

Chew, Pour, Pass, and Forget: Students Perception of Authentic Assessment in Universities in Ghana

*¹Frank Quansah, ²Daniel Asamoah

^{1,2}Department of Education and Psychology

Abstract: - *In recent times, stakeholders in education have questioned the training of students in universities. This is due to the fact that students find it difficult to apply what is learnt in schools to the world of work. This study examines students' perception of authentic assessment in universities in Ghana. A cross-sectional survey was conducted in four universities in Ghana. Using a multi-stage sampling technique, 1,891 students were selected to participate in the study. A questionnaire was adapted from Fisher and colleagues in 2005. The adapted questionnaire was validated using confirmatory factor analysis with 5,000 bootstrap samples and this was used to establish the construct validity of the questionnaire. Means, standard deviations and one-sample t-test were used to analyse the data. From the perspectives of the students, assessments in their university were not authentic ($t(629) = -6.536, p < .001$). The students argued that assessment in their institution did not help them to apply their learning to real life. The students were of the view that assessment in their universities failed to examine their ability to answer practical questions even in their field of study. It is recommended that lecturers in various universities in Ghana should try as much as possible to make their assessment more practical and applied to the real world of work.*

Keywords: - *Authentic assessment, perception, assessment task, assessment practices.*

Introduction

In schools, assessments are an indispensable part of the teaching and learning process (Goodrum, Hackling, & Rennie, 2001). Assessments are not only a means to allocate grades and examine whether set objectives are achieved but have also become a tool for learning (Watering, Gijbels, Dochy, & Rijt, 2008). Customarily, assessment practices employed in schools in Europe have been greatly decided by teachers and thus, inappropriately implemented which make assessment incongruent with planned learning, inauthentic and not transparent (Fisher, Waldrip, & Dorman, 2005). Rust (2002) has argued that teachers continuously assess student learning – and to graduate and certify learners – much as was done in past centuries, without significant reference to what learners should know and can do.

In the past decades of the previous century, educational culture has changed from knowledge-based to competency-based education even though educational goals have focused on producing knowledgeable students and future workforce

(Segers, Dochy, & Cascallar, 2003). A number of reviewed reports in different countries have revealed that students are not adequately prepared for the real world of work after they complete school (American College Testing, 2006). Gulikers, Bastiaens, and Kirschner (2006) attributed this problem to the fact that school standards are not aligned to the expectations of the world of work. Scholars have discovered that classroom discourse in schools in Sub-Saharan African stresses recitation and rote memorization without encouraging students' understanding (Hardman, Abd-Kadir, & Smith, 2008; Pontefract & Hardman, 2005; Sutton, 2000). Even though some teachers set instructional goals, they do not assess them (Mintah, 2003). Sofu, Ocansey, Nabie and Asola (2013) stated that instructional approaches that emphasise rote learning are restricted in terms of assessing higher levels of knowledge among students and thus should be avoided. Gibbs (1992), in his own words, indicated that “even where lecturers say that they want students to be creative

and thoughtful, students often recognise that what is really necessary, or at least what is sufficient, is to memorise” (p. 10).

In Ghana, teachers have been found to have poor assessment practices (especially test construction and grading) in various schools. Kankam et al. (2014), for instance, discovered that assessment practices by Social Studies teachers in SHS in Ghana do not match what the student is required to engage in after school. The authors, therefore, recommended that Ghanaian teaching universities should do well to broaden their scope on the teaching of assessment to incorporate authentic assessment. Adding to that, Physical Education (P.E) teachers in the Senior High Schools (SHS) in Ghana rarely employed assessments which provided an opportunity for peer or self –assessment (Sofu et al., 2013). Sofu et al. (2013) further discovered that the P.E teachers did not use a wide range of assessment technique even when it is required. Other studies, like that of Kankam et al. (2014), have also discovered a growing non-authentic assessment in SHS in Ghana. Quansah, Amoako and Ankomah (2019), in their study, discovered that teachers in some SHS in Ghana have limited competencies in test construction skills. Adu-Mensah (2018) also found that Basic School teachers in Ghana have a negative attitude towards grading.

