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University Lecturer's Competence In The Construction Of Multiple Choice Test Items: A Case Study Of Coltek-Kumasi

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Abstract:

The recent increase in student numbers has led to a re-thinking of the type and frequency of assessments used in universities. Marking large numbers of students' subjective scripts, projects and others is time consuming, labour intensive and often involves errors of consistency in assessment. As a solution to these problems, multiple choice test formats has become very popular. This case study was designed to diagnose university lecturers' competency in constructing multiple choice test items questions. Subjects were 63 lecturers from the College of Technology Education-Kumasi of the University of Education, Winneba, Ghana. The main instrument used to collect data was the questionnaire. Data was also obtained through content analysis of selected end-of-semester examination containing multiple choice items. Frequency counts, percentage and the chi-square were used to analyze the data. Findings indicated that the subjects used in this study most of the time do not follow the principles laid down by measurement experts in developing the multiple choice item.

Key words: Assessment, Multiple Choice Items, Objective Test Items, stem, Key, Option, Distracters

1.Introduction

Assessment is one of the most important aspects of the teaching –learning process. Hardly can one envisage an educational system without testing. Classroom assessment is an integral part of teaching (Chase, 1999; Popham, 2002; Trice, 2000) and takes so much of the teacher's teaching time (Stiggins, 1991). Research indicates that a sizable amount of classroom time is devoted to the assessment of student learning. Teachers spend between 10% to 50% of classroom time in assessment related activities (MacBeath & Galton, 2004; Stiggins, 2001). Most of the test teachers use in the classroom involve test that the teachers have constructed themselves. It is estimated that billions of teacher made tests are used in classroom assessment yearly. (Marso & Piggie, 1988). It is therefore an established fact that teachers regularly use tests they have constructed themselves and therefore place more premium on their own tests in grading and determining students' progress than they do on assessments designed by others (Boothroyd et al, 1992; Stiggins & Bridgeford, 1985; Williams, 1991). While some teachers are of the view that they have the necessary skills to produce valid and reliable tests (Oescher & Kirby, 1990), others express a level of discomfort with the quality of their own tests; others also believe that their pre-service training in measurement and evaluation was inadequate. It is well documented that half of all teacher education programmes have no assessment course requirement for teachers' under-going training (Stiggins, 1991). Research has also indicated that teachers receive little or no training in assessment after certification (Hermann & Dor-Bremme, 1984). Also, the formal training teachers received focused on large scale test administration and standardized tests rather than on the test construction strategies (Stiggins, 1991). While most of the evaluation done in schools are done with teacher made tests, most of the research on testing which have been reported in recent years has concerned standardized tests (Haynie, 1992).

Available findings on the quality of teacher made tests cast some doubt on the ability of teachers to perform evaluation effectively (Burdin, 1992). Even though, evaluation through teacher made tests in schools is an important part of the educational system, not many teachers have had training in the art of writing tests; hence, the process is not only difficult, but frustrating and often ineffective for many teachers'.

The multiple choice item has been chosen as the main focus of this study. It is an assessment method that is now heavily relied upon in many schools and driven by the effectiveness and efficiency argument. The MCI has been selected for three reasons. First, it is very versatile; it could be used to measure students' performance at any level and in any subject area as well as all levels of learning from knowledge to evaluation. Second, multiple choice items can be very useful for diagnostic purposes, for helping students realize their strengths and limitations. Third, because of the recent rise in students numbers in colleges and universities, multiple choice items are often used; it is therefore important that instructors learn to write the items well. Although the three for the popularity of multiple choice items are shared by some other item types, the multiple choice could be the most powerful assessment tool if the instructor constructs the items well. Multiple choice testing is an efficient and effective way to assess a wide

range of knowledge, skills, attitudes and abilities (Haladyna, 1999). When done well, it allows broad and even deep coverage of content in a relatively efficient way. Though often maligned, and though it is true that no single format should be used exclusively for assessment (The National Council on Measurement in Education, 1999). The multiple choice testing still remains one of the most commonly used assessment formats (Haladyna, 1999; McDougall, 1997).

It may appear fairly simple to construct items in the multiple choice format hence, its over-reliance in Ghanaian schools. Although, the format is simple, it can be time consuming to construct a meaningful multiple choice. Furthermore, because good multiple-choice tests are so difficult to construct, instructors tend to use the same questions across semesters. The result is that many teachers do not review their test items. Not all teachers in secondary schools and for that matter, universities in Ghana have had formal training in item writing (Amedahe, 1989). It is therefore questionable if these teachers without the necessary skills in testing are really able to evaluate the learning outcomes of their students using the multiple choice items.

