UNIVERSITY OF CAPE COAST

ASSESSMENT PRACTICES OF TUTORS IN THE NURSES' TRAINING COLLEGES IN THE WESTERN AND CENTRAL REGIONS OF GHANA

SOPHIA GIFTY WIREDU

2013

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BY

SOPHIA GIFTY WIREDU

Thesis submitted to the Department of Educational Foundations of the College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for award of Master of Philosophy Degree in Measurement and Evaluation

NOVEMBER 2013

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:……..... Date:…….

Name: Sophia Gifty Wiredu

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:…….Date:……..

Name: Dr. Kenneth Asamoah-Gyimah

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Name: Dr. Stephen Baafi-Frimpong

ABSTRACT

The assessment practices of tutors affect the performance of their students. There are different categories of tutors teaching in the nursing schools and this may affect their way of student assessment. This study was conducted to examine the assessment practices of tutors in the nurses' training schools in the Western and Central regions of Ghana. The study sought to find the knowledge of tutors in assessment, the effect of tutor academic qualification and the number of years of teaching on the assessment practices and the differences in the assessment practices of the tutors in different nursing schools.

A descriptive survey, where the whole of the accessible population was involved in the study (census) was conducted. The instruments used in the data collection were a Likert scale questionnaire and an observation checklist.

Results from the study indicated that 68.75% of the respondents had a certificate in professional education and also have teaching experience of between 0-7 years. The number of years of teaching had a higher influence on assessment practices than the qualification in professional education. Statistically, there was no significant difference in the knowledge of all tutors in assessment. There was, however, a significant difference in the assessment practices of the tutors in terms of all the indicators used except with test administration. There was also a significant difference between the tutors' assessment practices in certificate-only trained nursing schools and certificate and diploma trained nursing schools.

ACKNOWLEDGEMENTS

I wish to express my gratitude to my supervisors, Dr. K. Asamoah-Gyimah and Dr. S. Baafi-Frimpong, for assisting me in this work. I also wish to thank Dr. Owolabi, and all tutors in the Nurses' Training schools in the Western and Central Regions. For the encouragement and support, I am grateful to my friends and family. Finally, I appreciate the authors whose documents I used for the related literature review during this study.

DEDICATION

To all the tutors in the Nurses' Training Schools in the Western and Central Regions of Ghana.

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CHAPTER ONE

INTRODUCTION

Background to the Study

In the last decades, nursing education as in many other fields of nursing is undergoing fundamental changes in order to meet the needs of a rapidly changing society (Quinn, 2000). The aim of nursing education principally centres on the transmission of nursing knowledge and assisting nursing students to acquire the necessary skills and attitudes associated with nursing practices.

As with all professional preparation generally, nursing education encompasses three domains of learning - the cognitive, affective and the psychomotor. The assessment of these three domains provides a more holistic picture of students' performance or students' abilities in specific competencies.One way to enhance nursing education is to enquire into the assessment practices of tutors in the nurses' training institutions. There can be an improvement in educational outcomes through assessment but this can only be fulfilled when there are better assessment practices (Pellegrino, Baxter, & Glaser, 1999). Assessment has always been a sequence of teaching, as teaching and evaluating are integral parts of one's learning process. In nursing education, the assessment of the student involves complex activities. Theory and practice are often assessed simultaneously. According to Rothgeb (2008), assessment has been the centre of issues of accountability in higher education over the past twenty years. As a result, there has been an increased research on

classroom assessment as an essential aspect of effective teaching and learning (McMillan, Myran & Workman, 2002; Stiggins, 2002). As cited by Nitko (2001), the American Federation of Teachers, National Council on Measurement in Education and National Education Association view assessment as a method of obtaining information used in making decision about students' curriculum and programme and national policy. Farran (1980) also sees assessment as the process by which the quality of an individual's work or performance is judged.

Teachers spend a lot of time on students' assessment. Classroom assessment is the most common form of educational measurement, consuming at least 1/3 of a teacher's time and energy (Stiggins, 1992).

There seem to be a strong relationship between assessment and learning. Students learn more in classes where assessment is an integral part of instruction with frequent feedback about learning progress. McMillan (2007) maintains that, by implementing sound consistent and reliable assessment practices, teachers can improve the achievement level for students. McAlpine (2002) buttressed this by saying that all good teachers use assessment informally in the classroom to judge what progress students have made with their understanding and to provide information on how they can be helped to move forward. This implies that assessment practices of teachers affect the overall performance of their students. The Acting Registrar of the Nurses and Midwives Council of Ghana (2011) cited one of the perceived tutor related causes of poor student academic performance to be inadequate assessment of students by tutors in the nurses' training colleges.

Unfortunately, there has been a disconnection between the practices dictated by measurement specialists and the day-to-day classroom assessment of regular teachers. As stated by Astin (1993), assessment has been misused, misunderstood, and underused despite the positive benefits that assessment possesses.

It is evident that classroom assessment is an integral part of the teaching and learning process and it is obvious that assessment will help the teacher to know what the student thinks and how he thinks. “Good assessment is good instruction” (Nitko, 2001, p.6). All teachers must therefore assess their students’ work if they and their students are to have evidence of what achievement is taking place in the teaching and learning in order to build upon them effectively.

As part of the preparation of professionally trained nurses, various forms of assessment are carried on the student, both in the classroom (for theory) and in the ward (for practical work).These assessments are done in order for tutors to be satisfied that students can particularly pass the professional examinations and generally be qualified to take care of the needs of their patients and other clients. The assessment during training could be formative or summative. Formative assessment in the schools usually consists of assignments, quizzes, mid-semester examinations, tests and group work among others. The purpose of this kind of assessment is to help tutors to identify students’ shortcomings for remedial actions and improvement of instruction. Summative assessment in the schools is usually done at the end of each semester such as the end of semester examinations conducted at the nurses’ training schools. Another form of summative assessment for the

trainee nurses is the licensure examination which is co-ordinated by the Nurses' and Midwives' Council of Ghana (NMC) which is the regulatory body of nursing and nursing education in Ghana. This assessment is organized by the NMC at the end of the mandatory two or three-year course period, after which the relevant professional certification is awarded to successful student nurses to practise as professional nurses.

There are different categories of tutors within the different categories of nursing training institutions. These categories of tutors have background in nursing, nutrition, disease control and others. These tutors have diverse educational backgrounds and hold different views about the classroom assessment. Tutors therefore might assess their students based on their knowledge of assessment without necessarily employing the assessment practices that will make the results valid and reliable. The Ministry of Health (MOH) is responsible for the training and development of tutors while the NMC is the regulatory body of nurses in Ghana. However, these two institutions barely conduct in-service training programmes on assessment practices for tutors within the nurses' training institutions, in spite of its relevance to good assessment in schools. In 2011, The Acting Registrar of the NMC confirmed the significance of assessment in nursing education. He observed that the poor performance of students in the 2011 nursing licensure examinations was partly due to the inadequate or poor supervisory visits on the part of the NMC to the schools and the assessment practices of tutors.

Prior to the introduction of a two-year Diploma in Health Science Education by the University of Cape Coast (UCC), tutors within the health training institutions were holders of Diploma certificate in Nursing from the

University of Ghana. The two-year Diploma in Health Sciences Education programme by UCC was intended, solely, to train and equip health personnel to teach in the health training institutions including the nurses' training schools. A three-semester bachelor's degree sandwich programme was later introduced for the holders of the Diploma certificate in Health Sciences Education. The diploma programme was then replaced with a three-year Bachelor's degree programme in Health Sciences Education. The intention was to train health personnel who will follow the various principles in teaching so they could teach and train students in the various nursing institutions.

Among the roles of tutors within the nursing training institutions, is to assess their students in order to facilitate the successful pursuit of their nursing programme. As tutors with different educational qualifications are in the nursing institutions, it is necessary to find out the various assessment practices in the nursing institutions in the Western and Central regions of Ghana.

Statement of the Problem

Monitoring of the assessment practices of tutors in nursing training institutions is practically non-existent, and this leaves tutors to deploy various self-made assessment methods based on their knowledge or training. Assessment in higher education has become increasingly important over the past years (Ewell, 2002). The basic requirement to teach in the nurses' training institutions is for one to possess a first-degree certificate in any health related course irrespective of whether the person has some form of training in "education". This results in the recruitment of tutors who possess different

degrees and varying range of teaching and professional experience, teaching nursing and nursing-related courses in the nursing institutions.

Personal observation and experience indicate that, after tutors are posted to the nurses' training institutions, no form of monitoring is done on the tutors' assessment practices, and no in-service training or refresher course on student assessment is provided. Tutors are left on their own to decide the best ways of assessing their students.

Peterson, Einarson, Augustine and Vaughn (1999) found out that result from assessment data influence academic support services, academic programme and educational curriculum. According to Entwistle (2000), assessment is used as a means of facilitating "deep learning". The inability of some tutors to properly assess all the domains of learning in students has led to many people doubting the genuineness of the classroom assessment practices in the nurses' training institutions.

Even though the MOH realizes the need to provide tutors with support of various forms, the lack of understanding of what actually happens in the classroom setting may cause the tutor support programmes and efforts from the MOH not to adequately prepare tutors and address the varied challenges tutors may be faced with in a classroom assessment. If tutors are to support students to learn meaningfully, then classroom assessments in the nursing training institutions should be taken into consideration.

Since Stiggens (2002) attributes effective assessment practices to effective teaching and learning, it is important that tutors in the nurses' training schools effectively assess their students in order to enhance teaching and learning in the schools.

Unfortunately, from my personal observation between 2006 and 2009, it appeared tutors in the nurses' training schools did not follow the necessary assessment procedures in their classrooms. This undoubtedly was likely to adversely affect the quality of teaching and learning. But the question is "do tutors in the nurses' training schools really follow the principles for classroom assessment?" It is to fill the void in research in this area that this study was conducted to ascertain the classroom assessment practices of tutors in the nurses' training schools in the Western and Central regions of Ghana since it appeared not much had been done in terms of scientific research in this area.

Purpose of the Study

The way teachers perceive assessment may influence the way they teach and assess their students (Fennema & Romberg, 1999). In Ghana, there have not been many studies on the assessment practices of tutors in the nurses' training institutions. The purpose of this study therefore is to investigate the assessment practices employed by tutors in the Nurses' Training Schools in the Western and Central regions of Ghana.

Specifically, the purpose is to:

1. determine the influence of tutor academic qualification and teaching experience on their assessment practices in terms of test construction, administration, scoring and provision of feedback.
2. find out if there is a difference in knowledge in assessment of tutors who have and those who do not have professional qualification in education.

3. verify if there is a difference in the assessment practices of tutors who have and those who do not have professional qualification in education.
4. find out if any differences exist in the assessment practices of tutors in the nursing schools that train different categories of nurses.

Research Questions

The study was guided by the following research question and hypotheses

1. What is the influence of academic qualification and experience of tutors on their assessment practices in terms of test:
   a. planning
   b. construction
   c. evaluation
   d. administration
   e. scoring
   f. feedback

Hypotheses

1. H_0: There is no statistically significant difference in the knowledge of tutors who have professional qualification and those who do not have a professional qualification in education.
2. H_0: There is no statistically significant difference in the assessment practices of tutor who have and those who do not have a qualification in education.
3. H_0: There is no statistically significant difference in the assessment practices of tutors in the different categories on nursing institutions.

Significance of the Study

The results from this research will present bare evidence of the assessment practices in the nursing training institutions and this will give me the opportunity to offer constructive suggestions to the MOH, NMC and the nurses' training institutions on student assessment if there are disparities in the assessment practices of the tutors in the schools. The results from the study could help in the planning and conducting of in-service-training programmes for the tutors in the nurses' training schools in Ghana, as it will serve as a source of information on the assessment practices in nursing education in Ghana. Results of the study will also encourage tutors to maintain, modify, or discard certain assessment practices to improve upon teaching and learning.

Sometimes various agencies donate items to schools to enhance the teaching and learning. The results therefore will also help donor agencies to identify where to channel their logistical support to improve the assessment practices of tutors in the nurses' training schools.

Finally, results from this research will contribute to the scholarship of assessment in nursing education, particularly in Ghana and the world as a whole.

Delimitation of the Study

There are various nursing institutions in Ghana. Most of these institutions are government owned nursing institutions. Other organisations such as the Christian Health Association of Ghana (CHAG) and other individuals also own nursing institutions in the country. This study only focused on the tutors in the government and CHAG owned nurses' training schools within the Western and Central regions of Ghana. Other stakeholders

like students, parents, the NMC and the MOH were not considered. Location of institution in terms of urban, peri-urban or rural was also not considered. Only tutors who are engaged on permanent basis were included in the study, it therefore did not involve part time or casual tutors.

Tutors' assessment practices that were considered included test construction, administration, scoring and the provision of feedback. Characteristics of the tutor such as the teaching experience and academic qualification were studied but other characteristics such as age and subject were excluded in the study.

Limitations of the Study

Having access to all the tutors for some reasons was not possible. It was difficult to retrieve all the questionnaires and the return rate was 96.55%. There was difficulty obtaining direct literature from nursing institutions on the tutors' assessment practices to either support or disagree with the results. All tutors' test materials were not available as at the time of analysing the tests in the various schools. Since neither all the tutors nor the schools were captured in the observation, the results from the observation were not the actual representation of the accessible population.

Definition of Terms

Assessment practices - the ways tutors in the nurses' training institutions gather information about what students have learnt to make decisions about the students.

Categories of nursing schools- there are different schools that train various groups of nurses to be awarded with either certificate or diploma.

Nurses' and Midwives' Council of Ghana (NMC) - the regulatory body of nurses in Ghana.

Permanent tutors - tutors that are employed by the MOH and posted to a specific nursing training school.

Professional examination - this is the licensure examination organized by the NMC to certify students to enable them to practice as professional nurses.

Professional experience – this refers to the number of years the person has worked as a health professional before becoming a tutor.

Professional grade level - the grade of the tutor as in the nursing profession.

Organisation of the Rest of the Study

Chapter two of this study reviews related theoretical and empirical literature. Chapter three focuses on the research methodology. It includes the research design, population, sample and sampling procedure, research instrument, data collection and data analysis procedures. Chapter four presents the results and discussion of the data collected for the study. Chapter five, which is the final chapter, presents the summary and conclusions of the study as well as the recommendations made based on the results from the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter presents a review of related literature on the study. The review of the literature has bearing on the study, to help find answers to the research question and hypotheses developed concerning the assessment practices of tutors in the nurses' training schools. It involves the various aspects of classroom assessment, both theoretical and empirical as provided by experts in measurement and evaluation. Specifically the following areas have been covered in the review of literature:

1. the concept of assessment
2. assessment techniques
3. purpose of assessment
4. validity of assessment results
5. reliability of assessment results
6. the construction quality of assessment items
7. administration of assessment
8. grading of the assessment
9. assessment practices in schools

Concept of Assessment

The term assessment means different things to different people. Nitko (2001) cites the American Federation of Teachers, National Council on Measurement in Education and National Education Association, who see assessment as a method of obtaining information that is used to make decision

about students' curriculum and programme and national policy. From this, assessment can be viewed as a means of collecting information about students in order to help in making decisions concerning the students' wellbeing in terms of the curriculum and programme and national policies on education.

Palomba and Banta (1999) define assessment as "the systematic collection, review and use of information about educational programmes undertaken for the purpose of improving learning and development" (p. 4). They are more specific in the use of assessment results to improve learning and development. This implies that the information collected from assessment should be that which could be used by tutors to help students to enhance their academic performance.

Green and Lewis (1986) on the other hand viewed assessment as the estimation of the relative magnitude, importance or value of an individual's work or performance observed. According to them, assessment is not just the collection of the information but looking at how valuable the information that has been collected is the focus of assessment. Teachers usually do this as they observe their students at work in school and through the conduct of various tests and other assignments periodically.

