

UNIVERSITY OF EDUCATION, WINNEBA

**JUNIOR HIGH SCHOOL INTEGRATED SCIENCE TEACHERS'
PERCEPTION AND CLASSROOM ASSESSMENT PRACTICES IN
SELECTED SCHOOLS IN TEPA**

ATTA POKU JUNIOR

DECEMBER, 2015

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ATTA POKU JUNIOR

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**A DISSERTATION IN THE DEPARTMENT OF SCIENCE
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MASTER OF EDUCATION IN SCIENCE DEGREE**

DECEMBER, 2015

DECLARATIONS

STUDENT'S DECLARATION

I, Atta Poku Junior, hereby declare that this dissertation, with the exception of quotations and references contained in published works which have all been identified and duly acknowledge, is entirely my own original work, and it has not been submitted either in part or whole, for another degree elsewhere.

SIGNATURE:

DATE:

SUPERVISOR'S DECLARATION

I, hereby declare that the preparation and presentation of this dissertation was supervised in accordance with the guidelines for supervision of dissertation as laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: Dr. Ernest I. D. Ngman-Wara

SIGNATURE:

DATE:

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DEDICATION

This work is dedicated to Mercy Buckman, Stanley Poku Twumasi, Loveth Poku Adutwumwaa, and Akanzabwen Poku Fosuah. It is also dedicated to my parents Nana Twumasi Aben, Madam Adwoa Fosuah and Madam Georgina Abenaa Adutwumwaa.

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ABSTRACT

The purpose of the study was to investigate Junior High Schools Integrated Science teachers' perceptions of classroom assessment practices. The study employed a descriptive survey research design to collect data from a sample of 22 integrated science teachers' and 40 students' in the district. A questionnaire was used to collect quantitative data on teachers and students perception of classroom assessment in integrated science. Lesson observations and interview schedules as well as document analysis were also used to collect qualitative data on the teachers' classroom assessment practices. Analysis of the collected data revealed that teachers perceived classroom assessment as test that they gave to their students at specified time interval. Some teachers perceived classroom assessment as a test they showed limited ability to use different methods and tools to assess their students while teaching. The study recommends that, stakeholders be sought to foster alternative assessment approaches in Junior High Schools in the study area. In addition, teachers on the field should also be given in-service training on assessment techniques / tools. Further research should also be carried into the other factors that may also influence classroom assessment practices.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter provides the background of the study, problem statement, objectives of the research, research questions, and significance of the study

1.1 Background to the Study

One of the fundamental aspects of teaching and learning process is assessment. In order to improve teaching and learning, there is the need to collect, synthesize and interpret information to help in decision making in the classroom on the daily basis. Teachers need to know about their pupils' problems while learning, including their progress so that they can adapt their teaching strategies to meet the pupils' needs. A teacher can find this information out in a variety of ways that range from observations and discussions to multi-step tasks and projects, from self-assessment and homework to oral presentations.

Assessment is about building a picture over time of pupil's progress and/or achievement in learning across the primary schools curriculum. Information about how the child learns (the learning process) as well as what the child learns (the products of learning) shapes the picture. The teacher uses this information to identify and celebrate the child's current learning, and to provide him/her with appropriate support for future learning. For the teacher, assessment involves gathering information to

understand better how each child is progressing at school and using that information to further the child's learning. Assessment, therefore, goes far beyond just testing.

According to Gipps (1990) and Black and William (1998), it has become crystal clear that classroom assessment is an integral aspect of the teaching and learning process because through assessment, teachers get to know how far pupils have grasped a concept.

To measure learners' progress and achievement in learning, there is the need to conduct classroom assessment. Classroom assessment is helpful in diagnosing learners' knowledge of a particular topic (Hurley & Tinajaro, 2000) as well as providing help with teaching and learning, which is the core and basis for attaining excellence in education and school improvement (Stiggins, 1999). Classroom assessment also aids teachers to ascertain the weaknesses and strengths in their instruction and encourage them to continuously search for ways to improve teaching (Shepard, 1995).

Assessment of learner learning is integral to effective instruction and learning in the education system of Ghana. Teachers administer their own assessment and report the results to pupils, parents and the public in general. Faley and Ojerinde-Dibu (2005) opined that assessment is an effective method for improving learners' learning in schools. It provides

opportunities for independent practice (Boston, 2002), thus providing good ground for self-assessment.

Teachers are supposed to use the assessment to guide effective decision-making particularly with respect to the identification, remediation and ongoing evaluation of learners (Black & William, 1998). For teachers to be effective in doing this, they have to be assessment literate and capable of using such knowledge.

Many teachers think classroom assessment is all about allowing pupils to take paper and pencil tests, scoring them and assigning grades to learners based on their test performance. So there is a misleading tendency to equate classroom assessment with tests and examinations. Some teachers are reluctant to use different modes of classroom assessment because the teachers feel they do not know enough to assess learners fairly using them (Airasian, 1991). Teachers' knowledge on classroom assessment and its effect on their practices reveal that a lack of teachers' expertise in assessment knowledge caused road blocks for evidence based improvement of teaching and learning. To junior high school teachers particularly, there is a tendency to emphasize quantity and presentation of work and the neglect of quality in relation to learning. It seems much emphasis is placed on using marks to fill reports or records to the neglect of discerning the learning needs of pupils even not considering previous records.

Assessment also involves pupils in active mental processing of new information and makes them more aware of themselves as learners. Classroom assessment according to Angelo and Cross (1993) is an educational innovation that unites efforts to improve both teaching and learning. The objective of the researcher is not to appraise teachers' work or the school in any way but to accurately describe classroom assessment practices within the context of Ghanaian junior high schools.

1.2 Statement of the Problem

Classroom assessment is one of the facets of education that need to be understood and addressed if teachers are to support pupils to learn meaningfully. This research sought to understand the perception of teachers on classroom assessment and how classroom assessment is conducted. The aim of classroom assessment is to produce information that contributes to the teaching and learning process and assists in educational decision making, where decision makers include pupils, teachers and parents. According to the Assessment Reform Group (1999) and Fennema and Romberg (1999), the perception of teachers may have an influence on the way teachers teach and assess their students.

Classroom assessment poses a number of problems in the junior high schools. Some teachers have a casual approach to classroom assessment. Some teachers would set tests that would only address one aspect of the taxonomy of objectives of teaching and learning while others would

duplicate items from past questions. It was also observed that some test items were not properly structured and that assessment procedures lacked varieties.