2.Literature Review

The recent increase in student numbers has led to a re-thinking of the type and frequency of assessments used in universities. Marking large numbers of students' subjective scripts, projects and others is time consuming, labour intensive and often involves errors of consistency in assessment (Newstead & Dennis, 1994). Including multiple choice items allows for more regular and efficient examining of students. Multiple choice items also enable the lecturers to test a wide range of topics taught.

The multiple choice item is one of the selection type of objective test and the most widely recognized and efficient item for standardized tests in a number of academic subject areas. It is widely used in achievement tests of all types, primarily to assess learning outcomes at the recall and comprehension levels (Airasian, 2001). The uses of multiple-choice items and the guidelines for constructing them are well documented in research literature and training manuals of test publishers. Since only counts of the correct responses are required to obtain a student's score, assessments that use multiple choice items produce highly objective results (Kubizyn & Borrich, 1987).

A multiple choice consists of one or more introductory statements, called the stem, followed by several possible answers. Typically, only one answer, referred to as the key is correct. The incorrect answers are referred to as the distracters/misleads/foils and represent common errors that seem to be plausible to those students who have not attained the level of knowledge to recognize the key as the correct option (Linn & Gronlund, 2000). All multiple choice items have three elements in common: (1) the stem that presents the problem to be solved, (2) the correct or keyed option, and (3) several distracter options or incorrect responses that are likely to be plausible to the student who has not completely mastered the learning being tested.

It may appear to be fairly simple to write multiple-choice test items. However, constructing a meaningful item could be very difficult and time consuming. Writing items to measure recall of knowledge is not difficult, but writing items to cover comprehension, interpretation, application, analysis or synthesis is very difficult (Chan & Kennedy, 2002).

Both faculty and students have varied reasons for using and liking the multiple choice items. From the point of view of faculty, the multiple choice item is used for the following reasons :(1) it can be scored with ease and accuracy especially, with large classes, (2) the ability to create multiple versions of the same items leads to the controlling of cheating; (3) it lends itself to easy item-analysis; (4) it makes for easy verification of the correct answers (5) it also enhances the sampling of a wide range of content. From the point of view of the students' the reasons include (1) the belief that multiple choice test are objective and therefore less biased, (2)ability to guess the correct option, (3) the perceived ability to do better on multiple choice than constructed response.

Research however indicates that not all students and lecturers are fond of multiple choice tests. Zeidner (1987) conducted a research which indicated that about 25% of the student respondents preferred constructed-responses test over multiple-choice items. Also many college teachers and faculty members have expressed their concern over the difficulty of constructing multiple choice items. This has raised the concern that poorly written multiple choice items may not permit students to really exhibit what they know (Dufresne, Leonard & Gerace, 2002).

There is also the criticism that instructors may set the questions to measure recall of information and this will make the test too easy, thereby providing an inaccurate measure of student understanding. Also students who have poor reading skills are disadvantaged by poorly or ambiguously worded multiple choice (Paxton, 2003). Feuna (2004) in a research indicated that the result of multiple choice tests can be influenced by "testwiseness". The multiple choice test has also been criticized on the grounds that much time is used in their construction. Some teachers have many difficulties when they try to construct multiple-choice test and it is one of the reasons why they are very reluctant to use them (Burton, 1991, Downing, 2006).

Good multiple choice test items are generally more complex and time consuming to construct than other types of tests. The ability to write multiple-choice items is an important skill for the teacher to develop. A good quality multiple -choice test needs to be well planned and constructed and the responses for each item reviewed and edited. Most poorly written multiple choice items are characterized by at least one of the following: (1) they measure objectives for which they are not suited; (2) they contain specific determiners (clues) to the correct responses; and (3) they are worded ambiguously.

Well written multiple choice items are defined as those that are constructed in adherence to guidelines designed to avoid the three problems listed. A Good multiple-choice item is also recognized in the sense that those who have knowledge about the item get it right while those who have no knowledge about the item do get it wrong (McMillan, 2001).

