



BASIC SCHOOL TEACHERS' ASSESSMENT PRACTICES IN THE SISSALA EAST MUNICIPALITY, GHANA

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Abstract:

This study employed a sequential explanatory mixed-method design to examine basic school teachers' classroom assessment conceptions in the Sissala East Municipality in the Upper West Region of Ghana. In particular, the study examined the classroom assessment practices of teachers and their demographic characteristics that influence their assessment practices. Quantitative data gathered from 203 respondents were analyzed using mean, standard deviations, t-test and ANOVA. In the follow-up qualitative phase, semi-structured interviews were undertaken with 12 participants and the data subjected to interpretive thematic analysis. The findings revealed that teachers mostly employ traditional assessment methods than alternative assessment tools. Furthermore, gender, age, assessment training, teaching experience and class teaching level impacted the teachers' use of assessment methods. It was recommended among other issues that regular in-service training in assessment be conducted for teachers for them to be up-to-date and also develop their skills and use of appropriate alternative classroom assessment practices.

Keywords: assessment, assessment practices, teacher variables influencing assessment practices, Sissala East, basic school teachers

1. Introduction

Educational assessment of students' learning is pivotal in any educational enterprise. This is done to obtain information for making decisions on students learning. Gonzales (2003) cited in Yetkin (2017) sees assessment as *"a systematic gathering of information about students' performance that enables teachers to monitor their learning"* (p.89). To Sadler (2005) cited in Nguon (2013), assessment refers to *"the process of forming a judgment about the quality and extent of student achievement or performance, and therefore by inference a judgment about the learning that has taken place"* (p. 11). McMillian (2018) views assessment as the *"gathering, interpreting, and using evidence of student learning to support teacher decision*

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making in a variety of ways" (p.14). From the above, assessment is an essential component of any educational process. It determines where learners are now and what level they have reached; it provides feedback on their learning; it diagnoses learners' developmental needs; and it allows for the planning of curricular, resources, and activities (Alderson, 2005).

Generally, formative and summative assessments are the main forms of assessments. Formative assessment has its main focus to monitor and improve upon students' learning and classroom activities (Amedahe & Asamoah-Gyimah, 2016; Nsikak-Abasi, & Akanaono, 2017; Nortvedt, & Buchholtz, 2018). Formative assessment occurs during instruction. It is also called 'assessment for learning'. It is diagnostic as it is used to monitor students learning as well as identify students learning difficulties to offer remedial measures where applicable to enhance students learning (Ajogbeje, 2013; Amua-Sekyi, 2016; Okyere, Kuranchie, Larbi and Twene, 2018).

Feedback is a vital feature in formative assessment. Providing timely feedback to students enables them to recognize their strengths and weakness in learning and improve on them. Feedback goes beyond providing scores on performance to students to engaging them in dialogue, discussing thoroughly with students to understand better the thought processes underlying students' performance (Amua-Sekyi, 2016). According to Okyere et al. (2018), formative assessment processes enable students to learn from their mistakes, be more experimental and develop more desirable higher cognitive skills. Some formative assessment procedures are class tests, project work, assignments, presentations, quizzes.

Assessment of learning (AoL) or Summative assessment is concerned with how students have performed at the end of the instructional process (Amua-Sekyi, 2016; Gonzales & Aliponga, 2012; Mekonnen, 2014; Okyere et al., 2018). It focuses on measuring the extent of learning in students to certify student achievements or assign grades and is used for categorising students and reporting these judgments to others (Gonzales & Aliponga, 2012, Sanga, 2016). It is the assessment of a student's learning at a certain stage that sums up all prior learning and achievements that had occurred before it (Taras, cited in Asare, 2015).

According to Brown (2003), in summative assessment paradigm, three key purposes existed: reporting student progress and attainment; summing up the achievement for certification, selection, and placement purposes; and providing data for ascertaining the quality and effectiveness of a school, system and teacher. According to NaCCA (2019), the emphasis of summative assessment is to appraise the learner's development and achievement. In short, summative assessment provides evidence of a students' competence in a programme of study.

According to NaCCA (2019) and MoE (2018), summative assessment in Ghana's schools should take the form of; (1) final examination (end of studying a programme; this is truly summative assessment); (2) end of term examination; (3) projects (could be assessed for formative purposes); and (4) portfolios (also assessed for formative purpose during its development).

There exist several classroom assessment strategies that can be used to obtain information about students' achievement categorized into traditional and alternative strategies (Rahim, Venville, & Chapman, 2009, cited in Thomas, 2012). Traditional strategies or teacher-centred strategies consist of tests, textbook exercises, quizzes, and exams. In contrast, alternative strategies are mostly student-centred strategies such as group work, presentations, concept maps, journals, and portfolios (Rahim, Venville, & Chapman, 2009, cited in Thomas, 2012).

2. Literature Review

2.1 Kinds of Assessment Methods and Tools

Teachers employ various kinds of assessment tools to gather evidence on their students for varied uses or purposes. Some examples of assessment tools and methods are quizzes, observation, presentations, daily practice assignments, projects, portfolios, oral and written reports, group activities, student self-assessments, interviews, oral questions, conferences, rating scales, pencil-and-paper tests, and homework. It has to be noted that it is beyond the scope of this study to review all these assessment methods and tools. Only a few of them will be reviewed.

Berry (2008) has classified assessment methods either as traditional or alternative. Traditional methods like matching items, true-false, and multiple-choice do not take too much time in conducting and scoring them as compared to alternative methods like portfolios and observations. According to Berry (2008), paper-and-pencil tests as a traditional form of assessment have long been used as the main method for judging student achievement. Paper-and-pencil tests necessitate learners to answer in writing in a standardised test setting where administration procedures, scoring criteria and the content of the test papers are alike for every candidate (Berry, 2008). Selected response or objective test is the most common type of paper-pencil test. In the selected response test, students are asked questions with a range of responses for them to select the best answer or correct from the options given (Amedahe & Asamoah-Gyimah, 2016). Examples of the objective test are multiple-choice questions, true-false questions, and matching. Some merits of the objective test are that they are easy to score, objective, ensures much content sampling with limited time and space, and can measure knowledge, comprehensions, and application (Amedahe & Asamoah-Gyimah, 2016; Berry, 2008). However, paper and pencil test have been criticized because if caution is not taken, can result to largely measuring factual or recall of information and also it does not lend itself in assessing some essential learner outcomes and skills.

Another type of test is the supply type or constructed response type is subjected to various kinds of responses. Examples of the supply type are fill-in-the-blanks, short questions, and essays. An essay test requires students to compose their responses to questions using their own words. They are used to assess complex learning skills such as writing, communication and organization skills. However, they have a limited range of content coverage, require a lot of time to take the test, bluffing on the part of students

when they do not know answers to a question and scoring is very subjective (Amedahe & Asamoah-Gyimah, 2016; Berry, 2008).

Similar to pencil and paper tests, which is most at times is a formative assessment practice is quizzes. They are short and have fewer questions and can be done in a shorter time as compared to tests (Noori, Shafie, Mashwan, & Tareen, 2017). However, it must be noted that the various forms of paper and pencil tests can be used to gather information on students for formative and summative purposes.

Homework is regarded as a strategy of formative assessment that makes learners assess themselves. For instance, students can be assigned to answer questions on a particular website after schooling a day (Noori, Shafie, Mashwan, & Tareen, 2017). According to McMillan (2018), teachers use homework to diagnostically determine which particular areas of knowledge and skill need additional attention and to give students specific feedback. One benefit of assigning homework to students is that as it leads to mastery of skills through practice (Mierzwik, 2005 cited in Swanson, 2017). However, the administration of the students' work and scores can tremendously exert pressure on teachers, whereas parents consider homework assignments as too much work (Mierzwik, 2005 cited in Swanson, 2017).

