



Academic Assessment of Students Work and Quality Assurance in Tertiary Institutions: A Conceptual Framework

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Abstract

This paper discusses the social and cognitive variables that influence the roles of most practitioners during the marking of examination scripts and other student assessment procedures in educational institutions. Most approaches to the assessment of student work and are rooted in the specific historical, legal, national and pedagogical context of the institution. Studies have thus shown that practices differ widely between countries, regions, institutions and subject areas within institutions. It is the position of this paper that academic assessment procedures in educational environments should be designed to suit particular needs of the specific programme of study. What is important here is ensuring that the principles guiding the design of a specific assessment practice are transparent, fair and open to scrutiny by all stakeholders during and after their administration. It has been noted by some external assessors that when the final results of a student's work do not fit within a normal distribution curve incompetency on the part of the practitioner is to blame. This is a broad accusation and it remains to be shown how to go about substantiating professional incompetencies in academic assessment exercises. It is against this background that this paper presents a conceptual diagram and theories that support the influence of cognitive and social variables on the work of practitioners in higher education.

Keywords: Academic Assessment, Quality Assurance, Higher Education, Practitioner Cognitive, Social Factors.

Reference to this paper should be made as follows:

Azameti, M. S. K, & Adjei, E. (2013). Academic Assessment of Students Work and Quality Assurance in Tertiary Institutions: A Conceptual Framework. *International Journal of Scientific Research in Education*, 6(1), 1-8. Retrieved [DATE] from <http://www.ij sre.com>

INTRODUCTION

A critical aspect of teaching and learning functions in higher education that has not been considered in empirical investigations of quality assurance and management is the influence of non-academic or negative social variables on the work of practitioners. These variables or social factors include ethnicity, sexual advances by students and/or practitioners, affirmative action and protocol considerations of the academic board, fatigue/stress, and parents and/or

politicians seeking special considerations for students. These variables can significantly influence the work of some assessors and affect the quality of students' final achievements and their permanent academic records.

While many of these factors are highly contentious and so scarcely discussed, their presence and influence in the education system cannot be denied by practitioners, students, parents and policy makers alike. The areas typically most affected by these factors are the assessment process and related procedures involving the evaluation of student work and include, for example, end of semester examination invigilation, examination scripts grading, and the grading and supervising of student projects.

This paper identifies a loop of cognitive factors such as teacher efficacy, the use of marking schemes, and perhaps above all else, a loop of social variables that influence practitioner decisions during student assessment. The influence of cognitive and social factors on student assessments in academic institutions forms an integral part of social and cognitive psychology. Cognitive psychology, which is the study of mental states, in the context of this study highlights as evidence of a practitioner's ability, his or her initiative to prepare relevant marking scheme to guide the marking of scripts or other academic work. Cognitivism holds that moral judgments are statements of facts and therefore can be true or false (Schroeder, 2008a, 2008b). Student assessments, which tend to produce a normal distribution curve, may not always accurately represent the assessed work. These assessments may be true or false depending on the cognitive ability of the assessor or what is termed teacher efficacy.

LITERATURE REVIEW

Academic Assessment

According to Albert (1997), teacher self-efficacy refers to a practitioner's perceived ability to deal with the challenges and demands of his or her profession. In this context, quality assessment of student work depends to a large extent on the marker's professional skills or competencies, yet this does not rule out elements of subjectivity. Aside from the influence of cognitive variables, social variables also play a role when it comes to teaching and learning in academic institutions.

Personal observation suggests that there are many instances of a sheer lack of professionalism on the part of some assessors. This often happens when an institution engages a number of part-time workers who may have some accumulated work load from their permanent work places spill over into their assessments. One also cannot rule out accidental lapses. Rather than cause for concern, such occurrences when sparse should be seen as a product of complex and busy lives.

The literature on teaching and learning quality assurance in higher education is often limited to areas such as bloom taxonomy (Bloom et al. 1956) which is thought to serve as a guide for writing assessment materials that test knowledge of recognition and comprehension at lower levels and of analysis, synthesis, application and evaluation at higher levels. In addition to the aforementioned measures for ensuring quality and fairness in higher education academic assessments, marking schemes and normal distribution curves are common (Beardwell, Holden & Tim, 2004, p. 284). Operators of private tertiary institutions go further and organize training workshops for their staff around quality assurance measures so as to meet the quality standards required by their mentor institutions. The intended purposes of these training activities have, however, not yet been achieved.