There have been a lot of studies on assessment, but the literature takes for granted the present nature of classroom assessment and seeks improvement through increasing its efficiency (Rowntree, 1991). Thus, for example, it is common to find authors concerned with how to produce better multiple-choice questions and how to statistically handle test results. It is much less common to find writers questioning the rationale behind classroom assessment. Because of this reason and also because it helps in the teaching and learning process, an interest to explore teachers' perception and practice about the classroom assessment in junior high Schools was generated to broaden the understanding of classroom assessment.

The training of teachers on classroom assessment is a good proposal but can only be effective if the designers of the training programme know what teachers are already doing and what they are not doing well. Research in this area can inform the design of the training programme. Not much research has been reported in this area, especially in the Ahafo Ano North District so much is not known about Junior High Schools Integrated Science perception and their classroom assessment practices. The study would shed more light on the problems encountered by teachers in assessment making it more significant in Ghana.

1.3 Objectives of the Research

The main objective of this research is to find out how teachers perceive and carry out classroom assessment practices

Specific objectives are:

1. To determine junior high school teachers' perception on classroom practices.
2. To find out junior high school integrated science teachers' classroom assessment practices.
3. To ascertain the relationship between junior high schools integrated science perception and their classroom assessment practices.

1.4 Research Questions

1. What is junior high integrated science teachers' perception of classroom assessment?
2. What are the junior high schools integrated teachers' classroom assessment practices?
3. What is the relationship between junior high schools integrated science teachers' perception of classroom assessment and their classroom assessment practices?

1.5 Significance of the Study

Classroom assessment is one of the tools teachers can use to inform their teaching and learning of their students. Unfortunately, the purpose of classroom assessment by teachers in most schools seems to be confused and, therefore, does not support learning (Ainscow, 1988; Stiggins, 2002; Swan, 1993). In some schools the term assessment connotes testing and grading (Stiggins, 2002). This study investigated teachers' perceptions of classroom assessment and their current practices. The results may assist primary school teachers. Schools may use the information to develop assessment guidelines for their respective schools. Jere (2000) recommends the training of classroom teachers in how to assess pupils and believes that this training would improve and enhance the quality of education.

Assessment for learning is a powerful way of raising pupils' achievement. It is based on the principle that pupils will improve most if they understand the aim of their learning, where they are in relation to this aim and how they can achieve the aim (or close the gap in their knowledge). It is not an add-on or a project; it is central to effective teaching and learning. This study was designed to investigate teachers' perceptions of on classroom assessment practices. Specifically, the study sought to understand the methods and tools teachers use to assess their pupils. The researcher studied closely how classroom assessment was being carried

out in the classroom by focusing on the strategies and tools the teachers use to assess the learners.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter contains the review of selected literature related to the study, the purpose of classroom assessment, assessment practices in the classroom, framework of assessment, forms of assessment (diagnostic assessment, formative assessment, summative assessment, continuous assessment) and teachers' perception and practices on assessment.

The chapter is divided into five main sections. The first section gives an overview of the purpose of classroom assessment. The second section discusses the assessment practices in the classroom. Section three reviews literature on the framework of assessment. The fourth section talks about the perceptions of teachers on classroom assessment and the last section reviews studies that have been conducted on the forms of classroom assessment.

2.1 The Purpose of Classroom Assessment

Airasian (1996) defined classroom assessment as the process involved in the collection of information, interpreting it and taking a decision based on it on the daily basis in order to improve teaching and learning.

The purpose and use of classroom assessment in the teaching and learning cannot be overemphasized. It makes pupils know their level of performance and motivates them to maximize their learning. It exposes the strengths and weaknesses in learning and so makes it possible for any

adjustments to be done. It also helps to determine the effectiveness of instructional methods and materials on monitoring teaching performance.

Assessment aims to help three parties: (i) it helps to diagnose pupils' learning difficulties and to design appropriate remedial instruction. (ii) it enables teachers to decide on what to teach as well as getting feedback on how effective teaching has been (iii) It leads to fair selection and allocation of opportunity (the meritocracy). This means that classroom assessment is used to screen and select individuals for various purposes e.g. admission into certain courses or programmes, promotion, certification, employment and other honours.

Classroom assessment yields certificates of competence at a particular level. These certificates open the doors for placement in subsequent levels or careers. The selection function of classroom assessment which manifests itself as a social phenomenon has also been widely researched (Gipps, 1990; Rowntree, 1987).

Harlen (1994) shows the evaluative function of classroom assessment when information about the performance of groups of learners informs judgments about educational provision at the class, school, authority and national levels.

There are extensive research which deals with the issue of public accountability and classroom assessment. This depends on the assumption that an educational institution must increasingly be able to show that it is

meeting the goals that it has set for itself and the ones expected of it by society. This means that assessment helps to determine the extent to which educational goals are achieved by institutions or the entire educational system.

2.2 Assessment Practices in the Classroom

According to the National Council of Teachers of Mathematics (NCTM, 1995) believes that classroom assessment has the potential to enhance learning and to promote learners' interest in learning. This statement is too general considering the fact that in most schools classroom assessment means testing and grading (Van de Walle, 2001).

Beckmann, Senk and Thompson (1997) studied the assessment and grading practices of 19 high school teachers. Their research showed that the most frequently used assessment tools were tests and quizzes and these determined about 77% of learners' grades. Twelve of the nineteen teachers used other forms of assessment, such as written projects or interviews with learners. These other forms of assessment constituted 7% of learners' grades. Beckmann, Senk and Thompson found that test items were of low level, involved very little reasoning and were almost never open-ended. Their study also revealed that teachers' knowledge and beliefs as well as the content and textbooks of the course, influenced the characteristics of the test items and other assessment instruments.

McMillan (2001) in his empirical study, aimed at analyzing the nature of classroom assessment and grading practices, observed that teachers were mostly interested in assessing learners' mastery or achievement and that performance assessment was used frequently. Morgan and Watson (2002) reported that most middle and high school teachers use teacher-constructed tests to assess learners' achievement. In addition, Morgan and Watson found that most teachers view classroom assessment as additional requirement to their teaching job and not as a tool to improve their teaching methods and skills.