In assessment, teachers communicate with students through various means in order to gather meaningful information to make decisions concerning different aspects of students. Tamakloe, Amedahe and Atta (2005), maintained that "assessment occurs when one person through some kind of interaction with another, obtains and interprets information about that other person in terms of his knowledge and understanding or abilities or attitudes" (p. 176). Airasian (1991) also sees assessment to be a process whereby

information about a student is collected, interpreted and synthesized to assist in decision making.

McMillan (2001) notes that there are a number of "essential" assessment concepts that teachers need to know about to make valid decision about students, various means should be used to obtain the information so that any bias will be removed. The information gathered could be from different sources in order to make the decision about the student. Linn and Grolund (1995) supported McMillan's (2001) assertion that assessment should be used to gather information about student learning.

Nitko (1996) defines assessment as "a process for obtaining information about learners" (p. 4). From the various definitions by the different authorities, the main issue about the definition of assessment is on the gathering of information about students in order to make an informed decision that will support the wellbeing of the student.

Assessment is the process of observing a sample of a student's behaviour and drawing inferences about the students' knowledge and abilities (Ormrod, 2008). When one is looking at students' behaviour, typically, only a sample of classroom behaviour is used.

Assessment is for the benefit of not only the student but the teacher and other stakeholders as well. According to McAlpine (2002), assessment is a form of communication to the student as a form of feedback to their learning. It also serves as feedback to the teachers teaching. To the curriculum designer, it is the feedback on the curriculum and to the administrator as a feedback on the use of resources and to employers to indicate the quality of job applications.

Again, assessment is beneficial in protecting the safety of the society. For example, the Organisation for Economic Co-operation and Development (OECD) (2012) described that the framework of assessing the competency of final year engineering students is to test their ability to use basic engineering and scientific principles, engineering processes and generic skills to solve societal problems. This competency is assessed to ensure that there is improvement in quality of life, social needs, and commercial success of the society (OECD, 2012). In Ghana, the Part Three of the Health Professions Regulatory Bodies Act, 2013 (Act 857) mandates the Nursing and Midwifery Council (NMC) to secure in the public interest the highest standards of training and practice of Nursing and Midwifery. The council carries out this mandatory responsibility by assessing the nursing and Midwifery professionals through the NMC licensure examination. This examination helps the council to ensure that the trained Nursing and Midwifery Professionals would give safe, prompt and efficient service that would lead to a cost-effective healthcare and Public protection. From this, it is quite reasonable to argue that assessment protects the society as well.

Biggs (2003), Boud and Falchikov (2007) all state that the process of assessment is complex and its purpose and design are highly contested and value-laden. The practice of assessment is widely debated by academics, industry, governments, students and various stake holders within society, all of whom have their own agendas, assumptions and perspectives on the matter. Gipps and Murphy (1994) proposed that assessment design should come into play after we have decided our purpose. The various views about the meaning

of assessment confirm the earlier statement that assessment means different things to different people.

Assessment Techniques

There are various techniques of assessing students. The most common means by which teachers attempt to assess their students are tests and examinations (Tamakloe, Amedahe & Atta, 2005). These techniques include, but are not limited to paper and pencil test and performance task. Other means of assessing students are through the responses of students in class, homework performance, and observation of students, interviews/conference with students, students' presentations and portfolios.

Paper and Pencil Test/Examination

This is often the first choice for formal assessment because of its practicality (Ormrod, 2008). The assessments require students to write independently or to demonstrate understanding of concepts. A teacher gives seatwork as well as homework to students. These help the students practise learning targets.

Guidelines for Selecting and Using Classroom Assessment

Nitko (2001) has outlined the guidelines to be followed for classroom assessment to make it meaningful for making particular educational decisions.

1. Be clear about the learning target you want to assess - one should specify the kind of student knowledge, skill and performance about which information is needed. When you are able to specify the learning target, then the appropriate assessment technique will also be selected.

2. Be sure that the assessment technique(s) you select actually match the learning target. The assessment technique should be one that will let the student be able to match with the learning target.
3. Be sure that the selected assessment techniques serve the needs of the learners. Assessment techniques that provide meaningful feedback to students about how closely they have approximated the learning target should be used**.**
4. Whenever possible, be sure to use multiple indicators of performance for each learning target. One assessment format tends to emphasize only one aspect of a complex learning target and this under represents the learning target. Using multiple modalities of assessment enhances the validity of the assessment. For example, in a particular test, essay and multiple choice questions can be given to the student to answer.
5. Be sure that when you interpret the results of assessment, you take their limitations into account. Conditions of the student, the environment and the assessment process may limit the extent to which accurate information could be given, therefore when making decisions with the results, these limitations must be taken note of.

To make assessment meaningful, the following should be considered in any assessment:

1. the purpose of assessment,
2. validity of assessment results,
3. reliability of assessment results,
4. the referencing of the assessment,

5. the construction quality of assessment items and
6. the grading of the assessment.

Purpose of Assessment

It is important that before a teacher decides to assess students, the reasons for the assessment and how to design one that will satisfy those needs must be known. In order to do this, the teacher has to take into account the decisions he is going to make, the information that needs to be gathered to make those decisions and the methods that are appropriate for gathering that information. Dunn, Morgan, O'Reilly and Parry (2004) explain that assessment is used to accomplish several different purposes. They observed that while it may seem obvious that the purpose of assessment is to measure student learning, this thinking is overly simplistic. Nevertheless, it remains the dominant perspective. In the opinion of Dunn et al (2004) the role and purpose of assessment is far broader than just measuring student learning and maintaining pre-set standards of achievement. They propose that effective assessment is that which diagnoses students' difficulties, measures students achievement (with particular focus on improvement) over time, motivates students, judges mastery of skills, evaluates teaching efficiency and provides feedback to students.

Salvia and Ysseldyke (1978) have outlined at least five specific reasons for assessing students. These are for screening, placement, programme planning, programme evaluation and assessment of individual progress. Some assessment results can serve one purpose while others are multi–purpose in nature.

Screening. Achievement tests are routinely administered to help in the identification of students who may need special attention. For example, when choosing students for a further course or for employment, test may be given to students and based on the results, those who may not meet the criterion for admission may be given the necessary assistance based on their difficulty area in the test. Assessment in this context is used for prediction, for instance, which students will be able to benefit from further study or how the individuals might perform in employment.

Placement. In a school, assessment results are used to place students with different academic abilities into groups. Students who are not placed in honours sections for example are placed at other educational levels (Nitko, 2001).

Programme planning. Information from assessment is used to decide placement in groups for assignment or group work or to assign students to a remedial programme. Individuals are grouped according to similar abilities and no student is rejected. It helps to decide how to teach individuals as well as a group as their educational levels would be known.

Programme evaluation. Results from assessment are used to evaluate the effectiveness of a specific curriculum.

Assessment of individual progress. Assessment is used in monitoring students through grades. Grades obtained in an assessment are an indication of the academic progress made by students.

Below are some other identified purposes of assessment:

Diagnosis. Diagnosis assessment deals with the identification of both appropriate content and features of learning activities in which students have

learning difficulties. When the learning difficulties are identified, remedial help is then offered to these students.

Selection. Assessment results are used select individuals for specific educational activity, according to set criteria. Individuals who do not meet these set criteria are not considered for that educational activity. For example, writing an entrance examination to select students to offer a course at the university.

Other reasons set by Nitko (2001) about the uses of assessment are: provision of feedback to students and teachers, motivating students, for counselling and guidance decisions and for credentialing and certification.

Feedback to students. Results from assessment must help students to be aware of their wrong and right answers to questions. Students' errors can be corrected during lessons and these corrections can be done by the teacher or the student himself.

Feedback to teacher. If the assessment results indicate that students have not grasp a concept, then it is appropriate that the teacher re-teach that concept.

Motivating students. Assessment helps students to learn. When students achieve a certain level of the learning target, they are motivated to learn more, those who are not able to perform in a particular assessment are also motivated to learn in order to achieve a learning target.

Types of Assessment

Assessment could be grouped in various ways. These are:

1. formative
2. formal or informal

3. final or continuous
4. convergent or divergent
5. quantitative or qualitative
6. teacher centred or student centred
7. norm-referenced or criterion referenced
8. achievement or aptitude
9. paper and pencil or practical/oral
10. local or national
11. performance

Formative Assessment

A growing body of research has found that the extent to which teachers embed formative assessment practices in their everyday classroom interactions is strongly related to student learning and is associated with improved student achievement. Black and Wiliam (1998) defined formative assessment as including two interrelated parts: first, activities undertaken by the teacher and the students as a means of collecting information about the students' understanding or progress and, second, the use of this information to modify teaching and learning activities by the teacher, the students, or both.

Within this broad domain, research on learning flags the importance of providing formative or diagnostic information to teachers and students, providing clear expectations and goals for learning, creating coherence between assessment and curriculum, and supporting metacognitive practices. For example, research on classroom-based assessment suggests that greater student learning and higher task performance are achieved by providing task-oriented feedback to students (Butler, 1987; Crooks, 1988) and by eliciting

information from students through assignments and discussion as a means of gauging where students are in their progress toward a goal (Duschl & Gitomer, 1997).

For teachers to be effective in supporting student learning, they must continually be checking for the understanding of their students. Formative assessment is the type of assessment that occurs in the course of teaching or training in order to assist the learning process by improving future performance. It can also be termed as assessment for learning. As cited by Mansel, James and the Assessment Reform Group (1999), assessment for learning is " the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there" (p. 10). An example of this type of assessment is essays of students with the teacher's comments. One advantage of formative assessment is that it assists in forming a more detailed opinion about a student's abilities. In formative assessment, teachers work toward standards while identifying the factors behind the variation in students' achievements and adapting their teaching to meet individual needs. Formative assessment builds students' "learning to learn" skills by emphasising the process of teaching and learning, and involving students as partners in that process. It also builds students' skills at peer-assessment and self-assessment, and helps them develop a range of effective learning strategies. It is important that formative assessment is improved in order to help the student to improve on his/her achievement. Black and Wiliam (1998) found that, efforts to improve formative assessment produced more gains.

As cited by Brennan (2006) devising assessments that manifest learning goals is central to good teaching, not just a matter of measuring outcomes. With understanding as goal of instruction, an emphasis on assessment forces teachers to spell out what evidence of understanding would look like and these descriptions of performance propel them to provide students with opportunities to develop and practise these skills that might otherwise have been missed if "understanding" had been left out as the globally stated goal of unit.

Research on learning also suggests that understanding is strengthened when the learners are asked to take an active part in determining what they understand and how they came to that understanding, as well as what they still need to learn (National Research Council, 2000). Classroom practices that aid this kind of metacognition include peer- and self-assessment, reflection on one's own progress and determining what needs further improvement, and activities geared toward allowing students to make sense of new concepts through talk or writing, which allow the teacher to gather information on student understanding to guide his or her next steps (Palincsar & Brown, 1984; Scardamalia, Bereiter, & Steinbach, 1984; White & Frederiksen, 1998). Structuring these kinds of opportunities is formative assessment practice.

Fullan, Hill, and Crevola (2006) further clarify the need to include assessment for learning and place them in the context of designing expert instructional systems. They are specific in their ideas of what is necessary in today's classroom:

1. A set of powerful and aligned assessment tools tied to the learning objectives of each lesson, which give the teacher access to accurate and

comprehensive information on the progress of each student on a daily basis and which can be administered without unduly interrupting normal classroom routines.

2. A method of allowing the formative assessment data to be captured in a way that is not time consuming, to analyze the data automatically, and to convert them into information that is powerful enough to drive instructional decisions not sometime in the future, but tomorrow.

3. A means of using the assessment information on each student to design and implement personalized instruction; assessment for learning being a strategy for improving instruction in precise ways.

4. A built-in means of monitoring and managing learning, of testing what works, and of systematically improving the effectiveness of classroom instruction so that it more precisely responds to the learning needs of each student in the class.

Types of formative assessment

1. Self-assessment: self-assessment requires students to reflect on their own work and judge how well they have performed in relation to the assessment criteria. The focus is not necessarily on having students generate their own grades, but rather providing opportunities for them to be able to identify what constitutes a good (or poor!) piece of work. Some degree of student involvement in the development and comprehension of assessment criteria is therefore an important component of self-assessment. Developing reflective skills provides students with the ability to consider their own performance and to identify their strengths, weaknesses, and areas that require improvement. Students can then use this knowledge to

influence their future work, whether on a programme of study or in employment, by playing to their strengths and/or directing their efforts in areas they have already recognised as needing further improvement (Lines & Mason, 2005). Tutors could consider self-assessment as a teaching and learning exercise, as much as an assessment method and its inclusion within a course provides students with the opportunity to develop a core lifelong learning skill. According to Brown and Glasner (2003), tutors could use self-assessment in the form of reflective exercises, such as logs or diaries, or by encouraging students to assess how well they have met the assessment criteria in more traditional tasks such as essays and presentations. Audits or essay feedback questionnaires that students complete on submitting a piece of course work are particularly helpful as you can compare your perception of their work with your students' views on how well they have performed.

2. Diagnostic assessment: helps to identify specific learning strengths and needs. It determines learning targets and appropriate teaching and learning strategies to achieve them. This is important because many learners have higher-level skills in some areas than in others. Diagnostic assessment happens initially at the beginning of a learning programme and subsequently when the need arises. It is related to specific skills needed for the performance of tasks. The two processes are closely linked: diagnostic assessment adds to the information gathered from initial assessment. Together they help the teacher and the learner to build a clear picture of the individual in order to:

1. personalise learning.

2. develop an individual learning plan.
3. begin the process of assessment for learning that will continue throughout the learner's programme.
4. make links to progression routes and prepare for the next steps.

Diagnostic assessment should involve a range of methods and approaches, none of which is sufficient on its own. It is important to evaluate the quality of information obtained from particular methods. Appropriate assessment methods will be selected once the teacher knows the learner as well as the learning preferences.

1. Documents and records give evidence of achievements and include qualifications, records of achievement, references, non-academic certificates and awards.
2. Self-assessment gives learners some idea of where their strengths and weaknesses lie. It is vital to take learners' own views into account and to make the most of this knowledge.
3. Discussions and interviews allow the teacher and learner to get to know each other. They also provide an excellent opportunity to feed back the results of other assessment methods and to probe more deeply.
4. Assessment tools can play an important role in objective initial and diagnostic assessment of literacy, language and numeracy (LLN) skills. Tools are also sometimes used to assess occupational skills and learning difficulties and/or disabilities.
5. Structured group or individual activities during induction and early parts of the programme allow learners to apply specific skills. A free writing

task, for example, gives a rounded picture of how someone actually writes. Such a task also helps to put learners at the centre of the assessment process because they can write about themselves and their interests.

6. Observation gives a broader picture of the whole person and how they perform in a range of contexts. This will give insights into learners' strengths, how they work with others, how they think, how confident they are and how willing they are to ask for help.

Examples of formative assessment

The goal of formative assessment is to gain an understanding of what students know (and do not know) in order to make responsive changes in teaching and learning techniques, such as teacher observation and classroom discussion have an important place alongside analysis of tests and homework.

Black and Wiliam (1998) encourage teachers to use questioning and classroom discussion as an opportunity to increase their students' knowledge and improve understanding. They caution, however, that teachers need to make sure to ask thoughtful, reflective questions rather than simple, factual ones and then give students adequate time to respond. In order to involve everyone, they suggest strategies such as the following:

Invite students to discuss their thinking about a question or topic in pairs or small groups, and then ask a representative to share the thinking with the larger group (sometimes called think-pair-share).

1. Present several possible answers to a question, then ask students to vote on them.

2. Ask all students to write down an answer, and then read a selected few out loud.

Teachers might also assess students' understanding in the following ways:

1. Have students write their understanding of vocabulary or concepts before and after instruction.
2. Ask students to summarize the main ideas they have taken away from a lecture, discussion, or assigned reading.
3. Have students complete a few problems or questions at the end of instruction and check answers.
4. Interview students individually or in groups about their thinking as they solve problems.
5. Assign brief, in-class writing assignments (e.g., "Why is this person or event representative of this time period in history?)