According to Tribus in Philip, Messner and Ruh (1998, p.24), "perversity principles are ever present" and so "if you try to improve upon the performance of a system of people, processes, procedures, practices and machines by setting goals and targets for individuals and parts of the system, the system will defeat you every time and you will pay a price where you least expect it." Evidence from many contemporary private tertiary institutions in Ghana and other African countries shows that examination management is one area of the teaching and learning environment where huge sums of money are spent to pay invigilators and examination committee members every year (Ogunji, 2011). Related expenses, including fees for programme accreditation and institutional affiliation, have increased the cost of running private universities in many African countries. This underscores the travesty of the challenges faced not only in teaching and learning, but in managing private universities in Africa.

As a result of successful policies on quality assurance and their implementation in private universities in Africa, higher education committees, governments and other stakeholders are now continually seeking out new mechanisms to again improve quality and address emerging challenges. One area which has undoubtedly not been given critical consideration in discussions of quality assurance in higher education is the conduct of examinations and

the principles which guide the practitioner in his or her work. Although some institutions have guidelines for conducting end-of-semester examinations there seems to remain a disinterested attitude on the part of some invigilators with regards to the enforcement of these rules and regulations.

Most private African universities, including those in Ghana have received at least one complaint from their mentor public institutions concerning the way some of their staff perform their duties particularly the marking examination scripts and supervision of student research. Such was indicated by a member of the visiting team from a mentor public university in Ghana during the 2011 examination. Various training programmes have been organized to update the skills of staff in order to improve their performance in response to the concerns of mentor institutions, but the problems persist.

Recognizing this, this paper presents a conceptual framework based on the premise that the decision to ensure quality and fairness in academic assessment rests to a large extent with the assessor/examiner. These decisions are described in this paper as right-wing and left-wing decisions. Right wing decisions are influenced by cognitive variables while left-wing decisions are influenced by social or non-academic variables. The decision making process in this context is an individual one, but critical in that it places the assessors' professional credibility at stake. Allowing the influence of non-academic variables in the marking of examination scripts also threatens the credibility of the educational institution and the academic achievements and records of students. These academic lapses and inconsistencies may as a result have serious implications for the future expansion and autonomy of these private institutions.

One cannot study academic records without first investigating the factors and processes which led to the creation of those records. This supports the general systems theory (von Bertalanffy, 1968) which holds that organizations have interrelated parts that constitute a system and so what affects one part affects other parts [Alter, 2001]. To date, literature on quality assurance in educational management has not produced a comprehensive conceptual framework and diagram that explains the influence of social factors on the marking of examination scripts. This lack of a framework makes it difficult to identify testable assumptions as inputs in the planning, organizing and implementing of sustainable quality measures in post-secondary teaching and learning activities. This is not, however, to overlook the contributions of Ogunji, (2011), Olayinka (2010), Fasasi (2009), Adenipekun, (2004), Wilfried, (2002) in Ogunji (2011) and Badmu (2006) who have critically examined cases of academic dishonesty and examination management challenges in institutions of higher learning. Of particular interest in these studies is the lack of professionalism by some practitioners during assessments of students work.

Many stakeholders and policymakers bemoan the falling standards of education at all levels in recent years; they generally fail, however, to consider the extent to which certain social factors are inextricably linked to the work of practitioners and contribute to the problem (Olatoye, 2010; Clark & Robbert, 2004). The over use of protocol considerations for admitting some students and the augmenting of abysmal results for certain categories of graduating students are part of this problem. Some critics are of the view that such considerations eventually induce mediocrity among the final products of the institution and negate meritocracy among students (Wilfried, 2002; Harvey, 1993).

The conceptual framework in this study explains both cognitive variables and social factors in academic assessments by practitioners. Emphatically speaking, the decision to produce an acceptable result after marking examination scripts rests with the assessor. This decision is informed by forces which this paper terms centripetal and centrifugal forces and begins with elements such as the practitioner's self-efficacy or professional competency, the creation of relevant marking schemes, adherence to marking schemes, and avoiding awarding marks arbitrarily when marking scripts.

Other factors include the use of affirmative action and protocol considerations by academic boards. This paper proposes that the cognitive and non-academic or social variables are linked by theories termed *centripetality and centrifugality [untested]*. These are derived from the pure sciences, physics for example, and denote the moving, acting or pulling towards a centre or axis and vice versa. In the context of the conceptual framework and diagram discussed below, the marking of examination scripts by practitioners is guided by centripetal and centrifugal forces which may produce a normal distribution curve or abnormal curves that, under normal academic conditions, tend to illicit concern.

