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Elementary School Teachers' Opinions on Mathematics Assessment: Ghanaian Perspective

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Abstract

The process of teaching and learning must include assessment. Teachers' assessment approaches are influenced by how they view mathematics evaluation. This study set out to discover how Ghanaian elementary school teachers felt about mathematics assessment. A descriptive survey research approach was used because the study wanted to learn more about the perceptions, attitudes, beliefs, and other characteristics of the sample as a whole. Sixty-three (63) elementary school teachers were selected as a sample. According to the study, teachers generally had positive perceptions about what should be assessed, how it should be assessed, and the feedback to give to students, despite the fact that their perceptions about mathematics assessment generally do not align with the current thinking on assessment (socio-constructivist view). However, teachers had favorable opinions about what should be examined, how it should be assessed, and how to provide feedback to pupils. Future researchers are advised to use observation to learn more about the real assessment methods used by mathematics teachers. This will make it easier to offer the teachers specialized support to enhance their classroom activities, including assessment.

Keywords

Assessment, Assessment in Mathematics, Classroom Assessment, Elementary, Methods of Assessment, Perception, Teachers' Perception

1. Introduction

Mathematics has a significant impact on social life. And society depends heavily

on it for daily operations. The importance of mathematics cannot be understated in light of this. Even those who dislike mathematics for a variety of reasons admit that the subject is important. For instance, Legner (2013) asserts that it is challenging to identify a branch of mathematics that has no practical use. According to Sa'ad, Adamu, and Sadiq (2014), mathematics is integral to daily life and everyone's long-term planning. Thus, mathematics plays a significant role in humankind's ability to survive on Earth. This likely explains why arithmetic is taught as a required subject in elementary schools everywhere, including Ghana. Given the significance of mathematics, it is essential that students learn and understand its concepts. A succession of important choices about the content, the instruction, and the assessment of a mathematics session led to an effective lesson. This means that to secure the desired result, the material, training, and assessment all function together. If one doesn't function well, the entire system will be flawed, which will harm the nation's objectives in mathematics. If the goals of mathematics have been attained or do not depend on assessment, Tefera (2014) argues that just as development and education are inextricably linked, so is high-quality education.

According to research on the importance of classroom assessment for advancing high-quality education (Tefera, 2014), it has taken center stage in numerous initiatives to improve education (Oduro, 2015). This is so that remedial measures can be indicated by assessment results, which also provide information about students' accomplishments and learning issues (Black, Harrison, Lee, Marshall, & William, 2004). The syllabus includes an assessment process so that what is taught can be assessed and the required decisions can be made, ensuring that the national goals of mathematics are met. If these methods are followed to the end, it is anticipated that this will show in students' performance on standardized tests as well as in the broad application of mathematical concepts in the daily lives of basic school graduates. Further research is required to determine whether teachers are adhering to these assessment techniques. Assessment in the classroom is viewed as being essential to achieving high-quality education. Assessment has historically been primarily used in Ghana to determine placement. It has been utilized to choose individuals for employment and to advance through the levels/stages of the educational system (McWilliams & Kwamena-Poh, 1975 cited in Oduro, 2015). The implication is that formative evaluation has not received much consideration or importance. The National Council of Teachers of Mathematics' (NCTM, 2005) definition for assessment in mathematics, on the other hand, assumes that evaluating students' mathematical proficiency entails more than just grading them in a typical classroom environment. It also involves observing how the students apply mathematics in real-world contexts. This means that mathematics teachers must go beyond how well a student applies a memorization technique or algorithm (product) and stimulate students' mathematical understanding and problem-solving abilities (process).

Assessment procedures refer to the activity's teachers carry out to track and enhance instruction and learning in the classroom. Divergent results have

