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## Competencies and Skills in the Assessment Course: The Perspective of the Graduate Teacher in Ghana

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### Abstract:

*The study determined the competencies and skills of the assessment course to the practicing teachers in the Agona West and East Municipalities of Ghana. The descriptive survey design was adopted for the study. The target population for the study was all core subject teachers in the six public SHSs in the Agona West and East Municipalities of Ghana. Purposive sampling technique was used to select 204 core subject teachers in six SHSs for the study. Questionnaire was used to collect data for the study. The reliability coefficient for the questionnaire was 0.71. Frequencies, percentages, and document content analysis were statistical tools used for the data analysis. The findings of the study showed that, to a great extent, teachers indicated they have acquired competencies and skills upon taking the course which helped them to plan a test bearing in mind the purpose for the tests. Teachers indicated the course has helped them to avoid ambiguity in test items. It was found that the course should be more practical in content. It is recommended that teachers should apply the competencies and skills gained in the course when assessing their students. This would make teachers get accurate information on their students so that the right decisions can be taken. Furthermore, lecturers who teach the assessment course should include examples which would make the instruction interesting and lively. This would aid students to comprehend what is taught so that transfer of knowledge into solving problems in new environment would be achieved. It would again, erase the perception that the course is difficult from the minds of some students.*

**Keywords:** Assessment, competencies, skills, lecturers, perspective, teachers

### 1. Introduction

Assessment is defined as the process of obtaining information that is used to make educational decisions about students, give feedback to the student about his or her progress, strengths and weaknesses, judge instructional effectiveness and curricula adequacy and to inform policy (AFT, NCME, NEA, 2014). Decisions about students include managing classroom instruction, placing students into different types of educational programmes, assigning them to appropriate categories, guiding and counselling them, selecting them for educational opportunities, and credentialing and certifying their competence (Nitko, 2001). Assessment is also the process of gathering, interpreting, recording, and using information about pupils' responses to an educational task (Harlen, Gipps, Broadfoot & Nuttal as cited in Teach (2010). Assessment, therefore, is a powerful and strong process that can optimize or inhibit learning, depending on how it is implemented. This is why in assessment, teaching and learning are said to be inseparably linked, as one informs the others. Satterly as cited by Jones (2000) opined that, educational assessment is an omnibus term which includes all the processes and products which describe the nature and extent of student's learning.

Scriven (1994) identified two types of assessment methods that must be used to achieve desired goals. They are formative and summative assessment. Etsey (1992) and Ogunniyi (1990) saw formative assessment as a systematic procedure for collecting information on students about teaching and learning in the school environment. Different people have different views about what exactly counts as formative assessment. Some think it should be applied only to the minute-to minute and day-to-day interactions between students and teachers, while others also see it as interim, or benchmark, tests administered every six to ten weeks. Summative assessment is described as a tool used after instruction to measure student achievement which provides evidence of student competence or programme effectiveness (Teach, 2010). To Clarke (2006), summative assessment is all about summarizing students' progress at a particular point in time for the purpose of reporting, motivating and evaluation of their standards and progress. He pointed out that, this kind of assessment emphasizes on the teacher sitting with the learner, which is a thing that the teacher does with and for the learner rather than to him. Summative assessment also hinges on assessment for the purpose of accountability so as to determine student's performance level on a specific task or at the conclusion of a unit of teaching and learning (Black & William, 2001; Clarke, 2006; Harlen, 2006). Deducing from these, it can be said that such an assessment takes place after teaching and learning and can also be labelled as an end-of-key stage levelling assessment process (Clarke, 2006).