Beckmann, Senk and Thompson (1997) identified three main reasons why teachers do not use multiple classroom assessment methods. First, some teachers had limited knowledge of different forms of classroom assessment. Second, teachers felt time was not on their part to create different forms of classroom assessment. Third, teachers felt there was little or no professional guidance; therefore, they were not confident enough to practice other forms of assessments. Cooney reported a strong link between assessment and grading in the minds of high school teachers. There is a strong evidence suggesting that in schools assessment mainly refers to tests, examinations and grading (Bezuk, Cathcart, Vance & Pothier, 2001; Van de Walle, 2001). School leaders believe that one cannot assess without assigning grades (Lissitz & Schafer, 2002). Even though tests seem to be popular in schools, teachers seem to have different skills and views about tests. A study by Morgan and Watson (2002)

revealed that different teachers interpreted similar students' work differently.

McMillan (2001) studied the actual classroom assessment and grading practices of secondary school teachers in relation to specific class and determined whether meaningful correlation existed between teacher's assessment practices, grade level, subject matter, and ability levels of learners. McMillan found that there was no meaningful correlation between teacher's assessment practices, grade level, subject matter and ability level.

2.3 Theoretical Framework of Assessment

Haberman (1971) recognized that social sciences which encompasses educational assessment and evaluation comprised three different kinds of orientations, namely the empirical analytic, the interpretive and the critical theoretic. Different kind of paradigms will make the teacher to assess different instructional outcomes.

Classroom assessment is used to make various decisions and dwelling much on the empirical analytic makes it difficult for teachers to come up with proper teaching and learning methods, which ensure that their pupils are well catered for. Teachers should be able to design and administer more than summative end-of-unit tests and examinations if they are to realize improvement in schools (Green & Mante, 2002; Shepard, 2000).

Ryan (1988) gave a description of Haberman's three orientations in terms of assessment and evaluation paradigms as follows.

Empirical analytic paradigm– It is a western technical rationalism embodied in the logical positivist origins. This is likened to the traditional standardized approach to assessment and evaluation. The empirical analytic paradigms are essential to consider certification and development of educational policy (Aikenhead, 1997).

Interpretive paradigm– the concept and actions of the learner and his language are understood from the point of view of the learner. An alternative assessment technique such as portfolio and concept making gives the illustration of this paradigm. The issue of formative assessment is clearly interpretive because within this paradigm it is important to consider what knowledge, skills and values learners are actually learning (Aikenhead, 1997). This paradigm tries to improve teaching by concentrating on both process and product of learners' work.

Critical theoretic paradigm– The critical rhetoric paradigm would ask questions such as, "Whose knowledge is privileged in assessment?" Whose cultural interactions have cultural capital? Whose goal defines the criteria for evaluation? Therefore the context of assessment is embraced in the critical theoretic paradigm. The culture and social context in which classroom assessment takes place has a great influence on both process and product of learners work (Aikenhead, 1997).

Different paradigms direct us to assess different instructional outcomes.

Teachers need to draw upon the entire paradigm as they seek to meet the needs of that particular moment. The consideration of one paradigm exclusively will not give clear picture on classroom assessment. Teachers should thus give consideration to both the interpretive paradigm and the empirical analytic, in order to strike a balance in assessment.

2.4 Forms of Assessment

The different functions of assessment can be seen either by what they do (predictive or diagnostic) or by when they occur in the teaching and learning process (summative, formative).

According to Wragg (2001), classroom assessment has so many functions that it is not surprising that there are so many styles to go with them. No single form of classroom assessment can suit all conceivable functions and reactions.

2.4.1 Diagnostic Assessment

Although, some authors delineate diagnostic assessment as a component of formative assessment, most consider it a distinct form of measurement (McMillan, 2001). In a way this function can be regarded as formative because it starts with instruction and enables the needs and problems of pupils to be understood and remedial teaching done. Learners' knowledge, skills, or misconceptions are designed prior to planning instruction (McMunn, 2011). In practice the purpose of diagnostic assessment is to ascertain, prior to instruction, each learner's strengths, weaknesses, knowledge and skills (Swearing, 2002). In other words, diagnostic

assessment is used to identify the strengths and weaknesses of pupils in order to find out what further teaching is necessary. It enables the teacher to understand the learner's needs and problems and be able to decide what to do about them. It can be used for individualized instruction and must relate to short-term objectives.

Establishing these would permit the teacher to remediate learners and adjust curriculum to meet each pupil's distinct needs because the fundamental aim of the diagnostic test is remediation, it is both ungraded and low stakes (Swearing, 2002).

2.4.2 Formative Assessment

This is carried out as instruction progresses so that instruction can be programmed to meet pupils' level and educational needs. In other words assessment goes hand-in-hand with teaching and learning from the beginning of an instructional programme to the end of the programme.

Formative assessment occurs when teachers give information back to learners in ways that enable them to learn better, or when learners can engage in similar self-reflective processes.

Grades are not assigned to formative tests. Formative assessment grades are used as an on-going diagnostic tool, thus, the teacher employs the results of formative assessment mainly to modify and adjust practices, to reflect the needs and progress of learners (Swearing, 2002).

Formative evaluation has also been called progress evaluation since it helps to identify pupils' strengths and weaknesses. It is also guidance-

oriented since its results are used in guiding and counseling the pupil to overcome weaknesses and build on the strengths. It aims at ensuring a healthy acquisition and development of knowledge and skills by learners. It is used to identify pupils' needs in order to guide them towards desired goals and for appropriate remedial measures to be taken to meet such needs.

According to Sadler (1989) formative assessment is concerned with how judgment about the quality of learner's response can be used to mould and improve the competence. Continuous assessment cannot function formatively when it is cumulative, that is each attempt or piece of work submitted is scored and the scores are added together at the end of the course. This practice tends to produce in learners a mindset that if a piece of work does not contribute toward the total, it is not worth doing.

2.4.3 Summative Assessment

Summative assessment is carried out at the end of a course of instruction to find out the extent to which instructional objectives have been achieved. Black, Harrison, Lee, Marshall and William (2003) define summative assessment as a process that involves "Tests that are frequent, isolated from learning, carried out on special occasions with formal rituals and often carried out by methods over which individual teachers have little or no control". Summative assessments are given periodically at a particular point in time to find out what learners know, and what they do not know.