emerged from numerous research on teachers' assessment procedures in the classroom conducted in various regions of the world. According to Zhang and Burry-Stock's (2003) research, teachers' assessment methods vary because classroom evaluations are differentiated by teaching levels. Elementary instructors frequently utilize performance assessment as an alternative to paper-pencil assessments, while secondary teachers frequently use them and are concerned about the quality of assessment. Although Canadian mathematics teachers use a variety of assessment methods, including journals, observation, questions, self-assessment, and unique forms of "quizzes", to improve student learning, Suurtamm, Koch, and Arden (2010) claim that the teachers place a focus on the use of tests, homework, and classroom activities. According to Nabie, Akayuure, and Sofo (2013), Ghanaian teachers frequently assign tests, class exercises, and homework rather than alternative assessment formats such as oral presentations, observations, and project work. They also frequently ask questions that elicit facts from students rather than ones that require them to conduct research (Hattori & Saba, 2008). It should be mentioned that a number of factors influence the evaluation techniques that teachers use in the classroom. One of these elements is the teacher's perspective on evaluation (Brown, 2004). Studying teachers' perspectives of assessment, according to Chester and Quilter (1998), is crucial because it shows how various types of evaluation are being utilized or abused and what can be done to change it.

2. Statement of the Problem

Every country, including Ghana, continues to place a high priority on mathematics education. Students continue to perform poorly in national and international exams, despite Ghana giving mathematics instruction a high emphasis. In contrast to the national aim of 55%, which is significantly lower than the international benchmark of 70%, the National Education Assessment results for 2013 show that primary three and primary six students could only react accurately to only 19.6% and 12.3% of the test items on competency. Additionally, according to a 2015 study by Oduro (2015) based on a 2007 Trends in International Mathematics and Science Study (TIMSS) report, Ghana's 2007 score of 309 was the lowest of all the nations that took part in the evaluation. The country's development is impacted by the kids' dismal performance.

The instructor, who has a significant impact on the academic achievement of the children, needs to receive support. Assessment is a crucial aspect of teacher classroom procedures that might enhance students' performance (Coffey, 2003; Hattie & Timperley, 2007; Clark, 2012). According to Kitta (2014), there is a substantial and favorable association between learning and assessment. According to Kitta, when assessment is a crucial component of instruction, kids learn more than when it is not. This explains why it is important for instructors to effectively perform classroom assessments in order to inform instruction. Since there is evidence in the research that teachers' perceptions of assessment influence their assessment practices, it is crucial to understand how teachers view as-

sessment (Allen et al., 2013). However, the majority of studies on teacher evaluation in Ghana have concentrated on how teachers evaluate students in the classroom (Hattori & Saba, 2008; Nabie, Akayuure, & Sofo, 2013; Oduro, 2015). There doesn't appear to be any research on how Ghanaian mathematics teachers view student evaluations. In order to fill this vacuum in the research, this study investigated how Ghanaian basic school instructors felt about mathematics evaluation.

3. Research Questions

1) What do mathematics educators believe should be included in mathematics assessments?

2) How should mathematics be evaluated, in the opinion of mathematics teachers?

3) What are the opinions of mathematics teachers regarding the kind of the feedback that should be provided to students?

4. Literature Review

Assessment in the classroom is viewed as being essential to achieving high-quality education. Assessment has historically been primarily used in Ghana to determine placement. It has been utilized to choose individuals for employment and to advance through the levels or stages of the educational system (McWilliams & Kwamena-Poh, 1975 cited in Oduro, 2015). The implication is that formative evaluation has not received much consideration or importance. The National Council of Teachers of Mathematics' (NCTM, 2005) definition for assessment in mathematics, on the other hand, assumes that evaluating students' mathematical proficiency entails more than just grading them in a typical classroom environment. It also involves observing how the students apply mathematics in real-world contexts. This means that mathematics teachers must go beyond how well a student applies a memorization technique or algorithm (product) and stimulate students' mathematical understanding and problem-solving abilities (process). How teachers view assessment could have an impact on how they conduct assessments in the classroom. There have been several attempts to research how instructors feel about mathematics classroom assessment since it can show how various forms of assessment are being used or misused and what can be done to change it (Susuwele-Banda, 2005). It can also have an impact on behavior (Cillessen & Lafontana, 2002). This explains why different people, including teachers, will have different ideas about what mathematics evaluation comprises. These variations could result from diverse backgrounds and experiences. For Susuwele-Banda (2005) claims that in an exam-driven environment, teachers believe that exams lead to greater learning and increase student interest. This means that one's perspective of a situation, including an assessment, will vary based on their environment.