The decision to use multiple-choice tests or include multiple-choice items in a test should be based on what the purpose of the test is and the uses that will be made of its results. If the purpose is only to check on factual and procedural knowledge, if the test will not have a major effect on overall curriculum and instruction, and if conclusions about what students know in a subject will not be reduced to what the test measures, then a multiple-choice test might be somewhat helpful -- provided it is unbiased, well written, and related to the curriculum. If they substantially control curriculum or instruction, or are the basis of major conclusions that are

reported to the public (e.g., how well students read or know math), or are used to make important decisions about students, then multiple-choice tests are quite dangerous.

3.Objectives

The objective of the study is in three-folds. First, to find out the reasons lecturers' give for using the multiple-choice test items. Second,, to find out the extent to which faculty follow the guidelines in the construction of the multiple choice test items as outlined by measurement and evaluation experts. Third, to find out about common errors lecturers' make in constructing multiple choice items.

4.Research Questions

The study aims at finding answers to the following questions

- What are the reasons lecturers 'give for the use of multiple choice test items in measuring learning outcomes of the courses they teach?
- To what extent do lecturers' plan their multiple choice test items?
- Do lecturers' follow the guidelines in writing the stem of the items as put forward by measurement and evaluation experts?
- To what extent do lecturers' make use of the guidelines in developing the options to the items as put forward by measurement and evaluation experts?
- What are the common errors lecturers' make in constructing multiple choice test items?

5.Structure Of The Study

The paper is presented as follows. The first part presents the introduction and a selective review of the literature relevant to the study. The second section focuses on the methodology and data gathering procedures for the study. The third section is on the analysis of the questionnaire, findings and discussions as they relate to the research questions. The last section deals with the conclusion of the present study. The sample was chosen from lecturers in the five departments of the University of Education, Winneba – Kumasi campus which is also known as College of Technology Education, (COLTEK). Eighty lecturers were targeted for the study using a self administered questionnaire. The questionnaire sought to find out the factors that influence the lecturer's choice of the Multiple-choice Item (MCI), If lecturers plan their MCI, if lecturers follow, the standard guideline in writing the stem (items) and the extent to which lecturers make use of the standard guidelines in developing the options for the items. The first part of the questionnaire sought demographic information such as gender, age, teaching experience at the university and whether the lecturer is a professionally trained teacher or not. Table 1 indicates the demographic profile of the respondents. Sixty-three useable responses were obtained, which equaled 78% return rate.

	Frequency (N)	Percentage (%)
Gender		
Male	55	87.3
Female	8	12.7
Age		
26 – 40	15	23.8
41 and above	48	76.2
Teaching experience		
1 – 9	22	34.9
10 and above	41	65.1
Professionally trained		
Yes	43	68.3
No	20	31.7

Table 1: Demographic Profile Of The Respondents

Table 1 indicates that of the lecturers' who took part in the study, majority were males (87.3%), majority of the lectures were 41 years and above (76.2%), while 65.1% have taught in the university for ten and more years and also 68.3% of the respondents indicated that they were professionally trained teachers'.

6.Data Analysis

In analyzing the responses in relation to the research questions, the chi- square test of goodness of fit was employed. Also the 't' test of independent was used to test the four hypothesis stated for the study. In order to determine the common errors lecturers' commit in constructing multiple choice items, content analysis was done on a sample of multiple choice items lecturers' have constructed for the end of semester examination from 2010 to 2012. The analysis was done under (1) reasons for using multiple choice items,(2) planning of the test,(3) writing of the stem and (4) developing the options. For easy analysis and understanding, the four point likert scale was collapsed to two. Strongly agree and agree were collapsed to agree while strongly disagree and disagree were collapsed to give disagree.

Statement	Agree	Disagree	X ² Cal	Decision
I consider if the MCI meets the purpose of the test	20	43	21.8	Rejected, p< 0.05
I teach large classes	43	21	10.4	Rejected, p< 0.05
It is easy to construct the MCI	21	42	10.7	Rejected, p< 0.05
It is easy to score the MCI	44	19	6.5	Accepted, p> 0.05
My students prefer the MCI to any other test format	13	50	5.5	Accepted, p> 0.05
The MCI has a very high Reliability	43	20	6.5	Accepted, p> 0.05
The MCI has a very high content validity	43	20	6.5	Accepted, p> 0.05
The MCI measures complex learning abilities	22	41	11.8	Rejected, p<0.05

Table 2: Reasons For Using MCI
X² Crit = 7.815, Df = 3

As can be seen from Table 2, 20 of the respondents agreed that they consider if the multiple choice item will meet the purpose of the test while 43 of the respondents disagree with the statement. On the issue of class size 42 of the respondents indicated that they teach large classes hence, the use of the multiple choice, while 21 disagreed with the statement. The difference between these two groups was statistically significant ($X^2 = 21.8, p < 0.05$).