According to Berry (2008), alternative assessments are meant to promote students' abilities to generate and apply a broad scope of knowledge either than merely memorizing facts and performing basic skills. Alternative assessments are different from traditional paper-and-pencil tests (McMillan, 2018). Various kinds of alternative tools include peer assessment, observations, presentations, portfolios, interviews, projects, experiments, self-assessment, and simulations. Alternative assessments are grouped into "product" and "performance", in that at any point in time, whatever learning outcome that is to be measured, it *"will take the form of either a product, such as a research paper or a science report, or a performance, such as an oral presentation or a demonstration of a procedure in the lab"* (Berry, 2008, p. 83). Some of these alternative assessment tools are explained next.

Projects require learners either in groups or individually to carry out an enquiry process on a selected topic through the application of complex skills such as collecting, analyzing and organizing information and presenting the results. It illustrates more than a final product but rather the many steps required in achieving the final product. Projects can be assessed based on the process, the product, or both (Berry, 2008).

McMillan (2018) defined a portfolio as *"a purposeful, systematic process of collecting and evaluating student formative and/or summative assessments to document progress toward the attainment of learning targets or show evidence that learning targets have been achieved"* (p. 303). McMillan (2018, pp. 303-304) identifies the following features of an effective portfolio: (1) well-stated purpose linked with learning outcomes, 21st-century skills, and standards; (2) logically structured compilation of student work products; (3) active student involvement and high enthusiasm; (4) pre-established guidelines used to determine contents; (5) clear and well-defined scoring criteria for evaluating students' products; (6) student self-reflection; and (7) review and evaluation conferences between teachers and students.

Popham (2017) noted that for teachers to make effective use of portfolios, they should make *“ongoing collection and appraisal of students’ work a central focus of the instructional program rather than a peripheral activity whereby students occasionally gather up their work to convince a teacher’s supervisors or students’ parents that good things have been going on in class”* (p. 221). For a portfolio to be successful, the student and teacher must collaborate effectively; however, the responsibility and ownership of the contents of the portfolio are left with the student (Brown, 2018).

Expressions like ‘performance assessment’ and ‘authentic assessment’ are occasionally used interchangeably with alternative assessment, but they essentially stand for something different. Performance assessment is defined as an assessment activity that involves *“a student’s demonstration of a skill or competency in creating a product, constructing a response, or making a presentation”* (McMillan, 2018, p. 268). Instead of asking students how something is done, students perform or put on display the skill or behaviour. The purpose is to highlight students’ capability to utilize knowledge, attitudes and skills to produce their work or authentically perform a task. Performance assessment tasks can be organized into two categories: performance-based or performance-and-product. Examples of performance-based include performing keyboard skills in typing, debates, singing, playing a piano, or performing gymnastics. Performance-and-product examples include a complete research paper, project, slide shows, reports, and videos. On the other hand, authentic assessment employs processes to judge a student’s capability to think, learn, and perform a task in a manner explicitly similar in real life or the real world (Brown, 2018; McMillan, 2018), authentic assessment enables students to apply thinking skills and also motivates them to learn since learning is related to real-world situations.

Checklists, rating scales, and rubrics are three common approaches in scoring or evaluating performance assessments or authentic assessments (McMillan, 2018). Checklists, rating scales and rubrics are both tools and assessment strategies.

A checklist consists of a listing of specific criteria or dimensions in terms of behaviours, attitudes, knowledge, and skills to be demonstrated for which the teacher is to check whether or not each of them is met by simply ticking a ‘yes’ or ‘no’. For instance, checklists can be employed in evaluating a sequence of steps that are required in performing an action such as the proper steps in using a microscope.

According to McMillan (2018), rating scales are used to show the degree or frequency of the presence of a specific dimension, beyond a simple yes/no. Rating scales may be classified into numerical, qualitative, or numerical/quantitative combined scales. Rating scales that use numbers only on a continuum to depict the varying degrees of proficiency with regards to quality or frequency are called numerical scales. Qualitative scales use verbal descriptions to show the degree of student performance.

A rubric is an expanded form of rating scale that consists of a series of criteria that describe the degree of quality at each level of the scale (McMillan, 2018). Price, Pierson and Light (2011), note that apart from being used as summative assessments, rubrics can improve the whole learning process from the beginning and to the end by serving several purposes including sharing criteria for success for an assignment and giving purposeful feedback on an ongoing project. Also, they support self-monitoring and self-assessment

towards the award of the final grade on an end product. Rubrics can be grouped into two main types: holistic and analytic. A holistic rubric is one in which dimension results in a single overall score, while the analytic rubric provides a separate score for each criterion. (McMillan, 2018)

2.2 Teacher Assessment Practices

Two main approaches have been used in studies investigating teacher classroom assessment practices because “teacher’s classroom assessment practices are like any observable phenomena: they can be investigated with either the teachers’ self-reported practices or with independent observations of the assessment practices themselves” (Snyder, 2017, pp. 22-23). The two approaches claim to explore the actual assessment practices used in the classroom to varying levels of accuracy. Snyder (2017), citing Bachor and Anderson, suggested that none of the two approaches would be devoid of prejudices “*as the difference between observer bias and self-report inaccuracy is unknown*” (p.23). The underlying principle in using self-reported surveys in studying teachers’ classroom assessment practices is that those teachers who show a positive viewpoint toward a particular practice are more probable to engage in that same assessment in their classroom. This study employed a self-reported survey and structured interview to grasp teachers’ classroom assessment practices. Studies that employed surveys to explore teachers’ classroom assessment practices have paid attention to two domains of assessment use: the function of such practices in the classroom and the frequency they reportedly use them in their classrooms.

Research has indicated that teachers employ various assessment tools and methods in their classrooms, ranging from standardized tests, commercially developed tests and quizzes, textbook tests and quizzes, district-developed assessments, and informal classroom assessment strategies (McNair, Bhargava, Adams, Edgerton & Kypros, 2003; McMillan, Myran & Workman, 2002; Sajjad, Nasir, Nasir & Saif, 2019). Sajjad, Nasir, Nasir and Saif (2019) investigated 235 secondary school grade 10 English language teachers’ classroom assessment practices and the challenges and opportunities faced by them. Results from the study revealed that teachers mostly follow traditional assessment practice such as; oral presentations, objective type test, question answering, and homework during the instruction, and disregarding alternative assessment practices such as - group projects, one-minute test, presentation, portfolio, self and, peer assessment practices.

Onyefulu (2018) conducted a study in Jamaica to determine the classroom assessment of primary (n=64) and secondary (93) school teachers. The results revealed that the teachers often used restricted essays, multiple-choice, fill-in-the-blanks, short answers, closed-book tests, and portfolios. Similarly, Suah and Ong (2012) examined the assessment practices of Malaysian in-service teachers (n=406) and found that teacher trainees often use traditional assessment methods.

McNair, Bhargava, Adams, Edgerton, and Kypros (2003) investigated the grading practices of 157 primary teachers to ascertain the types and frequency of assessment tools used. The results indicated that the frequency with which paper and pencil tests are used

differs significantly by grade. Third- and fourth-grade teachers regularly used paper and pencil tests, but rarely by teachers in lower grades. Forms of assessment, such as checklists, portfolios and observation, were used less frequently and principally for summative purposes of external accountability and reporting.

McMillan and Nash (2000) found that the majority of teachers employ four main tools in determining grades. They are quizzes, tests, projects or papers and homework. A few teachers make use of participation in-class work and effort in their determination of their students' grades. In a subsequent study to replicate these findings, McMillan, Myran and Workman (2002) indicated that the major factors teachers employ for grading were academic performance, effort, and improvement; and minor factors were homework, comparing students with other students, other teacher's scores and borderline. In a situation where a student is at the borderline of getting a higher letter grade, the teachers take into consideration the student's effort, improvement, class behaviour, among others, when determining the grade. In a similar study, Alsarimi (2000) investigated 246 third preparatory science classroom assessment practices in Oman and found that teachers reported using multiple-choice items, oral exams, completion, short answer, and extended answer formats.

Bekoe, Eshun and Bordoh (2013) used interviews and classroom observation to investigate the formative assessment techniques that Colleges of Education Social Studies tutors employ to assess teacher-trainees in the Central Region of Ghana. A case study research design was adopted. Purposive and convenience sampling were employed to select both colleges and tutors for the study. The findings revealed that the major techniques of formative assessment tutors used were diagnostic assessment, peer assessment, portfolio assessment and self-assessment. Furthermore, the study indicated that as a result of the rushed nature in devising formative assessment and scoring, it resulted in a situation where there was over-concentration on the cognitive domain of learning and ignoring the psychomotor and affective domains.