In Ghana, for instance, before the implementation of the Educational Reforms, students went through the five-year secondary school course and at they took the School Certificate G.C.E “O” Level Examination for the award of a certificate. The certificate of the students depended on one or two days of writing in a particular subject. Even the time limit was not more than three hours for any subject. This means that all that the student is supposed to have learnt for five years is assessed in a few hours.

Harlen (2008) gave an illustration of the key elements of summative assessment as the process that takes place at a point in time and it is not on-going and cyclical as well as interpreting the evidence according to the terms of publicly available criteria. He also opined that learners have limited role in the process.

Summative classroom assessments should use well designed tests which are valid, reliable and fit for the purpose of enabling an accurate assessment of pupil achievement. High status of examination has become significant influence in policy and practice in this aspect.

Summative classroom assessment is intended to summarize pupil attainment at a particular point in time, whereas formative assessment is intended to promote further improvement (Crooks, 2001). Teachers commonly see assessment as apart from their regular teaching, serving the goal of assigning grades. However, in order for instruction to be effective teachers must also assess pupils while learning is in progress (Banicky & Heidi, 2006).

The difference between formative and summative assessment is not in timing, but purpose and effect; assessments made during the course of a unit or session may be used for summative or grading purposes rather than for truly formative purposes. However, formative assessment is initially connected with feedback and feedback to the teacher and the pupils are separated; Teachers use feedback to make decisions with respect to readiness, diagnosis and remediation. Pupils use it to monitor the strengths and weaknesses of their performances so that aspects linked with success or high quality can be recognized and reinforced and improving or modifying unsatisfactory aspects.

It is clear that both summative and formative assessments play a vital role in the teaching and learning situation. Formative assessment is considered to be “assessment carried out during the instructional process for the purpose of improving teaching and learning,” while summative assessment is “assessments carried out at the end of an instruction unit or course of study for the purpose of giving grades or otherwise certifying learner proficiency” (Shepard, 2006). This means that summative assessment takes place at the end of a term, course or programme of instruction whereas formative assessment begins with the development of the programme or curriculum or instructional material and continues as learning and instruction progress. However, research conducted by Croft, Trafford and Mapa (2000) revealed that the majority of primary school teachers surveyed reported frequently or always changing their teaching as

a result of information from standardized tests and diagnostic tools, an example of so-called ‘summative’ assessments being used for ‘formative’ purposes.

2.4.4 Continuous Assessment

Outstanding innovation of the new educational reform in Ghana is the practice and place of continuous assessment in the final assessment and certification of pupils and students in schools and colleges. Continuous assessment marks at present take thirty percent (30%) of the final examination scores.

Continuous assessment according to Falaye and Ojerinde-Dibu (2005) is defined as a mechanism whereby the final grading of pupils in the cognitive, psychomotor and an affective domain of learning systematically takes account of all their performances during a given period of schooling. Another definition by Airasain (1991) describes continuous assessment as an assessment approach which should show a full range of sources and methods used to gather, interpret and synthesize information about pupils that is used to enable teachers understand their learners, plan and monitor instruction and establish viable classroom culture. From the definitions, inferences can be made that continuous assessment is an assessment approach involving the use of a variety of assessment instruments, and assessing various components of learning.

Such an approach will also take place over a long period of time and would be holistic, representing the learner in total. There is the argument

that, formative continuous assessment is any assessment made during the school year that is meant to improve learning and help shape and direct the teaching/learning process. This aspect of continuous assessment is to remedy the shortcomings of the traditional 'one-shot' examination. Summative continuous assessment is meant to determine the effectiveness and efficiency of the whole learning episode. The continuous assessment mark, along with the end-of-year examination, contributes to the final grade (McTighe & Ferrara, 1994). In other words, continuous assessment is a process by which work done during a course is assessed as part of the learners' summative assessment (Petty, 2001). The pupil's final grade in the instructional programme is a cumulative total of performance on learning activities during the course

2.5 Perceptions and Practices

Many researchers have conducted studies to investigate teachers' perceptions of assessment in many different ways (Chester & Quilter, 1998). They believed that studying teachers' perceptions of assessment is crucial in that it gives an indication of how different forms of classroom assessment are being used or misused and what could be done to improve the situation. More critical also is the fact that perceptions affect behavior (Calderhead, 1996; Cillessen & Lafontana, 2002). This means that there is correlation between perception and behaviour.

A study conducted by Chester and Quilter (1998) on in-service teachers' perceptions of classroom assessment, standardized testing, and alternative

methods concluded that teachers' perceptions of classroom assessment affected their assessment classroom practices. Teachers that attached less value to classroom assessment used standardized tests frequently in their classrooms.

Chester and Quilter went further to opine that teachers with negative experiences in classroom assessment and standardized testing are least likely to see the value in various forms of classroom assessment. They recommended, therefore, that in-service training should focus on assisting teachers see the value of classroom assessment methods rather than "how to" do assessment.

A study conducted by Green (1992) on pre-service teachers with measurement training showed that the pre thirty (30) service teachers tended to believe that standardized tests address a very important educational outcome and believed that classroom tests are less useful. In the same study in-service teachers were of the view that standardized tests are important, but not to the degree that pre-service teachers did. A case study of one science teacher conducted by Bielenberg (1993) revealed that the teacher's beliefs about science defined how she conducted her science classes.

Diene (1993) carried out a research to understand teacher change. The research considered the classroom practices and beliefs of four teachers results suggest that teachers' beliefs and practices were embedded within

and tied to broader contexts, which include personal, social and previous ideas about a particular aspect.

Teacher perceptions act as a framework through which a teacher views, interprets and interacts with the teaching environment (Marton, 1981).

Teachers' conception of assessment is essential because evidence exists that teacher' conceptions of teaching, learning, and curricula influence strongly how they teach and what learners learn or achieve (Clark &

Peterson, 1986; Calderhead, 1996). Teacher's assessment practices are directly related to instruction and learner learning (Elkader, 2008).

According to Good and Brophy (1995), teachers perceptions of assessment modify procedures/methods teachers use for lesson planning, delivery, instruction and teacher interaction throughout the school term. Research proposes that teachers' perceptions of teaching and learning strongly influence how they teach and what learners learn or achieve Brown, 2004.

Teachers attitude and classroom assessment are inseparable so that changes in teachers' attitudes are associated with changes in classroom assessment.