Twenty-one of the respondents agree that it is very easy to construct the multiple choice items while forty-two respondents were of the view that it is difficult to construct the items. The difference was statistically significant ($X^2 = 10.7, p < 0.05$). Forty-four of the 63 respondents indicated that the scoring of the multiple choice items was very easy while nineteen disagree with the statement. The result was statistically not significant ($X^2 = 6.5, p > 0.05$).

Thirteen-of the respondents indicated that their students like the multiple choice, while fifty disagreed with the statement. The result was statistically not significant ($X^2 = 5.5, p < 0.05$). Forty-three respondents were of the view that the MCI has a very high reliability, while 20 disagreed. The result was statistically not significant ($X^2 = 6.5, p > 0.05$).

On the issue of the MCI have a high content validity, 43 of the respondents agree with the statement while 20 disagree. The difference between these two categories is statistically not significant ($X^2 = 6.5, p = 0.05$). As many as 41 of the respondents disagree with the assertion that the multiple choice item measures complex learning outcomes, while 22 agree with the assertion. The difference between the two groups was statistically significant ($X^2 = 11.8, p > 0.05$).

Statement	Agree	Disagree	X ² Cal	Decision
I prepare the table of specification	17	46	11.6	Rejected, p<0.05
I write the items throughout the semester	9	54	19.4	Rejected, p<0.05
I write the items in one or two days	47	16	9.3	Rejected, p<0.05
I write one or two questions after each Class	7	56	14.7	Rejected, p<0.05
I write the items before teaching the Topic	16	47	17.7	Rejected, p<0.05

Table 3: Planning Of MCI Tests By Lecturers
X² Crit = 7.82, Df = 3

Table 3 indicates that as many as 46 of the respondents disagree with the statement that they prepare the table of specification as part of planning the MCI test. However, 7 of the respondents agree with the statement. The result was statistically significant between the two categories. On the issue of respondents writing the items throughout the semester, 9 of the respondents agree with the statement while 54 disagree. The result was statistically significant.

Forty-seven of the respondents agree with the statement that they write the MCI in either a day or two while 16 disagree. The result for these two groups was statistically significant. Eight of the respondents indicated that they write one or two questions after each class while 55 disagree with the statement. The result for the two categories was not statistically significant. On whether respondents write the MCI before teaching the topics, 15 responded in the affirmative while 4 responded negatively. The result was statistically significant.

Statement	Agree	Disagree	X ² Cal	Decision
I write each item to measure a single objective	43	20	17.6	Rejected, p<0.05
I write more of the items in the positive term	33	30	19.1	Rejected, p<0.05
I underline/capitalised the negative Items	9	53	10.1	Rejected, p<0.05
I make use of difficult vocabularies to make the items more difficult	10	53	19.5	Rejected, p<0.05
I make all the items independent	30	33	6.1	Accepted, p> 0.05
I do review and editing of the items	48	15	34.9	Rejected, p<0.05
I arrange the items in order of difficulty	18	45	18.7	Rejected, p<0.05

Table 4: Writing Of The Items
X² Crit = 7.82, Df = 3

Table 4 shows that 43 of the respondents write the MCI to measure single objectives, while 20 of the respondents disagree with the statement. The result for the two categories was statistically significant. Thirty-three of the respondents also indicated that they write more of the items positively while, thirty indicated that they write more of the items in the negative. The result was statistically significant.

Nine of the respondents indicated that they either underline or capitalized negative words in the items while, 54 said they do not. The result was statistically significant. With regards to making use of difficult vocabularies to make the items look more difficult, 10 of the respondents agree while 53 disagree with the statement. The result was significant across the groups.

Thirty-three of the respondents indicated that they make all the items independent while thirty disagree with the statement. The result was statistically not significant (X²= 6.1= p> 0. p> 0.05). Also 48 of the respondents indicated that they do review and editing of the items while 15 disagree with the statement. The result was statistically significant. Eighteen of the respondents indicated that they arrange the items in order of difficulty, beginning with very few easy items while 45 of the respondents disagree with the statement. The result was statistically significant.