It is of essence to state that SHS teachers in Ghana are trained in the universities and thus, their teaching practices are, to some extent, as a result of the training received. However, assessment practices among lecturers in universities in Ghana seems to be less explored even though Mazur (2015) believes that deficiencies in students’ learning are the result of poor assessment practices in the universities. Students’ perception of assessment practices in any educational establishment cannot be overlooked. Thus, the way students prepare themselves for an assessment depends on how they perceive the assessment (before, during and after the assessment), and these effects can have either positive or negative influences on learning (Gielen, Dochy, & Dierick, 2003). Learners, therefore, need to understand the

processes of assessment and the implications for themselves as learners (Schaffner, Burry-Stock, Cho, Boney, & Hamilton, 2000).

Empirically, much is known about assessment practices among teachers in Ghana and most of them have found limited skills in assessment and testing practices among SHS teachers (Kankam et al., 2014; Quansah & Amoako, 2018; Quansah, Amoako, & Ankomah, 2019) and tutors of colleges of education (Anhwere, 2009; Akyeampong, 1997). Again, previous studies in Ghana focused on what teachers do in assessment. However, little is known on how students perceive the assessment practices of their teachers even though similar qualitative studies have been done in the Western World (e.g., Alkharusi et al., 2012; Fook & Sidhu, 2014; Gijbels, Van de Watering, Dochy, & Van den Bossche, 2005; Wass, Miller, & Sim, 2014). Even with that, most of these previous studies earlier stated were conducted among teachers. The few studies which employed students focused on their perception of assessment feedback, fairness and importance attached to assessment (e.g., Brown & Wang, 2011; Ferguson, 2011; Wren, Sparrow, Northcote and Sharp, 2009). This study, however, examines students’ perception of authenticity in assessment in universities in Ghana. It is important also to investigate the perception of authenticity in assessment since their perceptions significantly affect their learning and consequently their performance (Mazur, 2015; Rust, 2002).

Authentic Assessment

Wiggins (1990) has been largely involved in the advocacy of authentic assessment in schools. From his perspective, authentic assessment in education is visible when the assessment directly examines students’ achievement on worthy intellectual tasks. Wiggins (1990) believes that authentic activities encompass "ill-structured" challenges and roles that help students rehearse for the complex ambiguities of the "game" of adult and professional life. Wiggins (1990) clearly stated that:

“Authentic assessments provide the student with the full range of activities that reflect the challenges and priorities found in the best instructional activities:

carrying out research; revising, writing and discussion of papers; providing an engaging oral analysis of a recent political event; collaborating with others on a debate, etc.” (Wiggins, 1990, p.2)

Authentic assessment, as defined by Gulikers et al. (2008), requires students to use the integration of knowledge, skills, and attitudes so that they are able to apply these in professional life. These definitions seem to focus on the design of assessment tasks that allow students to use their reflections and their thoughts in relation to real-world scenarios and issues. Carless (2007) claimed that activity design should be practice-orientated to encourage students' active engagement in learning dispositions, and should reflect real-life situations linked to the subject learnt. Thus, assessment methods should empower students as learners and critical thinkers so that they demonstrate employability upon graduation.

Classical Test Theory

In 1904, Charles Spearman was responsible for figuring out how to correct a correlation coefficient for attenuation due to measurement error and how to obtain the index of reliability needed in making the correction. Spearman's finding is believed to be the beginning of Classical Test Theory (Traub, 1997). Others who had influence in the Classical Test Theory's framework include, George Yule and Truman Lee Kelley, Louis Guttman, and, most recently, Melvin Novick, also contributed in this regard after Spearman's initial findings (Lord & Novick, 1968).

Classical Test Theory (CTT) is a body of related psychometric theory that predicts outcomes of psychological testing such as the ability of test-takers. Classical Test Theory is a bit of a misnomer. There are actually several types of CTTs. The foundation for them rests on aspects of a total test score made up of multiple items. That is, the raw score (X) obtained by an individual is made up of a true component (T) and a random error (E) component. Thus, $X = T + E$ (Allen & Yen, 2002). For example, if on an achievement test, Joyce's true score is 108 but her observed score is 112, then X is 112, T is 108, and E is +4. If Joyce is tested again

and her observed score is 100, then X becomes 100, T is still 108, and E is - 8. For any given examinee and test, T is assumed to be a fixed value, although E and X vary for that examinee on different testing occasions (Allen & Yen, 2002).

