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Lecturers Perceptions Of Their Knowledge And Skills In The Construction Of Suitable Test Items

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Abstract: ***Since the inception, testing is an integral part of the educational system. The National policy on Education (2004) emphasises the importance of continuous assessment by stating that "educational assessment and evaluation will be liberalised by basing them in whole or in part on continuous assessment of the progress of the individual learner". This implies that lecturers should assess both the entry and terminal behaviour of the learners in the course of being taught, as this will reveal the progress made by the individual learner during the course. The continuous assessment system which is currently in use in Nigerian schools requires valid and reliable test instruments to make the exercise worthwhile. Therefore, this study sought to find out the lecturers' perception of their own skills in test construction and the suitability of test items. The results showed that 48% of the lecturers agreed they needed assistance in preparing structured assessment especially for essay questions than multiple choice questions (MCQs) and 50% noted that Examination Moderators are not always pleased with the structure of their marking guides. There is also no significant difference in the perceptions of male and female lecturers of their knowledge and skills in the construction of suitable test items. It is recommended among others, that, lecturers should be re-oriented on the need to follow stipulated test construction procedures and to put to use the skills attained from the various trainings they have had.***

Keywords: Perception, Assessment, Test, Policy, Construction, Instrument

I. INTRODUCTION

Test construction is an essential part of teachers' responsibility. Teachers are therefore supposed to craft well-functioning items in ensuring effective teaching and learning. The competency in test construction is an essential tool needed by every teacher if learning and instructional objectives are to be effectively attained. The importance of tests in the educational system is therefore enormous. Test provides a platform by which any significant educational objectives can be achieved (Hamafyelto, Hamman-Tukur & Hamafyelto, 2015). The effectiveness of learning goals, entrenched in the curricula of a school continues to be the most fundamental sign pole for institutional superiority, educational development and individual goals. Teachers are therefore required to have adequate knowledge in achieving these learning objectives in an accurate and precise manner. Teachers must, thus, have the capability in the science and art of test constructing (D Agostino, 2007).

A number of studies have explored teacher s classroom test construction skills (Hamafyelto et al., 2015; Kazuko, 2010; Onyechere, 2000). Ololube (2008) also evaluated test construction skills of professional and nonprofessional teachers in Nigeria and reported that professional teachers tend to construct effective evaluative instruments more than the non-professional teachers. It was also found in Ololube s study that professional teachers have the propensity to employ the various assessment techniques correctly, which is unlikely to happen in the case of non-professional teachers. Onyechere (2000) found that some teachers craft poor tests while others continue to use replica of test items because they seem to have inadequate skills in test construction. Hamafyelto et al. (2015) discovered that Senior High School teachers in Borno State, Nigeria, constructed items which focused on lower cognitive operations. In Ebinye s (2001) view, test construction has been found to be a major source of anxiety among many teachers in Nigerian schools, especially, less experienced ones. This

anxiety stems greatly from lack of skills in test construction among these teachers.

There are situations when students' responses to questions are way-off the expectations of the teacher. Here the teacher must have wondered what actually went wrong. Was it that he/she did not teach well or that the pupils did not understand what was taught? The problem may have stemmed from neither the teaching nor the pupils learning but from the way the test item was written. The question given by the teacher may not be perfectly clear, could be ambiguous, thus, giving room for more than one possible correct response.

According to Wiliam and Thompson (2008), Scriven and Bloom proposed the terminology formative and summative assessment, giving the reason to differentiate their roles. Formative assessment is introduced as an ongoing process of evaluating students learning, providing feedback to adjust instruction and learning, improving the curriculum. Summative assessment, on the other hand, is bound to administrative decisions and assigning grades to the tests.