Asare (2015) employed the sequential mixed-methods design to examine the classroom practices of formative assessment with 192 private and public kindergarten teachers in six regions of Ghana. Teachers' classroom formative assessment practices were categorized into two dimensions: (a) assessment modes frequently used, and (b) reasons for using them. Interviews were used to obtain qualitative data from three participants chosen from the sample that initially completed a questionnaire. The findings indicated that the often most used mode of assessment by the teachers was the paper- and- pencil test. Also, teachers employed a particular assessment technique just to satisfy the expectations of stakeholders (i.e., educational leaders and parents) to the neglect of the curriculum assessment recommendations. Furthermore, the findings revealed that no significant disparities existed between the private and public kindergarten teachers on nearly all the items in the two categories used in the study; however, significant differences were found on four reasons for choosing a specific kind of assessment.

Amoako (2018) investigated the formative assessment practices among 150 Distance Education course-tutors in Ghana using a self-administered questionnaire. The

findings revealed that the common formative assessment practices of on-site Distance Education course tutors in Ghana were 'oral questioning,' 'tutor made test,' 'observation,' 'peer-assessment,' and 'student self-assessment'. Furthermore, the findings indicated that the majority of the tutors employed multiple formative assessment measures.

2.3 Teacher Factors Influencing Teacher's Assessment Practices

Research studies point out that many contextual factors influence teachers' assessment practices (Fulmer, Lee & Tan, 2015; Fulmer, Tan & Lee, 2017). These factors exist at three levels; individual, school and societal levels are known respectively as micro-, meso- and macro-levels (Fulmer, Lee & Tan, 2015; Fulmer, Tan & Lee, 2017). However, the focus of this study is on the micro-level, specifically on teacher variables and their influence on assessment practices.

Bol, Stephenson, O'Connell and Nunnery (1998) examined 893 teachers' frequency of use of alternative assessment and traditional methods with respect to teaching experience, subject area, and grade level. The alternative methods of assessment investigated were observation-based and performance assessment methods. The traditional modes of assessment were quizzes, written assignments and close-ended examinations. The study findings revealed that the more experienced teachers more frequently employ alternative assessment than the less experienced teachers. Also, Kolo-Keaikitse (2012) investigated 691 teachers' classroom assessment practices in Botswana. The study found that teacher-related factors such as teaching experience, academic level, and preparation in assessment positively contributed to their skills, beliefs, attitudes and use of appropriate assessment methods in the classroom.

Furthermore, in Uganda, Matovu and Zubairi (2014) discovered that academic qualifications and training in assessment significantly predicted university lecturers' assessment practices. They remarked that teachers with more experience in teaching and higher academic qualifications possess desirable assessment practices due to their constant dealings with learners' assessment activities.

Moreover, Susuwele-Banda (2005) found that the superior the teacher's academic qualification, the better the teaching skills and assessment practices. Suah and Ong (2012) discovered that years of teaching experience influenced the assessment practices of teachers, as beginner teachers have a higher inclination of utilizing questions developed by other teachers. This signifies a lower perception of assessment competency. However, Gonzales and Aliponga (2012) found that academic qualifications do not influence academic staff's assessment practices. Gonzales and Aliponga (2012) further revealed that assessment practices of teachers depended principally on the purpose they had set for the class, rather than their educational qualifications.

According to Al-Nouh, Taqi and Abdul-Kareem (2014), teacher professional development programmes play a crucial role in enhancing practising teachers' knowledge and skills of assessing learners, especially in this era of a paradigm change from summative to formative assessment practices. Also, Susuwele-Banda (2005) and Matovu and Zubairi (2014) have found that assessment-based training influences teachers' assessment practices. Furthermore, Zhang and Burry-Stock (2003) indicated

that teachers' ability to put into practice classroom assessment activities depended largely on the degree of their training in conducting student assessments. Therefore, it is imperative that assessment-based training is provided to teachers to equip them with skills and knowledge of assessment practices.

The teaching level of teachers has been found to influence the assessment practices of teachers. Trepanier-Street, McNair and Donegan (2001) investigated the assessment practices of elementary teachers to uncover their use and importance of various kinds of assessment. The results of the study indicated that both the lower and upper elementary teachers value and use various modes of assessment; though, some disparities and preferences existed. While lower elementary teachers used and cherished checklists, rating scales, written observational notes, one-on-one assessments, and portfolios, on the contrary, upper elementary teachers put more value on tests published from reading series and textbooks, teacher-made tests, paper-pencil assessments, and conferencing with students. These differences between the groups may be as a result of the maturity levels of the students being taught by them (Trepanier-Street et al., 2001). Zhan and Burry-Stock (2003) also investigated 297 teachers on their classroom assessment activities across grades, and subject areas found that the higher the grade levels, the more teachers used objective types of items. Whereas secondary teachers often rely on paper-pencil tests, primary teachers often use performance assessment. The abovementioned studies seem to prove that teacher assessment practices can be exclusive of one academic qualification, teaching experience, assessment training, and grade level to another. Therefore, teachers' classroom assessment activities call for a considerable investigation. In Ghana, studies on assessment and its practices among teachers have been well researched and documented (e.g. Amoako, 2018; Bordoh, Bassaw & Eshun, 2013). However, the researches in this area focused attention on formative assessment practices among senior high school teachers and its impact on students learning (Sofu, Ocansey, Nabie & Asola, 2013), among Colleges of Education tutors and the strategies they use (Bekoe, Eshun & Bordoh, 2013; Eshun, Bordoh, Bassaw & Mensah, 2014), among distance education tutors (Amoako, 2018) as well as among kindergarten school teachers in the country (Asare, 2015). These investigations have not particularly paid attention to the assessment practices of basic school teachers in the Ghanaian educational system.

Besides, studies on classroom assessment indicate that teachers' assessment practices are influenced by several independent variables, such as the teaching experience of the teacher (Bol, Stephenson, O'Connell & Nunnery, 1998; Kolo-Keaikitse, 2012; Suah & Ong, 2012), the academic qualifications of the teacher (Gonzales & Aliponga, 2012; Matovu & Zubairi, 2014) and the teacher's exposure to professional assessment training (Matovu & Zubairi, 2014; Susuwele-Banda, 2005) among others. There appear to be inadequate studies on how these factors shape teachers' assessment practices in Ghana.

Therefore, the research questions which guided the study were:

- 1) What are the assessment practices of basic school teachers in the Sissala East Municipality?

- 2) To what extent do basic school teachers' classroom practices differ based on teacher variables (e.g., level of teaching, teaching experience, training in assessment, gender, and age)?

3. Methodology

This study used Creswell and Creswell (2018), Creswell and Plano Clark (2011, 2018), and Johnson and Christensen (2017) sequential explanatory mixed-method design, which incorporates qualitative data to clarify quantitative conclusions. The study's population included 796 professional basic school teachers from Sissala East Municipality's nine circuits, of whom 260 were chosen for analysis using Krejcie and Morgan's (1970) sample size table. However, the questionnaire was completed and returned by 224 teachers, resulting in a return rate of 86 percent.

First, a convenience sampling strategy was used to pick four (4) circuits with a total population of 441 teachers for the quantitative portion of the investigation. These circuits were chosen because of their accessibility and proximity to the researcher. Second, all basic school teachers in the four circuits were divided into three groups: Lower Primary, Upper Primary, and Junior High School, from which 260 teachers were randomly selected.

The questionnaire and interview guide were used to collect data. The demographic information for the respondents was provided in the first portion (Part A) of the questionnaire, which was adapted from a Calveric study (2010). Gender, age group, the educational level reached, years of teaching experience, grade level(s) presently teaching, and assessment training were among the demographics. This data was needed to create a respondent profile, as well as to choose interview participants and do inferential statistical analysis. The questionnaire's section B detailed the various assessment procedures used by teachers in their classes. They were selected from studies by McMillian et al (2002) and Titty (2015). A semi-structured interview guide was employed in the qualitative phase involving 12 respondents.