There has been a robust measurement through questionnaires on teacher conceptions on assessment (Brown, 2004; Hargreaves, 2005), but one defect in this body of research is the lack of quality data. Brown, Bull & Pendlebury (1997) questionnaire on teachers' conceptions on assessment has been used with New Zealand, Australia and Hong Kong primary teachers and secondary school teachers and the data obtained from these

teachers revealed the following four purposes of assessment as perceived by teachers:

- 1· It improves teaching.
- 2· It makes learners accountable for learning.
- 3· It makes schools and teachers accountable for learner learning.
- 4· It should be rejected because it is invalid, irrelevant, and negatively affects teachers, learners, curriculum and teaching (Brown, 2004; Torrance & Pryor, 1998).

Studies have shown that, to a certain degree, teachers are satisfied with their classroom assessment practices. Unfortunately, some teachers' problems included poor teaching assessment training, not enough time to properly assess their learners (Mettler, 2005) and a large amount of teaching conceptual material in their courses. Brown (2003) strongly argues that, all pedagogical acts are affected by conceptions teachers have about the act of teaching, the process and purpose of assessment practices and the nature of learning. Teachers influence their classroom practices (Thompson, 1992). In turn teachers' actions significantly impact on pupil learning (Muigs, 2006). Research has shown that learner assessment is one of the most important tasks of a classroom teacher and that it has the greatest influence on learners' perception of assessment.

Perceptions can lead a teacher to communicate with learners in a unique manner (Gutierrez, 2000). Teachers, who view assessment as a useful means of gathering data upon which to take decisions about learning and

their teaching, attempt to make assessment an integral part of teaching. They emphasize formative rather than summative assessment, frequently use informal means of assessment; encourage learners to take risks and reward academic effort as well as good results. They tend to take responsibility for learning that takes place in the classroom.

The improvement conception, promoted by researchers Black and William (1998), Black, Harrison, Lee, Marshal and William (2003), under the 'rubric assessment for learning' is underpinned by the premise that classroom assessment's primary role should be for learner improvement. This may occur directly by giving learners useful feedback and by using effective peer and self-assessment practices or indirectly through teacher modifications of instruction to better suit diagnosed learner needs

Teachers who view assessment as a mechanism for making learners accountable for learning will favour formal summative high stakes assessment to formally determine learner abilities and achievements. This kind of information can be reported to the community and stakeholders like other schools and employers.

Teachers tend to wean themselves from the responsibilities of learners' failure by blaming the learner's socio- economic conditions or lack of ability (Delandshire & Jones, 1999).

Teachers who view assessment as a necessary part to education and school accountability will favour summative and quasi-formative assessment to generate marks that can be reported to external agencies (Vanderyor &

Killen, 2003). This kind of assessment should be used to publicly demonstrate teacher and school effectiveness (Firestone, Shorr & Monfills, 1998).

Finally, the conceptions that reflect feelings that evaluation has no legal place within teaching and learning, will probably avoid formative assessment and take a haphazard approach to summative assessment, thus, is creating a self-fulfilling prophecy that assessment is a waste of time (Vanderyor & Killen, 2003). When the system emphasizes content, conformity and high stakes summative assessment as it did in South Africa during the apartheid era, teachers' conceptions of assessment are unlikely to be immune to the system within which they work (Jansen, 1999).

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter also focused on methodology used in this empirical study.

This chapter touched on research design, population sample, sampling procedures, data collection procedures as well as the approaches to analyzing and presenting the data.

3.1 Research Design

According to Amedahe (2002), a research design is a plan or blue print that specifies how data relating to a given problem should be collected and analyzed. The study utilized a descriptive survey research design with mixed method approach to collect data related to Integrated Science teachers' and their students' perceptions of classroom assessment and its practices in science. Ary, Cheser and Asghar (1990), stress that descriptive survey is an important method that is frequently used in educational research. This is because in education most of the issues that are researched into are almost descriptive in nature; hence the adoption of the descriptive survey designs. A survey was adopted so as to enable the researcher to collect information from a large and dispersed group of Integrated Science teachers and students. The use of this survey also ensured that the researcher was able to make an in-depth analysis within a short time frame.

The study employed both qualitative and quantitative methods of data collection to determine the JHS Integrated Science teachers and their students' perceptions on classroom assessment practices. The quantitative research method enabled the researcher to identify the various factors that contribute to the perception of teachers and their students on classroom assessment practices. The qualitative research method helped the investigator to gain insights in the classroom assessment tools that JHS integrated science teachers used to assess their students in the selected schools. The used of mixed methodologies makes possible to get interpret and make informed judgement concerning the study subjects' ideas on the issues. Also, the use of qualitative research strategy in a broad framework of a quantitative methodology is aimed at gathering further data from a smaller sample, to provide insight and triangulation for interpreting the quantitative data. The use of more than one instrument to enable triangulation of findings is considered to increase the quality of data, particularly where such instruments appear to be combining different methods (i.e., quantitative and qualitative), as advocated by Patton (2002) and Creswell (2009).

3.2 Area of Study

The study was conducted in Tepa in the Ahafo Ano North District in the Ashanti Region of Ghana. The district has its capital as Tepa. There are both urban and rural communities in the study area. Communities are classified as urban and rural based on the total number of persons and the

kind of social amenities in the community. According to Ghana Statistical Service (2012), communities /localities with a population of 5000 or more persons are classified as urban while localities with less than 5000 persons are classified as rural. Communities /localities are also designated as urban when they are endowed with social amenities such as universities, tertiary institutions, health centres, markets and many more. Tepa district is endowed with many social amenities due to its urban status. Some social amenities found in the district include nurses training colleges, modern hospital and modern market centre. The schools in Tepa were carefully selected for the study due to their proximity to the researcher and the school authorities' willingness to allow the studies to be carried out in their schools.

3.3 Population

A research population is a large well-defined collection of individuals having similar features (Castillo, 2009). Castillo differentiates between two types of population, the target population and the accessible population. The target population is the total group of subjects to which the researcher would like to generalize the results of a study (Ary, Jacobs, & Razzavieh, 2002; Castillo, 2009) and accessible population is the group of subjects that is accessible to the researcher for a study from which the study sample can be drawn (Ary, Jacobs & Razzavieh, 2002; Castillo, 2009). The target population in this study was integrated science teachers and students in Ahafo Ano North Junior High Schools. However, the

accessible population in this study comprised integrated science teachers in Tega township. There are 11 Junior High Schools in Tega with 108 teachers.