In addition to these classroom techniques, tests and homework can be used formatively if teachers analyse where students are in their learning and provide specific, focused feedback regarding performance and ways to improve it. Black and Wiliam (1998) make the following recommendations:

1. Frequent short tests are better than infrequent long ones.
2. New learning should be tested within about a week of first exposure.
3. Be mindful of the quality of test items and work with other teachers and outside sources to collect good ones.

Portfolios, or a collection of students' work, may also be used formatively if students and teachers annotate the entries and observe growth over time and practice (Duschl & Gitomer, 1997).

Summative Assessment

This form of assessment is done at the end of a course or a programme to judge the students' overall performance. Summative assessment can also be interchanged with assessment of learning. This provides evidence of student achievement at strategic times throughout the course, often at the end of a period of learning. Evidence of student achievement is collected over time from three different sources- observations, conversations and student achievement. Its purpose is for the progression of the student from one point to the other; it is more useful for external purposes concerning further studies or employment. An example is the end of year examination.

Boud (2000) suggested that summative assessment has dominated thinking and practice in higher education and it takes up too high a proportion of teachers' time, energy and resources at the expense of preparing effective learners. Light, Cox and Calkins (2009) pointed out that regardless of the flaws of traditional end of course summative assessments, they still prevail throughout higher education.

Using summative assessment to help teaching. The impact of summative assessment on teachers and teaching has been well researched and represented in the reviews of Crooks (1988), Linn (1982) and Shepard (1991). Crooks looked at the impact of assessment on students, including self-efficacy, intrinsic motivation and attribution of success or failure. He found evidence of the importance of motivational aspect in relation to classroom assessment; that the use of extrinsic motivation is problematic and that intrinsic motivation and self-regulated learning is important to continued learning both within and without school. He reviewed the potentially positive role of classroom

assessment, for example, in helping students to focus their learning, but also concluded that test anxiety has a debilitating effect on achievement and that this could be reduced by avoiding comparisons between students and the use of letter grades. Gordon and Reese (1997) reported evidence that teachers can train students to pass any kind of test, even those intending to assess higher thinking skills, frustrating those who consider that teaching to well designed tests can influence teaching in positive directions (e.g.Yeh, 2001). Kellaghan, Madaus and Raczek (1996) expressed doubts that the aims of the education reform which emphasises higher level thinking and problem-solving skills are compatible with the programmes of high stakes testing. They traced the mechanism for orienting students towards performance goals to the way in which students are prepared for high stakes tests. The research they reviewed also undermined the claim that better tests will lead to better teaching and learning.

> Proponents of a system of high-stakes examinations will argue that if we get the right kinds of tests – ones worth teaching to and preparing for – then test-preparation practices will lead to the development of the valued skills purportedly measured by the test. However, we believe that this argument seriously underestimates the ability of test preparation to corrupt the very construct the test is trying to measure. …An important implication of this is that when such corruption occurs, inferences from the test to the original domain of interest – which if the educational reform language is to be believed is the domain of higher-order thinking skills and habits of learning – will no longer be valid (Kellaghan et al., 1996, p. 53).

Using summative assessment to help learning. Using assessment to help learning means that the students, the ones who do the learning, have information about where they are in their learning, what steps they need to take and how to take them.

Some examples of using summative assessment to improve learning are provided by Maxwell (2004) and Black, Harrison, Lee, Marshall and Wiliam (2003). Maxwell describes the approach to assessment used in the Senior Certificate in Queensland, in which evidence is collected over time in a student portfolio, as 'progressive assessment'. He states that all progressive assessment necessarily involves feedback to the student about the quality of their performance. This can be expressed in terms of the student's progress towards desired learning outcomes and suggested steps for further development and improvement. For this approach to work, it is necessary to express the learning expectations in terms of common dimensions of learning (criteria). Then there can be discussion about whether the student is on-target with respect to the learning expectations and what needs to be done to improve performance on future assessment where the same dimensions appear. As the student builds up the portfolio of evidence of their performance, earlier assessment may be superseded by later assessment covering the same underlying dimensions of learning. The aim is to report 'where the student got to' in their learning journey, not where they started or where they were on the average across the whole course (Maxwell, 2004).

The identification of goals and assessment criteria in terms of a 'common dimension of learning' is, as Maxwell states, Central to this approach. Further, descriptions of these dimensions of learning need to be

detailed to be capable of giving guidance, yet not be so prescriptive as to infringe teachers' ownership of the curriculum. As the research reviewed earlier shows, the dependability of assessment is enhanced when teachers have a thorough understanding of the goals and of the nature of progression towards them. In Queensland this is facilitated, on the one hand, by schools being able to make decisions about their own work plan and, on the other hand, by teachers' regular participation in the process of moderation. Time and respect for the professionalism of teachers (Cumming & Maxwell, 2004) are also important. These are clearly essential factors when teachers' assessment has outcomes with high stakes for individual students. However, a significant feature of the Queensland system is that the assessment of students in the Senior Certificate is detached from school and teacher accountability procedures.

Black et al. (2003) included the formative use of summative assessment as one of four practices that teachers found were effective ways of implementing formative assessment (the others being questioning, feedback by marking and student peer-assessment and self-assessment). These practices were all devised or elaborated by teachers as they strove, working with the researchers, to make changes in their classrooms so that assessment was used to help learning. In relation to the formative use of summative tests, the teachers devised three main ways of using classroom tests, beyond just assessing attainment, to develop students' understanding. The first of these involved, helping students to prepare for tests by reviewing their work and screening past test questions to identify areas of insecure understanding. This reflection on their areas of weakness enabled them to focus their revision.

The second innovation was to ask students to set test questions and devise marking schemes. According to Black et al. (2003), this helped them both to understand the assessment process and to focus further efforts for improvement

The third change was for the teachers to use the outcome of tests diagnostically and to involve students in marking each other's tests, in some cases after devising the marking scheme. This has some similarity to the approach reported by Carter (1997), which she called 'test analysis'. In this, the teacher returned test papers to students after indicating where there were errors, but leaving the students to find and correct these errors. The students' final mark reflected their response to the test analysis as well as the initial answers. Carter described this as shifting the responsibility for learning to the students, who were encouraged to work together to find and correct their errors.

These approaches are ones that teachers can use in the context of classroom tests over which they have complete control. Black et al. (2003) noted that when external tests are involved, the process can move 'from developing understanding to ''teaching to the test''. More generally, the pressures exerted by current external testing and assessment requirements are not fully consistent with good formative practices' (Black et al., 2003, p. 56). These teachers used their creativity to graft formative value on to summative procedures. A more fundamental change is needed if assessment is to be designed to serve both purposes from the start. There is the potential for such change in the use of computers for assessment, which provide the opportunity for assessment to serve both formative and summative purposes. In the

majority of studies of the use of ICT for assessment of creative and critical thinking, reviewed by Harlen and Deakin (2003), the assessment was intended to help in the development of understanding and skills as well as to assess attainment in understanding and skills. The effectiveness of computer programs for both of these purposes was demonstrated by those studies where computer-based assessment was compared with assessment using paper and pencil (Kumar, 1993).

The mechanism for the formative impact was the feedback that students received from the program. In some cases, this was no more than reflecting back to the students the moves or links they made between concepts or variables as they attempted to solve a problem. According to Osmundson, Chung, Herl and Klein, 1999, the feedback was in providing a 'score' for a concept map that is created on the screen by dragging concepts and links. The score compares the students' maps with an 'expert map' and required a much greater degree of analysis than could be provided in any other way.

In other studies conducted by Schacter, Herl, Chung, O'Neil, Dennis, and Lee, (1997) the computer program used a record of all mouse clicks in order to provide feedback to the students and teacher information about the processes used in reaching a solution. Schacter et al (1997) referred to this as 'bridging the gap between testing and instruction'.

In order for assessment to have a formative purpose it is necessary to be able to report not only the students' final performance, but also what processes students need to improve in order to raise their performance. The collection of information about processes, even if feasible in a non-computer-based assessment, is immensely time consuming and would not be a realistic

approach to meeting the need for information for improving learning. The use of computers makes this information available, in some cases instantly, so that it provides feedback for the learner and the teacher that can be used both in formative and summative ways. In these cases the process of assessment itself begins to impact on performance; teaching and assessment begin to coalesce. Factors identified as values of using computers for learning then become equally factors of value for assessment. These include speed of processing, which supports speed of learning; elements of motivation such as confidence, autonomy, self-regulation and enthusiasm, which support concentration and effort; ease of making revisions and improved presentation, which support quality of writing and other products; and information handling and organization, which support understanding (National Council for Education Technology, NCET, 1994).

Formal Assessment

Formal assessment is when the students performing the task are aware that what they are doing is for assessment purposes, examples examinations and thesis. It involves the use of test to obtain data that is then made available to the institution. The data gathered are usually subjected to statistical analysis and comparisons drawn between other students (Quinn, 2000). Example in nursing education is clinical practical examination. It sometimes puts stress on the student, causing him/her to perform poorly; others may also cram and perform well without deep understanding. The criteria for formal assessment have less room for bias (McAlpine, 2002).

Informal Assessment

With this kind of assessment, there is no comparison of students' performance. It is usually personal and subjective to the teacher involved. Data for such assessment are from the day to day observation of the students' behaviour, informal conversation and contact with the student, examination of students' notes among others. Informal assessments focus on the reading behaviours exhibited by individuals and teacher observation rather than scores and comparisons (Wason-Ellam, 1994).

Final/Terminal Assessment

This occurs at the end of a course, example the traditional 'finals' assessment where three years of study is assessed over a period of a few days. Episodic assessment deals with the assessment of students at specific times such as at the end of the year or assessment in particular aspects of nursing. This type of assessment is appropriate when learning how each new field of study contributes to understanding others and so it is only more appropriate to assess the learning as a whole than as different parts. A key problem with this form of assessment is that the student's performance may not be a true reflection of his abilities as the test is taken once. This kind of assessment again, generates data that are based on a very small and possibly unrepresentative sample of a student's behaviour.

Continuous Assessment

It is the assessment at regular intervals during the course of study, example, and the modular assessment where judgement is made at the end of a study. It samples all of a student's output in a course and on regular basis; no 'passing' of a student is based on a 'once-and-for-all' basis. Feedback from

the assessment can be used to improve teaching and learning and the final results are based on the performances over a period of time.

Convergent Assessment

Convergent assessments are those tasks that have one correct answer, example is correct answer objectives. This form of assessment is easier to mark without the assessor being biased and can cover a wider range of the curriculum. It can be marked by a computer as well.

Divergent Assessment

This form of assessment is based on opinion and analysis, example, essay type test. They are easy to construct but can consume time in marking. It also requires greater marking skill. It allows students to express themselves.

Quantitative Assessment

Quantitative assessments consist of assessing the student to collect data that are represented numerically. For instance, performance on a test may be scored so that a number represents the degree to which an individual performed. Because quantitative data are expressed in numbers, they can be compared directly or subjected to statistical analysis, and they can enable the tutor make certain assumptions when comparing one data point to another. Quantitative assessment also may permit one to express numerically meaningful changes in performance (given certain conditions). One may claim, for instance, that a change in a test score from 50 to 60 represents a 10-point or a 20 percent gain in an individual's performance, expressed as a percentage of his or her original score. Quantitative data, therefore, are valued for the ease with which calculations and comparisons can be made, and for the

easily understandable representations of performance that they produce (Dunn, Morgan, O'Reilly & Parry, 2004).

Qualitative Assessment

This is concerned with the assessment of qualities that an individual possess. A student's view of what constitute a good relationship with a patient is a qualitative data (Quinn, 2000).

A common misconception is that qualitative assessments are not as reliable, valid, or objective as quantitative ones. This is not necessarily the case. There are well-designed and statistically reliable means of interpreting and analysing qualitative data and numerous resources for learning to use qualitative methods (Silverman, 2001; Maxwell, 1996). For example, an instructor might assess the same learning goals using a multiple-choice test or an essay test. Similarly, a instructor might grade a senior project presentation quantitatively with a standard set of evaluation criteria (i.e., a rubric). Alternatively, he or she might provide the student with a prose evaluation, in a non-scaled format, citing the strengths and weaknesses of the presentation. However, it is best if this evaluation is organized around standard set of criteria that were shared with the student beforehand.

A student survey designed to gather information on student satisfaction may elicit data that are quantitative (i.e., "On a scale of 1 to 7, how satisfied are you with the quality of advising?") or qualitative ("How would you describe your experience with academic advising?"). Qualitative data must be sorted, categorised, and interpreted (most often by humans rather than by computer programs) before a final judgment can occur.

Methods of ensuring the reliability of qualitative data are time-consuming. For instance, to ensure that portfolio assessment is reliable; at least two raters are used to review each portfolio, providing a form of "inter-rater" reliability. Focus groups, another commonly used form of qualitative data collection, require large investments of time to gather data from comparatively few students.

A good use of qualitative evaluation is to help develop quantitative evaluation criteria (rubrics).For instance, one might conduct focus groups for designing questions for a satisfaction questionnaire or use a scoring rubric for portfolios to determine what characteristics of students' writing might be evaluated.

Teacher-centred Assessment

According to Dunn et al. (2004), in teacher centred assessment students demonstrate the skills introduced in the class in authentic or structured settings as the teacher observes their performance and records use of the critical elements of the skill. The teacher establishes specific criteria which students are intended to meet: criteria may be progressive in nature (a series of gymnastics balances) or part of a sequence (a series of dance steps); teacher checks off when a student has met each criterion.

Student-centred Assessment

In this assessment, students are involved providing an assessment of their own performance or progress. The students are given the opportunity to provide written or oral, formal or informal, journals or reflective narratives of a task assign to them. Teaching and assessing are intertwined and assessment is used to promote and diagnose learning (Dunn, et al 2004).

Norm-referenced Assessment

Norm-reference assessment **(**NR) is a form of assessment that uses standardized test in which results compare the performance of an individual with the performance of a large group of students. NR are sometimes referred to as scores of "relative standing." NR compares individual scores relative to a normative sample, which is a group of students with known demographic characteristics (age, gender, ethnicity, or grade in school). Comparisons are made using two statistical properties of the normative sample: the mean and the standard deviation. NR produces raw scores that are transformed into standard scores using calculations involving the mean and standard deviation. The standard score is used to report how a student performed relative to peers. Standard scores are often reported as percentiles because they are relatively easy for parents and educators to interpret, but there are many other types of standard scores that maybe reported (e.g., z-scores or T-scores).

Commercially available cognitive and achievement tests are often norm-referenced. For example, the Stanford Achievement Test Series (SAT10) is a NR and was recently used in a national evaluation of the Reading First program. Language proficiency tests used to identify students with Limited English Proficiency (LEP), such as the IPT Family of Tests, are NR (Beth, Robin, Megan, Beth & Fatih, 2009)

Criterion-referenced Assessment

Salvia and Ysseldyke (1978) explains criterion-referenced assessment as the measurement of a person's development of particular skills in terms of absolute level of mastery. This explains whether a person is able to perform a

particular task or not. For example, the student is or is not able to identify the primary colours.

Achievement Assessment

Achievement refers to how well a student has performed in the past (Quinn, 2000). This type of test aims to measure attainment of objectives in school-based curricular. It tries to gauge skills and knowledge developed because of specific instruction.

Aptitude Assessment

Aptitude is how well a student will perform in the future. According to Elliot, Kratochwill, Cook and Travers (2000), an aptitude test is a test that predicts a student's performance in a certain task by sampling the cumulative effect on the individual on many experiences. They are used to predict what students can learn. They are used to measure performance based on learning abilities.

Paper and Pencil Test

This is often the first choice used for formal assessment because of its practicality (Ormrod, 2008). The assessment requires students to write independently or to demonstrate understanding of concepts. A teacher gives seatwork as well as homework to students for them to respond in writing. These help the students to practice the learning target.