Assessment plays many essential roles in education and a single assessment can serve numerous, but quite distinctive, roles. To begin with remediation role, it happens when sometimes the instruction the teacher arranges for the student in schools is not effective, therefore students may need special instruction, hence, relying on alternative methods

or materials. Also, diagnostic assessment or decisions revolve around questions like, what learning activities should I use to best adapt to the individual student requirements and thereby maximizing the opportunities to attain the chosen targets? Diagnosis implies identifying both the appropriate content and the features of the learning activities in which a student should be engaged to attain the learning target (Glaser & Nitko, 1971; Nitko, 1989; Nitko & Hsu, 1974). Hence, when the content of the assessment course is not adequate, assessors would find it difficult selecting the right method or content for the diagnosis of such an individual.

Placement decisions are characterised by assignment of levels of the same general type of institution, education or work; no one is rejected, but all remain within the institution to be assigned to some level (Cronbach, 1990; Cronbach & Glaser, 1965). Assessment provides information to place students in courses and classes where they are likely to succeed in the future and also provide the basis for grouping individuals for instruction in view of the individual differences.

The assessment course in the two universities provides trainee teachers with skills and competencies to develop a table of specification in planning their assessment. Here, teachers determine what to be tested or measured. According to Etsey (2004), assessment helps teachers to determine the chapters or units of the course content that the test should cover as well as the knowledge, skills or attitudes to be measured. Instructional objectives need to be defined in terms of student behaviours and linked to what has been stressed in class. A test plan made up of a table of specifications should be made.

Amedahe (1989) and Quagrain (1992) revealed that most secondary teachers in Ghana lack the skills required for constructing objective and essay type tests, which are the most frequently used instruments in schools. Teachers, however, construct assessment instruments to assess their students. This issue stems from the fact that, the education system at the basic and secondary levels lacks the availability of standardized tests as pertains to other educational systems such as USA. In effect, teachers use their limited knowledge and skills in the development of items which may not ensure validity and reliability of the assessments.

Campbell and Evans (2000) evaluated pre-service teachers who had completed coursework in educational measurement and found that student teachers did not follow many assessment practices recommended during their coursework. This phenomenon, has made graduate teachers very narrow minded in terms of methods or techniques of assessing students.

Stiggins and Conklin (1992) explain that many “teachers have not been taught how to evaluate their test items, take necessary steps to improve quality, or accurately set criterion levels for student performance” (p. 16). Graduates, according to Stiggins and Conklin, often rely on their own inadequate experiences of constructing poor test items to assess their students. The structure of the assessment courses in the University of Cape Coast, and the University of Education, Winneba, is such that, student teachers are taught competencies and skills involved in planning a test, bearing in mind the purpose for the test, how to avoid ambiguity in test items, construction of test items which are fair to all students and others. Also, it provides trainee teachers with the knowledge to develop table of test specification to plan assessments and interpretation of test scores. But, the question is, are graduates who took the assessment course from the two universities able to construct test items devoid of ambiguities? Are they able to construct test items bearing in mind the purpose for the tests?

### *1.1. Competencies and Skills in Assessment Course*

According to Shulman (2004), every assessment starts with specifying exactly what is to be assessed. Teachers do this in order for students to get targets they aim for. Gronlund (as cited in Oduro-Okyireh, 2008) posited, that “the key to effective achievement testing is careful planning” (p. 15). It is during the planning stage that the purpose of the test must be determined. The content of assessment in education course is designed to provide student teachers with competencies and skills. For teachers to be able to assess students well and to make sound decisions based on the results, teachers must understand general principles about how students learn, and they must understand deeply the content areas they teach as well (William, 2010).

The assessment course in the two universities provides trainee teachers with skills and competencies to develop a table of specification in planning their assessment. Here, teachers determine what to be tested or measured. According to Etsey (2004), assessment helps teachers to determine the chapters or units of the course content that the test should cover as well as the knowledge, skills or attitudes to be measured. Instructional objectives need to be defined in terms of student behaviours and linked to what has been stressed in class. A test plan made up of a table of specifications should be made. The table of specifications matches the course content with the instructional objectives (Etsey, 2004). With the total number of items on the test in mind, the specification table helps to avoid overlapping in the construction of the test items, helps to determine the weighting of learning outcomes with respect to content areas, and makes sure that justice is done to all aspects of the course, thereby helping to ensure the content validity of the test.