Statement	Agree	Disagree	X ² Cal	Decision
I occasionally repeat words in the option	21	42	6.5	Accepted, p>0.05
I arranged the options alphabetically or numerically if it involves computations	22	41	16.8	Rejected, p<0.05
I use the same number of options for all the item	9	54	13.9	Rejected, p<0.05
I write the correct option before writing the distracters	30	33	16.8	Rejected, p<0.05
I use 'all of the above (AOTA) as an option	48	15	19.9	Rejected, p<0.05
I use 'none of the above as (NOTA) as an option	45	18	19.9	Rejected, p<0.05
I make all the options plausible And Homogenous	37	26	1.6	Accepted, p>0.05
I make the key longer/shorter than The Rest of the options	21	42	22.2	Rejected, p<0.05

Table 5: Writing Of The Options
X² Crit = 7.82, Df = 3

Table 5 shows that 21(33%) of the respondents agree with the item 'I occasionally repeat words in the option' while 42 (67%) disagree with the statement. The result was not statistically significant (X²= 6.5, p>0.05). Another item 'I make all the options plausible and homogenous was also not statistically not significant (X²=1.6, p>0.05). The result of the rest of the items on Table 5 indicates they were all statistically significant.

7. Content Analysis Of Selected End-Of-Semester Multiple Choice Test Items

In order to gain first hand information as to the extent to which lecturers' follow the guidelines laid down by measurement and evaluation experts in writing multiple choice items, a sample of end-of-semester examination which has multiple choice items were selected for content analysis. A random sample of thirty examination questions from the 2010- 2012 academic years were selected.

From the content analysis, the following were seen as the major flaws lecturers' make in writing the MCI.

- The keys (correct options) were longer or shorter in words than the distracters
- The options have not been arranged in alphabetical or numerical order
- The use of 'all the above' and 'none of the above' as options. In some instances, the two were used as options for the same question. In others, all of the above as an option, runs through all the items constructed
- Most of the items were negatively written and the negative words not underlined, italicized or bold faced
- There were words in the stem which serve as specific determiners that can aid the uninformed student to get the answer correct

Discussion

8. Reasons For Using The Multiple Choice Item

It is worth noting that lecturers give a wide range of reasons for using the multiple choice items which are in line with what are in the literature. For example, some of the reasons given by the lecturers include the fact that the items can be graded easily, quickly, consistently; they can cover a wide range of subjects; and they can be returned to their test takers in relatively short periods. The reasons given by the respondents agree with that of Haladyna (1999) who was of the view that multiple choice testing is an efficient and effective way to assess a wide range of knowledge, skills, attitudes and abilities. When done well, it allows broad and even deep coverage of content in a relatively efficient way. These findings also agree with that of Newstead & Dennis, (1994) who indicate that 'marking large numbers of students' subjective scripts, projects and others is time consuming, labour intensive and often involves errors of consistency in assessment. Including multiple choice items allows for more regular and efficient examining of students. Multiple choice items also enable the lecturers to test a wide range of topics taught'.

It was obvious that as much as 68.3% of the respondents do not consider the objective (use) of the test before deciding to use the MCI. One of the major principles of testing is that the testing instrument should serve the purpose of the test. The decision to use multiple-choice tests or include multiple-choice items in a test should be based on what the purpose of the test is and the uses that will be made of its results. If the purpose is only to check on factual and procedural knowledge, if the test will not have a major effect on overall curriculum and instruction, and if conclusions about what students know in a subject will not be reduced to what the test measures, then a multiple-choice test might be somewhat helpful -- provided it is unbiased, well written, and related to the curriculum. If they substantially control curriculum or instruction, or are the basis of major conclusions that are reported to the public (e.g., how well students read or know math), or are used to make important decisions about students, then multiple-choice tests are quite dangerous.

Respondents also disagree with the assertion that it is easy to construct the multiple choice item as well as the fact that it has high content validity. These two findings are in line with what was found in the literature. The multiple choice test has also been criticized on the grounds that much time is used in their construction. Some teachers have many difficulties when they try to construct multiple-choice test and it is one of the reasons why they are very reluctant to use them (Burton, 1991, Downing, 2006).