Unconfirmed reports from employers in both developing and least developed nations highlight concerns about the quality of graduates from tertiary institutions; these concerns pertain to not only those graduates of from less endowed institutions and communities, but those as well of industrialized nations (Abdulrazaq & Amimulahi, 2000; Ayita, 2006; Ajibola, 2002). At the same time and despite these telling observations, we should resist attempts to undermine genuinely high academic performances which in most cases do produce abnormal distribution curves.

Quality Assurance

The World Bank Working Report No. 124 (1999/2000) on quality assurance in sub-Saharan African universities confirmed the sub-quality standard of students graduating from many African tertiary institutions of learning. Often these reports are unsurprising when one considers the prevailing financial and logistic constraints in many developing nation educational systems. Still, if these allegations are taken seriously then educational practitioners involved in student assessments must be accountable for their decisions. Reports such as these provide new opportunities for educational service providers and stakeholders to reconsider earlier quality assurance policies in the context of challenges to tertiary education today (Materu, 2007).

It is interesting to note that universities no longer pursue knowledge for its own sake; rather they provide qualified human resources and produce relevant knowledge. With this new socio-economically oriented paradigm comes a different kind of accountability as higher education institutions are now judged in terms of quality of outputs and contributions to national development.

The Conceptual Diagram

The conceptual diagram upon which this paper is based addresses five key areas of practitioners' roles in academic evaluation in tertiary education:

A: the diagram considers self-efficacy or the professional competence of the practitioner. This includes creating a relevant marking scheme, adhering to the scheme, and awarding marks based on merit or the correct answers as stated in the marking scheme.

B: the diagram provides a theory in support of common cognitive and social variables in two separate loops.

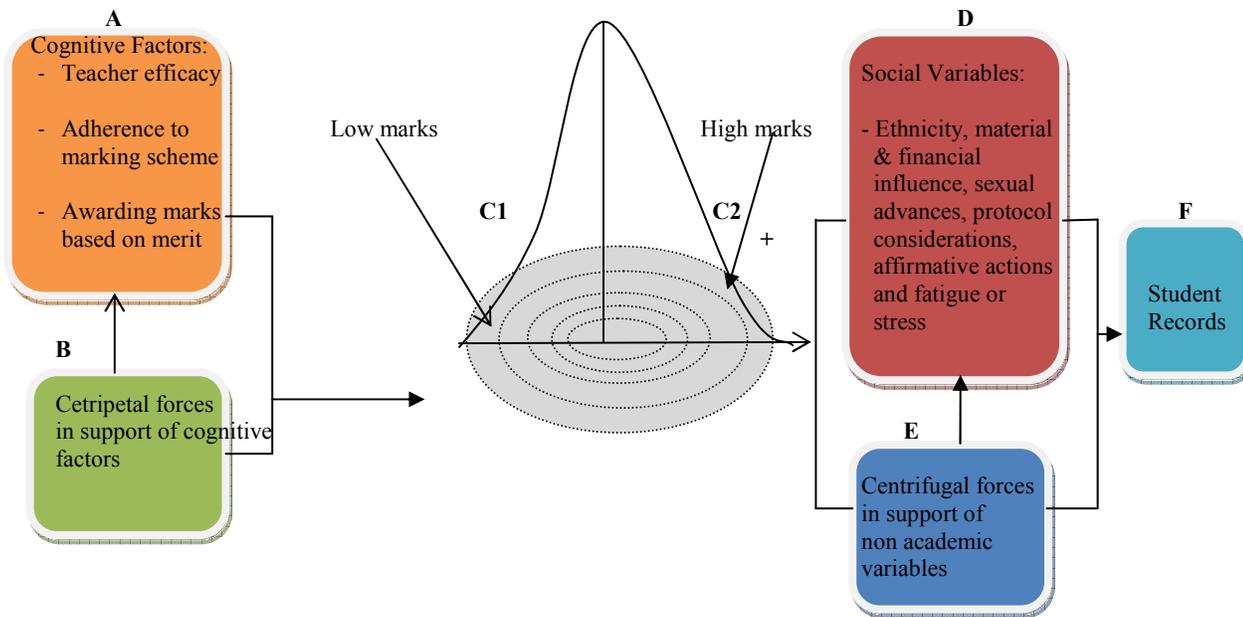
C: the diagram provides a centre of convergence that indicates point of difference rating scales, moving from the negative direction to positive directions or centre of dispersal.