Teachers also, must be able to articulate clear learning objectives that are congruent with both content and depth of thinking implied by standards and curriculum goals, in such a way that they are attainable and assessable. A competent teacher defines and describes the knowledge and skills students need to learn in clear, attainable, and assessable ways. There must be targets that the students can envision for themselves and achieve. Targets must be assessable so that both students and teachers will know whether and to what degree they have achieved the targets (Stiggin, 2008; Taylor & Nolen, 2005).

Coupled with the above, the course helps practicing graduate teachers to have a collection of strategies for communicating to students what achievement of a learning is. It also equips practicing graduate teachers to share and communicate the learning objectives with students, parents and colleagues as well. The course outline of assessment courses in the two universities again, provides trainee teachers, a collection of several strategies for communicating

learning objectives to students (See Appendix F). This includes telling, showing, and having students discover for themselves the learning objectives in the content areas they teach (Moss & Brookhart, 2009).

Importantly, good students are able to detect the learning intentions or objectives without being taught by the teacher. However, for the sake of other students, the teacher needs to understand how to create and use activities, assignments, and assessments that embody the learning intentions at different levels of student understanding (Ruiz-Primo, Furtak, Ayala, Yin & Shavelson, 2010) without confusing the activities with the learning intentions themselves.

According to Hattie and Timperley (2007), assessment provides teachers the skills for effective and useful feedback on student work. He further elaborated that effective teacher feedback on student work is usually descriptive. Effective feedback gives students information about their work against the standards. Kluger and DeNisi (1996) indicated that effective feedback is at an intermediate level of generality so that students can identify specific improvements that are needed. Campbell and Collins (2007) found that assessment provides teachers with the knowledge to communicate the interpretations of assessment results. Teachers speak understandably with parents about the results of their children's classroom assessments, report card grades, the decisions made on the basis of these assessments and the intended consequence and follow-ups.

The course outline from the two universities captures test construction skills (See Appendix F). Test construction skills include the competencies needed for developing quality test items based on stipulated principles of test construction (Ali, as cited in Agu, Onyekuba & Anyichie, 2013). These competencies are outlined by Ujah (2001) as: objectivity, communicative, item validation skills and skills for applying appropriate strategies for ascertaining the reliability of test instruments. Silker (2003) asserted that, skill in test item construction enables a teacher to construct test items with precision, appropriateness of language-use, objectivity and good grading scales.

Agu, Onyekuba and Anyichie (2013) pointed out that teachers need not be experts in educational measurement and evaluation to construct valid and reliable tests, but there are some basic test construction skills which every teacher ought to possess to construct quality test items. Skills in assessment in education help teachers to structure test items to elicit clear and concise answers from students; construct test items that will be appropriate for learners of different ages, abilities, and gender and set test items so that students finish within time and do not grow scared of tests (Ali, 1999).

Assessment provides teachers with skills and competencies about the quality of test items. Teachers are able to ascertain how test items are closely linked with their ability to provide the kind of information needed regarding students' performances. A well written test item allows the teacher to accurately and consistently measure students' mastery of specific contents taught in class (Agu, Onyekuba & Anyichie, 2013). Results of such tests allow teachers to measure to some degree, how effective their instruction has been. To construct good test items, therefore, classroom teachers should possess the competencies in the following areas as outlined by Chidolue (1999, p. 36):

determining the purpose of each testing exercise; stating specific, measurable educational objectives; making good content outline; preparing test plan which will guide item construction; choosing appropriate test item formats; constructing clear, precise and unambiguous items; constructing items that focus the attention of a group of students, often with widely varying background experiences, on a single idea; constructing items with appropriate difficulty and discriminative indices; developing marking guide suited for the test; performing item analysis of their test items; developing tests that are economical in time and money; giving clear directions on how the test should be administered and taken; reviewing the test in order to correct any errors made during item construction.