In the context of this study, the observed score can be linked to the examination and quiz scores of students. For example, a student who obtains a score of “78%” in Research Methods has an observed score of “78%”. It is vital to state that this observed score (i.e., 78%) consist of a true score and an error score. The true score, here, depicts what the student can actually do whereas the error score consists of the factors which create inconsistencies between the grade a student obtains and the actual abilities of the student. Thus, if Nathaniel cheats in a Research Methods examination and as a result obtains a score of “85%” but do not have mastery over the course content, then the true score becomes inconsistent with the observed score (85%). This means that the cheating which went on during the examinations led to errors in the score, and therefore, resulting in lower reliability of the observed scores.

In a more applied sense, if students perceive assessment as inauthentic, then they will engage memorisation of fact in order to pass. When this happens, there will be a discrepancy between what the students can do and what he/she is expected to do. This study, in using the theory of CTT, focuses on how assessments procedures in education contribute to errors in the observed scores of students. It is expected that the observed scores of students equal their true score which implies that their observed scores are error free. Although this is something too difficult to achieve, it is possible to reduce the errors so that they would have an insignificant effect on the observed scores.

This theory is significant in its effort to provide a comprehensive understanding of how scores and grades of students can be contaminated. This study also explains how assessment practices of teachers are likely to significantly contribute to the errors in scores. The theory further helps to discuss why university students might have good academic achievement in schools but become handicapped

when there is an opportunity for them to apply what has been learnt in schools.

Methodology

The study employed a cross-sectional survey with quantitative approach. This design was employed in this study because of its simplicity – we posed a number of questions (through writing) to willing participants (students), summarised their responses with percentages, frequency counts, and more sophisticated statistical tools; and then drew inferences about the entire (student) population from the responses of the sample (Leedy & Ormrod, 2010). The study was conducted in four public universities: University of Ghana, University of Cape Coast, Kwame Nkrumah University of Science and Technology, and University of Education, Winneba. The population comprised only undergraduate regular students in the selected

universities. A multi-stage sampling technique was employed to sample 1,891 students from the four universities.

We used a questionnaire for the data collection. The instrument was adapted from the “Students’ Perception Assessment Questionnaire (SPAQ)” developed and validated by Darrell Fisher, Bruce Waldrip and Jeffery Dorman in 2005. Only the “authenticity” dimension of the standardised instrument was adapted. Few modifications were made after the pilot-testing. None of the original items was eliminated but was reworded to fit into the context of the study. After the modification and data collection, a Confirmatory Factor Analysis (CFA) using Structural Equation Modelling (SEM) was used to validate the instrument. This was done using 5,000 bootstrap samples. Figure 1 presents the graphical result of the CFA.