A critical examination of literature indicates poor test construction skills of most teachers in all levels of education across diverse subjects globally (Anhwere, 2009; Ebinye, 2001; Hamafyelto et al., 2015; Kazuko, 2010; Onyechere, 2000). This is really a great problem as students achievement are likely to be reported with errors because poor items are used to measure achievement. Is it that teachers are not well trained in test construction? Is it that teachers are trained well but feel reluctant in using what has been taught them? It is important to state that these previous studies examined teachers test construction skills by asking them what they actually do when crafting test items for students. However, these studies do not provide a comprehensive picture of what teachers know. This is because teachers might have the knowledge but be reluctant in practising what he/she knows. This is seen in the study of Ebinye (2001) who found that crafting test items appeared to be a burden on teachers. Therefore, irrespective of the knowledge the teacher has, he may likely construct poor questions, or perhaps, repeat already existing questions (Onyechere, 2000).

In Nigeria, teachers are trained in assessment, of which test construction is an important component. In the Colleges of Education, for instance, students are taken through a full course in educational assessment. The course content allows these students to have a practical knowledge on test construction and assessment, in general. Similarly, Universities in Nigeria who train teachers also have a course in assessment for potential teachers to be trained in assessment. This course also enlightens students on the construction of test items. Earlier studies (Anhwere, 2009; Ebinye, 2001) opined that even though teachers are trained in school assessment which includes test construction, most of them do not adhere to the rules governing these practices which leads to poorly crafted questions. It appears that teachers' attitude towards test construction is nothing to boast of and this, to a greater extent, contributes to the construction of poor items. This study seeks to empirically examine lecturers perceptions of their knowledge and skills in the construction of suitable test items.

II. STATEMENT OF THE PROBLEM

The process of teaching and learning is a continuing lifelong activity for any academician. An effective lecture with a well framed lesson plan and learning objectives complemented with an active choice of teaching/learning methods and aids will lead to an effective learning outcome. The impact of a lecture can at best be judged through valid and reliable formative assessments. Lecturers have however been found to have negative attitude towards test construction. This may contribute to the construction of poor questions among these lecturers as indicated in previous studies. It is likely that lecturers have the knowledge about test construction but their attitudes prevent them from utilizing the knowledge they have. It is said that test construction is a difficult and rigorous task if teachers are supposed to do it effectively (Nitko, 2001). This explains the reason why some teachers see test construction as a burden. This study therefore seeks to empirically examine lecturers perceptions of their knowledge and skills in the construction of suitable test items.

RESEARCH QUESTION AND HYPOTHESIS

The study was guided by the following research question and hypothesis:

RQ1: To what extent do the trainings in test construction reflect positively in the preparation of suitable test items by lecturers in tertiary institutions?

RH1: There is no significant difference in the perceptions of male and female lecturers of their knowledge and skills in the construction of suitable test items.

III. POPULATION

The population consisted of all lecturers in all higher institutions in Ogun State, Nigeria.

IV. SAMPLING TECHNIQUE AND SAMPLE

Multistage sampling technique was used for this study. The first stage involved stratification based on courses offered. The stratum picked comprises of institutions saddled with the responsibility of training teachers. These are Federal College of Education, Abeokuta; Tai Solarin College of Education, Omu-Ijebu; and the Faculty of Education of the Tai Solarin University of Education, Ijebu-Ode. One hundred and twenty respondents (lecturers) were then purposively sampled, in the ratio 5:5:2 respectively. Fifty (50) respondents each were selected from Federal College of Education, Abeokuta and Tai Solarin College of Education, Omu-Ijebu while twenty (20) were selected from the Faculty of Education of the Tai Solarin University of Education, Ijebu-Ode. Finally, the lecturers sampled in each of the institutions were sampled purposively along the gender divide in equal number.