Local / Internal Assessment

This assessment set and marked by the school teachers. Students get the mark and feedback regarding the assessment.

National / External Assessment

This is set by a governing body and is marked by non-biased personnel. Students only receive a mark. Therefore, students have no idea how they performed in terms of which items were correctly answered.

Performance Assessment

Performance-based assessment represents a set of strategies for the application of knowledge skills and work habits through the performance of tasks that are meaningful and engaging to students. This type of assessment provides teachers with information about how to fairly assess a student's performance (Airasian, 1991).

Validity

Nitko (2004) refers to validity as the soundness or appropriateness and uses of students' assessment results. Validity therefore emphasizes the uses to which a teacher puts assessment results. Judgement about the validity of interpretations or use of assessment results should be made after studying several pieces of validity evidence. Nitko (2004) notes that validity judgement must be based on four (4) principles

1. The interpretations a teacher gives to students' assessment results are valid only to the degree that one can point to evidence that support their appropriateness and correctness
2. The uses a teacher makes of the assessment results are valid to the degree to which one can point to evidence that support their correctness and appropriateness
3. The interpretations a teacher makes of the assessment results are valid only when the values implied by them are appropriate.

4. The interpretations and uses a teacher makes of the assessment results are valid only when the consequences of these interpretations and uses are consistent with appropriate values.

Categories of Validity Evidence

1. Curricular/Content validity
2. Construct related evidence of validity
3. Criterion-related evidence of validity

Curricula/Content validity. Assessment should sample adequately the content of syllabus. Content validity refers to the degree to which the content of the items reflects the content domain of interest (Dunn et al., 2004)

Construct related evidence of validity. A construct is an individual's characteristics, trait, attribute or ability that is assumed to exist in order to explain some aspects of behaviour. Construct validity evidence is explained by Swaffield (2008) as validating the extent to which an assessment did measure the construct of interest. This means that construct validity is how closely the assessment relates to the domain that is to be assessed. It can also be explained that the degree to which one can infer construct or trait from assessment results. The extent to which test results are related to data from an observed behaviour with regard to the construct in question can said to be construct related evidence. Ensuring construct validity means that the assessment content is closely related to the learning objectives of the course.

Criterion related evidence of validity. This is concerned with empirical method of relationship between test scores or other measures (predictors) and some independent external measure (criteria). There are two

sub-categories of criterion related validity, predictive and concurrent validity evidence.

Predictive validity evidence. This suggests that the predictions made on the basis of assessment results will be valid. For example, one might predict that someone who scores 'A' in mathematics at the SSS level might be perform better in a degree course in mathematics than someone who scored a C. this type of validity.

Concurrent validity evidence. It involves the collection of instrument data and criterion data are gathered at nearly the same time and results are compare. It is used to describe how well a test predicts current outcomes. Swaffield (2008) states that, concurrent validity is when one uses an assessment results to predict the performance on another assessment taken at the same time. For example, researcher administers a self-motivation inventory to a group of second year senior high school in a certain school and compares their scores on it with their teacher's ratings of students' self-motivation obtained at about the same time.

Reliability

Reliability is the consistency of assessment results. A reliable assessment consistently gives the same results under identical circumstances. It is important to consider whether the results of a test will be consistent when designing assessment. Reliability is about how assessment can be trusted to give consistent information on students' progress (Mansel, James & ARG, 2009).

An assessment task is unreliable if different markers award different grades to the same student attempt at the assessment or if one marker awards a

different grade to the same student attempt at the assessment at a later point in time (Le Brun & Johnstone, 1994).

Types of Reliability.

1. Test-retest
2. Parallel forms
3. Internal consistency

Test-retest reliability. To Nitko (1996), test-retest is the testing the reliability of assessment results, where a test is administered to a group of students. That same test is administered to the same group immediately or after an interval of time. Scores from the two tests are compared and if found to be similar they are said to have high test-retest reliability. Typically, the two separate administrations are only a few days or a few weeks apart; the time should be short enough so that the examinees' skills in the area being assessed have not changed through additional learning. The relationship between the examinees' scores from the two different administrations is estimated, through statistical correlation, to determine how similar the scores are. This type of reliability demonstrates the extent to which a test is able to produce stable, consistent scores across time.

Parallel forms reliability. To Biggs (1999), two tests of parallel forms (test that measures the same thing) are administered to the same group of students at the same time or after an interval of time. A positive correlation between the results is an indication of a reliability of parallel forms. Dunn et al. (2004) explains further that many examination programmes develop multiple, parallel forms of an exam to help provide test security. These parallel forms are all constructed to match the test blueprint, and the parallel test forms

are constructed to be similar in average item difficulty. Parallel forms reliability is estimated by administering both forms of the exam to the same group of examinees. While the time between the two test administrations should be short, it does need to be long enough so that examinees' scores are not affected by fatigue. The examinees' scores on the two test forms are correlated in order to determine how similarly the two test forms function. This reliability estimate is a measure of how consistent examinees' scores can be expected to be across test forms (Dunn, et al., 2004).

Internal consistency. The internal consistency measure of reliability is frequently used for norm referenced tests (NRTs). This method has the advantage of being able to be conducted using a single form given at a single administration. The internal consistency method estimates how well the set of items on a test correlate with one another; that is, how similar the items on a test form are to one another (Professional Testing Inc., 2006). Nitko (1996) also pointed out that many test analysis software programs produce this reliability estimate automatically. However, two common differences between NRTs and criterion referenced tests (CRTs) make this method of reliability estimation less useful for CRTs. First, because CRTs are typically designed to have a much narrower range of item difficulty, and examinee scores, the value of the reliability estimate will tend to be lower. Additionally, CRTs are often designed to measure a broader range of content; this results in a set of items that are not necessarily closely related to each other. This aspect of CRT test design will also produce a lower reliability estimate than would be seen on a typical NRT (Professional Testing Inc., 2006).

Referencing of the Assessment

In order for assessment to be meaningful, students' abilities must be compared with a common measure. This can be done by comparing students' performance with other candidates (norm referencing), with objective criteria (criterion referencing) or with the candidate's own performance against a prior performance or in another area (McAlpine, 2002).

Norm-related Referencing

This is comparing individuals with their peers. It is usually used for selection purposes but gives little information about students' actual abilities. There are two main forms, these are the norm and cohort referencing.

Cohort referencing. This type of referencing takes the subgroup of candidates attempting the assessment as its base line. The highest results are given to students who attain the best marks relative to their peers who also took the assessment at the time.

Isoptive Referencing

This involves the comparing an individual's performance against him/herself. There are two forms of this referencing.

Relative isoptive referencing. This is the comparison of an individual's performance in one sub-domain compared with others, regardless of overall performance. With this type of referencing, students are pointed towards their weakest areas regardless of what their overall abilities in the subject might be.

Time dependent isoptive reference. This is comparison of a student's performance over time.

Construction of Quality Assessment Items

To ensure usefulness of the assessment results, the items must be of appropriate quality. The difficulty and discriminatory levels must be appropriate for the students.

Difficulty Level

The difficulty index is the percentage of the total number of students who answer test item correctly. Difficulty level can also be interpreted as how easy or how difficult an item is. The values of the difficulty level range from 0.0 to 1.0. Santos (2007) suggested a benchmark for interpreting the difficulty level of test item. He suggested that items with difficulty level of 0.00 to 0.25 means the item is difficult and needs to be revised or discarded, 0.26 to 0.75 means the item is right difficult and needs to be retained and 0.76 to 1.0 means the item is above easy and the item needs to be revised or discarded.

Discriminatory level

The discrimination level is the difference between the percentage of students in upper and lower groups who got the items correct. Generally, students who did well on the test should select the correct answer to any given item on the test. Thus, discrimination level distinguishes for each item between the performance of students who did well on the test and students who did poorly. For examination with a normal distribution, discrimination level of 0.3 and above is good; 0.6 and above is very good. Values close to zero mean that most students performed the same on an item. The index should never be negative (Oosterhof, 1990).

Crafting Items for Assessment

According to Etsey (2012), in the development of items for a test, a test plan made up of a table of specification or blue print must be made. The

table of test specification covers the topics and sub-topics covered in a course and the number of items to be included in the test.

Test items and key are to be prepared as soon as possible after the material has been taught. In writing the test items, the table of specification should be referred to constantly. The items should match the instructional objectives and they should be well formulated without any ambiguity in meaning, free from spelling or typing errors and grammatically correct. More items than actually needed should be prepared. The items should be of varying difficulty and the items should be prepared in advance to allow for reviews and editing.

Clear and concise directions for the test should be stated such as the number of items to respond to, where answers should be written, amount of time available and mode of identifying the testee among others.

Developing and Choosing Methods for Assessment

Assessment methods should be appropriate for and compatible with the purpose and context of the assessment.

1. Assessment methods should be developed or chosen so that inferences drawn about the knowledge, skills, attitudes, and behaviours possessed by each student are valid and not open to misinterpretation, therefore, development or selection of assessment methods for collecting information should be clearly linked to the purposes for which inferences and decisions are to be made. In Ghana for example, the NMC licensure examination is used to assess the knowledge, skills and attitude of the nursing and midwifery professionals.

2. Assessment methods should be clearly related to the goals and objectives of instruction, and be compatible with the instructional approaches used.

Assessment methods should be in harmony with the instructional objectives to which they are referenced. Planning an assessment design at the same time as planning instruction will help integrate the two in meaningful ways. For example if an instructor wants his/her nursing students gain the skills of checking the temperature of a patient in a lesson on the topic 'Checking the Temperature of Patients', then it would be appropriate for the instructor to ask his/her students to demonstrate/perform how he/she (student) would check patient's temperature. Asking the students to perform the action as way of assessing whether the student could perform the activity will be better than just asking the students to describe the process of checking a patient. This is because the student at his/her field of work is expected to really check the temperature of patient.

3. When developing or choosing assessment methods, consideration should be given to the consequences of the decisions to be made in light of the obtained information. In the event of misinterpretation of the level of performance on an end-of-unit test may result in incorrectly holding a student from proceeding to the next instructional unit in a continuous progress situation.

4. More than one assessment method should be used to ensure comprehensive and consistent indications of student performance. To obtain a more complete picture or profile of a student's knowledge, skills, attitudes, or behaviours, and to discern consistent patterns and trends, more than one assessment method should be used. For instance to obtain a driving license, the testee is expected to do written test and practical test.

5. Assessment methods should be suited to the backgrounds and prior experiences of students. Assessment methods should be free from bias brought about by student factors extraneous to the purpose of the assessment. Possible factors to consider include culture, developmental stage, ethnicity, gender, socio-economic background, language, special interests, and special needs. Students' success in answering questions on a test or in an oral quiz, for example, should not be dependent upon prior cultural knowledge, such as understanding an allusion to a cultural tradition or value, unless such knowledge falls within the content domain being assessed. All students should be given the same opportunity to display their strengths.

6. Content and language that would generally be viewed as sensitive, sexist, or offensive should be avoided. The vocabulary and problem situation in each test item or performance task should not favour or discriminate against any group of students.

7. Assessment instruments translated into a second language or transferred from another context or location should be accompanied by evidence that inferences based on these instruments are valid for the intended purpose. Translation of an assessment instrument from one language to another is a complex and demanding task. Similarly, the adoption or modification of an instrument developed in another country is often not simple and straightforward. Care must be taken to ensure that the results from translated and imported instruments are not misinterpreted or misleading.

Collecting Information for Assessment

Students should be provided with a sufficient opportunity to demonstrate the knowledge, skills, attitudes, or behaviours being assessed.

Assessment information can be collected in a variety of ways (observations, oral questioning, interviews, oral and written reports, paper-and-pencil tests). The guidelines which follow are not all equally applicable to each of these procedures.

1. Students should be told why assessment information is being collected and how this information will be used. Students who know the purpose of an assessment are in a position to respond in a manner that will provide information relevant to that purpose. For example, if students know that their participation in a group activity is to be used to assess cooperative skills, they can be encouraged to contribute to the activity. If students know that the purpose of an assessment is to diagnose strengths and weaknesses rather than to assign a grade, they can be encouraged to reveal weaknesses as well as strengths. If the students know that the purpose is to assign a grade, they are well advised to respond in a way that will maximize strength. This is especially true for assessment methods that allow students to make choices, such as with optional writing assignments or research projects.

2. An assessment procedure should be used under conditions suitable to its purpose and form. Optimum conditions should be provided for obtaining data from and information about students so as to maximize the validity and consistency of the data and information collected. Common conditions include such things as proper light and ventilation, comfortable room temperature, and freedom from distraction (e.g., movement in and out of the room, noise). Adequate work-space, sufficient materials, and adequate time limits appropriate to the purpose and form of the assessment are also necessary. For example, if the intent is to assess student participation in a small group,

adequate work space should be provided for each student group, with sufficient space between subgroups so that the groups do not interfere with or otherwise influence one another and so that the teacher has the same opportunity to observe and assess each student within each group.

3. In assessments involving observations, checklists, or rating scales, the number of characteristics to be assessed at one time should be small enough and concretely described so that the observations can be made accurately.

Student behaviours often change so rapidly that it may not be possible simultaneously to observe and record all the behaviour components. In such instances, the number of components to be observed should be reduced and the components should be described as concretely as possible. One way to manage an observation is to divide the behaviour into a series of components and assess each component in sequence. By limiting the number of components assessed at one time, the data and information become more focused, and time is not spent observing later behaviour until prerequisite behaviours are achieved.

4. The directions provided to students should be clear, complete, and appropriate for the ability, age and grade level of the students. Lack of understanding of the assessment task may prevent maximum performance or display of the behaviour called for. In the case of timed assessments, for example, teachers should describe the time limits, explain how students might distribute their time among parts for those assessment instruments with parts, and describe how students should record their responses. For a portfolio assessment, teachers should describe the criteria to be used to select the materials to be included in a portfolio, who will select these materials, and, if

more than one person will be involved in the selection process, how the judgments from the different people will be combined. Where appropriate sample material and practice should be provided to further increase the likelihood that instructions will be understood.

5. In assessments involving selection items (e.g., true-false, multiple-choice), the directions should encourage students to answer all items without threat of penalty. A correction formula is sometimes used to discourage "guessing" on selection items. The formula is intended to encourage students to omit items for which they do not know the answer rather than to "guess" the answer. Because research evidence indicates that the benefits expected from the correction are not realized, the use of the formula is discouraged. Students should be encouraged to use whatever partial knowledge they have when choosing their answers, and to answer all items (Joint Advisory Committee, 1993).

6. When collecting assessment information, interactions with students should be appropriate and consistent. Care must be taken when collecting assessment information to treat all students fairly. For example, when oral presentations by students are assessed, questioning and probes should be distributed among the students so that all students have the same opportunity to demonstrate their knowledge. While writing a paper-and-pencil test, a student may ask to have an ambiguous item clarified, and, if warranted, the item should be explained to the entire class.

7. Unanticipated circumstances that interfere with the collection of assessment information should be noted and recorded. Events such as a fire drill, an unscheduled assembly, or insufficient materials may interfere in the way in

which assessment information is collected. Such events should be recorded and subsequently considered when interpreting the information obtained.

8. A written policy should guide decisions about the use of alternate procedures for collecting assessment information from students with special needs and students whose proficiency in the language of instruction is inadequate for them to respond in the anticipated manner. It may be necessary to develop alternative assessment procedures to ensure a consistent and valid assessment of those students who, because of special needs or inadequate language, are not able to respond to an assessment method (for example, oral instead of written format, individual instead of group administered, translation into first language, providing additional time). The use of alternate procedures should be guided by a written policy developed by teachers, administrators, and other jurisdictional personnel.

Three fundamental principles for constructing assessments Nitko (2001) has outlined the following three principles to be followed when one wants to develop assessment:

1. Assessment should focus on important learning targets. Assessment tasks should focus on educationally important learning targets.
2. Assessment should be crafted to elicit from students only the knowledge and performances relevant to the learning being assessed. The assessment results should indicate if student or has not achieved the desired degree of learning.
3. The tasks should not prevent a student from demonstrating that the achievement the learning target. For example, inappropriate vocabulary, poorly worded directions, or imprecise wording that often

makes the question ambiguous therefore eliciting a wrong answer from a student who has knowledge about it.