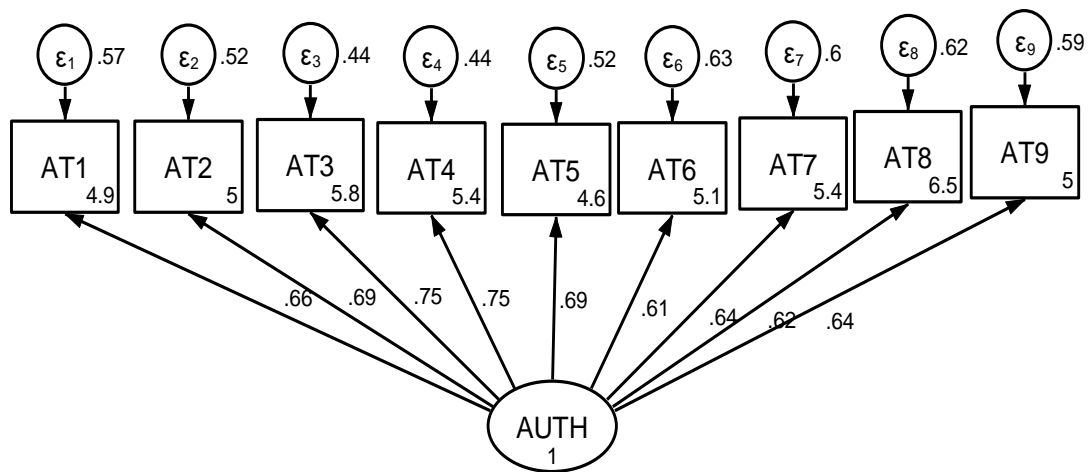


Figure 1: SEM of the Authenticity Scale

Table 1: CFA Results

Measure	Loading	Bootstrap SE	P-value	95% Conf. interval	
				LL	UL
AT1	.659	.027	.000	.606	.712
AT2	.698	.027	.000	.637	.744
AT3	.759	.018	.000	.717	.786
AT4	.748	.021	.000	.705	.786
AT5	.699	.024	.000	.648	.740
AT6	.609	.020	.000	.568	.648
AT7	.635	.017	.000	.601	.670
AT8	.618	.016	.000	.585	.648
AT9	.649	.018	.000	.605	.675

Average Variance Extracted (AVE) = 0.5; Cronbach Alpha= .89

The results in Table 1 reveal that all the items significantly loaded on the construct (authenticity). This was evident from the loadings between .609-.759. The AVE of .5 shows that construct validity of the instrument has been established. The Cronbach alpha of .89 also suggests that the instrument has less errors and high internal consistency (Quansah, 2017). Results from the Model fit indices were at acceptable levels (Root Mean Square Error of Approximation (RMSEA)- .021, Good of Fit Index (GFI)-.90, Comparative Fit Index (CFI) - .90, Chi-square – nonsignificant).

Results

The study sought to examine students’ perception on the authenticity of assessment in the Ghanaian

public universities. Nine (9) items were used in quantify this construct which was measured on a four-point Likert scale (Strongly Agree-4, Agree-3, Disagree-2, Strongly Disagree-1). Mean and standard deviations were used to analyse the data gathered. A mid-point of 2.5 was used as the baseline for comparison such that mean values above 2.5 indicated that most of the respondents were in agreement with the statement and vice versa. One sample t-test was also carried out to find out whether the composite score significantly differed from the test value. Test value of 22.5 was used. Results on the analysis of data are presented in Table 2.

Table 2: Perception of Students on the Authenticity of Assessments in UCC

Statement	Mean	SD
Assessment in my university helps me to apply my learning to real-life situations.	2.46	.90
Assessment tasks in my university are useful in my everyday life.	2.47	.85
I find assessment tasks in my university relevant to what I do outside of school.	2.38	.88
Assessment in my university assesses my ability to apply what I know to real-life problems.	2.49	.86
Assessment in my university examines my ability to answer practical questions in my field of study.	2.37	.79
Assessment in my university does not reflect issues in real life situations.	2.57	.84
Assessment in my university does not help me to apply what has been taught.	2.68	.84
Assessment in my university does not give me the chance to demonstrate my abilities on wider learning tasks.	2.53	.85
Assignments in my university do not offer me the chance to learn values and processes of team work.	2.74	.87
Overall Mean	20.44**	4.06

**t (629) =-6.536, p<.001; Source: Field survey (2018)

It was revealed from the one sample t-test analysis that assessment in the universities was not authentic (t (629) =-6.536, p<.001). By this, a majority of the respondents argued that assessment in their institution did not help them to apply their learning to real life (M=2.46, SD=.90) (see Table 2). The respondents stated that assessment tasks in their universities were not useful in everyday life (M=2.47, SD=.85). It was found that assessment tasks were not relevant to what they do outside of school (M=2.38, SD=.88). The respondents opined that assessment in their universities failed to

examine their ability to answer practical questions even in their field of study (M=2.37, SD=.79). The respondents asserted that assessment in their universities did not reflect issues in real life situation (M=2.57, SD=.84). In terms of demonstrating their abilities on wider learning tasks, the respondents were of the view that assessment in the institutions did not provide such an opportunity (M=2.53, SD=.85). The respondents again said that assessment in their university did not offer the chance to learn the values and processes of teamwork (M=2.74, SD=.87).

Discussion

Training university students to be equipped with the 21st century competence and skills have been the priority of several educational institutions. Due to this, policies and plans have been put in place by these universities to ensure the complete development of students. Assessment has been a major strategy in achieving this in almost every university. In an effort to find out how authentic assessments are, this present study revealed that there is a low degree of authenticity in assessment with the institutions. This is the perception of the students. This suggests that assessment did not help students to apply their learning to real-life situation and as a result, the students perceive assessment in the institution as not useful and relevant to what they do outside of work. Students believed that assessment does not help them to apply what has been taught. With this perception held by the students, it suggests that they just learn by rote, get their grades, and complete the university and leave. As to the skill and competence they attain, something little is known.