Using a questionnaire, interviews, and observations, Susuwele-Banda (2005)

came to the conclusion that teachers consider classroom evaluation as assessments they administer to their pupils at predetermined intervals. Additionally, they had a restricted ability to employ various techniques and instruments to evaluate their pupils because they view classroom assessments as examinations. In practically every lesson, these professors also hardly ever assess their students. Contrarily, Pacheco (2007) looked into how Brazilian primary teachers perceived assessment and discovered that, despite still using summative testing, the participants valued formative testing and used a variety of tools and methods to evaluate their children.

Additionally, Pryor and Crossouard (2008) noted that mathematics teachers view assessment as measuring. Measuring implies putting numbers on the characteristics that students exhibit. Instead, assessment includes measurement, where the allocated number informs the assessor of the student's level of performance and the proper action to be taken regarding the student's performance. The use of the written test will be preferred by teachers who hold this viewpoint more strongly than other alternative kinds of evaluation like the oral interview, observation, and other real-world tasks. Additionally, such teachers are more prone to provide numerical rather than qualitative evaluations. Alternative modes of evaluation are heavily emphasized in modern mathematical assessment theory.

According to Morgan and Watson (2002), the majority of teachers see classroom evaluation as an additional duty rather than as a tool to enhance their instruction. This indicates that these teachers view evaluation as separate from instruction and will demand compensation from their employers for participating in assessment. Teachers who hold this viewpoint are more inclined to assess their pupils merely for the sake of testing rather than in an effort to advance both student learning and practice. According to Diene (1993), teachers would view assessment as a distinct task requiring more time if it is not integrated into the teaching process. Additionally, it's probable that they'll fabricate students' continuous assessment scores to send to WAEC. Due to this, there may be inconsistencies between the students' performance as measured by their final external examination results and the teacher's presentation of their grades. In Ghana, it appears usual to see students' grades from their teachers being higher than what they receive on their final exam (BECE and WASSSCE). It calls into question the teacher's evaluation of the student in the classroom as well as how they view evaluation in general.

Pre-service teachers tend to view classroom evaluation as less effective, according to a study by Green (1992) on pre-service teachers with measurement training. Green contends that classroom assessments are less beneficial and that standardized examinations address critical educational outcomes. This may be due to the apparent lack of use of classroom assessment results in the students' final grades and certifications. Teachers who took part in the Improving Educational Quality (IEQ) continuous assessment initiative, according to Kadyoma (2004), argued that continuous assessment was reducing educational standards

because it did not give students' performance grades or positions. Giving a pupil a grade and a place on the tests they take is the standard method of evaluating students (Kadyoma, 2004). Teachers who share this perception have a propensity to give numerical grades and scores for students' achievement rather than descriptive summaries. This has a propensity to hide the child's abilities and limitations in terms of mathematical idea(s).

Making the learner numerate is the goal of teaching mathematics. The learner gains mathematical skills that he or she can use in daily activities by being numerate. Five (5) mathematical strands were proposed by the National Research Council (NRC, 2001), which, when correctly taught and evaluated, will result in mathematical proficiency. Conceptual comprehension, procedural fluency, strategic aptitude, adaptable reasoning, and a positive outlook are some of these threads. The five (5) strands are interconnected and interdependent, according to the NRC, in the growth of mathematical competence.

Teachers use a variety of evaluation tools and methods to judge how closely the kid is approaching the learning objectives. Studies have shown that testing and grading are used the most commonly to evaluate student performance in mathematics classes around the world (Van de Walle, 2001; Lissitz & Schafer, 2002). The most popular evaluation methods employed by teachers, according to Senk, Beckmann and Thompson (1997) and Susuwele-Banda (2005), are tests and quizzes. However, they discovered that the test questions utilized by teachers only required extremely basic reasoning and low order thinking. In contrast, Oduro (2015) contends that higher order questions are more likely to enhance students' ability to think critically, which would therefore enhance their performance.

Additionally, it has been observed that teachers use both written and spoken inquiry in an effort to extract students' mathematical thought processes. Oduro (2015) discovered conflicting opinions regarding how various oral questioning evaluates students' form-written thinking skills. She asserts that while Stiggins, Frisbie, and Griswold (1989) discovered a distinction between oral and written mathematics questions in terms of the thinking skills evaluated According to Chitsonga (2010), there were no differences between the teachers' use of oral and written items in mathematics classes in terms of the cognitive abilities needed to respond. The same low-order thinking abilities, which need the recall of factual information and engagement in normal operations, were examined by both the oral and written items.