The data was subject to descriptive statistics after checking for normality and reliability analysis. Mean values were calculated and interpreted for the individual items. ANOVA and t-test were used to explore whether there were significant differences in the use of assessment methods by teacher variables. The thematic analysis method was used as the primary method of analysis for the qualitative interview.

4. Results

4.1 Quantitative Findings

4.1.1 Methods and Tools Employed in Assessing Learners

The research question *"What assessment methods and tools do basic school teachers use in assessing learners in the Sissala East Municipality?"* was intended to enable participants to rate the extent to which they use some under-listed methods and tools of assessment in the classroom subsumed under two broad domains: Traditional (formal) assessment and

Alternative (informal) assessment. Six items, namely class tests, class exercises, oral questions, objective assessments, homework and essay questions, made up the traditional assessment construct. In comparison, the alternative assessment construct had six items (performance assessments, authentic assessments, oral presentation, individual project work, group project work and portfolio assessment). The participants' responses were analysed using frequencies, percentages, mean rating and their standard deviations. The results are depicted in Table 1.

Table 1: Frequencies, Percentages, Mean Rating and their Standard Deviation of Assessment Tools and Methods (n = 203)

	Never		Rarely		Sometimes		Often		Very Often		M	SD
	n	(%)	n	%	n	(%)	n	%	n	(%)		
Class exercises	1	(0.5)	0	(0.0)	7	(3.4)	41	(20.2)	154	(75.9)	4.71	.58
Oral questions	1	(0.5)	9	(4.4)	15	(7.4)	35	(17.2)	143	(70.4)	4.53	.85
Homework	2	(1.0)	5	(2.5)	23	(11.3)	80	(39.4)	93	(45.8)	4.27	.83
Objective assessments	2	(1.0)	21	(10.3)	58	(28.6)	72	(35.5)	50	(24.6)	3.72	.98
Class test	1	(0.5)	6	(3.0)	91	(44.8)	79	(38.9)	26	(12.8)	3.61	.77
Oral presentations	11	(5.4)	27	(13.3)	62	(30.5)	61	(30.0)	42	(20.7)	3.47	1.12
Essay-type questions	11	(5.4)	28	(13.8)	68	(33.5)	62	(30.5)	34	(16.7)	3.39	1.09
Performance assessments	21	(10.3)	36	(17.7)	84	(41.4)	38	(18.7)	24	(11.8)	3.04	1.12
Group project work	24	(11.8)	53	(26.1)	68	(33.5)	46	(22.7)	12	(5.9)	2.85	1.09
Individual project	23	(11.3)	57	(28.1)	71	(35.0)	38	(18.7)	14	(6.9)	2.82	1.08
Authentic assessments	27	(13.3)	57	(28.1)	82	(40.4)	31	(15.3)	6	(3.0)	2.67	.99
Portfolios assessment	55	(27.1)	65	(32.0)	40	(19.7)	29	(14.3)	14	(6.9)	2.42	1.22
Mean of means = 3.46												

Source: Field Data, (2020).

From Table 1, the items' mean scores range from 2.4 (1.2) to 4.7 (0.6), while the frequencies and percentages of the respondents ranged from 0 (0.5%) to 154 (75.9%). The results from Table 8 further revealed that out of the 12 items rated by the teachers, five of these had a mean score higher than the mean of means score (3.5). These items include class exercises ($M = 4.7$, $SD = 0.6$), oral questions ($M = 4.5$, $SD = .9$), homework ($M = 4.3$, $SD = .8$), objective assessments ($M = 3.7$, $SD = 1.0$), and class test ($M = 3.6$, $SD = .8$). Among these five items, more than half (50% or more) of the respondent indicated they used these tools and methods often or very often (class exercises about 96%, oral questions about 88%, homework about 85%, objective test about 60%, and class test about 51%). One item, oral presentation ($M = 3.5$, $SD = 1.12$) had a mean that equals the mean of means scores.

Again, Table 1 indicates that six items had a mean score less than the item mean of means score (3.5). The items include essay-type questions ($M = 3.39$, $SD = 1.09$), performance assessments ($M = 3.04$, $SD = 1.12$), group project work ($M = 2.85$, $SD = 1.09$), individual project work ($M = 2.82$, $SD = 1.08$), authentic assessment ($M = 2.67$, $SD = .99$), and portfolio assessment ($M = 2.42$, $SD = 1.22$). These items' mean scores were less because the majority of the respondents indicated that they sometimes, seldom, or never use these assessment tools and methods.

4.1.2 Influence of Teacher Variables on Assessment Practices

4.1.2.1 Assessment Practices and Gender

Mean aggregate values were compared for the two different levels of the independent variable, gender for each assessment practice. The two levels of this variable were: male and female. Table 2 provides a summary of the mean values for each gender level by assessment practice as well as an independent t-test. The data showed that females had the highest average values objective assessments, oral questions, homework, class exercises, performance assessments, oral presentations, individual project work, group project work and portfolio assessments. The males also had the highest mean scores for class tests, essay-type questions and authentic assessments. Standard deviations for each assessment practice revealed that the most variability of responses was related to portfolio assessment, while the least variability of responses was related to the class exercises.

Table 2: T-test Analysis of Assessment Practice Means by Gender

Variable	Male			Female			Independent t-test		
	n	M	SD	n	M	SD	t	df	sig
Class test	99	3.62	.80	104	3.61	.73	.10	201	.92
Objective assessment	99	3.55	.95	104	3.91	.95	-2.76	201	.01*
Essay-type questions	99	3.61	1.00	104	3.20	1.12	2.71	201	.01*
Oral questions	99	4.45	.86	104	4.62	.78	-1.40	201	.16
Homework	99	4.20	.83	104	4.37	.71	-1.51	201	.13
Class exercises	99	4.58	.61	104	4.86	.40	-3.88	201	.00*
Performance assessments	99	3.01	1.09	104	3.07	1.15	-.36	201	.72
Authentic assessments	99	2.67	1.02	104	2.66	.96	.02	201	.98
Oral presentations	99	3.32	1.17	104	3.62	1.06	-1.87	201	.06
Individual project work	99	2.80	1.11	104	2.84	1.07	-.25	201	.80
Group project work	99	2.83	1.11	104	2.87	1.07	-.24	201	.81
Portfolio assessment	99	2.40	1.23	104	2.43	1.22	-.17	201	.87

* $p < .05$

Source: Field Data, (2020).

An independent t-test was performed to find out whether differences existed in the mean scores of assessment practices by gender. As indicated in Table 2, the t-test revealed a significant difference between male and female teachers in the use of Objective assessments, essay-type questions and class exercises. The t-test revealed a statistically significant difference between males and females in their objective item assessment practices ($t(201) = -2.76, p < .05$). Females ($M = 3.91, SD = .95$) had significantly higher values than males ($M = 3.55, SD = .62$). Also, the t-test results revealed a statistically significant difference between males and females in their use of essay-type questions ($t(201) = 2.71, p < .05$). Males ($M = 3.61, SD = 1.00$) had significantly higher levels of essay-type questions than females ($M = 3.20, SD = .112$). Again, the t-test revealed a statistically significant difference between males and females in their use of class exercises ($t(201) = -3.88, p < .05$). Females ($M = 4.86, SD = .40$) had significantly higher values than Males ($M = 4.58, SD = .61$).

4.1.2.2 Assessment Practices by Age

For the analysis of significant differences in mean scores according to age, age was categorized into three groups. These are low (21 – 30 years), mid (31 – 40 years), and high (41 and above years) age groups. Mean aggregate values were compared for the three different levels of the independent variable, age for each assessment practice. Table 3 provides a summary of the mean values for each age group by the assessment practice. The data showed a general trend whereby those in low (21 – 30 years) age group had the highest average values for traditional assessment methods such as class test, essay-type questions, oral questions, homework, and class exercises. In contrast, those in high (41 – 60 years) age group scored the highest values in alternative assessment practices such as performance assessment, authentic assessment, project works, portfolio and oral presentation and a traditional assessment practice of objective assessments. Standard deviations for each practice revealed that the most variability of responses was related to portfolio assessment for mid (31 – 40 years) age group, while the least variability of responses was related to the use of class exercises among the low (21 – 30 years) age group.