V. INSTRUMENT AND INSTRUMENTATION

A questionnaire based survey was conducted on the lecturers, the instrument consisted of 30 items and the evaluation was done using 4 point modified Likert scale. The parameters assessed were as follows: A) Preparation of lesson plan B) Preparing effective learning objectives C) Choice of teaching/learning methods D) Preparing structured assessment E) Difficulty in preparing multiple choice questions and essays F) Preparation of good marking guides. The parameters were set according to the objectives and the average response was calculated. The content validity and reliability of this instrument were established using Lawshe's method of content validity and Cronbach Alpha respectively. The coefficients were 0.73 and 0.71 respectively.

VI. ANALYSIS

The data for the research question was analysed using means and percentages while the data obtained for the research hypothesis was analysed using T-test comparison of means.

VII. RESULTS

- ✓ The results showed that 61% of the lecturers were able to prepare lesson plan without difficulty, 56% perceived they can prepare effective learning objectives, majority of the lecturers were able to choose appropriate teaching learning methods, 54% chose relevant teaching/learning methods, 48% of the lecturers agreed they needed assistance in preparing structured assessment especially for essay questions than multiple choice questions (MCQs) and 50% noted that Examination Moderators are not always pleased with the structure of their marking guides.
- ✓ T-test comparison of Male and Female Lecturers' perception of their knowledge and skills in the preparation of suitable items

Lecturers	N	Mean (X)	Std dev	std error	df	sig	Decision
Male	60	70.8140	6.41416	.69166		157	0.095
Female	60	72.4110	5.41304	.63355			

p-value 0.05

Table 1

0.095 is greater than 0.05, there is no significant difference in the Male and Female lecturers perception of their knowledge and skills in the preparation of suitable items. The null hypothesis is therefore not rejected.

VIII. DISCUSSION OF RESULTS

The need for teachers to construct good test in assessing their students cannot be overemphasised. While some lecturers are found constructing poor items, others are found to be repeating already existing questions (Onyechere, 2000). Some researchers have attributed this to lecturers limited knowledge and skills in the area of test construction (Anhwere, 2009; Ebinye, 2001; Hamafyelto et al., 2015; Kazuko, 2010; Onyechere, 2000). Others have attributed poor questions of lecturers to the fact that they see test constructions as a major source of anxiety and burden (Ebinye s, 2001). This present study revealed another factor which also accounts for the poor construction of test items among lecturers. Many were found to have a negative attitude towards test construction. This may contribute to the construction of poor questions among these lecturers as indicated in previous studies. It is likely that these lecturers have the knowledge about test construction but their attitudes prevent them from utilizing the knowledge they have. Test construction, we might say, is a difficult and rigorous task if lecturers are supposed to do it effectively (Nitko, 2001). This explains the reason why some lecturers see test construction as a burden, no matter the gender of the lecturer. The findings of this present study implies that even when lecturers are given adequate training in the area of test construction, it is unlikely that their skill attained might be put to use if they have negative attitude towards crafting the questions. This presupposes that the attitude of lecturers towards test construction is likely to act as a moderator in the relationship between knowledge and practice of test construction.

IX. CONCLUSION

Most lecturers agreed they needed assistance in preparing structured assessments and none have done item analysis of multiple choice questions. Testing in education cannot be under emphasized because teaching and learning can never be complete without it. Lecturers would, thus, be ignorant of how well they are doing as well as how well the learners are grasping the concepts being taught. Nevertheless, lecturer effectiveness and learners performance can never be properly assessed if tests are poorly constructed.

X. RECOMMENDATIONS

Even though, teachers in training are taken through courses in their training, test construction still seem to be a nightmare for many lecturers. It is therefore recommended that:

- ✓ Educational stakeholders should re-orient lecturers on the need to follow stipulated test construction procedures and to put to use the skills attained from the various training they have had.
- ✓ Regular trainings, seminars and workshops should be organised for the lecturers for refreshing knowledge and skills on constructing suitable test items.
- ✓ There is the need for improved attitude on the part of the lecturers, training alone would not bring about the required competencies.
- ✓ The supervisory hierarchy of the teaching staff in tertiary institutions are to ensure adherence to testing construction procedures.

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