According to a study by Dandis (2013), mathematics teachers either use standard or alternative techniques to evaluate their students. The traditional approach is primarily focused on paper-and-pencil assessments in which students must show their mastery of facts, skills, and definitions—the most fundamental and basic mathematical knowledge—as well as other mathematical concepts. Numerous research on the techniques used by mathematics teachers to evaluate their students seem to indicate that most teachers primarily use the traditional test method, with just a small number of teachers using alternative types of as-

sessment (Dandis, 2013; Watt, 2005; Buhagiar, 2007; Rico, 1993; Black, 1998; Berenson & Carter, 1995; Susuwele-Banda, 2005). According to Dandis' (2013) research, the majority of Spanish mathematics instructors use written tests to assess their students' progress during the academic year. He claims that despite admitting that other teachers in other subject areas might be utilizing various variants of the evaluation system, the teachers claimed they were unaware of anybody who did.

The conventional testing approach should be replaced with alternative assessment methods, according to current thinking on assessment and how it might be utilized to facilitate learning (Buhagiar, 2007; Dandis, 2013; Janisch, Liu, & Akrofi, 2007; Dogan, 2011; Popham, 2000). According to Dandis, teachers employ alternatives such portfolios, student journals, peer evaluation, interviews, and interim assessments. He contends that when students participate in the evaluation process, they are able to recognize their areas of weakness. In contrast, students can correct honestly and are occasionally stricter than the instructor, which is advantageous since it increases their awareness and sense of involvement in the educational process, both of which are positive for the development of the students' character. He claimed that despite the effectiveness of alternate types of evaluation, teachers cited huge class sizes as making it impossible to apply these assessment methods to the latter.

Another element of assessment is feedback. According to Ramaprasad (1983), feedback is a technique that helps students bridge the gap between their current level and the desired outcome. Feedback consequently offers avenues for improvement and encourages the child to evaluate his existing performance. Black and William (1998) contend that in an educational assessment strategy, the teacher should give students descriptive feedback by highlighting their progress and offering suggestions for improvement in previous work or remedial instruction.

Assessment experts have pushed for student participation in the evaluation process. Student participation in assessment, according to Chappuis and Stiggins (2002), aids them in projecting their future ambitions and learning objectives. Judgmental feedback, according to Chappuis and Stiggins (2002), not only has less value for improvement and student learning, but it also deters students from learning. Formative feedback, according to Black and William (1998), highlights students' strengths and problems, offers suggestions for progress, and avoids comparing one student to his or her colleagues.

5. Methodology

In order to learn more about the views, attitudes, opinions, behaviors, or features of a sample that was intended to be typical of the population, the study used a descriptive survey research design. Through a multi-stage sampling approach, a sample of 63 basic school instructors (11 at the junior high school and 52 at the primary school) were chosen for the study. It was decided on a proportionate number for each stratum using stratified sampling (based on previous

performance in BECE and Primary Schools considered a separate stratum). The schools were then chosen using simple randomness. All primary school teachers and JHS mathematics instructors were chosen for the study after a school was chosen. Susuwele-Banda (2005) Banda's questionnaire, which was created by Horizon Research, Inc. (HRI) originally, was modified for this study in order to collect data. The instrument was validated using professional judgment. A Cronbach's Alpha of 0.762 reliability was realized.

6. Results

Perceptions of teachers about assessment in mathematics

This inquiry focused on how mathematics teachers view assessment. It requested information from respondents regarding their opinions of mathematics assessment in the classroom and its applicability. The results are shown in **Table 1**.

In the table cited below, twenty-four (24) instructors, or 38.1% of the total, stated that assessment is a tool that helps them with their instruction. This demonstrates that these educators view assessment as an aid to learning and as such see it as an instructional management tool. This is consistent with current assessment theory, which aims to make learning mathematics simpler, more

Table 1. Perception of teachers about classroom assessment.