Table 3: Comparison of Assessment Practice Means by Age

Variable	21 – 30 years (Low)			31 – 40 years (Mid)			41 – 60 years (High)		
	n	M	SD	n	M	SD	n	M	SD
Class test	70	3.70	.84	84	3.57	.73	49	3.55	.71
Objective assessment	70	3.53	1.00	84	3.79	.95	49	3.94	.90
Essay-type questions	70	3.50	1.15	84	3.26	1.03	49	3.49	1.04
Oral questions	70	4.69	.67	84	4.50	.81	49	4.39	1.00
Homework	70	4.37	.77	84	4.30	.77	49	4.14	.79
Class exercises	70	4.74	.50	84	4.73	.52	49	4.67	.59
Performance assessments	70	2.94	1.17	84	3.00	1.11	49	3.24	1.07
Authentic assessments	70	2.69	1.04	84	2.51	.95	49	2.90	.94
Oral presentations	70	3.43	1.15	84	3.40	1.15	49	3.65	1.03
Individual project work	70	2.70	1.08	84	2.75	1.05	49	3.10	1.14
Group project work	70	2.89	1.11	84	2.64	.99	49	3.14	1.16
Portfolio assessment	70	2.24	1.14	84	2.36	1.30	49	2.78	1.16

Source: Field Data, (2020).

One-way ANOVA was used to test for the differences between the age groups for the categories of assessment practices and the results shown in Table 4. The results showed a significant difference in assessment practice by age. Precisely, there was a significant difference in group project work. A Scheffe post hoc analysis (see Table 5) showed a significant mean difference for group project work between teachers with mid (31-40 years) and high (41 – 60 years) (M = 3.14, age groups. Teachers with high (41 – 60 years) age score was significantly higher than those with mid (31 -40 years) age group by a difference of .500.

Table 4: ANOVA of Assessment Practices for Age

Practice		df	F	Sig.
Class test	Between Groups	2	.74	.48
	Within Groups	200		
	Total	202		
Objective assessments	Between Groups	2	2.87	.06
	Within Groups	200		
	Total	202		
Essay-type questions	Between Groups	2	1.16	.32
	Within Groups	200		
	Total	202		
Oral questions	Between Groups	2	2.06	.13
	Within Groups	200		
	Total	202		
Homework	Between Groups	2	1.27	.28
	Within Groups	200		
	Total	202		
Class exercises	Between Groups	2	.26	.77
	Within Groups	200		
	Total	202		
Performance assessments	Between Groups	2	1.14	.32
	Within Groups	200		
	Total	202		
Authentic assessments	Between Groups	2	2.42	.09
	Within Groups	200		
	Total	202		
Oral presentations	Between Groups	2	.84	.43
	Within Groups	200		
	Total	202		
Individual project work	Between Groups	2	2.30	.10
	Within Groups	200		
	Total	202		
Group project work	Between Groups	2	3.43	.03*
	Within Groups	200		
	Total	202		
Portfolios assessment	Between Groups	2	2.98	.05
	Within Groups	200		
	Total	202		

*P < .05

Source: Field Data, 2020.

Table 5: Scheffe Post Hoc for-Assessment Practice (Group Project Work) and Age

(I) Age Group	(J) Age Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30	31 - 40	.243	.174	.378	-.19	.67
	41 - 60	-.257	.200	.439	-.75	.24
31 - 40	21 - 30	-.243	.174	.378	-.67	.19
	41 - 60	-.500*	.193	.037	-.98	-.02
41 - 60	21 - 30	.257	.200	.439	-.24	.75
	31 - 40	.500*	.193	.037	.02	.98

*. The mean difference is significant at the 0.05 level.

4.1.2.3 Assessment Practices and Educational Level

Mean aggregate scores were compared for the two different levels of the independent variable, educational level for each assessment practice. The two levels of this variable were: diploma and Bachelor and above. There were only three respondents who attained a master's degree, so this number was added to the bachelor group because of their small number. Table 32 provides a summary of the mean values for each educational level by assessment practices as well as results of an independent t-test. The data revealed that teachers with a diploma educational level had the highest mean scores for class tests, oral questions, homework, class exercises, performance assessments, authentic assessments, and oral presentations. However, those with a bachelor's degree and above had the highest mean values for objective assessment, essay-type questions, individual project work, group project work and portfolio assessments. Standard deviations for each dependent variable revealed that the most variability of responses was related to portfolio assessment, while the least variability of responses was related to the class exercises.

Table 6: T- test analysis of Assessment Practice Means by Educational Level

Variable	Diploma			Bachelor and above			Independent t-test		
	n	M	SD	n	M	SD	t	df	sig
Class test	92	3.66	.83	111	3.57	.71	.89	201	.38
Objective assessment	92	3.71	1.02	111	3.76	.92	-.37	201	.71
Essay-type questions	92	3.37	1.11	111	3.42	1.01	-.35	201	.72
Oral questions	92	4.63	.66	111	4.46	.93	1.48	201	.14
Homework	92	4.35	.76	111	4.23	.79	1.04	201	.30
Class exercises	92	4.75	.48	111	4.69	.57	.75	201	.45
Performance assessments	92	3.10	1.10	111	2.99	1.14	.68	201	.50
Authentic assessments	92	2.74	1.05	111	2.60	.94	.97	201	.33
Oral presentations	92	3.53	1.16	111	3.42	1.09	.69	201	.49
Individual project work	92	2.68	1.16	111	2.93	1.01	-1.60	201	.11
Group project work	92	2.84	1.13	111	2.86	1.05	-.12	201	.90
Portfolio assessment	92	2.26	1.23	111	2.55	1.20	-1.68	201	.09

Source: Field Data, (2020).

An independent t-test was conducted to find out whether there were differences in assessment practice by educational level. The test revealed that there was no significant difference between teachers with diploma educational level and those with a bachelor's degree in all the assessment practices. The mean of those with diploma qualification was not significantly different from those with bachelor and above qualification in all the assessment practices. In other words, teacher qualification or educational level does not affect teachers' assessment practices.

4.1.2.4 Assessment Practices and Class Level of Teaching

Mean aggregate scores were compared for the three different levels of the independent variable, level of teaching for each assessment practice. The three levels of this variable

were: lower primary, upper primary and JHS. Table 7 provides a summary of the mean values for each level of teaching by the assessment practices.

Table 7: Comparison of Assessment Practices Means by Grade Level of Teaching

Variable	Lower Primary			Upper Primary			JHS		
	n	M	SD	n	M	SD	n	M	SD
Class test	60	3.60	.79	46	3.63	.85	97	3.61	.72
Objective assessment	60	3.98	1.00	46	3.85	.92	97	3.53	.93
Essay-type questions	60	2.97	1.31	46	3.43	1.05	97	3.65	.83
Oral questions	60	4.57	.75	46	4.65	.82	97	4.46	.87
Homework	60	4.35	.78	46	4.41	.62	97	4.19	.83
Class exercises	60	4.80	.44	46	4.87	.40	97	4.60	.61
Performance assessments	60	3.12	1.22	46	3.26	1.00	97	2.89	1.10
Authentic assessments	60	2.75	.93	46	2.83	.93	97	2.54	1.04
Oral presentations	60	3.42	1.09	46	3.72	1.11	97	3.39	1.14
Individual project work	60	2.75	1.20	46	2.96	1.05	97	2.79	1.02
Group project work	60	2.95	1.19	46	2.98	1.09	97	2.72	1.02
Portfolio assessment	60	2.58	1.34	46	2.33	1.10	97	2.36	1.20

* $p < .05$

Source: Field Data, (2020).

The data from Table 7 showed those teaching at the lower primary level had the highest mean values for objective assessment and portfolio assessment practices. Also, those at the upper-grade level recorded the highest mean scores for class tests, oral questions, homework, class exercises, performance assessments, authentic assessments, oral presentations, individual project work, and group project work; while those at the JHS level had the highest mean value for the use of essay-type questions. Standard deviations for each assessment practice revealed that the most variability of responses was related to portfolio assessment within the lower grade level. In contrast, the least variability of responses was related to the class exercises within the upper-grade level.

