

# Science Teacher Educators Understanding of the Concept of Assessment in Ghana

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**Abstract:** *The purpose of the study was to find out the extent of science teacher educators understanding of assessment practices used in Ghana. The research design used for the study is a descriptive survey. The target population of the study was made up of some of the science teacher educators in Colleges of Education in Ghana. Purposive sampling was used to select sixty-seven (67) science teacher educators from thirty-eight (38) Colleges of Education. Questionnaire was used to collect data for the study. It was found out that majority of the respondents agreed that assessment is the process of obtaining information for the purpose of using the information to make a decision about the student, the curricula, educational programme and educational policy. This means that the college of education science teachers really understand the concept of assessment*

**Keywords:** Formative, Assessment, Continuous Assessment

## 1. Introduction

The ongoing ferment in educational innovation in Ghana is directed towards producing effective human resource base to man the various sectors in the national economy. In order to achieve this laudable goal, the most important input is the cadre of well educated and well trained personnel to man effectively the new educational system which has assessment and grading as one of its pillars. Obviously, it is teachers who are at the heart of the implementation of the various forms of assessment. Teacher education therefore becomes a very important aspect of the process of innovation in the colleges of education.

Assessment is the collection of information for the purpose of using that information for making educational decision about the student, the curricular and educational policy (Nitco, 2002). Students in the colleges of education in Ghana go through formative assessment procedures before they obtain their final grades in their examinations. Assessment becomes formative in nature only when either the teacher or the student uses that information to inform teaching and/or influence learning (Black, 1998).

It is argued that attending to what goes on in the classroom in terms of assessment is crucial for achieving high standards (Black & William, 1998). In an extensive review of the literature that included more than 250 articles, Black and William (1998) place the effect size for learning gains in interventions involving aspects of formative assessment between 0.4 and 0.72. While learning gains were seen across student achievement levels, gains were highest for lower achieving students.

The substantial evidence of the positive impact on student achievement notwithstanding, research shows that meaningful formative assessment is, in general, not a key to priority of teachers (Crooks 1988; Black & William, 1998). Secondary Schools in England solicited information about the extent and nature of formative assessment practices in

science came to conclusion that most assessment practice remains as norm referenced marks, unrelated to criterion and with few accompanying details or comments (Daws & Singh, 1996). This situation is not different to what pertains to the colleges of education in Ghana. One cannot understand whether the teachers are not knowledgeable in the assessment practices or not. It is for this reason that the researchers decided to find out the science teacher educators understanding of the concept of assessment in Ghana.

## 2. Statement of the Problem

There is a problem in assessment and grading practices as they relate to determining students' grades in Colleges of Education in Ghana. The continuous assessment marks given to students in science are so high that, they do not match up with students' marks and grades in the end of semester's examination (Chief Examiner's Report, 2007). The mode of assessment used is formative but as to whether the college of education teachers really understand this assessment practice is another question to answer. This has necessitated the need to find out the science teacher educators understanding of the concept of assessment in Ghana.

## 3. Purpose of the Study

The purpose of the study was to find out the extent of science teacher educators understanding of assessment practices used in Ghana.

### Research Question

What is the extent of science teacher educators understanding of the concept of assessment?

### Methodology

The research design used for the study is a descriptive survey. The target population of the study was made up of some of the science teacher educators in Colleges of Education in Ghana. These categories of respondents were

selected because the study was about science teacher educators. The accessible population comprised of sixty-seven (67) science teacher educators in the Colleges of Education from twenty-six (26) districts in all the ten (10) regions in Ghana. Purposive sampling was used to select sixty-seven (67) science teacher educators from thirty-eight (38) Colleges of Education. Questionnaire was used to collect data for the study.

#### 4. Results/Discussion

To answer the research question, science teacher educators were asked about their views with regard to statements on the concept of assessment. The percentage score values of responses of teachers on the concept of assessment were found as shown in Table 1.