Item	Response	Frequency	Percent
Classroom Assessment is the…	Process of administering test to assign grades and report to parents and officials	11	17.5
	Process which helps teachers to promote students	9	14.3
	All the test given at the end of a topic	19	30.2
	Tool that informs teaching and learning	24	38.1
Is assessment useful to teachers?	Yes	63	100
Why assessment is useful to teachers?	Identify strengths and weaknesses of students	24	38.1
	Helps in measuring students' performance	19	30.2
	Informs teaching	17	27.0
	Helps to promote students	2	3.2
	Helps to know fast learners and slow learners	1	1.6
Is assessment useful to students?	Yes	63	100
Why assessment is useful to students?	helps students to identify their strengths and weaknesses	26	41.3
	helps them to compete	5	7.9
	helps them to know the level of performance	18	28.6
	helps children effect corrections	10	15.9
	helps children to better monitor their own learning	4	6.3

relevant, and more flexible. Additionally, 19 (30.2%) of the teachers believe that assessment refers to all tests that teachers administer to pupils in order to gauge their level of achievement. Nine more educators believe that assessments are used to advance kids. This implies that 61.9% of teachers do not view mathematics in a way that is consistent with the way that assessment is currently thought of.

Additionally, Table 1 reveals that every teacher views assessment as a crucial tool for the teaching and learning process. They claim that assessment aids in monitoring student performance (30.2%), identifying students' strengths and shortcomings (38.1%), and informing teaching (27%). Assessment is seen as helpful by teachers as well, as evidenced by the 41.6% claim made by 26 teachers that it aids students in identifying their own strengths and limitations. Another 18 (28.6%) believe that students benefit from being able to gauge their level of performance.

Perception of Teachers about what should be Assessed in Mathematics

The results of the perception of teachers about what should be assessed are presented in Table 2.

Table 2. Perception about what should be assessed in mathematics.

Statement	SD (%)	D (%)	A (%)	SA (%)	Mean (out of 4)	SD
Task should measure lesson objective(s)			7 (11.1)	56 (88.9)	3.89	0.32
Mathematics tasks require recall of facts	2 (3.2)	8 (12.7)	31 (49.2)	22 (34.9)	1.84	0.77
Mathematics tasks involve eliciting the conceptual understanding of students		4 (6.3)	26 (41.3)	33 (52.4)	3.46	0.62
Mathematics tasks involve eliciting students' problem-solving skills	1 (1.6)		34 (54.0)	28 (44.4)	3.41	0.59
Assessment should probe reasoning	2 (3.2)	3 (4.8)	21 (33.3)	37 (58.7)	3.48	0.74
What is assessed involve application of knowledge	3 (4.8)	1 (1.6)	23 (36.5)	36 (57.1)	3.46	0.76
What is assessed enable students communicate solutions appropriately	3 (4.8)	4 (6.3)	27 (42.9)	29 (46.0)	3.30	0.80
Assessment tasks should elicit higher order thinking skills	4 (6.3)	4 (6.3)	36 (57.1)	19 (30.2)	3.11	0.79
Overall					3.24	0.61

SD = Strongly Agree; D = Disagree; A = Agree; SA = Strongly Agree.

According to Table 2's findings, 56 teachers, or 88.9%, strongly agreed that instructors' assessment tasks should measure their instructional objectives, and the remaining seven teachers, or 11.1%, also agreed. It is supported by a mean score of 3.89 and a standard deviation of 0.32 that teachers believe assessment tasks used to gauge students' mathematical learning should be derived from their instructional goals. Additionally, 84.1% of the teachers believe that recollection should be a component of mathematics assessment problems, whereas the remaining 10 (15.1%) did not. The respondents agreed that assessment tasks measuring students' conceptual understanding (mean 3.46, SD 0.62), problem-solving skills (mean 3.41, SD 0.59), reasoning (mean 3.48, SD 0.74), application of knowledge (mean 3.46, SD 0.76), and proper communication of mathematical solutions (mean 3.30, SD 0.80) were important indicators of student learning. A favourable opinion of what should be evaluated in mathematics is indicated by an overall mean score of 3.24 out of four and a standard deviation of 0.61.

Perception on How Mathematics is assessed

Table 3 indicates the perception of the respondents about how these varying mathematics tasks should be assessed in the classroom to enhance effective learning.