One-way ANOVA was used to test for the differences between the age groups for the categories of assessment practices and the results shown in Table 8. The result showed a significant difference in assessment practice by age. Precisely, there was a significant difference in objective assessment. A Scheffe post hoc analysis (see Table 9) showed a significant mean difference for objective assessment between teachers teaching at the lower grades and those teaching at the JHS level. Teachers teaching at the lower primary level ($M = 3.98$, $SD = 1.00$) had a significantly higher mean score in their reported usage of objective assessments than those teaching at the JHS level ($M = 3.53$, $SD = .93$). Also, there was a significant difference in essay-type assessments. A Scheffe post hoc analysis (see Table 9) showed a significant mean difference for essay-type assessments between teachers teaching at the lower grades and those teaching at the JHS level. Teachers teaching at the lower level ($M = 2.97$, $SD = 1.31$) had a significantly lower mean score in their reported usage of essay-type assessments than those teaching at the JHS level ($M = 3.65$, $SD = .83$).

Again, there was a significant difference in class exercise assessments practices. A Scheffe post hoc analysis (see Table 9) showed a significant mean difference for class exercises assessments between teachers teaching at the upper primary grades and those teaching at the JHS level. Teachers teaching at the upper Primary level ($M = 4.87$, $SD = .40$) had a significantly higher mean score in their reported usage of class exercises than those teaching at the JHS level ($M = 4.60$, $SD = .61$).

Table 8: ANOVA of Assessment Practices for Grade Level of Teaching

Practice		df	F	Sig.
Class test	Between Groups	2	.021	.98
	Within Groups	200		
	Total	202		
Objective assessments	Between Groups	2	4.76	.01*
	Within Groups	200		
	Total	202		
Essay-type questions	Between Groups	2	7.99	.00*
	Within Groups	200		
	Total	202		
Oral questions	Between Groups	2	.87	.42
	Within Groups	200		
	Total	202		
Homework	Between Groups	2	1.65	.20
	Within Groups	200		
	Total	202		
Class exercises	Between Groups	2	5.28	.01*
	Within Groups	200		
	Total	202		
Performance assessments	Between Groups	2	1.96	.14
	Within Groups	200		
	Total	202		
Authentic assessments	Between Groups	2	1.67	.19
	Within Groups	200		
	Total	202		
Oral presentations	Between Groups	2	1.43	.24
	Within Groups	200		
	Total	202		
Individual project work	Between Groups	2	.52	.60
	Within Groups	200		
	Total	202		
Group project work	Between Groups	2	1.26	.29
	Within Groups	200		
	Total	202		
Portfolios assessment	Between Groups	2	.78	.46
	Within Groups	200		
	Total	202		

* $p < .05$

Source: Field Data, (2020).

Table 9: Scheffe Post Hoc for-Assessment Practice (Objective Assessment, Essay-type Questions and Class Exercises) and Grade Levels of Teaching

Dependent Variable	(I) Current Teaching Level	(J) Current Teaching Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Objective assessments	Lower Primary	Upper Primary	.136	.185	.766	-.32	.59
		JHS	.458*	.155	.014	.07	.84
	Upper Primary	Lower Primary	-.136	.185	.766	-.59	.32
		JHS	.322	.169	.167	-.10	.74
	JHS	Lower Primary	-.458*	.155	.014	-.84	-.07
		Upper Primary	-.322	.169	.167	-.74	.10
Essay-type questions	Lower Primary	Upper Primary	-.468	.204	.075	-.97	.04
		JHS	-.683*	.171	.000	-1.11	-.26
	Upper Primary	Lower Primary	.468	.204	.075	-.04	.97
		JHS	-.215	.187	.517	-.67	.25
	JHS	Lower Primary	.683*	.171	.000	.26	1.11
		Upper Primary	.215	.187	.517	-.25	.67
Class exercises	Lower Primary	Upper Primary	-.070	.102	.793	-.32	.18
		JHS	.202	.085	.063	-.01	.41
	Upper Primary	Lower Primary	.070	.102	.793	-.18	.32
		JHS	.272*	.093	.016	.04	.50
	JHS	Lower Primary	-.202	.085	.063	-.41	.01
		Upper Primary	-.272*	.093	.016	-.50	-.04

*. The mean difference is significant at the 0.05 level.

Source: Field Data, (2020).

4.1.2.5 Assessment Practice and Years of Teaching Experience

Mean aggregate scores were compared for the three different levels of the independent variable, years of teaching experience for each assessment practice. The three levels of this variable were: low (less than 5 years), mid (5 – 10 years) and high (over 10 years) teaching experience. Table 10 provides a summary of the mean values for each level of years of teaching experience by the assessment practices.

The data showed that those with low (less than 5 years) teaching experience had the highest mean values for class tests, essay-type questions, oral questions and homework. Those with mid (5 – 10 years) teaching experience had the highest mean value for class exercises while those with high (over 10 years) teaching experiences had the highest mean score in performance assessments, authentic assessments, oral presentations, individual project work, group project work, portfolio assessment and objective assessment. The standard deviation for each assessment practice revealed that, the most widely spread of responses was related to portfolio among the low teaching experience group. In contrast, the least variability of responses was related to the class exercises among those with low and mid teaching experience.

Table 10: Comparison of Assessment Practices Means by Years of Teaching Experience

Variable	< 5 years (Low)			5 - 10 years (Mid)			>10 years (High)		
	n	M	SD	n	M	SD	n	M	SD
Class test	68	3.66	.84	62	3.58	.71	73	3.59	.74
Objective assessment	68	3.65	.99	62	3.73	.1.03	73	3.82	.89
Essay-type questions	68	3.50	1.00	62	3.24	1.12	73	3.44	1.03
Oral questions	68	4.65	.64	62	4.55	.80	73	4.42	.97
Homework	68	4.43	.78	62	4.15	.77	73	4.27	.77
Class exercises	68	4.75	.47	62	4.76	.47	73	4.66	.63
Performance assessments	68	3.07	1.11	62	2.95	1.22	73	3.08	1.05
Authentic assessments	68	2.72	1.09	62	2.53	.99	73	2.73	.89
Oral presentations	68	3.46	1.22	62	3.35	1.07	73	3.59	1.08
Individual project work	68	2.72	1.14	62	2.56	1.02	73	3.12	1.03
Group project work	68	2.82	1.11	62	2.60	1.05	73	3.08	1.06
Portfolio assessment	68	2.32	1.29	62	2.21	1.16	73	2.68	1.18

Source: Field Data, (2020).

One-way ANOVA was used to test for the differences between the years of teaching experience groups for the categories of assessment practices and the results shown in Table 11. The result showed a significant difference in assessment practice by teaching experience. In particular, a significant difference was realized in both individual projects and group project work. A Scheffe post hoc analysis (see Table 12) showed a significant mean difference for both individual project work and group project work between teachers with mid (5 - 10 years) teaching experience and high (over 10 years) teaching experience. Teachers with high (over 10 years) teaching experience scores in both individual and group project works were significantly higher than those with mid (5 - 10 years) teaching by a difference of 0.56 and 0.49, respectively.

Table 11: ANOVA of Assessment Practices for Years of Teaching Experience

Practice		df	F	Sig.
Class test	Between Groups	2	.23	.80
	Within Groups	200		
	Total	202		
Objective assessments	Between Groups	2	.58	.56
	Within Groups	200		
	Total	202		
Essay-type questions	Between Groups	2	1.01	.37
	Within Groups	200		
	Total	202		
Oral questions	Between Groups	2	1.30	.27
	Within Groups	200		
	Total	202		
Homework	Between Groups	2	2.17	.12
	Within Groups	200		
	Total	202		
Class exercises	Between Groups	2	.77	.46
	Within Groups	200		
	Total	202		
Performance assessments	Between Groups	2	.27	.76
	Within Groups	200		

	Total	202		
Authentic assessments	Between Groups	2	.81	.45
	Within Groups	200		
	Total	202		
Oral presentations	Between Groups	2	.74	.48
	Within Groups	200		
	Total	202		
Individual project work	Between Groups	2	5.09	.01*
	Within Groups	200		
	Total	202		
Group project work	Between Groups	2	3.46	.03*
	Within Groups	200		
	Total	202		
Portfolios assessment	Between Groups	2	2.90	.06
	Within Groups	200		
	Total	202		

*P < .05

Source: Field Data, (2020).