Koksal (2004) also noted, that in test construction, it is essential that the teacher asks the following questions: Is the task perfectly clear? Is there more than one possible correct answer (objective items)? Can test-takers arrive at the correct response without having the skill supposedly being tested? Do test-takers have enough time to perform the task(s)?

Added to the above, the course outline from the two universities is such that trainee teachers are equipped with the knowledge in assessment to take several decisions (See Appendix F). Campbell and Collins (2007) found that understanding how to use assessment for different kinds of decisions was considered an essential assessment skill, according to a consensus of assessment textbooks authors.

In a nutshell, the structure of the assessment courses in the University of Cape Coast, and the University of Education, Winneba, is such that, student teachers are taught competencies and skills involved in planning a test, bearing in mind the purpose for the test, how to avoid ambiguity in test items, construction of test items which are fair to all students and others. Also, it provides trainee teachers with the knowledge to develop table of test specification to plan assessments and interpretation of test scores. But, the question is, are graduates who took the assessment course from the two universities able to construct test items devoid of ambiguities? Are they able to construct test items bearing in mind the purpose for the tests?

### 1.2. Research Questions

- What is the perception of graduates of the University of Cape Coast and the University of Education, Winneba on the adequacy of skills and competencies acquired in the assessment course for assessing their students?
- In what ways do graduates of the two universities of teacher education think the course in assessment should be improved to ensure its relevance and practicality to graduates in the field?

## 2. Methods

The study employed the descriptive survey design. The target population was the set of teachers in all the public SHSs in the Agona East and West Municipalities of Ghana who have taken course in assessment at UCC and UEW while the accessible population consisted of teachers of Core Mathematics, English Language, Social Studies and Integrated Science in the six public SHSs in the Agona East and West Municipalities. The purposive survey procedure was used to select 204 respondents for the study. A self-developed questionnaire was used for data collection. The questionnaire comprised both close and open-ended items. Items on the questionnaire were dichotomously-scored as 1 = Not applicable, 2 = No and 3 = Yes. Respondents were also made to write by responding to research question two. The Cronbach 's co-efficient alpha for the items on adequacy of the competencies and skills assessment course provided was (13 items) = .76.

Ethical clearance was received from Institutional Review Board in the University of Cape Coast. The purpose of the study, the need for individual participation, anonymity as well as confidentiality of respondents' responses were spelt out. Informed consent was sought from participants by explaining the purpose of the study to them. Anonymity of respondents was highly considered in the study. This gave the participants the opportunity to have their identity concealed. Neither names nor any identifiable information from respondents were taken. On the issue of confidentiality, effort was made to maintain confidentiality of the responses of the participants. Participants were told that their responses would be kept confidential and that no one known to them would have access to the information provided. The questionnaire was administered personally by the researcher to all the 234 teachers involved in the study in the six selected SHSs in the Agona West and East Municipalities. A period of one month was used to travel to all the sampled schools to administer the questionnaire. Out of the 234 questionnaires administered, 204 representing 87.17% were retrieved. Data was analysed using frequencies and percentages to answer research question one while data on research question two was analysed using document content analysis.

### 3. Results

#### 3.1. Research Question One

What is the perception of graduates of University of Cape Coast and University of Education, Winneba on the adequacy of skills and competencies acquired in the assessment course for assessing their students?