The National Council on Measurement in Education (NCME) which was originally founded in United States in 1938 has also outlined responsibilities of an assessment developer. These are,

1. Ensure that assessment products and services are developed to meet applicable professional, technical, and legal standards.
2. Develop assessment products and services that are as free as possible from bias due to characteristics irrelevant to the construct being measured, such as gender, ethnicity, race, socioeconomic status, disability religion, age or national origin.
3. Plan accommodations for groups of test takers with disabilities and other special needs when developing assessment.
4. Disclose to appropriate parties any actual or potential conflicts of interest that might influence the developers' judgement or performance.
5. Use copyrighted material in assessment products and services in accordance with state and federal law.
6. Make information available to appropriate persons about the steps taken to develop and score the assessment, including up-to-date information used to support the reliability, validity, scoring and reporting process and other relevant characteristics of the assessment.
7. Protect the rights to privacy of those who are assessed as part of the assessment development process (National Council on Measurement in Education, NCME, 1995).

Administering Test for Assessment

Teachers have the responsibility of making sure that test for assessment is administered in a fair and accurate manner. The National Council on Measurement in Education (1995) has outlined the responsibilities of test administrator. In administering test for assessment,

1. Inform the students about the test prior to its administration, including its purpose, uses and consequences; how the assessment information will be judged or scored; how the results will be kept on file; who will have access to the results; how the results will be distributed; and examinees' rights before, during and after the assessment.
2. Administer only those tests for which they are qualified by education, training, licensure or certification.
3. Take appropriate security precautions before, during and after the administration of the test.
4. Understand the procedures needed to administer the test prior to administration.
5. No eligible student should be excluded from the assessment.
6. Avoid any conditions in the conduct of the test that might invalidate the results.
7. Provide for the document all reasonable and allowable accommodations for the administration of the test to persons with disabilities or special needs.
8. Provide reasonable opportunities for individuals to ask questions about the assessment procedures or directions prior to and at prescribed times during administration of the test.

9. Protect the rights to privacy and due process of those who are assessed.
10. Avoid actions or conditions that misrepresent their actual levels of attainment.

During the assessment procedure, a teacher has the following responsibilities to fulfil.

1. The administration of the test should be conducted in a professional manner. Students should not be rushed through the assessment or the assessment should not be too long for the available time. This creates unfair conditions for the students.
2. Accommodating students with disabilities. If there are some students with disabilities in a teacher's class, the teacher has to make reasonable accommodation to assess the student. For example, teachers could make special seating arrangement for students who are physically challenged.

Stiggins (1994) has also outlined the following questions to be answered by the teacher before the administration of assessment.

1. What concept, skill, or knowledge am I trying to assess?
2. What should my students know?
3. At what level should my students be performing?
4. What type of knowledge is being assessed, reasoning, memory or process?

By answering these questions, the teacher can decide what type of activity best suits your assessment needs.

Grading

Grading involves comparing a students' performance with a predefined set of standards. McAlpine (2002) states that "grades awarded are very concise summaries of students' abilities (p. 5). Grades provide information about students' achievement in a summary format.

Students' grades should meaningfully be a representation of learning outcomes. Meaningful grades help teachers to determine the entry points for instruction when they start teaching and can modify the instruction during the course. This can be achieved if assessment information is organised by learning outcomes that helps the teacher to build a profile of the students. For grades to be of good quality, the same performance by students should result in the same grade from different teachers of the same subject or grade level. To achieve this, teachers need to work form a common understanding of learning outcomes and performance standards. Graded tests and assignment convey to students what is important to learn. If the graded assignment deviates from the goal of leaning, then it is possible for students to focus their learning on the graded portion of the curriculum. Using grades as a reward or punishment can weaken the students' intrinsic motivation to learn (Brennan, 2006).

Grades should also be purely a measure of the students' achievement without the dilution from other factors such as students' behaviour, attitude and other non-achievement factors. Grades should also be supportive of learning. When grades are used to reward or punish students' behaviour, their real meaning of supporting learning is diminished.

Judging and Scoring Student Performance

Judging and scoring refers to the process of determining the quality of a student's performance, the appropriateness of an attitude or behaviour, or the correctness of an answer. Results derived from judging and scoring may be expressed as written or oral comments, ratings, categorizations, letters, numbers, or as some combination of these forms. Canadian Psychological Association (1986), and the study conducted by Joint Advisory Committee, Centre for Research in Applied Measurement and Evaluation (1993) outlined the following guidelines for judging and scoring students' performance:

1. Before an assessment method is used, a procedure for scoring should be prepared to guide the process of judging the quality of a performance or product, the appropriateness of an attitude or behaviour, or the correctness of an answer. To increase consistency and validity, properly developed scoring procedures should be used. Different assessment methods require different forms of scoring. Scoring selection items (true-false, multiple-choice, and matching) requires the identification of the correct or, in some instances, best answer. Guides for scoring essays might include factors such as the major points to be included in the "best answer" or models or exemplars corresponding to different levels of performance at different age levels and against which comparisons can be made. Procedures for judging other performances or products might include specification of the characteristics to be rated in performance terms and, to the extent possible, clear descriptions of the different levels of performance or quality of a product.

2. Before an assessment method is used, students should be told how their responses or the information they provide will be judged or scored. Informing students prior to the use of an assessment method about the scoring procedures to be followed should help ensure that similar expectations are held by both students and their teachers.
3. Care should be taken to ensure that results are not influenced by factors that are not relevant to the purpose of the assessment. Various types of errors occur in scoring, particularly when a degree of subjectivity is involved (e.g., marking essays, rating a performance, judging a debate). For example, if the intent of a written communication is to assess content alone, the scoring should not be influenced by stylistic factors such as vocabulary and sentence structure. Personal bias errors are indicated by a general tendency to rate all students in approximately the same way (e.g., too generously or too severely). Halo effects can occur when a rater's general impression of a student influences the rating of individual characteristics or when a previous rating influences a subsequent rating. Pooled results from two or more independent ratters (teachers, other students) will generally produce a more consistent description of student performance than a result obtained from a single ratter. In combining results, the personal biases of individual ratters tend to cancel one another.
4. Comments formed as part of scoring should be based on the responses made by the students and presented in a way that students can understand and use them. Comments, in oral and written form, are provided to encourage learning and to point out correctable errors or

inconsistencies in performance. In addition, comments can be used to clarify a result. Such feedback should be based on evidence pertinent to the learning outcomes being assessed.

5. Any changes made during scoring should be based upon a demonstrated problem with the initial scoring procedure. The modified procedure should then be used to rescore all previously scored responses. Anticipating the full range of student responses is a difficult task for several forms of assessment. There is always the danger that unanticipated responses or incidents that are relevant to the purposes of the assessment may be overlooked. Consequently, scoring should be continuously monitored for unanticipated responses and these responses should be taken into proper account.
6. An appeal process should be described to students at the beginning of each school year or course of instruction that they may use to appeal a result. Situations may arise where a student believes a result incorrectly reflects his/her level of performance. A procedure by which students can appeal such a situation should be developed and made known to them. This procedure might include, for example, checking for addition or other recording errors or, perhaps, judging or scoring by a second qualified person.

Summarizing and Interpreting Results

Procedures for summarizing and interpreting assessment results should yield accurate and informative representations of a student's performance in relation to the goals and objectives of instruction for the reporting period. Summarizing and interpreting results refers to the procedures used to combine

assessment results in the form of summary comments and grades which indicate both a student's level of performance and the valuing of that performance. Canadian Psychological Association (1986), and the study conducted by Joint Advisory Committee, Centre for Research in Applied Measurement and Evaluation (1993) outlined the following guidelines for summarising and interpreting results:

1. Procedures for summarizing and interpreting results for a reporting period should be guided by a written policy. Summary comments and grades, when interpreted, serve a variety of functions. They inform students of their progress. Parents, teachers, counsellors, and administrators use them to guide learning, determine promotion, identify students for special attention (e.g., honours, remediation), and to help students develop future plans. Comments and grades also provide a basis for reporting to other schools in the case of school transfer and, in the case of senior high school students, post-secondary institutions and prospective employers.
2. They are more likely to serve their many functions and those functions are less likely to be confused if they are guided by a written rationale or policy sensitive to these different needs. This policy should be developed by teachers, school administrators, and other educational personnel interested in school assessment practices in consultation with representatives of the audiences entitled to receive a report of summary comments and grades.
3. The way in which summary comments and grades are formulated and interpreted should be explained to students and their parents/guardians.

Students and their parents/guardians have the right to know how student performance is summarized and interpreted. With this information, they can make constructive use of the findings and fully review the assessment procedures followed. It should be noted that some aspects of summarizing and interpreting are based upon a teacher's best judgment of what is good or appropriate. This judgment is derived from training and experience and may be difficult to describe specifically in advance. In such circumstances, examples might be used to show how summary comments and grades were formulated and interpreted.

4. The individual results used and the process followed in deriving summary comments and grades should be described in sufficient detail so that the meaning of a summary comment or grade is clear. Summary comments and grades are best interpreted in the light of an adequate description of the results upon which they are based, the relative emphasis given to each result, and the process followed to combine the results. Many assessments conducted during a reporting period are of a formative nature. The intent of these assessments (e.g., informal observations, quizzes, text-and-curriculum embedded questions, oral questioning) is to inform decisions regarding daily learning, and to inform or otherwise refine the instructional sequence. Other assessments are of a summative nature. It is the summative assessments that should be considered when formulating and interpreting summary comments and grades for the reporting period.

5. Combining disparate kinds of results into a single summary should be cautiously done. To the extent possible, achievement, effort, participation, and other behaviours should be graded separately. A single comment or grade cannot adequately serve all functions. For example, letter grades used to summarize achievement are most meaningful when they represent only achievement. When they include other aspects of student performance such as effort, amount (as opposed to quality) of work completed, neatness, class participation, personal conduct, or punctuality, not only do they lose their meaningfulness as a measure of achievement, but they also suppress information concerning other important aspects of learning and invite inequities. Thus, to adequately summarize the different aspects of student performance, letter grades for achievement might be complemented with alternate summary forms (e.g., checklists, written comments) suitable for summarizing results related to these other behaviours.
6. Summary comments and grades should be based on more than one assessment result in order to ensure adequate sampling of broadly defined learning outcomes. More than one or two assessments are needed to adequately assess performance in multifaceted areas such as Reading. Under-representation of such broadly defined constructs can be avoided by ensuring that the comments and grades used to summarize performance are based on multiple assessments, each referenced to a particular facet of the construct.

7. The results used to produce summary comments and grades should be combined in a way that ensures that each result receives its intended emphasis or weight. When the results of a series of assessments are combined into a summary comment, care should be taken to ensure that the actual emphasis placed on the various results matches the intended emphasis for each student.
8. When numerical results are combined, attention should be paid to differences in the variability, or spread, of the different sets of results and appropriate account taken where such differences exist. If, for example, a grade is to be formed from a series of paper and pencil tests, and if each test is to count equally in the grade, then the variability of each set of scores must be the same.
9. The basis for interpretation should be carefully described and justified. Interpretation of the information gathered for a reporting period for a student is a complex and, at times, controversial issue. Such information, whether written or numerical, will be of little interest or use if it is not interpreted against some pertinent and defensible idea of what is good and what is poor. The frame of reference used for interpretation should be in accord with the type of decision to be made. Typical frames of reference are performance in relation to pre-specified standards, performance in relation to peers, performance in relation to aptitude or expected growth, and performance in terms of the amount of improvement or amount learned. If, for example, decisions are to be made as to whether or not a student is ready to

move to the next unit in an instructional sequence, interpretations based on pre-specified standards would be most relevant.

10. Interpretations of assessment results should take account of the backgrounds and learning experiences of the students. Assessment results should be interpreted in relation to a student's personal and social context. Among the factors to consider are; age, ability, gender, language, motivation, opportunity to learn, self-esteem, socio-economic background, special interests, special needs, and test-taking skills. Motivation to do school tasks, language capability, or home environment can influence learning of the concepts assessed, for example. Poor reading ability, poorly developed psycho-motor or manipulative skills, lack of test-taking skills, anxiety, and low self-esteem can lead to lower scores. Poor performance in an assessment may be attributable to a lack of opportunity to learn because required learning materials and supplies were not available, learning activities were not provided, or inadequate time was allowed for learning. When a student performs poorly, the possibility that one or more factors such as these might have interfered with a student's response or performance should be considered.
11. Assessment results that will be combined into summary comments and grades should be stored in a way that ensures their accuracy at the time they are summarized and interpreted. Comments and grades and their interpretations, formulated from a series of related assessments, can be no better than the data and information upon which they are based. Systematic data control minimizes errors which would otherwise be

introduced into a student's record or information base, and provides protection of confidentiality.

12. Interpretations of assessment results should be made with due regard for limitations in the assessment methods used, problems encountered in collecting the information and judging or scoring it, and limitations in the basis used for interpretation. To be valid, interpretations must be based on results determined from assessment methods that are relevant and representative of the performance assessed. Administrative constraints, the presence of measurement error, and the limitations of the frames of reference used for interpretation also need to be accounted for.

Reporting Assessment Results

Assessment reports should be clear, accurate, and of practical value to the audiences for whom they are intended. Canadian Psychological Association (1986), and the study conducted by Joint Advisory Committee, Centre for Research in Applied Measurement and Evaluation (1993) outlined the following guidelines for reporting assessment results:

1. The reporting system for a school/institution should be guided by a written policy. Elements to consider include such aspects as audiences, medium, format, content, level of detail, frequency, timing, and confidentiality. The policy to guide the preparation of school reports (e.g., reports of separate assessments; reports for a reporting period) should be developed by teachers, school administrators, and other educational personnel interested in school assessment practices in consultation with representatives of the audiences entitled to receive a

report. Cooperative participation not only leads to more adequate and helpful reporting, but also increases the likelihood that the reports will be understood and used by those for whom they are intended.

2. Written and oral reports should contain a description of the goals and objectives of instruction to which the assessments are referenced. The goals and objectives that guided instruction should serve as the basis for reporting. A report will be limited by a number of practical considerations, but the central focus should be on the instructional objectives and the types of performance that represent achievement of these objectives.
3. Reports should be complete in their descriptions of strengths and weaknesses of students, so that strengths can be built upon and problem areas addressed. Reports can be incorrectly slanted towards "faults" in a student or toward giving unqualified praise. Both biases reduce the validity and utility of assessment. Accuracy in reporting strengths and weaknesses helps to reduce systematic error and is essential for stimulating and reinforcing improved performance. Reports should contain the information that will assist and guide students, their parents/guardians, and teachers to take relevant follow-up actions.
4. The reporting system should provide for conferences between teachers and parents/guardians. Whenever it is appropriate, students should participate in these conferences. Conferences scheduled at regular intervals and, if necessary, upon request provide parents/guardians and, when appropriate, students with an opportunity to discuss assessment

procedures, clarify and elaborate their understanding of the assessment results, summary comments and grades, and reports, and, where warranted, to work with teachers to develop relevant follow-up activities or action plans.

5. An appeal process should be described to students and their parents/guardians at the beginning of each school year or course of instruction that they may use to appeal a report**.** Situations may arise where a student and his/her parents/guardian believe the summary comments and grades inaccurately reflect the level of performance of the student. A procedure by which they can appeal such a situation should be developed and made known to them (for example, in a school handbook or newsletter provided to students and their parents/guardians at the beginning of the school year).
6. Access to assessment information should be governed by a written policy that is consistent with applicable laws and with basic principles of fairness and human rights. A written policy, developed by teachers, administrators, and other educational personnel interested in school assessment, should be used to guide decisions regarding the release of student assessment information. Assessment information should be available to those people to whom it applies – students and their parents/guardians, and to teachers and other educational personnel obligated by profession to use the information constructively on behalf of students. In addition, assessment information might be made available to others who justify their need for the information (e.g.,

post-secondary institutions, potential employers, researchers). Issues of informed consent should also be addressed in this policy.

