions, the lecturer would give questions to the candidates to research on and present papers in the class. This increased high attention of learners, research abilities, and thinking, besides reduced work load on the lecturer's part. However, this was sometimes abused by the learners for example by participating in groups; few would research and thus learn research and presentation skills. While the rest (majority) would earn 'free marks' and thus less or no research/presentation skills respondents told the researcher.

Class Attendance and Participation: This technique was mentioned by 21 (10.5%) of whom 7 rated it as very good, 9 good and 5 poor. Class attendance was a good method of assessment in which learners would be motivated to attend because of 'free' marks but eventually they would end up learning more and effectively participating in class lectures, discussions and presentations. However, this method would not work in large classes because it is difficult to register all and assess their participation. Further, the method was limited in transparency where lecturers would even award marks to their "class friends" respondents said. In most cases, lecturers gave these marks by estimation and imagination which would not be fair to all class learners because the attendance and participation was not at the same level. One respondent from UMU, 2003 – 2005 recalls how one of her classmate attended 8 lectures out of 60 lectures

but his name was perfectly ticked for the all lectures with a consistent signature and he earned class attendance marks. Lecturers in their response rebuffed the above accusation as student "rumours" and unfounded prejudice but acknowledged the difficult in being fair to award class attendance marks. Nevertheless, class attendance helped in motivating learners to attend and thus learning more issues.

Taxonomy of Educational Objectives

In a more critical assessment to ascertain the reliability and validity of results the above assessment techniques produced, the study examined the taxonomy of education objectives. According to the taxonomy of educational objectives developed by Bloom and others in 1956 at the University of Chicago (USA), it means classification of educational objectives based on the intended behaviour of learners. The classification involves objectives that cater for: 1. The Cognitive domain, 2. The Affective domain and 3. The Psychomotor domain.

In detail the Cognitive domain usually associated with the head leads to the acquisition of knowledge at six levels.

1. Knowledge – The ability to know and recall learned material.
2. Comprehension – The ability to grasp the meaning of the material.
3. Application – The ability to use learned materials in new and concrete situations.
4. Analysis – The ability to break down material into its small component parts so that its structure is easily understood.
5. Synthesis- The ability to put small component parts together to form a new whole.
6. Evaluation – The ability to judge the value of material

The Affective domain usually associated with heart leads to the development of attitudes, values or feelings at five levels.

1. Receiving – The ability to listen and get information.
2. Responding – The ability to act and reply to a given situation.
3. Valuing – The ability to gauge and judge given information or situation.
4. Organization – The ability to put information or things in order using the learnt knowledge.
5. Characterization – The ability to sort out and classify information or things according to their form or need. And also develop your character

The Psychomotor domain usually associated with the hands leads to the development and acquisition of skills at five levels.

1. Imitation – The ability to see some things and attempt to reproduce it

2. Manipulation – The ability to do something in your way using the acquired knowledge.
3. Precision – The ability to summarize a given skill in your way and produce results
4. Articulation – The ability to defend what you have learnt and done (your position, theory or practice)
5. Naturalization – The ability to develop the skill acquired naturally (Kline, 1987; Richlin, 2006; Ureubu, 1991; Davis, 2001; Gipps, 1994; Worthen & Sanders, 1987).

In view of the above, out of 200 respondents in terms of rating the cognitive domain; 90 (45%) acquired High, 97 (48.5%) Moderate and 3 (1.5%) Low. This is amazing to discover that despite all the challenges mentioned, the lecturers taught with the available materials and student acquired that. For the affective domain, out of 200 respondents in terms of rating the acquisition, 42 (21%) High, 98 (49%) Moderate, and 60 (30%) Low. This is not a desirable situation. It indicates the limited hidden curriculum, co-curriculum, core curriculum, spiral and the difference between the official and actual curriculum that would have enabled learners to acquire the relevant attitudes, feelings or values. Out of 200 respondents in terms of rating the psychomotor domain acquisition, 32 (16%) rated High, 87 (43.5%) rated Moderate, and 81 (40.5%) low. This is further a worrying situation because of the inadequacy in the pedagogical methods that would have enabled all the learners to acquire the relevant skills for developing Uganda.

Generally the assessment techniques are good at producing results of the cognitive domain, but largely limited in producing results of the affective and psychomotor domain because of being examination oriented in terms of structure and objective. Further, they are limited because of academic plagiarism and unprofessional conduct in terms of assessment that renders them largely unable to produce up-to-date reliable and valid results of learners.

CONCLUSION AND RECOMMENDATIONS

Conclusion

In the last 20 years, Uganda has witnessed unprecedented increase in HE enrolments and institutional growth. But it has been a growth with few positive changes in curricular or response to socio-economic needs. This growth has made little positive contribution to the development of Uganda, as evidenced in poverty levels, socio-economic disparities between the rich and poor that widen each passing year, unemployment, and corruption. Thus HE as delivered in the tertiary institutions today is facing numerable challenges particularly assessment which undermines the quality of HE.

The study concluded that the immediate and long-term implementation of the recommendations made in this study will enhance learning institutions in assessing learners professionally. These recommendations will enable HE to;

1. Produce quality graduates who will earn high incomes and contribute positively to Uganda's development in all development sectors.
2. Produce graduates with academic excellence in addition to strong personality of a just character. Such graduates will combine gifts of academic excellence, professionalism, good governance and entrepreneurship, hence developing a frugal class of educated citizens who will harness Uganda's resources for holistic development.
3. Attract foreigners (learners and investors) who will bring income to the economy and market the education sector of Uganda, in general, and HE in particular.
4. Equip graduates with relevant global skills which will enable them work outside Uganda as expatriates or common people who in turn will bring revenue to the economy and more extra skills that will enhance Uganda's holistic development.

Recommendations

Regarding the assessment of learners, the study acknowledges the examination orientated education system in which HE is taught. The study does not aim at dismantling the examination orientated system, but improving on it. It recommends that 40% be continuous assessment and 60% final examinations assessment at undergraduate and 50% continuous assessment and 50% final examinations assessment for post graduates. The continuous assessment and final examinations should be based minimally at 50% pass mark before a candidate is pronounced to have passed.

Table 1: Recommended Under Graduate and Postgraduate Assessment Score

Method of Assessment	Total mark for Assessment in percentage	
	Undergraduate	Postgraduate
1. Class attendance and participation	5	10
2. A test (written)	10	10
3. Field work based research paper	10	10
4. Library / Internet based research paper	10	5
5. Presentation in class at least one of the papers researched	5	5
6. Oral examination	-	10
7. Final examination (written)	60	50
Final Total	100	100

Source: Lubaale, 2011:163

The above table shows recommended under graduate and postgraduate assessment by Lubaale (2011)

which this study concurs and recommends. The study recommends use of various continuous appraisal methods like; individual presentation, debates, essays, paper presentations, book reviews, tests, reports of field work visits or research, class discussions, attendance, oral defence, project work, research seminar/tutorial presentations and discussions be adopted accordingly. This will certainly enhance and greatly improve on the learner's acquisition and retention of the cognitive, affective and psychomotor education domains. All the above is recommended in order to have a more uniform curriculum particularly in the area of assessment which the perennials (Bertrenda, 1961) were advocating amidst varying environments and senate discretion.

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