Competencies and Skills	Yes		No		Not applicable	
	Freq	(%)	Freq	(%)	Freq	(%)
1. How to plan a test bearing in mind the purpose for the tests.	196	96.0	4	2.0	4	2.0
How to use instructional objectives as the basis for test items.	190	93.1	13	6.4	1	.5
2. How to avoid ambiguity in test items.	176	86.2	24	11.8	4	2.0
3. How to provide instructions for taking the test.	174	85.3	28	13.7	2	1.0
4. How to construct assessment items which are fair to all students.	168	82.4	29	14.2	7	3.4
5. How to construct assessment items which are practical to all students.	171	83.8	28	13.7	5	2.5
6. How to construct objective items with only one correct or best answer.	174	85.3	23	11.3	7	3.4
7. How to develop a table of specifications to plan assessments.	140	68.6	50	24.5	14	6.9
8. How to ensure adequate content sampling for a test.	156	76.5	42	20.6	6	2.9
9. How to assess individual class participation.	156	76.5	44	21.5	4	2.0
10. How to follow required procedures (time limit, no hints, no interpretation) when administering tests.	164	80.4	33	16.2	7	3.4
11. Confidentiality with regard to test scores.	140	68.6	56	27.5	8	3.9
12. How to interpret test scores to students and parents.	151	74.0	41	20.1	12	5.9

*Table 1- Distribution of the Results of Respondents' Perception of Whether They Achieved Competency in Assessment Course  
Source: Field Survey, (2018)*

Table 1 showed that graduate teachers have perceived competencies and skills gained from the course as adequate. The results regarding the adequacy of competencies and skills acquired are summarised into three categories based on how the items were scored. These categories were (a) Yes=adequate, (b) No=not adequate and (c) not applicable.

The participants who responded that the course provided adequate competencies and skills ranged between 68.6% to 96.0% while between 2.0% to 27.5% indicated that the course did not.

Also, the results showed that between .5% to 6.9% indicated that the competencies and skills were not applicable when assessing their students. It could be observed from the study that the majority of the respondents were of the opinion that the assessment course provided them with the skills and competencies required to help them in their work.

#### 3.2. Research Question Two

In what ways do graduates of the two teacher training universities think the course in assessment should be improved to ensure its relevance and practicality to graduates in the field?

Statement	Frequency	Percent (%)
1. Proper guidelines for interpreting test scores.	8	4.0
2. Should be a full programme on its own.	25	12.3
3. Should be more practical in content.	45	22.0
4. Should be taught at all levels (100-400).	15	7.3
5. There should be in service training on assessment for graduates.	11	5.3
6. More lecturers should be employed to teach the course.	13	6.3
7. Local examples should be used when teaching the course.	8	4.0
8. Lecturers should adopt the use of PowerPoint presentations for teaching the course.	5	2.4
9. No response	74	36.4
Total	204	100.0

*Table 2: Distribution of Respondents' Ways of Improving the Assessment Course  
Source: Field Survey, (2018)*

Under the ways of improving the course, 130 respondents responded to the questionnaire. Some of the respondents involved in the study indicated that; (a) they did not have any idea about the ways through which the courses could be improved and (b) others also have no reason for not responding to the questionnaire. The researcher made several efforts by explaining to them the need for their participation but they did not. Table 10 shows that 22.0% indicated that the assessment course should be made more practical to students for them to understand it well. Also, 12.3% opined that the course should be made a full programme of study in the two Universities. This would help students understand the content very well and practice it as such. Furthermore, 7.3% indicated that the course should be taught at all levels in universities while 6.3% asserted that more lecturers should be employed to teach the course. It is worth noting that a greater proportion of the respondents indicated varied ways of improving the assessment course. These opinions would enhance the content of the course in the two universities.

#### 4. Discussion

The findings indicated that, in general, teachers in the study perceived the competencies and skills acquired through the course they took as adequate. Competencies and skills the course provides include (a) how to plan a test bearing in mind the purpose for the test, (b) how to avoid ambiguity in test items, (c) how to develop a table of test specifications to plan assessments and (d) how to ensure adequate content sampling for a test.

Through the study of the course, teachers acquired the skills and competence to plan a test bearing in mind the purpose for the test and how to use instructional objectives as the basis for test items. These are consistent with previous findings of Shulman (2004). In the literature, Shulman asserted that every assessment starts with specifying exactly what is to be assessed. Chidolue (1999) further indicated that assessment provides teachers with skills to determine the purpose of each testing exercise. Gronlund (as cited in Oduro-Okyireh, 2008) noted that "the key to effective achievement testing is careful planning" (p. 15). It is during the planning stage that the purpose of the test must be determined. For teachers to be able to assess their students well and to make sound decisions based on the results, teachers must understand general principles about how students learn, and they must understand deeply the content areas they teach as well (William, 2010).