**Table 1:** Science teacher educators views on the concept of assessment

Item	Agree	Disagree	Total
1) Assessment is obtaining information from the students.	56(83.55%)	11(16.40%)	67(100%)
2) Assessment is obtaining information used for making decision about students, curricular, educational programmes and policies	53(79.10%)	14(20.90%)	67(100%)
3) Assessment implies the extent to which students have benefited from a course	48(71.60%)	19(28.36%)	67(100%)
4) Assessment involves testing students	60(89.6%)	7(10.40%)	67(100%)
5) Assessment is taking decision about students	61(91.04%)	6(8.94%)	67(100%)
6) Assessment imply mere gathering of information	20(29.85%)	47(70.15%)	67(100%)

**Source:** Field data, 2012

From Table 1, the percentages of the response to how science teacher educators understand the concept of assessment showed that, out of sixty-seven (67) science teacher educators who answered the questionnaire, fifty-six(56), representing eighty-four percent(84%) agreed that, assessment is a means of obtaining information from the students. On the other hand, eleven (11) of them representing sixteen percent (16%) disagreed that assessment is obtaining information. It is therefore conclusive that majority of the science teacher educators were of the view that assessment is obtaining information. It can be seen that, most of the respondents are toeing the line that assessment is by obtaining information about students. This view is in line with the assertion by Rogers (1991) that classroom teachers are calling for more training due to their perceived lack of preparedness to assess their students, citing weaknesses in their undergraduate preparation programs.

Fifty-three (53) of the respondents representing seventy-nine percent (79%) agreed that assessment is about obtaining information about students which is used to make decisions about students, the curricula, educational policy or

programme. Only fourteen (14) of them representing twenty-one percent (21%) disagreed that assessment is about obtaining information about students which is used to make a decision about students, the curricula, educational policy or programme. Averagely, this finding may indicate that most of the respondents do understand what assessment is all about which is in line with what was proposed by Nitco (2002). Nitco (2002) defined assessment as the process for obtaining information that is used for making a decision about students, curricula, programmes and educational policy.

Forty-six (46) of the respondents representing seventy-two percent (72%) agreed that assessment implies the extent to which students have benefited from a course. Also, nineteen (19) of the science teacher educators representing twenty-eight percent (28%) disagreed that assessment helps students to benefit from a course of study. Research shows that when students are involved in the assessment process, they learn more, achieve at higher levels, and are more motivated. They are also better able to set informed, appropriate learning goals to further improve their learning. (Crooks, 1988; Black & William, 1998; Davies, 2004; Stiggins, 1996; Reeves, 2007).

Sixty (60) of the respondents representing ninety percent (90%) agreed that assessment involves testing students and only seven (7) of them representing ten percent (10%) disagreed that assessment involves testing of students. This percentage score shows that majority of the respondents were of the view that assessment involves testing students. This view expressed by the respondents is similar to that of Amadehe and Gyimah (1995) when they suggested that one of the tools for effective assessment is test. They further expressed that assessment is a subset of test. This expression therefore means that assessment involves test.

Sixty-one (61) of the teachers representing ninety-one percent (91%) agreed that assessment means taking decision about students. Only six (6) of them representing nine percent (9%) disagreed that assessment is used to take decision about students. Assessment is used for numerous purposes: to diagnose student needs, to group students, to grade students, to evaluate instruction and to motivate students. (Stiggins, 1999).

Twenty (20) of the respondents representing thirty percent (30%) agreed that assessment is mere gathering of information. On the other hand, forty-seven (47) of them disagreed that meaning of assessment. It can be seen from the statements that, majority of the respondents did not perceive assessment to be the mere collection of information but rather using the information to take decision about students such as placement, selection and motivation.

In Table 1 most of the respondents did point out that assessment is the collection of information. Besides, some of respondents said that, assessment is not the collection of information instead, the collection of information for making a decision about the student, curricula, educational programmes and policies. While others think it is mere collection of information, others also think that the information collected should be used in making decisions.

However, assessment is the collection of information for the purpose of using the information to make a decision about the student, the curricula, educational programme and policy as proposed (Nitco, 2002).

Furthermore, the meaning of assessment has been used by most science teacher educators in the Colleges of Education interchangeably with the concept test. Brookhart (1994) also cites literature that calls for an increase in emphasis in teacher preparation programmes on classroom assessment and a decrease in emphasis on large-scale testing. In the same study, it was concluded that teachers' skills in both areas are limited.

## 5. Conclusions

It can be concluded that almost all the respondents agreed that assessment is the process of obtaining information for the purpose of using the information to make a decision about the student, the curricula, educational programme and educational policy. This means that the college of education science teachers really understand the concept of assessment.

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