According to Table 3, 36 respondents, or 57.1%, agreed that a thorough evaluation of mathematics employs a variety of assessment methods. But one respondent was adamantly against. The respondents generally agreed that numerous evaluation methods should be used to gauge pupils' mathematical learning, as seen by their mean score of 3.40. 24 people (38.1%) "agreed" and 19 people (30.2%) "strongly agreed" that the traditional assessment methods were superior to the alternative assessment methods when asked which group of assessment techniques were better. To this assertion, 16 (25.4%) "disagreed", and 4 (6.3%) "strongly disagreed". This indicates that the majority of teachers (68.3%) prefer traditional assessment methods over alternative ones. This is inconsistent with how assessments are currently thought of. Again, 47 instructors, or 74.6%, strongly agreed that assessments in mathematics classes should take into account the variations that are present in every classroom, whereas six teachers, or 9.5%, disagreed. Thus, about three out of every four teachers believe that assessments should take into account individual characteristics. The typical teacher firmly believes that assessment should take into account student variations in the classroom, according to the mean score of 3.65. The availability of sufficient time for pupils during evaluation was another idea that received great support from respondents. Only one person disagreed, recording a mean score of 3.57, with the remaining respondents strongly agreeing with 37 (58.7%) or agreeing with 25 (39.7%). According to Table 4's results, respondents also agreed that there should be equal access for all during assessment (Mean = 3.29 out of 4), that students should be involved in evaluating their own work (Mean = 3.22 out of 4), that questions should be probing (Mean = 3.38 out of 4), that there should be

Table 3. Perception about how mathematics is assessed.

Statement	SD (%)	D (%)	A (%)	SA (%)	Mean	SD
Comprehensive assessment use multiple assessment tasks		1 (1.6)	36 (57.1)	26 (41.3)	3.40	0.52
Traditional assessment techniques are better than the alternative.	4 (6.3)	16 (25.4)	24 (38.1)	19 (30.2)	2.08	0.90
Effective assessment caters for individual differences in class		6 (9.5)	10 (15.9)	47 (74.6)	3.65	0.65
Effective assessment provides equal access for all students	2 (3.2)	11 (17.5)	17 (27.0)	33 (52.4)	3.29	0.87
Adequate time should be provided for reflection during assessment		1 (1.6)	25 (39.7)	37 (58.7)	3.57	0.53
Well assessed lessons involve child-self assessment		11 (17.5)	27 (42.9)	25 (39.7)	3.22	0.73
Questioning method probe students' conceptual understanding			39 (61.9)	24 (38.1)	3.38	0.49
Effective assessment provides enough tasks for students.		7 (11.1)	31 (49.2)	25 (39.7)	3.29	0.66
Students need to be assessed frequently	3 (4.8)	5 (7.9)	24 (38.1)	31 (49.2)	3.32	0.82
Assessment items should be from textbook provided	6 (9.5)	30 (47.6)	18 (28.6)	9 (14.3)	2.52	0.86
Assessment is effective when students are assessed in groups than individually.	14 (22.2)	29 (46.0)	16 (25.4)	4 (6.3)	2.16	0.85
Overall					3.09	0.56

Table 4. Perception about the use of feedback in assessing mathematics tasks.

Statement	SD (%)	D (%)	A (%)	SA (%)	Mean	SD
Effective assessment requires teachers to give immediate feedback to students		3 (4.8)	28 (44.4)	32 (50.8)	3.46	0.59
Good assessment delivers high quality feedback that helps students self-correct			34 (54.0)	29 (46.0)	3.46	0.50
Good assessment encourages positive motivational beliefs and self-esteem			18 (28.6)	45 (71.4)	3.71	0.46

Continued

Feedback should encourage students to compete		4 (6.3)	26 (41.3)	33 (52.4)	3.46	0.62
Feedback informs teachers about the effectiveness their instructional strategies			22 (34.9)	41 (65.1)	3.65	0.48
Feedback should be in the form of a grade/numerical score only	6 (9.5)	38 (60.3)	17 (27.0)	2 (3.2)	2.76	0.67
Feedback should be in written form only	13 (20.6)	37 (58.7)	10 (15.9)	3 (4.8)	2.95	0.75
Feedback should be in oral form only	8 (12.7)	26 (41.3)	21 (33.3)	8 (12.7)	2.54	0.88
Feedback should be in the form of a grade/numerical score and written.	3 (4.8)	14 (22.2)	34 (54.0)	12 (19.0)	2.87	0.77
Feedback should be in the form of a grade/numerical score and oral		9 (14.3)	37 (58.7)	17 (27.0)	3.13	0.63
Feedback should be in the form of oral and written.	2 (3.2)	5 (7.9)	37 (58.7)	19 (30.2)	3.16	0.70
Overall					3.20	0.38