Mention should be made of the fact that the finding in terms of the assessment course content includes teaching the students how to interpret test scores to their students and parents was in line with research finding by Hattie and Timperley (2007). According to Hattie and Timperley, training of teachers must provide them with the skills for clear interpretation of students' scores. Campbell and Collins (2007) noted that assessment provides teachers with the skills to communicate the interpretations of assessment results. Teachers speak understandably with parents about the results of their children's classroom assessments, report card grades, the decisions made on the basis of these assessments and the intended consequence and follow-ups.

The course also provides teachers with the skills for effective and useful feedback on student work. Kluger and DeNisi (1996) indicated that effective feedback is at an intermediate level of generality so that students can identify specific improvements that are needed. He further elaborated that effective teacher feedback on student work is usually descriptive. Effective feedback gives students information about their work against the standards.

The study found out that the course taught teachers with skills on how to develop a table of specifications to plan assessments. This was in line with research findings of Etsey (2004). In the literature, Etsey indicated that assessment provides teachers with skills for determining the chapters or units of the course content that the test should cover as well as the knowledge, skills or attitudes to be measured. Instructional objectives need to be defined in terms of student behaviours and linked to what has been stressed in class. A test plan made up of a table of specifications should be made. The table of specifications matches the course content with the instructional objectives (Etsey, 2004). With the total number of items on the test in mind, the specification table helps to avoid overlapping in the construction of the test items, helps to determine the weighting of learning outcomes with respect to content areas, and makes sure that justice is done to all aspects of the course, thereby helping to ensure the content validity of the test.

The study revealed that, in general, respondents indicated some ways through which the assessment course can be improved. Practicing graduate teachers indicated that the content adequacy, relevance and acquisition of competencies

and skills can be improved by making (a) the course a full programme on its own, (b) the course more practical and (c) engaging more lecturers to teach the course in reduced class sizes. The study found that the practicing graduate teachers indicated that the course is broad with so many areas, hence making it a full programme would make students understand the rudiments of assessment and appreciate the concepts involved better. This would also help student teachers to acquire the competencies and skills needed to assess their students.

It was also suggested that the course should be made more practical. Graduate teachers believed that the course content is theoretically oriented therefore, the need to make it more practical and become more effective. Thus, students on the course should be introduced to the practical aspect of every topic they learn. This would help students grasp the principles underpinning the course thereby ensuring content adequacy and relevance as well.

Moreover, the study showed that more lecturers should be employed to teach the course. Inadequate lecturers to handle the course contributes to a lecturer handling a class of 300 or 350 students at an instructional time. This does not create conducive environment for learning to take place. Hence, the need to employ more lecturers to teach the course cannot be overlooked.

Additionally, it was found that the course should be taught by lecturers with the use of local examples. Respondents indicated that, most often, lecturers teach the course citing foreign examples to elaborate their points and ideas. This does not help the understanding of students of the course, hence making the course boring and monotonous to them.

Furthermore, the study showed, that to ensure the acquisition of competencies and skills of a student upon taking the course, PowerPoint presentations should be employed by lecturers to teach the course. This approach carries visual images of some information which would make it easier for students to grasp and understand.

## 5. Conclusions and Recommendations

The assessment course provided teachers with information which enhanced teaching and learning in the sense that the course provided a lot of competencies and skills to them in terms of assessment of their students. It could, therefore, be concluded that, to a great extent, teachers in the government assisted Senior High Schools in the Agona West and East Municipalities acquired competencies and skills from the course. It is, therefore, recommended that lecturers who teach the assessment course should include examples which would make the instruction interesting and lively. This would aid students to comprehend what is taught so that transfer of knowledge into solving problems in new environment would be achieved.

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