3.4 Sampling Techniques

According to Webster (1985), a sample is the finite part of statistical population whose attributes are studied to gain information about the larger population and the sampling techniques are the strategies applied by researchers during the sampling process (Castillo, 2009). Stratified sampling techniques followed by purposive sampling technique were used for the selection of the schools. In this technique, individual teachers were contacted for relevant information needed to answer questions posed by the researcher. There are 11 junior high schools in Tega with 108 teachers. All the Junior High Schools in the Tega Township were purposefully selected. Two teachers from each Junior High School were interviewed. In all 22 teachers were selected for interview. All the head teachers of the sampled schools were part of the sample.

3.5 Instruments

Instruments used for the data gathering were a questionnaire, interview and lesson observation schedule. In addition, written documents such as daily notes, students' exercise books as well as audio-tape recording of

teachers' lessons were to augment the information obtained from the main instruments.

3.5.1 Questionnaire

A questionnaire is a written document in survey research that has a set of questions given to respondents or used by an interviewer to ask questions and record the answers (Neuman, 2003). A questionnaire could be answered by the person from whom information is sought or through interpreter. The questionnaire items can be:

- i. Closed-ended in which the questions permit only certain responses such as yes or no for the respondent to choose from the answers provided in the questionnaire.
- ii. Open-ended in which individuals can make any responses they wish in their own words.

The main advantage of the questionnaire is that it can be mailed or given to a large number of people at the same time (Jack & Norman, 2003). In this study, the researcher used the closed-ended type of questions in which the respondents were limited to a list of options from which they must choose to answer the question. Such questions produce more uniform answers and they usually evoke a rapid response. Also closed-ended items were also used because they are relatively easy and quick to answer. They also require no writing or elaboration and talking which may result in embarrassment or unclear answers being provided. They also provide responses that the researcher can easily compile and quantify.

3.5.2 Interview

Interview is a way to collect data as well as to gain knowledge from individuals (Kvale, 1996). According to Merriam (2001), interviewing is the best technique to use when conducting intense case studies of a few selected individuals. Isaac and Michael (1982) also noted interview as a form of questioning characterized by the fact that it employs verbal questioning as its principal techniques of collection of data.

According to Best and Kahn (1998), there are types of interviews and these falls under two main categories. These are structured and unstructured interviews. Gordon (1975) mentioned that structured interviews are interviews in which the specific questions to be asked and the order of the questions are pre-determined and set by the researcher. The unstructured interview is formal and highly individualized; interviews develop questions as they go along and probe respondents' answer with follow-up inquiries.

In this study, the researcher employed one-on-one unstructured type of interview to collect qualitative data from the respondents. That is, the teachers were interviewed based on the issues that emerged during the lesson observation. This was because different topics, activities and teaching aids were used with different group of students with different environmental conditions. More also different questions were asked by the

teachers and the students. Finally, it was also to help the researcher to gain in-depth information on the teachers' perceptions of classroom assessment.

The interview questions were centred on the types of feedback given by students, tools used to assess students, ways of assessing students (either individually or as a group), when to assess students and the types of assessment format used.

Among the advantages of interviews as noted by Aggor and Badu-Nyarko (2003) is that interview can do more than just reading questions. The interviewer can pass out pictures or product samples for respondents to examine. Interviewing also enables interviewers to clarify directions and encourage respondents to develop answers. Another advantage of an interview is its adaptability. The interviewer can alter the interview situation at any time in order to obtain the fullest possible responses from the individuals.

3.5.3 Lesson Observation Schedule

Creswell (2002) recommended the use of observational protocol as a method for recording notes. This is to enable the researcher to know exactly what was going on in the classroom. In this study, a lesson observation protocol was used to collect data on Junior High Schools Integrated Science teachers on classroom assessment practices. The essence of the lesson observations was to enable the researcher gain insight into how the teachers translate their perception of classroom

assessment into practice. Again, lesson observation was used to clarify some of the responses given to some questionnaire items.

3.5.4 Validity of Instruments

Validity of a research instrument is concerned with how well it measures the concept(s) it is intended to measure (Alhassan, 2006, Awanta & Asiedu-Addo, 2008). Content validity is the extent to which a measurement reflects the specific intended domain of content (Carmines & Zeller, 1991). The instruments, questionnaire, lesson observation and interview schedule were given to the supervisor to determine their content validity and also identify any ambiguities in the items. This was to ensure that the items reflected the intent of the researcher. The instruments were modified based on the feedback from the supervisor. His comments led to the correction of typographical errors and clarification of elements of ambiguity in the instruments.

In order to validate the students' questionnaire items, the questionnaire was pilot tested with ten students from different Junior High Schools in Tewa. The data from the pilot test indicated that the items were clear and understandable to the students.

3.5.5 Reliability of Instruments

Reliability concerns the extent to which a questionnaire, interview, lesson observation or any measurement procedure produces the same results on repeated trials (Kuder & Richardson, 1937). It is the ability or consistency of scores over time or across raters. In order to ensure the reliability of the

questionnaire items, a pilot study involving ten students and four integrated science teachers from different Junior High Schools in Tepa was conducted using the same set of questionnaire. The teachers and students used in the pilot study were not involved in the actual study. The data from the pilot test indicated that the items were clear and understandable to the students.

The lesson observation protocol was also piloted with the same teachers used in piloting the questionnaire. The reliability of the lesson observation protocol was then assessed using inter-rater percentage reliability. Samples of the lesson observation protocol were used to observe lessons by different experts to determine the inter-rater percentage reliability of the data. The inter-rater percentage reliability value was found to be 75% after analyzing the data by the experts. This suggested that the lesson observation schedule could be used to undertake the study.

3.6 Data Collection Procedure

The researcher obtained an introductory letter from the Head of Department of Science Education, University of Education, Winneba which was used to seek permission from the headteachers/headmistress of the schools that participated in the study. The researcher made three visits each to the selected schools. The researcher first visited each school, introduced himself and seeks permission from the head teachers / head mistress and also to establish rapport with the Integrated Science teachers and to solicit their participation in the study. The second visit was used to

administer the questionnaire to the teachers. Each respondents was given adequate time to complete the questionnaire. The questionnaire was completed and collected on the same day. The final visit was used to interview and observe teachers' lessons delivery and the kind of assessment given after lesson delivery, and also thanked the head teachers / head mistress for their acceptance.