7. Transfer of assessment information from one school to another should be guided by a written policy with stringent provisions to ensure the maintenance of confidentiality. To make a student's transition from one school to another as smooth as possible, a clear policy should be prepared indicating the type of information to go with the student and the form in which it will be reported. Such a policy, developed by jurisdictional and ministry personnel, should ensure that the information transferred will be sent by and received by the appropriate person within the "sending" and "receiving" schools respectively.

Teacher Capacity-Building for Effective Classroom Assessment

The following initiatives are vital in building teacher capacity in classroom assessment to improve student learning:

1. Creating effective classroom assessments: this can be achieved by:

    a. Teachers being trained on how to develop high quality classroom assessment through workshops and use of models.

    b. Government preparing and providing explicit guidelines describing good classroom assessment practices.

    c. Teachers creating assessments and asking for “expert” feedback on their quality and

    d. Mandating teachers to participate in professional development at all times.

2. Implementation of Classroom Assessment: The capacity of teachers needs to be built here because:

a. Teacher must regularly examine the quality of student work and the quality of work they assign students (i.e. cognitive challenge, purpose).

b. Leadership support and time are critical for teachers to be able to work together on improving assessment.

c. For sustained results, there must be balance between pressure and support (i.e. teachers must be expected to improve the quality of instruction and should be supported in doing so by all the means at the disposal of the school.

There are many ways teachers at the nurses training colleges can work together to improve their assessment practices if their capacity is built in the above three areas. For example, the teacher may:

1. Have to understand the standards set and clarify instructional goals as a first step toward better assessment;
2. Work together on integrating more performance assessments into their assessment methods;
3. Work together to find and use assessments as windows into students' thinking in an effort to become better at diagnosing student needs;
4. Design institutional interventions based on assessment information;
5. Look together at the quality of student work;

Through these activities, schools can develop into communities of practice that continuously revisit and restructure the learning environment for the benefit of the student through student assessments.

Assessment Practices

There is enough evidence that in schools, assessment merely refers to tests, examinations and grading (Lissitz & Schafer, 2000). According to Dean

(1999), most teacher education programmes skim over classroom assessment, leaving teachers to assess in the way they were assessed when they were in school. Campbell and Evans (2000) evaluated pre-service teacher who had completed course work in educational measurement and found that student teachers did not follow many assessment practices recommended. The National Council of Teachers of Mathematics, NCTM, (2000) held that assessment has the potential to enhance mathematics learning and to promote students' interest in mathematics. This is too general a statement considering the fact that in most schools assessment means testing and grading (van de Wallen, 2001). Gullickson (1984) has the view that most teachers believe they have adequate knowledge of testing and measurement, more to experience than university course work.

Numerous researchers and organizations have specified that the content domain in which teachers need to develop assessment skills. Among the commonly discussed skills are choosing appropriate methods, developing paper and pencil test, administration and scoring tests interpreting standardized test results, evaluating and improving assessment instruments, using assessment in decision making and grading (Airasia, 1994; Stiggens, 1992).

McMillan, Myran and Workman (2002) in their study, aimed at describing the nature of classroom assessment and grading practices, found that teachers were mostly interested in assessing students' mastery or achievement and that performance assessment was used frequently. Morgan and Watson (2002) reported that most middle and high schoolteachers use teacher-constructed tests to assess students' achievement. In addition, Morgan

and Watson found that most teachers view classroom assessment as an added requirement to their teaching job and not as a tool to improve their teaching.

Cooney (1992) and Garet and Mills (1995) found similar results. Cooney surveyed high school mathematics teachers' assessment practices while Garet and Mills surveyed grade 4 to 12 mathematics teachers across the United States. Both studies reported that teachers mostly used short-answer tests for assessment. The two studies further reported that there was a strong influence of publisher's assessment materials on classroom practices. Teachers use the readymade tests without making modifications to them (Cooney, 1992; Garet & Mills, 1995). Beckmann, Senk and Thompson (1997) identified three reasons why teachers do not use multiple assessment methods. First, some teachers had limited knowledge of different forms of assessment. Second, teachers felt they had no time to create different forms of assessment. Third, teachers felt there was little or no professional guidance; therefore, they (teachers) were not confident enough to try out other forms of assessments. Cooney reported a strong link between assessment and grading in the minds of high school teachers.

A study conducted by Gurski (2008) in Canada, examined secondary classroom teachers' assessment and grading practices in one urban school division. It compared the assessment practices of ten elementary teachers over a period of 11 weeks with Ohio's fourth and sixth grade science Proficiency Tests. The study asked secondary teachers, within inclusive classrooms, to indicate their current assessment and grading practices. Evidence from the survey demonstrated that teachers in inclusive schools have diverse

assessment and grading practices and that they have begun to explore the potential for assessment to assist all students in their learning.

In another study, by Chapman (2011) in New Zealand, on the assessment practices of teachers in New Zealand outdoor education tertiary programmes, it was found that teachers were generally highly skilled outdoor education practitioners; however, there were indications that there were gaps of understanding of theoretical assessment concepts. Teachers seemed to find summative assessment challenging but they routinely used formative assessment to promote learning and worked hard at providing quality opportunities for learning. The use of assessment criteria was common practice. The role of professional judgement in assessment decisions were treated with suspicion because it was seen as too subjective. However it became clear that professional judgement was essential aspect of their assessment practices.

CHAPTER THREE

METHODOLOGY

This chapter deals with the methodology that was used in carrying out the study. It involves the description of the design for the study, population, sample and sampling procedure. It also gives a description of the instruments for the collection of the data for the study, the validity and the reliability as well as the strengths and weaknesses of the chosen instrument. The chapter also describes the procedure used for the collection of the data and finally explains how the data was analysed.

Research Design

The design that was used for the study was a descriptive study. The specific descriptive study that was used was the survey method. The descriptive survey determines and reports the way things are (Gay, 1992). He furthered this type of design is usually conducted to estimate the prevalence of the outcome of interest for a given population.

In order to describe tutors' assessment practices in the nursing training institutions in the Western and Central regions of Ghana, the descriptive survey design was used since its (descriptive survey design) objective is to describe accurately activities, objects, processes and persons (Fraenkel & Wallen, 2000). Polit and Hungler (1995) supported this assertion by stating that describing and documenting aspects of a situation as it normally occurs rather than explaining it is possible with descriptive survey. In carrying out a descriptive study, situations are described and documented as they occur

without necessarily trying to explain why they occurred. According to Babbie (1990), it will also be possible to generalize findings from the sample to the entire population. According to Frankel and Wallen (2000), the use of descriptive survey has a potential to provide a lot of information obtained from a large sample of individuals, it also helps to describe the current situation thus the current assessment practices of the tutors in the various nurses' training schools.

Further, descriptive survey was considered in this study because it is practical and large amounts of information can be collected from a large number of people in a short period of time. It is relatively cost effective. It can be carried out by the researcher or another person can collect the data on behalf the researcher. The results of the questionnaires can usually be quickly and easily quantified by either the researcher or through the use of a software package. Also, it can be analysed more scientifically and objectively. When data is quantified, it can be used to compare and contrast other research and may be used to measure change. Positivists believe that quantitative data can be used to create new theories and/or test existing hypotheses (Creswell, 2003).

More so, descriptive survey provides a quick and reliable data for analysis since the research would be conducted within a limited time frame (McBride, 1995). The advantages of this design are that the subject is observed in a complete natural and unchanged environment. Descriptive research is often used as a pre-cursor to more quantitative research designs, the general overview giving some valuable pointers as what variables are worth testing qualitatively. Again, the use of descriptive designs allows

variables and procedures to be described as accurately and completely as possible so that other researchers can replicate the study.

Population

The population for the study was all tutors who teach in the various nurses' training institutions in the Western and Central regions of Ghana. The tutors in the nurses' training schools in the Western and Central regions were 122 in number. Some of the tutors are nurses while others are not but have professional background such as nutrition and disease control while others do not have any health related background at all. These tutors also hold different certificates and degrees from different universities.

There are 11 nurses' training institutions with 122 tutors. The tutor distribution in terms of school location (the location of the school is added to the identification of the school) is presented in Table 1.

Table 1: Nursing Schools, where they are Located and the Number of Tutors in the Schools

School	Location	Number of tutors
Health Assistant	Sefwi Wiawso	7
Health Assistant	Asankragwa	6
Health Assistant	Asanda	8
Nursing and Midwifery	Sekondi	18
Nursing and Midwifery	Tarkwa	6
Community health	Esiama	9
Health Assistant	Dunkwa-on-Offin	9
Health Assistant	Twifo Praso	8
Community health	Winneba	18
Nursing and Midwifery	Cape Coast	18
Psychiatry Nursing	Ankaful	15
Total		**122**

Accessible population

The accessible population was all permanently employed tutors in the Western and Central regions of Ghana who were at post at the time of collecting the data. These tutors were 116 in number.

Sample and Sampling Procedure

All the tutors at post in the Western and Central regions of Ghana were involved in the study. Ary (1990) explains that a survey that covers the entire population of interest is referred to as census. Gay (1992) also agrees that in a census survey, an attempt is made to acquire data from each member of a population. Since the number of tutors in the nursing schools in the Western and Central regions is not large, the whole of the accessible population was used in the study.

Instruments

The instruments used for the collection of data for the study were a four-point Likert scale questionnaire (Appendix B) and an observation checklist (Appendix C).

Questionnaire as identified by Kerlinger (1973) is widely used for collecting data in educational research because it is very effective for securing factual information about practices and conditions for which the respondents are presumed to have knowledge. It is also used for inquiring into the opinions and attitudes of the subjects of the study. Nwadinigwe (2002) also pointed out that, questionnaires are the most popular and commonest means of data collection instrument and that its popularity lies in the fact that it is simple to construct. Again, according to Amedahe (2002), a questionnaire consists of a list of questions or statements relating to the aims of the study, the hypotheses

and research questions to be verified and answered, to which the respondent is required to answer by writing. With the use of a questionnaire, a researcher can give explanation of issues to the respondents, children and illiterates who cannot read and write can be assisted to fill the questionnaire and non-responses can be controlled to some extent by the researcher by making appointment with respondents to collect the questionnaire.

Although, the questionnaire was chosen as the appropriate instrument, it has some weaknesses in the sense that it is expensive in terms of time especially if respondents are scattered over a large area. Other weakness is that there is the likelihood of respondents trying to compare answers given. This was resolved by making sure that respondents did individual work when they were completing the questionnaire.

The questionnaire was in two main sections. The first part was on the background information of the respondents that was relevant to the study. The second part, which forms the main body of the questionnaire, focused on knowledge of the tutors in assessment and the nature of the assessment practices of the tutors. The items were mostly made up of closed ended statements using the Likert scale and ‘yes’ or ‘no’ format to ensure easy and quick response to the items.

A checklist comprises a set of written statements that were used in recording behaviours as they occurred. The checklist was used to verify the responses of the tutors concerning their assessment practices in terms of test construction of items and administration. If a particular behaviour is present when an individual is being observed, the researcher places a check opposite it

on the list. The statements on the checklist were crafted from the questionnaire to validate respondents' responses.

Pilot-Testing of the Instrument

The instrument was pilot tested in the Health Assistant Nurses' Training School in Teshie, Accra. The tutors in this school were purposive selected for the pilot testing because they have similar characteristics as the tutors who participated in the actually study that the main study. The reason for the pilot study was to ascertain the validity and reliability of the instrument. Also, the pilot test gave the advance warnings about where possible problems and difficulties that could be encountered in the main study and whether proposed methods or instruments were appropriate or too complicated. In effect, the pilot study was conducted to help refine the instrument and the plans for the field test.

Teijlingen and Hundley (2011) have argued that, administering the instruments to pilot subjects in exactly the same way as it will be administered in the main study enables the researcher to ask the subjects for feedback. This helps to identify ambiguities and difficult items. In this study, the pilot study helped to record the time taken to complete the achievement test and decide whether it was reasonable. It also helped to discard all unnecessary, difficult or ambiguous items. It gave opportunity to assess whether each item gave an adequate range of responses and provided an opportunity to re-word or re-scale any item that was not answered as expected.

Validity of the instruments

In this study, face and content validity were used to ascertain the validity of the instrument. Face and content validity are qualitative measures

of validity and are often employed in educational research because they are the easiest to ascertain.

Face Validity

Face validity is the evaluation of an instrument's appearance by a group of experts and/or potential participants**.** It establishes an instrument's ease of use, clarity, and readability. The face validity point out that the instrument is pleasing to the eye and applicable for intended purpose (Ary, Jacobs & Razavieh as cited in Alhassan, 2011). That the face validity indicates the extent to which the instrument appears to measure what it is meant to measure.

The questionnaire was given to experts to read for necessary corrections and suggestions. My colleagues, supervisors and other measurement and evaluation experts reviewed the instruments to ensure their validity.

Content Validity

Content validity is the appropriateness of the content of an instrument (Biddix, 2009). That is, content validity determines whether the questions accurately assess what one wants to know. It involves taking representative questions from each of the sections of the unit and evaluating them against the desired outcomes. For example in this study, the items on the questionnaire were constructed based on the literature reviewed. The items were constructed to generate responses to answer the research questions and hypothesis as much as possible. Also, the content of the instruments were assessed by the supervisors of this thesis and were found to be satisfactory.

Reliability of the Instruments

Cronbach's alpha was used to determine the reliability coefficient of the items on the questionnaire. The reason for choosing Cronbach's alpha is that it measures internal consistency of items that are non-dichotomous (Kuder & Richardson, 1937; Cortina, 1993). Cronbach's coefficient alpha was used to determine the reliability of the responses generated by the instrument. The reliability coefficient calculated after the data collection is 0.73.The reliability coefficient of 0.73 means that 73% of variability in scores is due to true score differences among the respondents, while the remaining 27% (1.00 - 0.73) is due to measurement error. According to George and Mallery (2003) and Kline (1999), the reliability coefficient greater than 0.70, indicates a homogeneous test. That is, the test is likely to correlate with alternate forms (a desirable characteristic). Therefore, the reliability coefficients of 0.73 obtained in this study confirmed that the questionnaire used in the main study is within the acceptable benchmark of instrument being reliable.

Data Collection Procedure

An introductory letter (Appendix D) from the Department of Educational Foundations was sent to the principals of all the nurses' training schools in the Western and Central regions of Ghana for approval to collect data. The institutions granted approval and appointments were fixed with the tutors to explain the rationale for the study where necessary. This enabled researcher to establish rapport with them. In order to be communicating frequently with the tutors concerning the questionnaire, the phone number of one of the tutors in each institution was taken. In all, it took seven weeks to collect the data.

Ethical Considerations

An ethical approval was sought from the Department of Educational Foundation, College of Education Studies, University of Cape Coast, Cape Coast. The approval from the Faculty Ethics Committee enabled the research to follow the university's laid down principles regarding research ethics.

Another ethical issue that was considered in this study was the consent of the participants. The consent of the participants was sought first. The researcher explained to the participants the aims, nature, duration, and the possible consequences of the research. The researcher again informed the participants how the results of the study will be disseminated. This enabled the researcher to consider the participants who were voluntary to take part in the study.

Again, the researcher ensured as far as possible that the research was not detrimental to physical, sociological and psychological wellbeing of the participants. The researcher tried to establish good relationship with the participants through mutual respect and trust. The researcher as much as possible avoided actions that could have harmful effects on other researchers as well as other disciplines.

More so, the anonymity and privacy of the participants was respected and personal information relating to participants was kept confidential and secure. This assurance was stated in the invitation letter the researcher gave to the participants (APPENDIX A).

Lastly, the researcher was honest, objective, open, careful and sincere in recording and reporting the data that was collected in this study.