Traces of this argument can be found in the literature. Gulikers et al. (2008) observed that there is a gap between teacher and student perceptions of authenticity. Assessment tasks that teachers felt as authentic were not considered authentic by students. Do teachers understand authenticity more than students or otherwise? While some studies have indicated that teachers have an inadequate conceptualisation of authenticity (Maclellan, 2004), others argued that students do not have much knowledge to know authentic items (Gulikers et al., 2008). It must be said that authenticity is a matter of individual perception and is somewhat dependent on personal experience. Therefore, for assessment tasks to relate to real-life situations, it is imperative that teachers and other personnel who are involved in the assessment decision process understand what real-life situations students are really concerned about (Gulikers et al., 2008). This is important because the perceptions students hold significantly predict their learning (Gielen et al., 2003) and thus, learners need to understand the processes of

assessment and the implications it has for them as learners (Schaffner et al., 2000).

In Dorman et al.'s (2006) study, which was conducted among 449 secondary school students, it was found that students held the perception that assessment in their schools was of low authenticity. This implies that the students perceived assessment as not relevant to what they do outside school and does not help them apply their learning in a real-life situation. A similar result was discovered in Gao (2012) and Dhindsa Omar, & Waldrip's (2007) study. These studies also found low levels of authenticity as reported by secondary school students. These results are consistent with the findings of the study. Dorman et al. (2006) further revealed that assessments with a low degree of authenticity have a harmful effect on the confidence in their ability to successfully perform academic tasks. There is the need, therefore, to ensure that assessments given to students are authentic. Even though the findings of this study corroborates with these previous studies, the samples and the context of the studies differ.

The findings of the study contradict that of Fernandes et al. (2012) who explored students' perceptions about assessment practices at a university in Northern Portugal. Their study focused on Project-Led Education (PLE) approaches and their impact on students' learning processes and outcomes. Fernandes et al. (2012) revealed that students were able to relate their work to broader and professional situations outside the academic world. Unlike this study which is quantitative, Fernandes et al.'s study was qualitative in nature. It is obvious that students in Fernandes et al.'s study, perceived assessment to be authentic since these students were engaged in project-led education which is more practical than the paper and pencil test used in most universities. This can explain the discrepancies in the results.

Conclusions and Recommendations

An objective of any undergraduate programme is to equip students with specialized knowledge and skills needed for the pursuit of careers in different sectors of the economy. This objective cannot be

achieved if these perceptions held by the students are true. What then could influence the perception of the students to give such responses? It is likely that the forms of assessment and how these assessments are constructed do not offer students the chance to learn practical skills and abilities. Even though these universities advise that the components of assessment should consist of take-home assignments, class quizzes and tests, term papers, and practical works, our personal observation and experience seem to suggest that most lecturers use only quizzes and exams in assessing their students. We do not dispute the fact that quizzes and examinations can measure high order skills and content mastery, but some level of competence is needed in test construction before this can be possible. Assessing students using term papers, take-home assignments, and practical work improves the reasoning and writing skills of students more than quizzes and examinations. Therefore, the blend of these assessments is likely to build mastery and competence among these students.

It is important to emphasise that once students hold the perception that assessment measures how well they are able to memorise what has been taught without understanding, they will definitely argue that assessments in the school are inauthentic. With this perception, the kind of questions used in assessing these students should be questioned. Thus, if questions just measure memorisation of fact, then, indeed assessment cannot offer students the opportunity to apply their learning to practical situations. However, these perceptions cannot be easily equated to the practices of these lecturers in assessing their students since perception is a function of several variables such as experience, attitude, etc.

Because students perceived assessment as inauthentic, it is recommended that lecturers in various universities in Ghana should try as much as possible to make their assessment more practical and applied to the real world of work. The management of various universities should alternatively appoint assessment officers (experts in educational measurement) whose work will be to

review test items constructed by lecturers, supervise the assessment practices of the lecturers and organise frequent training on assessment for lecturers. The officer would also be there as an advisor to the lecturers on the assessment procedures which are considered appropriate for respective courses based on the course objective.

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