3.7 Data Analysis

Data analysis is the ordering and breaking down of data into constituent parts and performing statistical calculations on the raw data to provide answers to the questions guiding the research (Osuala, 1993). Quantitative and qualitative data were analyzed separately given the different nature of the data. In this case the data would be sorted, organized and coded. The data would also be analyzed using a grounded theory where the interviews would be transcribed.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Overview

This chapter presents findings of the study which include characteristics of the respondents, and teachers' perception on classroom assessment, competencies of teachers on classroom assessment, tools and methods used in classroom assessment and influence of teachers' perceptions on classroom assessment. Table

Table 4.1: Characteristics of the Respondent

Gender	No of teachers	Percentage
Male	15	70.0
Female	7	30.0
Total	22	100
Qualifications:		
Post-Graduate	1	5.0
Graduate	4	18.0
Diploma	16	72.0
Certificate	1	5.0
Total	22	100
Ranks:		
Assistant Director I	1	5.0
Principal Superintendent	15	66.0
Superintendent I	4	18.0
Number of years of teaching:		
Less than 6	17	77.0
More than 6	5	23.0
Total	22	100
Number of years at present station		
Less than 5 years	16	73.0
More than 5 years	6	27.0
Total	22	100

From the table, 70% of the teachers were males while 30% are females. 5% were post-graduates, 72% were diploma, 18% also were graduates and the remaining 5% have teacher's certificate "A". In terms of the ranks of the respondents, 66% of the teachers were principal superintendants, 5% were assistant director I and 18% and 11% are superintendant I and superintendant II respectively. Seventy-seven percent of the responding teachers have been teaching less than six years whilst 23% of the respondents have spent more than six years in their present station. Seventy-three percent of the responding teachers have been in their current station for less than five years and the remaining 27% of the respondents have stayed in their station for more than five years. This indicates that majority of the teachers have gained experience in the teaching profession.

Table 4.2 shows how some teachers perceived classroom assessment as a test.

Table 4.2 Teachers Perception of Classroom Assessment

Classroom Assessment	No. of teachers	Percentage
a) is process of administering a text to students' in order to assign grades and report to parents and officials.	5	23
b) is a process which helps teachers to promote students from one class to another	2	9
c) refers to all test a teacher gives at the end of topic or term.	10	45
d) is a tool that a teacher uses to inform teaching and learning.	5	23
Total	22	100

From the Table 4.2, 22 teachers were sampled to complete the questionnaire and out of this number, 23% of them defined classroom assessment as a tool that teachers use to inform teaching and learning. Forty-five percent of the respondents also defined classroom assessment

as a test that teachers give to students at the end of each lesson delivery or after treating a topic, 23% of the respondents defined classroom assessment as a process which enables classroom teachers to carry out promotion exercise, that is, to promote students from one class to another. The remaining 9% of the respondents defined classroom assessment as a process of administering a test to students in order to assign grades and report to parents and officials.

The respondents who defined assessment as a tool that informs teaching and learning indicated that they assess students in every lesson. The responding teachers who also defined assessment as a process of administering a test to students for grading and reporting to parents and officials carry out assessment in every month. Also the respondents who defined classroom assessment as a process that teachers use to promote students from one class to another gave an indication that they assess in every two weeks. In the last category of the definition of classroom assessment (classroom assessment is a test given to students at the end of a topic), majority of the respondents indicated that they assess in every lesson while the remaining respondents answered that they assess once in a week.

All the respondents strongly agreed that classroom assessment is very useful to them as teachers as well as to their students. Answers given by respondents on why they carry out assessment included among other things; to identify the average students and those who are below and above

average; the respondents also indicated that classroom assessment enables them as teachers to know their own strengths and weaknesses in some areas of teaching; another reason given by the respondents is that through classroom assessment, teachers are able to know the ability of students. Respondents also indicated that classroom assessment is useful to students because it enables students to recall whatever is taught in classroom. Students also get to know where they fall short as well as knowing their stands in class.

On the kind of feedback given to students, respondents indicated that, at times students clapped for getting a question correctly. Others also include **510** , etc. Students' reports according to the respondents are at times displayed for others to see. The respondents also revealed that they review the class work with the students.

4.3 Competencies of Teachers on Classroom Assessment

All the responding teachers indicated that they are competent when it comes to classroom assessment. That is they have the competence to carry out classroom assessment. Respondents have acquired assessment skills from the colleges of education. The head teachers also confirmed the competencies of teachers when it to comes to the conduction of classroom assessment. Some of the responding head teachers revealed that training of teachers in classroom assessment is not adequate. According to them assessment by teachers is on trial and error basis all because teacher trainees come out of the Colleges of Education with little knowledge in

classroom assessment though they practice with this little knowledge that they have acquired and that has made them gained more experience from the classroom on assessment. Both head teachers and teachers confirmed that though teachers conduct assessment, teachers do not have the competence to analyse the assessment data using statistics.

4.4 Tools and Methods Used in Classroom Assessment

Respondents revealed the use of several method and tools to assess their students. The methods and tools include home-works, tests and classroom exercises though the majority of the respondents use tests as the main method of assessing students. This is because most of the respondents see assessment as a test. Some of the teachers reported that they assess their students on a weekly or monthly basis. A variety of classroom assessment was not used by teachers to fully capture much information on the students. The research also indicated that both formative and summative assessment methods are used by the respondents. Though the respondents use these two assessment methods, much emphasis is laid on the summative form of assessment. The respondents revealed that though formative assessment is good, because of the size of the classes, they find it difficult to use it.

The findings of this research work confirms the findings of a research conducted by Volente (2009) which revealed that much emphasis is placed on tests, quizzes and projects to assess students' learning.

4.5 Influence of Teachers' Perception on Classroom Assessment Practices

How teachers perceive classroom assessment has influence on the classroom assessment practices that they adopt. How students learn is not a major concern of teachers. Some of the respondents revealed that the size of the class would not permit them to carry out assessment on a daily basis. Chester and Quilter (1998) in study revealed that perceptions of teachers on assessment have effect on their assessment practices.

There are two main categories of classroom assessment. These are learning for assessment and assessment for learning (Stiggins, 1998). The main tool of assessment of learning is tests whereas observations and interviews are good for assessment for learning (Pophan, 1999; Stiggins, 1998).