Data Analysis

The data collected was analysed using the Statistical Product and Service Solutions (SPSS). The relevant background data of the respondents were analysed using descriptive statistics. Research question one was analysed using linear regression. Hypotheses 1and 2 were tested at 0.05 level of significance using independent sample *t*-test and one-way ANOVA was used in testing hypothesis three at 0.05 level of significance. These test statistics were appropriate because the data collected through the four-point Likert scale questionnaire were interval scale and continuous. The preliminary check showed that the distributions of the data were normal. The normality of the distributions of the data was checked using histogram as part of the descriptive statistics (Field, 2005; Pallant, 2001). Homogeneity of variance was also ensured. The Levene's test was used to check the equality of variance, at the 5% significance level.

Item1was coded as diploma = 1, first degree = 2, post graduate diploma=3, other degrees=4. Item 2 was coded as certificate students only = 1, diploma student only = 2, certificate and diploma students = 3. Item 3 was coded as 0 - 3 =1, 4 – 7 = 2, 8 – 11 = 3, 12 – 15 = 4. Items 4 to 11 were coded as strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1. Items 12 to 39 were scored dichotomously. Items 12 to17, 19, 20, 23 to 27 and 29 to 39 were coded as Yes = 2, No = 1. Items 18, 21, 22 and 28 were coded as No = 2, Yes = 1. Items 40 to 48, 53, 56, 57, 59, 60 to 65 were coded as Yes = 3, Sometimes = 2, No = 1. Items 49 to 52, 54, 55, 58 were coded as No = 3, Sometimes = 2, Yes = 1.

CHAPTER FOUR

RESULTS AND DISCUSSION

Chapter four presents the results and discussion of the data collected. It is presented in two parts, the first part deals with the analysis of the data on relevant background information of the tutors who responded to the questionnaire items while the second part analyses the research question and the hypotheses.

Background Information

Out of 122 questionnaires distributed 112 were obtained making the return rate of the questionnaire 91.8%. The background information of the respondents with regard to their academic qualification, category of students taught and the number of years in teaching have been provided in tables 2 – 4.

Academic Qualification of Respondents

Responses relating to the academic qualification of the tutor respondents are presented in Table 2.

Table 2: Tutor Academic Qualification

Qualification	No.	(%)
Diploma (health sciences education)	3	2.68
First degree (health sciences education)	49	43.75
Post graduate diploma in education	25	22.32
Other degrees	35	31.25
Total	**112**	**100.00**

The data in Table 2 shows that 49(43.75%) had obtained a qualification in B.Ed (Health Sciences Education) and 3(2.68%) of respondents had also obtained a qualification in Diploma in Health Sciences education. Also 35 (31.25%) had other degrees but not in education. The differences in the qualification of the respondents may be due to the fact that anybody who has a certificate/degree awarded by a recognized university is allowed to teach at the nurses' training school. There are different subject areas that can be taught by other non - professional nurses. Majority of the tutors had a professional certificate in education because a tutor who teaches in a Nursing school is encouraged to have the professional certificate in education if he has not got one already.

Category of Students Taught

Responses with regard to the category of students the tutors teach in the nurses' training schools are presented in Table 3.

Table 3: Category of Students Taught

Category of Students Taught	No.	%
Certificate students only	34	30.36
Diploma students only	63	56.25
Certificate and Diploma students	15	13.39
Total	**112**	**100.00**

From Table 3, majority (63) of the tutors taught in schools that trained students for the award of only diploma and 15 of the tutors taught in schools that trained students to be awarded with certificate and diploma. In the Western and Central regions, the schools that trained students to be awarded

with diploma were more than the schools that trained students to be awarded with both certificate and diploma. The tutors in turn were many in the diploma awarding schools. Most of the tutors trained only one category of nursing students.

Number of Years in Teaching

Responses relating to the number of years the respondents have spent in teaching are presented in Table 4.

Table 4: Number of Years in Teaching

Years	number	percentage
0-3	51	45.54
4-7	27	24.11
8-11	26	23.21
12-15	8	7.14
Total	**112**	**100.00**

The results in Table 4 shows that 69.65% of the respondents had been teaching for 0-7 years and 7.14% of the respondents stated that they had worked as tutors for 12-15 years. The large number of tutors having taught for 0-3 years might be as a result of the creation of new schools within the regions with the corresponding increase in the posting of newly qualified personnel as tutors; more newly qualified professional nurses may also be interested in teaching.

Analysis of Research Question one

What is the influence of a tutor's academic qualification and experience on assessment practice in terms of:

a. planning

b. construction

c. administration

d. scoring

e. feedback

Research question one was analysed using linear regression, where tutor academic qualification and years of teaching experience were the independent variables and the assessment practice (planning stage, item construction stage, item preparation stage, test evaluation, test administration, test scoring, and provision of feedback) was the dependent variable. The data in Table 5 shows the effect of academic qualification and number of years of teaching on the assessment practices (overall) of tutors in the nursing training institutions.

Table 5: Results of Linear Regression Analysis Examining the Effects of Tutor Academic Qualification (AQ) and Years of Teaching (YT) on Assessment Practice

Activity	R-square	F	B(AQ)	B(YT)	t(AQ)	t(YT)	Sig
Planning	.831	267	-.474	.805	-12.0	20.4	.0001
Construction	.516	58.1	-.429	.600	-6.43	8.99	.0001
Item preparation	.584	28.2	-.373	.471	-4.78	6.04	.0001
Test evaluation	. 548	23.4	-.367	.428	-4.96	5.33	.0001
Test administration	.022	1.23	.110	-.107	1.15	-1.12	.264*
Scoring	.459	46.3	-.555	.420	-7.87	5.96	.0001
Feedback	.377	32.9	-.494	.393	-6.52	5.18	.0001
Overall	**.716**	**137**	**-.597**	**.633**	**-11.6**	**12.3**	**.0001**

Note: *signifies no significant difference ($p > 0.05$)

The results in Table 5 indicate that, there is statistically significant difference in the academic qualification and number of years of teaching on

the assessment practices (overall). Also 71.6% of the variation in assessment practices can be explained by variability in a person's academic qualification and the number of years the person has been teaching. The number of years has more effect (.633) than academic qualification on the overall assessment practice. Again 83.1% of variation in planning, 51.6% in test construction, 58.4 % in item preparation, 54.8% in test evaluation can be explained by variability in the number of years of teaching and academic qualification. Again, 45.9% of variation in scoring and 37.7% variation in feedback can also be explained by variability in the number of years of teaching and academic qualification of the tutor. The results agree with Gullickson (1984), who contends that most teachers believe they have adequate knowledge of testing and measurement more to experience than university course work. There was no statistically significant influence from both the academic qualification and the number of years the tutor has been teaching on test administration. There is almost equal influence (2.2% variation) from both academic qualification and years of teaching on test administration. This exception may be due to the fact that during test administration, as was observed, all the tutors were involved and so tutors learnt from each other during test administration.

Analysis of Hypothesis 1

Ho: There is no statistically significant difference between tutors who have and those who do not have qualification in education in terms of knowledge in assessment.

This hypothesis was tested using the independent t-test and the results are presented in Table 6. A comparison was made of the mean score for

tutors who have qualification in education and those who do not have. Alpha was set at .05.

Table 6: *t*-Test Examining Differences in Knowledge in Assessment of Tutors with and without Academic Qualification in Education

Knowledge in assessment	Education (77) Mean	*SD*	No Education (35) Mean	*SD*	*t*	Sig. *df*	*N*	2-tailed
Meaning of assessment	3.49	.576	3.48	.507	.069	110	112	.945*
Purpose of Assessment	3.66	.476	3.57	.502	.921	110	112	.359*
Method link to inferences	2.98	.716	3.17	.513	-1.37	110	112	.175 *
Method match Objectives	3.63	.510	3.54	.505	.901	110	112	.370*
Assessment and instruction planned same time	3.32	.759	3.31	.529	-.567	110	112	.572*
More assessment methods used for performance	3.36	.667	3.54	.657	-1.32	110	112	.188*
Method Should suit Background	3.10	.717	3.42	.608	-2.32	110	112	.022
Inform students Reason for Assessment	3.15	.629	3.37	.598	-1.70	110	112	.091*
Overall	**3.32**	**.287**	**3.42**	**.367**	**-1.54**	**110**	**112**	**.125***

Note. * signifies no significant difference ($p > 0.05$)

From Table 6, the mean test score for tutors who had qualification in education for all the items under knowledge (mean = 3.32, SD = .287) was less than that of tutors who did not have a qualification in education (mean = 3.42, SD = .367). However, there was no statistically significant difference in the overall assessment practice between the two when the independent t-test was conducted, t (110) = -1.54, p = .125 (two tailed). Among all the items under knowledge in assessment, there was only one, item number 10 (Assessment method should suite the background of the students) which showed a statistically significant difference in the responses of tutors who had professional qualification and those who did not have in education.

This finding is consistent with the results of the study conducted by Susuwele-Banda (2005). He investigated teachers' perceptions of classroom assessment in mathematics and their current classroom assessments practices. He also examined the extent to which teachers use different classroom assessment methods and tools to understand and to support both the learning and teaching processes. The results he obtained from both questionnaire and interview data showed that teacher experience and teacher education program did not seem to contribute much to teachers' perceptions of classroom assessment. On the other hand the study conducted by Chester and Quilter (1998) showed that teachers' perceptions of classroom assessment affected their classroom assessment practices. Further Davison (2004) and Neesom (2000) have confirmed that teachers' academic qualification is one of the confounding variables that influence teachers' beliefs and practices of classroom assessment.

Though this study showed that there was no significant difference in the overall assessment practice between the tutors who have professional qualification and those who do not, the only assessment practice (assessment method suitable to the background of the students) which they differ significantly raises a lot of concerns. It was found in this study that tutors who had professional qualification were able to choose assessment method suitable to the background of the students than their counterparts who did not have professional qualification.

Palomba and Banta (1999) have asserted that one important distinction in assessment methods is between techniques that directly determine whether students have mastered the content of their academic programmes and those that ask students to reflect on their learning. Tutors ability to know what a student brings to a course or a unit is important. Knowing what learning is taking place at a specific moment in class is equally valuable. Therefore tutors' inability to choose appropriate assessment method to suit their students' background could have detrimental effect on the students' outputs. This means that students who are taught by tutors who do not have education background could jeopardise the future of such students since they (tutors) might not assessed the students fully before, during and after the instructional time. For example, tutors required to choose appropriate assessment methods to enable them fully assess the practical nursing skills the students learnt through practical training and experience. The acquirement of this type of practical knowledge presupposes the availability of clinically experienced tutors who are able to demonstrate skills and correct mistakes, and that the

student can practice practical skills in interaction with patients and other students.

Also, it has been identified that training could improve pain management through effective assessment and reporting (Courtenay & Carey, 2008). The development and implementation of an effective monitoring and evaluation of patient care system, including pain management, would ensure that knowledge gained at workshops and other update courses are applied in practice. Also, specialist programmes at Master's level for advanced practice nurses could prepare nurses for pain management. It has been realised that nurses with specialist training have more knowledge than those trained for general practice (Wilson, 2007).

Analysis of Hypothesis Two

Ho: There is no statistically significant difference between tutors who have qualification in education and those who do not have education in terms of assessment practices.

This hypothesis was also tested using the independent sample t-test and the results are presented in Table 7. The independent sample t-test was performed by comparing the mean score for tutors who had qualification in education and those who did not have. Alpha was set at 0.05.

Table 7: Independent Sample *t*-Test Examining Differences in Assessment Practices of Tutors with and without Qualification in Education

Assessment	Education (77)		No education (35)					
	Mean	SD	Mean	*SD*	*t*	*df*	*N*	Sig.
Planning	1.73	.218	1.50	.264	4.98	110	112	.0001
Construction of items	1.73	.162	1.58	.153	4.52	110	112	.0001
Preparation of items	1.76	.102	1.67	.132	3.87	110	112	.0001
Evaluation of test	1.92	.084	1.83	.173	3.01	110	112	.004
Administration of test	2.58	.294	2.64	.137	-1.3	110	112	.177*
Scoring	2.28	.386	1.78	.324	6.59	110	112	.0001
Feedback	2.21	.327	1.86	.259	5.61	110	112	.0001
Overall	**2.03**	**.134**	**1.84**	**.130**	**7.13**	**110**	**112**	**.0001**

Note: * signifies no significance ($p > 0.05$)

From Table 7, the mean test score for tutors who have a qualification in education for all the items under assessment practice (mean =2.03, *SD*=.134) was higher than that of tutor who do not have a qualification in education (mean = 1.84, *SD* =.130). There was statistically significant difference in the assessment practice (represented as overall") of the tutors, $t(110) = 7.13$, $p = 0.0001$ (two tailed).

Even though the previous results indicated that there was no statistically significant difference in the knowledge of the tutors concerning

assessment, the tutors with qualification in education seem to follow the principles when it comes to the actual practices. Contrary to the evidence by Campbell and Evans (2000), whereby pre-service teachers who had completed course work in educational measurement did not follow many assessment practices recommendations, the tutors with certificate in professional education seemed to follow the principles in assessment of students.

Documentary analysis of already constructed test items by tutors in the schools indicated that with the exception of "determining the item format to use for a test", planning seemed to be left undone during test construction. During item construction, most of the tutors waited until they were ready to conduct a test before writing the items. There was also no development of table of test specification but some tutors wrote more than the needed test items. The tutors were not so particular about the difficulty level of the test items when constructing the test but there was evidence of items with varying difficulty level. The test had clear directions and items were well spaced. During each test administration, an environment that was conducive was provided and oral instructions were given to the entire group even though there were instances where invigilators talked to individual students. No tutor was found reading newspaper or marking scripts but there were occasional conversation between teachers and receiving of phone call was witnessed once.

The data in Table 7 also shows that the t-test statistic was not statistically significant for test administration. In most of the schools visited, it was realized that during administration of test, all tutors were involved and

based on that it is likely that the tutors learn from each other which almost becomes a norm during test administration. All the tutors shared test scripts and answer booklets at the same time. One tutor who is the head for a group of tutors administering a test then gives the necessary information during the testing, such as making sure all testees have test scripts and answer sheets, making of general corrections in the test if any and the regular announcement of time for the test.

Analysis of Hypothesis Three

Ho: There is no statistically significant difference in the assessment practices of tutors in the different categories of nursing institutions.

The descriptive statistics of the tutors who teach in the different nursing schools are presented in Table 8. The respondents were divided into three groups, according to the category of nurses trained in the institution. Group 1consists of tutors who teach in schools that train nurses to be awarded with only certificate, Group 2 consists of tutors who teach in schools that train nurses to be awarded with only diploma and Group 3 is made up of tutors who teach in schools that train nurses to be awarded with either certificate or diploma.

Table 8: Descriptive Statistics of Tutors who Teach in Schools that Train Different Categories of Nurses

Category of Nurses	N	Mean	SD
Certificate only	34	1.935	.155
Diploma only	63	1.975	.157
Certificate and Diploma	15	2.064	.160
Total	**112**	**1.975**	**.160**

Majority of the respondents trained nurses to be awarded with the diploma certificate and 15 tutors taught in the schools that trained students to be awarded with either certificate or diploma certificate. The tutors who taught in the schools that trained both students for either certificate or diploma certificate had a mean of 2.064 and a standard deviation of .160 and those that teach students to be awarded with certificate only had a mean of 1.935 and a standard deviation of .155.

Hypothesis 3 was tested using One-Way Analysis of Variance (ANOVA). The results are presented in Table 9. A one way between groups analysis of variance was conducted to explore the differences between the assessment practices of the tutors at the different categories of the nursing institutions.