9.Planning Of MCI

Test planning includes several activities that need to be carried out by the teacher to devise a new test. As a first step, the teacher must draw up a test "blue print", specifying: 1) the content and 2) objectives of the test; types of items; practice exercises; time and limit.

From the analysis of the result it is obvious that a significant majority of the respondents reported not planning their multiple choice items. Planning of the test is one of the major principles in testing. There is the tendency of most teachers waiting till the last minute before hurriedly writing their items. The end result is that most of the items are poorly written. At times the items are ambiguous, unclear, and trivial in nature.

It is very important that Teachers should write the test before teaching a unit, and should share the test plan with the students before the test. Here's why. When teachers write the test before teaching the unit, they tend to write questions about the most important concepts, and then stress those concepts during instruction. When the teacher writes the test the night before it is given, he or she tends to measure the things that are easy to measure, which may not be aligned with instruction

10.Writing Of The Items

The respondents reported that they write the items to measure a single objective, they write more of the items in the positive terms, they write the items devoid of difficult vocabularies, and they do review and edit the test items. These findings are consistent with the principles of writing multiple choice items. As indicated McMillan by, (2001)' well written multiple choice items are defined as those that are constructed in adherence to guidelines designed by measurement experts and as found in the literature of assessment. A Good multiple-choice item is also recognized in the sense that those who have knowledge about the item get it right while those who have no knowledge about the item do get it wrong. The analysis indicates that more than half of the respondents write the items in the negative terms. For most educational objectives, a student's achievement is more effectively measured by having him or her identify a correct answer rather than an incorrect answer. Just because the student knows an incorrect answer does not necessarily imply that he or she knows the correct answer. For this reason, items of the negative variety are not recommended for general use. Occasionally, negative items are appropriate for objectives dealing with health or safety issues, where knowing what not to do is important. In these situations, negative items must be carefully worded to avoid confusing the student. The negative word should be placed in the stem, not in the alternatives, and should be emphasized by using underlining, italics, bold face, or capitals. In addition, each of the alternatives should be phrased positively to avoid forming a confusing double negative with the stem. In a survey of 46 authoritative references in the field of educational measurement, 31 of the 35 authors that discussed the negative variety recommend that they be avoided (Haladyna& Downing, 1989a)

11.Writing Of The Options

From the analysis, it is obvious that as much as 63.3% of the respondents indicate that they do not arranged their options in alphabetical order or numerically if it involves computations. This is a serious violation of the principle o writing the options of multiple choice. Arranging the items in alphabetical order helps prevent identification of patterns in the answers. More than 71.4% of the respondents indicate that they use the option 'all of the above' and 'none of the above'. This is a serious flaw in writing of the options. These two alternatives are frequently used when the teacher writing the item has trouble coming up with a sufficient number of distractors. Such teachers emphasize quantity of distractors over quality. Unfortunately, the use of either of these alternatives tends to reduce the effectiveness of the item. All of the above can be identified by noting that two of the other alternatives are correct and can be eliminated by noting that one of the options is incorrect. None of the above measures the ability to recognize incorrect answers rather than correct answers and therefore does not appear plausible to some students. While research on the use of "all of the above" is not conclusive, the use of "none of the above" has been found in several studies to decrease item discrimination and test score reliability (Haladyna & Downing, 1989b).

It is worthy to note that 58.7% of the respondents indicated that they make all their options plausible. This is in line with the principle of writing options to multiple choice items which states that 'for the student who does not possess the ability being measured by the item, the distractors should look as plausible as the answer'. Unrealistic or humorous distractors are nonfunctional and increase the student's chance of guessing the correct answer. Plausible distractors may be created by making use of common student misconceptions as distractors. The incorrect answers supplied by students to a short answer version of the same item are a good source of material to use in constructing distractors for a multiple-choice item.

12. Conclusion

There are many reasons why many lecturers' prefer the MCI to other test formats. But the question is do they have the necessary competence in the writing of the multiple choice items? The purpose of the study was to investigate lecturers' competence in the construction of multiple choice test items. The article has shown that there is much to be done to raise the competence level of the lecturers' with regards to the writing of multiple choice test items. While in some areas they go along with the principles of testing, in majority of the areas they lack the necessary competence. In-service training on both the theoretical and practical dimension of writing multiple choice items need to be given attention by the university.

A major limitation of the study was the relatively small sample size, which may limit the generalizability of the findings to the population under study. Further research needs to be carried out to examine the competency of the multiple choice items in different universities.

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