Table 12: Scheffe Post Hoc for-Assessment Practice
(Individual Group work, Group Project Work) and Years of Teaching Experience

Dependent Variable	(I) Teaching Experience	(J) Teaching Experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Individual Project Work	< 5 years	5 - 10 years	.156	.186	.704	-.30	.62
		> 10 years	-.403	.179	.081	-.84	.04
	5 - 10 years	< 5 years	-.156	.186	.704	-.62	.30
		> 10 years	-.559*	.183	.011	-1.01	-.11
	> 10 years	< 5 years	.403	.179	.081	-.04	.84
		5 - 10 years	.559*	.183	.011	.11	1.01
Group Project Work	< 5 years	5 - 10 years	.227	.188	.486	-.24	.69
		> 10 years	-.259	.181	.361	-.70	.19
	5 - 10 years	< 5 years	-.227	.188	.486	-.69	.24
		> 10 years	-.485*	.185	.034	-.94	-.03
	> 10 years	< 5 years	.259	.181	.361	-.19	.70
		5 - 10 years	.485*	.185	.034	.03	.94

*. The mean difference is significant at the 0.05 level.

Source: Field Data, (2020).

4.1.2.6 Assessment Practices and Training in Assessment

Assessment training was categorized into two levels as training during undergraduate studies only (pre-service training) and training during and after undergraduates (pre-service and in-service). Table 13 summarizes the mean scores for each category of training in assessment by the assessment practices. The data revealed that teachers with training in assessment during pre-service only had the highest mean values for class tests, essay-type questions, oral questions, homework, class exercises, performance assessments, and those with assessment training in both pre-service and in-service recorded the highest mean scores for objective assessment, oral presentations, individual project work, group

project work, portfolio assessment. Standard deviations for each subgroup indicated that the most variability in responses was associated with portfolio assessment among those with pre-service and in-service training, and the least spread group in responses was associated with class exercise among the pre-service group.

An independent t-test was performed to find out whether differences existed in the mean scores of assessment practices by training in assessment. As indicated in Table 13, the t-test revealed a significant difference between teachers with training in assessment during pre-service only and teachers with training in assessment during and after pre-service in the use of homework assessments, group project work and portfolio assessment. The t-test revealed a statistically significant difference between teachers with only pre-service training in assessment and those with training in assessment during and after pre-service in their usage of homework assessment practices ($t(201) = 2.17, p < .05$). Teachers with only pre-service training in assessment ($M = 4.40, SD = .76$) had significantly higher values in the usage of homework than teachers with assessment training during and after pre-service ($M = 4.17, SD = .78$).

Table 13: T-test Analysis of Assessment Practice Means by Training in Assessment

Variable	During pre-service			During and after pre-service			Independent t-test		
	n	M	SD	n	M	SD	t	df	sig
Class test	102	3.67	.74	101	3.55	.79	1.05	201	.30
Objective assessment	102	3.64	.98	101	3.83	.94	-1.44	201	.15
Essay-type questions	102	3.45	1.01	101	3.35	1.14	.69	201	.49
Oral questions	102	4.59	.78	101	4.49	.87	.89	201	.37
Homework	102	4.40	.76	101	4.17	.78	2.17	201	.03*
Class exercises	102	4.76	.49	101	4.67	.57	1.23	196.36	.22
Performance assessments	102	3.06	1.14	101	3.02	1.10	.25	201	.81
Authentic assessments	102	2.67	1.01	101	2.66	.97	.024	201	.98
Oral presentations	102	3.34	1.13	101	3.60	1.11	-1.66	201	.10
Individual project work	102	2.68	1.11	101	2.96	1.04	-1.88	201	.06
Group project work	102	2.69	1.07	101	3.01	1.08	-2.14	201	.03*
Portfolio assessment	102	2.23	1.17	101	2.61	1.25	-2.29	201	.02*

* $p < .05$

Source: Field Data, (2020).

Also, the t-test results revealed a statistically significant difference between teachers with only pre-service training in assessment and teachers with assessment training during and after pre-service in their project work done in groups ($t(201) = -2.14, p < .05$). Teachers with only pre-service training in assessment ($M = 2.69, SD = 1.07$) had significantly lower levels of project work done in groups than teachers with assessment training during and after pre-service ($M = 3.01, SD = 1.108$). Again, the t-test revealed a statistically significant difference between teachers with only pre-service training in assessment and teachers with assessment training during and after pre-service in their use of portfolio assessments ($t(201) = -2.29, p < .05$). Teachers with only pre-service training in assessment ($M = 2.23,$

SD = 1.17) had significantly lower values in their use of portfolio assessments than teachers with assessment training during and after pre-service (M = 2.63, SD= 1.25).

4.2 Qualitative Results

4.2.1 Basic School Teachers' Methods of Assessment

The teachers were interviewed on their practices of classroom assessment on the following questions:

- What kinds of assessment techniques/methods do you use to assess your students' learning?
- How frequently do you use each of these assessment techniques/methods?

These questions were intended to obtain respondents' views about the techniques/methods they use to assess their students and the frequency they use them. The respondents mostly gave answers that were within the traditional methods of assessment range, as expressed below:

"I usually use class exercises, homework and class test, which is mainly an objective test." (Samad, UPT 1, Interview data, 2020)

"Mmmm, ok, the method I use mostly is 'portmanteau questions,' I mean objective questions in the form of class exercises and also oral questions. You know, it is very easy to mark such questions." (Fauzia JHT 3, Interview data, 2020)

"For every lesson, I give my pupils a simple test to assess their understanding. ...my pupils are very young, so I just use TRUE or FALSE questions or just two answers, that is one correct answer and one wrong answer." (Diana, LPT 2, Interview data, 2020)

"I use observation, interviews and sometimes test. The test is done four times in a term." (Rose, LPT 3, Interview data, 2020)

"I mostly use oral questions, objective tests and essay questions." (Kojo, Interview data, 2020).

"I do use oral questions in class and homework for after classes. The homework is usually in the form of an essay so that the students learn more." (Issak, JHT 4, Interview data, 2020).

"There are many assessment methods I use to assess my learners, including essays, projects and portfolios." (Moses, UPT 2, Interview data)

From the above results, only a few teachers do employ alternative assessments like observations, interviews, projects and portfolios. The preference for mostly traditional assessment techniques was mainly due to their ease of usage.

4.2.2 Teachers' Demographic Characteristics and Classroom Assessment Conceptions and Practices

The extent to which teacher variables shape teachers' assessment conceptions and practices were examined. However, only results that yielded significant differences during the quantitative phase will be looked at in greater depth in this section.