Table 9: Results of One Way ANOVA of Tutors who Teach in Schools that Train Different Categories of Nurses

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	.174	2	.087	3.526	.033
Within Groups	2.695	109	.025		
Total	**2.869**	**111**			

There was statistically significant difference at the $p < .05$ level in assessment practices scores for the three nursing institution groups [F (2, 109) = 3.5, p =.03]. Despite obtaining statistical significance, there was medium difference in mean scores between the groups. The effect size, calculated using eta squared was .06. Post–hoc comparisons using Tukey HSD test indicated that the mean score for Group 1 (mean= 1.93, *SD*=.155) was

significantly different from Group 3 (mean = 2.06, *SD* = .160). Group 2 (mean = 1.97, *SD* = .157) did not differ significantly from either Group 1 or 3. Group 3 seem to follow the correct assessment practices than Group 1.

The difference between groups 1 and 3 might be the result of the current introduction of nursing schools to train students for certificate courses. New schools may mean more newly qualified tutors are posted to teach there. The introduction of the training of two categories of nursing students on the same compound by the same tutors is not long ago; more tutors with first degree irrespective of the qualification in education teach in these schools and this might account for the difference in their assessment practices from that of the two year certificate programme.

Analysis of the Observation Checklist

Table 10: Descriptive Statistics of Documentary Analysis of Test and Observation of Test Administration

Activity	No. of schools	Yes (%)	No (%)
1. Any evidence of purpose of assessment	8	0 (0.0)	8(100.0)
2. Written evidence of learning target and objective to be achieved.	8	0 (0.0)	8(100.0)
3. Test specification table	8	0 (0.0)	8(100.0)
4. Different methods of assessment are used to indicate student performance.	8	6 (75.0)	2 (25.0)
5. First draft of test items (to see the number of items at initial stages)	8	1(12.5)	7 (87.5)

Table 10 cont'd

6. Easy items are arranged at the beginning.	8	2 (25.0)	6 (75.0)
7. Good lighting conditions are ensured.	8	8(100.0)	0 (0.0)
8. Proper ventilation is ensured.	8	8(100.0)	0 (0.0)
9. The assessment environment is free from distraction	8	8(100.0)	0 (0.0)
10. The work space is adequate.	8	8(100.0)	0 (0.0)
11. Sufficient materials are available.	8	8(100.0)	0 (0.0)
12. Time limit for the testing appropriate.	8	8(100.0)	0 (0.0)
13. The instruction for test is clear.	8	8(100.0)	0 (0.0)
14. Invigilators listen to phone calls.	8	1(12.5)	6 (87.5)
15. Invigilators read during testing.	8	0 (0.0)	8(100.0)
16. Invigilators mark scripts during testing.	8	1(12.5)	7 (87.5)
17. Availability of marking scheme.	8	2 (25.0)	6 (75.0)

From Table 10, no tutor had a written evidence of the purpose of conducting the test, objective for conducting the test and no table of test specification. Six (75%) of the test analysed had both multiple choice questions and essay for the students to answer. Only one tutor was able to produce the first draft of her constructed test items which was later edited, some of tutors responded that they had left it in their various homes. Two of the tests assessed had easy items at the beginning of the test, which was an indication of good test development.

All (100%) the venues used for the administration of the tests had good lighting systems, was well ventilated, noise free environment, enough space for students to work enough materials, adequate time and clear instructions for taking the test. No tutor that invigilated the tests read any material while the test was going on but one school had an invigilator marking his scripts during the invigilation. Two tutors from two schools were able to produce their marking scheme for the tests that the students were taking. Other tutors mentioned that since they did most of the marking of the scripts at home, they left the marking scheme at home.

These observations made during test administration, the analysis of the test documents and the responses to the questionnaire are in agreement, some of the standards for students' assessment were followed by the tutors and others were not followed at all.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This final chapter deals with the summary of the entire study, conclusions drawn from the findings as well as recommendations based on the findings and conclusions. Areas for further research have also been suggested.

Overview of the Study

The study was conducted to investigate the assessment practices that existed in the Nurses' Training Schools in the Central and Western regions of Ghana. All 11 schools that trained different categories of nurses were selected to be part of the study.

There were different categories of tutors who taught in the various Nurses' Training Schools. Some of them had and some did not have background in professional education. The tutors had also taught for different number of years in the schools.

My personal observation and experience indicated that not all the tutors followed the principles used in student assessment and so the study was conducted to investigate the assessment practices of those tutors in the Nurses' Training Schools in the Western and Central regions of Ghana.

The research question that guided the study was "what is the influence of academic qualification and experience of tutors on the assessment practices in terms of test construction, administration, scoring and feedback".

Other hypotheses were also formulated such as “there is no statistically significant difference in knowledge and assessment practice of tutors who have and those who do not have professional background in education.

The study was to get evidence on the assessment practices of the tutors and the results was to help to encourage tutors to maintain, modify or discard certain assessment practices to improve on teaching and learning.

In conducting the study, the focus was on government Nurses’ Training Schools and CHAG Nurses’ Training Schools in the Western and Central regions of Ghana. Only test construction, administration, scoring and the provision of feedback were taken into consideration.

In order to conduct the study, a descriptive survey that involved all the 116 accessible population was used. Among these, 112 actually participated in the study. A Likert scale questionnaire and an observation checklist were used in the data collection. The responses from the questionnaire were coded and analysed using SPSS.

The results indicated that most of the tutors had adequate knowledge in the assessment of students but they were not transferring the knowledge into actual practice.

Key Findings

The results from the research showed that most of the tutors had professional certificate in education and majority also taught in schools that trained only a particular category of nurses. It was also found that majority (45.54%) of the tutors had been in the teaching field for between 0 - 3 years. It can be deduced that the qualification of the tutors and the number of years they had taught had influence on their assessment practices.

The study also ascertained that the number of years of teaching had a greater influence on the overall assessment practice of the tutor. Teaching experience had more influence on planning, item construction, item preparation and test evaluation practices in assessment. The academic qualification of tutors had a slight influence on scoring and the provision of feedback. There was, however, almost equal influence of a tutor's academic qualification and years of teaching on test administration.

It was found from the results that both tutors with and those without professional certificate in education had adequate knowledge about assessment. Though, tutors with qualification in education had slightly higher knowledge in assessment than their counterparts without a qualification in education, the difference was not statistically significant.

The study also revealed that there was statistically significant difference in the actual assessment practices. Tutors with professional certificate in education planned, constructed items, prepared items, evaluated test, scored and provided feedback better than the tutors without a professional certificate in education.

Among the different schools, tutors also had different ways of assessing students. The difference existed between the tutors who taught in certificate only schools and certificate and diploma combined schools. This difference could be attributed to large number of respondents from the schools that trained only certificate students (Group 1) as compared to the small number of respondents from the schools that trained certificate and diploma students (Group 3). Group 3 had a slightly higher mean than those in Group 1.

It could also be as a result of the experience the tutors in Group 3 had gained over the years by teaching two different groups at a point in time.

Conclusions

Based on the findings from the study, the following conclusions have been drawn:

1. if there were more enforcement of the principles of students assessment, then the tutors will also make an effort to go by these principles during student assessment.
2. The teacher's knowledge in assessment practices enhances teaching and learning.
3. it is also necessary that tutors stay and teach in the Nurses' Training Schools for a longer period because the longer the tutors stay to teach, the more likely they are to follow the principles in assessment.
4. if all the tutors had background in professional education, it is likely that they will encourage each other in the actual practice of the principles associated with student assessment.

Recommendations

On the basis of the findings of the study and conclusions drawn from them, the following recommendations are made for consideration by the Ministry of Health, the Nurses' and Midwives Council of Ghana, the Nurses Training Schools as well as the tutors in the institutions.

1. There should be regular supervision of the tutors irrespective of the educational background during teaching and learning and especially on student assessment by the schools' authorities and from time to time

the Nurses and Midwives Council of Ghana, strict adherence to the principles of assessment must be enforced.

2. There should be regular in-service training for the tutors on issues concerning assessment and more nurses should be encouraged to take advance courses that involve student assessment.
3. Tutors should also be motivated to stay in the schools to teach for longer years. This motivation could be in the form of encouraging and supporting carrier advancement.
4. All persons who want to teach in the Nurses' Training Schools must have a certificate in professional education as a requirement before he is employed to teach.

Suggestions for Further Studies

It is suggested that in the future, tutors perception on student assessment should be investigated and there should be a study to find out if the location of school and the calibre of students admitted into the nursing schools affect the tutors' assessment practices.

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APPENDICES

APPENDIX A

Letter of Invitation

I am a colleague and student from the University of Cape Coast. This is to request for your cooperation in this research.

The goal of my research is to investigate the current assessment practices in the nurses' training institutions in the Western and Central regions of Ghana. This study will determine the nature of assessment procedures within the institutions. It will also help identify the degree to which tutor qualification, skills and experience are related to the assessment process.

Your responses will remain anonymous and confidentiality will be maintained. Approval to conduct this study has been obtained from the University of Cape Coast.

To ensure anonymity, please do not put your name or your school name on the questionnaire. Please respond to the questions as frankly as possible.

A summary of the results of this study will be made available to your school.

Your anticipated cooperation is sincerely appreciated.

Thank you.

Sophia Gifty Wiredu.

APPENDIX B

Questionnaire

SECTION A

Background Information

Please tick the appropriate response and/or fill in the spaces provided with the appropriate response.

1. What is your professional grade level? (e.g. SNO, Technical officer, etc).

   Please specify _____

2. What is your current academic qualification

   Certificate [ ]

   Diploma [ ]

   1st degree [ ]

   2nd degree [ ]

   PhD [ ]

   Other, please specify _____

3. Is/Are any of your qualification(s) specifically in education?

   Yes [ ]

   No [ ]

   If yes, kindly provide the name of the degree you hold in 'education'

   _____

4. Which category of trainee nurses do you teach in your school?

   RGN [ ]

   RMN [ ]

   HAC [ ]

CHN dip. [ ]

CHN cert. [ ]

CHN cert. /CHN dip. [ ]

Midwifery - cert. [ ]

RGN/Midwifery [ ]

Midwifery – dip. [ ]

5. How many years have you been teaching in the nurses' training institution?

Less than 1 year [ ]

Between 1-2 years [ ]

2-3 years [ ]

4-6 years [ ]

7 years and above [ ]

6. Which class(es) do you teach?

First year [ ]

Second year [ ]

Third year [ ]

First and second years [ ]

First and third years [ ]

Second and third years [ ]

First, second and third years [ ]

7. How many subjects do you currently teach in this school?

One [ ]

Two [ ]

Three [ ]

Other, please specify _____

8. Have you ever attended assessment workshop/conference/seminar after you were posted as a tutor?

   Yes [ ]

   No [ ]

   If yes, when did you attend the assessment training?

   This year [ ]

   Last year [ ]

   Last two years [ ]

   Other, please specify_____

SECTION B

Knowledge in Assessment

Please tick (√) the responses to indicate the degree to which you agree or disagree with the statements below. The scale notation is as follows:

SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly Disagree

Assessment	SA	A	D	SD
1. Assessment is obtaining and interpreting information collected about a person in terms of his knowledge, understanding or attitudes.				
2. Assessment is a process where information is collected, interpreted and synthesized to assist				

in decision making.				
3. Assessment is a process of obtaining information about student learning.				
4. Assessment is a form of communication to the student as a form of feedback to their learning.				
5. Assessment is a way of obtaining information that is used to make decisions about students' curriculum and programme and national policy.				
6. Assessment is the estimation of the value of an individual's work.				
7. A tutor should consider the purpose of the assessment before writing the items.				
8. Assessment methods should be linked to the inferences and decisions the tutor wants to make.				
9. Assessment methods should actually match the learning target and objective of instruction.				
10. Assessment method is planned at the same time as when planning instruction.				
11. The consequences of the decisions to be made should be considered when choosing assessment method.				
12. More than one assessment method is used to indicate student performance.				
13. Assessment method should suit the background				

and prior experience of the student.				
14. Assessment method should discriminate against students.				
15. Students should be informed of the reason for the assessment.				
	SA	A	D	SD
16. Proper lighting and ventilation conditions should be provided.				
17. Area for the assessment should be free from distraction.				
18. Materials provided for assessment should be sufficient.				
19. Adequate space should be provided for the assessment.				
20. Time limit for the assessment should be sufficient.				
21. Directions for the assessment should be clear, complete and appropriate for student background.				
22. Students' disabilities should be considered in assessment.				
23. Any unanticipated circumstance that interferes with assessment should be noted and results interpreted with circumspect.				
24. A procedure for scoring should be prepared				

before an assessment method is used.				
25. The way in which grades are formulated and interpreted should be explained to students				
26. An appeal process should be described to students at the beginning of each school year or course of instruction that they may use to appeal a result.				
27. Interpretations of assessment results should take account of the backgrounds and learning experiences of the students.				
28. Access to assessment information should be governed by a written policy				

Assessment Practices

Indicate whether you do the following or not during the construction of your assessment items by ticking (√) the appropriate response.

ACTIVITY	Yes	No	Sometimes
29. I consider the purpose of the assessment before I write the items.			
30. I link my assessment method to the inferences and decisions I want to make.			
31. The assessment methods I use actually match the learning target and objectives of instruction.			

32. I plan my assessment method at the same time as I plan my instruction.			
33. I consider the consequences of the decisions to be made when choosing assessment method.			
34. I use more than one assessment method to indicate student performance.			
35. My assessment method is suited to the background and prior experience of my students.			
	Yes	No	Sometimes
36. My assessment methods do not discriminate against any student (e.g. The methods are designed to meet the needs of various categories of students).			
37. Items on my assessment tools are not biased against any student.			

Indicate by ticking (√) the appropriate response whether you take the following into consideration during the administration of your assessment.

Activity	Yes	No	Sometimes
38. I tell my students the reason for the assessment prior to assessment.			
39. I ensure proper lighting conditions when students are taking an assessment task.			
40. I ensure proper ventilation conditions when students are taking an assessment task.			
41. I ensure that the area for assessment is free from distraction.			
42. I ensure adequate work space during assessment.			
43. I ensure sufficient materials are available during assessment.			
44. I ensure adequate time limits during assessment.			
45. The instructions for my assessment are clear.			

46. The directions for my assessment are appropriate for the students' ability, age and grade level.			
47. I consider students with disabilities, e.g. those with eye or speech problems.			
48. I take note of any unanticipated circumstance (e.g. Light off, malfunctioned equipment, etc.) that may interfere with the assessment and interpret the results with circumspect			

APPENDIX C

Observation Check List

ACTIVITY	YES	NO
1. Written evidence of purpose of assessment		
2. Written evidence of learning target and objective to be achieved		
3. Different techniques of assessment are used to indicate student performance		
4. The test items are biased against students		
5. Clear instructions on test		
6. Adequate time allowed for test		
7. Enough materials and work space		
8. Good lighting conditions are ensured		
9. Proper ventilation is ensured		
10. The assessment environment is free from distraction		
11. The work space is adequate		
12. Sufficient materials are available		

APPENDIX D

Introductory Letter

UNIVERSITY OF CAPE COAST

CAPE COAST, GHANA

DEPARTMENT OF EDUCATIONAL FOUNDATIONS

Telephone: 32440/4 & 32480/3 Direct: 042-36037
TELEX: 2552, UCC, GH
Telegrams & Cables: University, Cape Coast

University Post Office
Cape Coast, Ghana

Our Ref.:

Your Ref:

29/10/12

THESIS WORK

LETTER OF INTRODUCTION

We introduce to you Mr./Mrs./Miss. Sophia Gifty Klivedu
a student from the University of Cape Coast, Department of Educational Foundations. ~~He~~/ She is pursuing a Master of Philosophy degree in Measurement & Evaluation
As part of his/her requirements, he/she is expected to work on a thesis entitled:
Assessment Practices of Tutors in Nurses' Training Schools in Western and Central Regions of Ghana

~~He~~/ She has opted to make a study at your institution/establishment for the project. We would be most grateful if you could provide the opportunity for the study. Any information provided will be treated as strictly confidential.

Thank you.

for (Dr. Koawo Edjah)
HEAD

DEPARTMENT OF EDUCATIONAL FOUNDATIONS
UNIVERSITY OF CAPE COAST
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