D and E: the diagram outlines the purported social variables that negatively influence the assessment functions of the practitioner (d) along with a supporting theory or concept (E).

F: the framework points to the end results of the cognitive and social variables which are the academic records of students. This last part of the framework emphasizes the subjectivity of the academic achievement of students in tertiary institutions, although the formal records created for them in this process become a reference point for external stakeholders such as employers, political parties and other academic institutions.

The framework put forward in this study makes three important contributions to the literature on quality improvement in academic evaluation in both public and private tertiary institutions. These contributions will be confirmed following a proposed validation exercise to be conducted in three tertiary institutions in Accra between February and April 2013. The researcher is in the process of designing a cross-sectional survey instrument for this validation exercise.

Figure 1: A conceptual framework outlining the cognitive and social factors that influence academic assessments and students records creation in tertiary institutions.



Likert rating scale: 5 – 1

The point C2 from the right direction is the centre of dispersal on the *Likert rating scale* of 1-5.

DISCUSSION

- Point **A** depicts some selected cognitive variables [CV] or activities that involved the assessor's cognitive abilities. These include:
 - Teacher efficacy
 - Professional competency
 - Adhering to the marking scheme
 - Awarding marks based on the merit of answers provided
 - Minimizing or avoiding global marking; and
 - Not scoring irrelevant points provided by the candidate
- Point **B** shows the centripetal force linking the cognitive variables and pulling them towards the centre of convergence. The centripetal force denotes movement towards the center or axis and reduction in volume. Three things may happen here in the context of this diagram:
 - Movement towards the center implies quality in marking;
 - Increased average performances rather than unsubstantiated high scores; and
 - Normal distribution curves after a statistical analysis of the final result.
- Point **C1** is considered the buffer zone which implies awarding average marks in order to keep final assessments within the confines of normal distribution. The negative sign depicts the gradual decline in marks being awarded as the assessor is guided by the marking scheme and other cognitive variables. It implies that the examiner is being careful to avoid scoring irrelevant points provided by candidates. Ensure quality in assessment is a hallmark of a good assessor.

Point **C2+** represents a higher zone and move away from the centre or the center of dispersal. When an assessor is operating within this zone, it is cause for concern. The assessor's decision to operate within this zone, a left-wing decision, may be accidental or deliberate. Accidental lapses may occur due to fatigue or

stress. A deliberate decision to operate in this zone may be the result of *some of the social factors [SF] listed in point D*.

4. **Point D** which represents the social or non-academic factors is linked with point **E**, the centrifugal forces drawing the assessment process from the center towards the right culminating in academic records at **F**, the final point of the diagram. This explains a situation in which the person marking exam scripts is not guided by his or her cognitive abilities and the marking scheme, but by non-academic variables. The final results are not likely to depict a normal distribution curve.
5. **Point F** represents the end result of the entire academic evaluation exercise, student records. Academic records of students consist of several items such as bio data, previous qualifications, admission information, counseling information and special awards if applicable. The most significant items, however, are the courses of study and the grades obtained. The total grade point average (GPA) and/or Cumulative Grade Point Average (CGPA), which indicates the final achievement of students, are the result of the series of activities described in this conceptual framework.

CONCLUSION

The conceptual diagram discussed in this paper presents cognitive and social variables that influence the way practitioners assess student work in tertiary institutions. These social factors introduce certain subjectivities into the academic achievements and final records of students. As a human institution, one must proceed slowly when discussing the positive and negative variables that characterize the teaching functions of practitioners. These variables pressure higher education institutions to guarantee not only quality assurance, but the quality of those who are hired as practitioners. Ensuring quality in assessment, particularly as student populations grow is associated with improved confidence in what these institutions do. The conceptual diagram is likely to have a significant impact in its ability to clarify the expectations around the academic achievements that represent the end of each cycle of learners.

It is also important to state here that the conceptual framework is not a mere assumption. There is a critical link between the theory and practical reality as proven by the enforcement of quality assessment of student work in higher education. Although different historical and pedagogical traditions and legal frameworks have resulted in different approaches to higher education and assessment procedures, the need for assuring quality in teaching functions is a universal phenomenon due partly to the subjectivity of academic achievements. This is largely a result of human frailties and the fact that the increasingly complex human population and attendant technologies have not eliminated the challenges of human subjectivity in higher education.

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