In terms of frequency of usage of assessment methods, the interview results indicated that females employ more often objective assessments than essay assessments because objective assessments take less time to score. Comparatively, male respondents use essay assessments more than their female counterparts. Some excerpts are shown below:

"For every lesson, I give my pupils a simple test to assess their understanding. ...my pupils are very young, so I just use TRUE or FALSE questions or just two answers; that is one correct answer and one wrong answer. (Diana, LPT 2, Interview data, 2020)

"Mmmm, ok, the method I mostly use is 'portmanteau questions'; I mean objective questions in the form of class exercises and also oral questions. You know, it is very easy to mark such questions." (Fauzia JHT 3, Interview data)

"I do use oral questions in class and homework for after classes. The homework is usually in the form of an essay so that the students learn more." (Issak, JHT 4, Interview data, 2020)

Further, teaching experience and in-service classroom assessment training featured as some of the factors that influence teachers' assessment practices. Teachers who had earned an in-service assessment training and had over ten years of teaching experience reported that using alternative assessment methods such as projects and portfolio assessment. An example of a response to this view from Moses, a teacher with over ten years' experience was as follows:

"There are many assessment methods I use to assess my learners, including essays, projects and portfolios. From my experience in teaching and workshops I have attended, these methods can make students acquire deep learning and skills which some methods of assessment do not provide. (Moses, UPT 2, Interview data)

In a similar vein, teachers who had not received classroom assessment training after graduating seemed to employ homework, a traditional assessment method to enable their students to acquire deep learning of materials taught in class. A typical remark was from Issak, a diploma teacher with less than five years' experience and with no training in assessment after graduation, who said: *"I do use oral questions in class and homework for after classes. The homework is usually in the form of an essay so that the students learn more."* (Issak, JHT 4, Interview data, 2020)

5. Discussions

5.1 Discussion of Methods and Tools Employed in Assessing Learners

Results from both quantitative and qualitative data revealed that Sissala East teachers had limited tools and methods of assessing their students. These teachers mainly used exercises, oral questions, objective questions (e.g., fill in the gap, true or false, multiple-choice, and matching), class tests and oral presentations to assess their students. This presupposes that the kind of assessment tools used by the teachers mainly encourage memorization of facts, principles, procedures and processes. This result is in tandem with findings reported by Sajjad, Nasir, Nasir and Saif (2019). The results in their study indicated that teachers mostly follow traditional assessment practice such as; oral presentations, objective type test, question answering, and homework during the instruction, and disregarding alternative assessment practices such as - group projects, one-minute test, presentation, portfolio, self and, peer assessment practices.

Similarly, Onyefulu (2018) discovered that teachers often used traditional assessment methods such as short answers, multiple-choice, fill-in-the-blanks, and closed-book tests. Again, the findings of this study concur with Suah and Ong (2012) that Malaysian in-service teachers often use traditional assessment methods. The finding also corresponds to Titty's (2015) study, where it was found out that most of the respondents often or more often used traditional assessment tools and methods such as exercises, oral questions and tests.

5.2 Discussion of Teacher Variables and Conception of Assessment and Practices

Teacher variables such as gender, educational level, age, level of teaching, years of teaching experience and assessment training were examined to determine if they influence the teachers' assessment practices. As a result, ANOVA and t-test were applied to examine the differences and the results analyzed and presented.

Regarding the relationship between assessment practices and teacher variables, statistically significant relationships were established between gender and three assessment practices: class exercises, objective assessments and essay-type questions. Females had significantly higher values than Males in their use of objective assessments and class exercises. In contrast, male teachers reported higher levels of use of essay-type questions in assessing students than females. These differences in the use of objective assessments and essay assessments between males and females could be due to the limited time needed to score objective assessments as compared to that of essays. Scoring essay items needed time outside the normal instructional period, which female teachers may lack due to their home or marital duties outside the school hence their preference of the use of objective assessments such as true/false items, fill in the blank spaces, matching and multiple-choice. In contrast, males may find some extra time outside the school session to engage in scoring essay-type questions.

A significant difference was found among age groups and assessment practices. The mean score for group projects was significantly different between mid (31 – 40 years) age and high (over 40 years) age teachers. Teachers over 40 years of age had significantly

higher levels of the use of group projects in assessing students than teachers in a mid-age (31 – 40 years).

Teachers' assessment practices were investigated by educational level: diploma and bachelor and above. The data suggested that teachers with a diploma level education tend to employ more of traditional assessment practices and those with a bachelor degree and above educational attainment in alternative techniques; however, an independent t-test conducted revealed there was no significant difference between teachers with diploma educational level and those with a bachelor degree in all the assessment practices. This study is in agreement with Gonzales and Aliponga (2012), who found that academic qualifications do not influence academic staff's assessment practices. Gonzales and Aliponga (2012) further revealed that assessment practices of teachers depended principally on the purpose they had set for the class, rather than their educational qualifications. However, the study is not in support of Calveric (2010), who discovered that highly educated teachers reported significantly higher scores for authentic assessments than teachers with bachelor's degrees.

In terms of the grade level of teaching, statistically significant differences were found between teaching grade level (lower primary, upper primary and JHS) and three assessment practices: objective assessments, essay-type questions and class exercises. Teachers at the lower primary grade level had significantly higher scores in the use of objective assessments than those at the JHS level. Also, teachers at the JHS level had significantly higher levels of the use of essays in assessing students than those at the lower primary. Again, teachers teaching at the upper primary level had a significantly higher mean score in their reported usage of class exercises than those teaching at the JHS level. These differences between the groups may be as a result of the maturity levels of the students being taught by them (Trepanier-Street et al., 2001). It can be seen that this present study does not support Zhan and Burry-Stock (2003), who found that the higher the grade levels, the more teachers used objective types of items. Whereas secondary teachers often rely on paper-pencil tests, primary teachers often use performance assessment.

Two significant relationships were found among levels of years of teaching experience and assessment practices. The mean scores for the use of individual projects and group projects were significantly different between teachers with mid (5 - 10 years) teaching experience and high (over ten years) teaching experience. Teachers with long (over ten years) teaching experience scores in both individual and group project works were significantly higher than those with mid (5 - 10 years) teaching. These findings seem to be in line with Bol, Stephenson, O'Connell and Nunnery (1998), who found that the more experienced teachers more frequently employed alternative assessment than their less experienced counterparts. Also, Koloi-Keaikitse (2012) noted that in Botswana, teacher-related factors such as teaching experience positively contributed to the use of appropriate assessment methods in the classroom.

Assessment training was categorized into two levels as training during undergraduate studies only (pre-service training) and training during and after undergraduates (pre-service and in-service). A significant test was conducted for this

variable and assessment practices. Three significant differences were noted between teachers with training in assessment during pre-service only and teachers with training in assessment during and after pre-service in the use of homework assessments, group project work and portfolio assessment. Teachers with only pre-service training in assessment had significantly higher values in the usage of homework than teachers with assessment training during and after pre-service. Also, teachers with only pre-service training in assessment had significantly lower levels of project work done in groups than teachers with assessment training during and after pre-service. Again, teachers with only pre-service training in assessment had significantly lower values in their use of portfolio assessments than teachers with assessment training during and after pre-service. According to Al-Nouh, Taqi and Abdul-Kareem (2014), teacher professional development programmes play a crucial role in enhancing practising teachers' knowledge and skills of assessing learners, especially in this era of a paradigm change from summative to formative assessment practices. Also, Susuwele-Banda (2005) and Matovu and Zubairi (2014) have found that assessment-based training influences teachers' assessment practices. Furthermore, Zhang and Burry-Stock (2003) indicated that teachers' ability to put into practice classroom assessment activities depended largely on the degree of their training in conducting student assessments. Therefore, it is imperative that assessment-based training is provided to teachers to equip them with skills and knowledge of assessment practices.

6. Conclusions

The following conclusions can be drawn from the study.

First, the study revealed that the majority of the respondents used traditional assessment tools such as class exercises, oral questioning, homework and objective tests in assessing their learners. These kinds of assessment tools used by the teachers mainly encourage memorization of facts, principles, procedures and processes.

Second, the study revealed that apart from educational level, demographic variables such as gender, age, teaching experience, class teaching level and training in assessment impacted on teachers' use of assessment methods and tools. In-service training in assessment techniques had a strong impact on the basic school teacher's usage of alternative assessment methods like projects and portfolio assessments. This means that in-service training on assessment should be continued for all basic school teachers.

7. Recommendations

From the main findings of this study, it is recommended that:

- a. The Heads of Basic Schools and the Ghana Education Service in the Sissala East Municipality should conduct regular in-service training, workshops and seminars in assessment for teachers in order for them to be up-to-date with contemporary issues about alternative assessments and also develop their skills and use of appropriate classroom assessment practices. Identifying approaches to classroom

assessment and specific practices that are considered desirable for different levels of teaching is also essential.

- b. Analysis of demographic characteristics showed significant relationships with selected assessment practices; stakeholders should consider these in the development of ways to improve the assessment literacy of teachers.

Conflict of Interest Statement

The author declares no conflict of interest.

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