The respondents indicated that test is their tool that they use to assess their students, therefore, conclusions can be drawn that the respondents placed emphasis on assessment of learning. Brooks and Brooks (1999) opined that laying much emphasis on assessment for learning will help to improve students' achievement.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

In this section, the researcher discusses the results of the findings of the study in respect to the research questions

5.1 Summary

The study investigates Junior High Schools Integrated Science teachers' perception of classroom assessment practices. The study utilized a descriptive survey research design with mixed method to collect data related to junior high school integrated science teachers' and their students' perceptions of classroom assessment and its practices. The descriptive survey was used to collect data from a sample of 22 Integrated Science teachers and 40 students.

Instruments used for the data collection were a questionnaire, interview and lesson observation. Quantitative and qualitative data were collected and analyzed separately given the different natures of the data. The data collected were sorted and organised. The data were also analysed using a grounded theory where the interviews including preparing and organizing would be transcribed.

All the respondents strongly agreed that classroom assessment is very useful to them as teachers as well as to their students. They also indicated

that classroom assessment is useful to students because it enables students to recall whatever is taught in classroom. Students also get to know where they fall short as well as knowing their stands in class.

5.2 Conclusions

The purpose of the study was to investigate how the perceptions of teachers on classroom assessment influence their assessment practices.

This research concludes that teachers have competence to carry out assessment practices in the classroom though some of the head teachers and the teachers revealed that teachers receive little training from the Colleges of Education in classroom assessment. They claim to have acquired the assessment skills through trial and error in the classroom.

It has also been established from the research that most of the teachers use tests as the main tool and method of assessing students. Though both summative and formative forms of assessment are used by the respondents, emphasis is laid on summative form of assessment than formative. The reason according to the responding teachers is that the size of their class does not provide enough room for formative form of assessment though the respondents are aware that formative assessment improves teaching and learning process. The respondents attested to the fact that summative assessment does not improve teaching and learning but because of convenience, they are tempted to use summative. The study

also revealed that some of the responding teachers perceived classroom assessment as a test that teachers give to students after treating a topic. Others also perceive assessment to be a tool that informs teaching and learning. The last category of the respondents also perceived classroom assessment as a process of administering a test so that grades can be assigned. All of these perceptions have effect on the classroom assessment practices because teachers choose a practice based on his perception.

5.3 Recommendations

It is a known fact from literature and the findings of this study that many factors influence classroom assessment practices so it will be of essence if a study could be conducted to find out those factors apart from teachers perceptions. A study can also be conducted to ascertain how students also perceive classroom assessment. Colleges of education should pay much attention to the acquisition of classroom assessment skills by teacher trainees so that teachers become well-versed in classroom assessment practices. The Colleges of Education can also organise short courses on classroom assessment for teachers on field so that that they can improve upon their assessment skills.

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QUESTIONNAIRE FOR TEACHERS

The Perception of Teachers on Classroom Assessment Practices in Junior High Schools in Tega.

This study investigates how teachers perceive assessment practices in junior high schools in Tega. Your responses will be treated as confidential.

To ensure confidentiality you are not supposed to provide your name.

Your cooperation is appreciated.

Instructions:

Please kindly provide these items from your point of view but not general point of view. You are either to tick or write where required.

1. Gender: Male [] Female: []

2. Professional Qualification:

Certificate [] Diploma [] Graduate [] Post-Graduate []

3. Rank in G.E.S Supt I [] Supt. II [] Principal Supt. []

Assistant Director II [] Assistant Director I [] Deputy Director []

Director II []

4. Number of years at present station

5. How long have you been teaching?.....

6. Define assessment as you used in your classroom.

.....

.....

.....

.....

7. How often do you assess?

.....

.....

8. Is assessment is useful to you as a teacher? Explain

.....

.....

.....

9. Do you find assessment useful to your learners and why?

.....

.....

.....

10. What type of feedback do you provide for students based on your assessment?

.....

.....

11. Why is assessment important?

.....
.....

12. What assessment techniques/ methods should you as a teacher use?

.....
.....
.....

13. Do you think you have the competence to carry out assessment?

.....

14. How does the size of your class affect your classroom assessment procedures?

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.....
.....
.....

14. Generally, do you think assessment is well carried out in your school?

.....

15. Do you think Colleges of Education adequately trained you to do assessment?

Justify your answer.....

QUESTIONNAIRE FOR HEAD TEACHERS

The Perception of Teachers on Classroom Assessment Practices in Junior High Schools in Tega.

This study investigates how teachers perceive assessment practices in junior high schools in Tega. Responses will be treated as confidential. To ensure confidentiality you are not supposed to provide your name. Your cooperation is appreciated.

Instructions:

Please kindly provide these items from your point of view but not general point of view. You are either to tick or write where required.

1. Gender: Male [] Female: []

2. Professional Qualification:

Certificate [] Diploma [] Graduate [] Post-Graduate []

3. Rank in G.E.S Supt I [] Supt. II [] Principal Supt. []

Assistant Director II [] Assistant Director I [] Deputy Director []

Director II []

4. Number of years at present station

5. How long have you been head teacher?.....

6. Mark a statement below that best defines assessment as you use assessment in your classroom []

a. classroom assessment is a process of administering a test to students in order to assign grades and report to parents and officials.

b. classroom assessment is a process, which helps teachers to promote students from one class to another.

c. classroom assessment refers to all tests a teacher gives at the end of a topic or term

d. classroom assessment is a tool that a teacher uses to inform teaching and learning

7. How often do the teachers assess? (Tick one option that best describes how often you assess)

a. once a week

b. once a month

c. every two weeks

d. twice a term

e. about every lesson

f. other

(specify).....
.....

8. Assessment is useful to me as a head teacher. (*Tick one*)

a Strongly disagree

b Disagree

c Strongly agree

d Agree

Why?.....

.....

9. Assessment is useful to pupils. (*Tick one*)

a Strongly disagree

b Disagree

c Strongly agree

d Agree

Why?.....

.....

.....

10. What type of feedback do you provide for pupils based on the teachers' assessment?

.....

.....

11. Why is assessment important?

.....

.....

.....

12. What assessment techniques/methods do teachers use?

.....
.....

13. Do you think teachers have the competence to carry out assessment?

.....

14. How does the size of the classes affect teachers' classroom assessment procedures?

.....
.....
.....

18. Generally, do you think assessment is well carried out in your school?

.....

19. Do you think colleges of education adequately trained teachers to do assessment?

Justify your answer.

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