SD = Strongly Agree; D = Disagree; A = Agree; SA = Strongly Agree.

enough tasks (Mean = 3.29 out of 4), and that students should be assessed frequently (Mean = 3.32 out of 4). The origin of the test items that can be utilized to evaluate students was another question that was posed to the respondents. Thirty respondents (47.6%) and six (9.5%) disagreed and strongly disagreed with the statement that teachers should use textbooks for their assignments, respectively. This indicates that while 27 (42.9%) were against the claim, 36 (57.1%) supported using the test items from the textbook. This suggests that the majority of respondents do not think that teachers should develop their own assessment tools. In a similar vein, 43 respondents, or 68.2%, did not support the idea of evaluating pupils in groups, while the remaining 31.8% thought group evaluation was beneficial. With a standard deviation of 0.56, the mean perception of teachers generally regarding how to evaluate in mathematics was 3.09.

Perception on Feedback in mathematics

Another component of classroom assessment is feedback. Table 4 indicates the kind of feedback and feedback procedures that teachers perceive should be used during assessment in mathematics.

From Table 4, 32 respondents, or 50.8%, strongly agreed and 28 respondents, or 44.4%, agreed that teachers must provide pupils with rapid feedback when they need guidance to move on. However, three respondents disputed this claim.

A mean score of 3.46 indicates that respondents generally believe feedback must be given right away. Similar findings are shown in Table 4 for the statements "good assessment deliver high quality feedback information that helps learners self-correct" (mean = 3.46) and "feedback should help teachers modify their instructional strategies" (mean = 3.65) as well as "feedback should encourage positive motivational beliefs and self-esteem." This demonstrates that respondents had a highly positive opinion of the kind of comments teachers should use when conducting assessments. Regarding the type of feedback, Table 4 shows that the majority of respondents did not support using just one type of feedback when evaluating mathematics pupils. For instance, Table 4 shows that, respectively, 70.2%, 79.3%, and 54.0% of respondents did not support the use of numerical only, written only, and oral only feedback for students. However, it appears that they support the use of various forms of feedback while conducting assessments. According to Table 4, 73%, 85.7%, and 88.9% of respondents supported using numerical and written, numerical and oral, and written and oral feedback strategies, respectively, during evaluation.

7. Discussion

The study shows that most teachers' perceptions of assessment in mathematics do not align with current thinking since most of them do not perceive assessment as being used to guide their instruction. This supports the findings of Susuwele-Banda (2005) and Pryor and Crossouard (2008) who argued that because most teachers viewed classroom assessment as a test and measurement, there was little effort made to understand how the children were learning. This suggests that educators with this viewpoint won't choose alternate methods of evaluation. They are more prone to use numbers to describe the performance of the students. However, they asserted that assessment is beneficial to both the teacher and the students' progress. This shows a favorable attitude toward evaluation. However, their optimistic outlook can be influenced by the significance they have on using evaluation outcomes to compare or elevate kids. In contrast, Green's (1992) research showed that teachers typically view classroom assessment as being less valuable. The performance of the students would increase if teachers could keep this upbeat attitude and change their assessment methods to favor more alternative approaches to evaluation.

With an overall mean score of 3.24 out of four and a standard deviation of 0.61, it was determined that teachers' perceptions of what was to be examined were, on the whole, good. This assumes that instructors' perceptions of mathematics assessment activities were that they should need both higher- and lower-order thinking skills. All respondents agreed that assessment activities should test the lesson's objectives, hence it was generally believed that teachers' instructional objectives should vary in terms of difficulty level. Table 3 also shows that 84.1% agreed that mathematics assessment activities should require the recollection of facts, while 87.3% believe that mathematics assessment tasks should re-

quire higher level thinking skills. This opinion of teachers is somewhat consistent with the requirements of the profile dimensions, which state that greater focus should be placed on knowledge application than knowledge and understanding (Ministry of Education, 2010).

Considering that mathematics received an overall mean score of 3.09 out of 4, there was once more a favorable opinion regarding how it should be evaluated. The traditional modes of assessment, which mostly involve paper and pencil tests, were, in the opinion of the majority of teachers, preferred to the alternative types of evaluation. This supports the contention made by Nabie, Akayuure, and Sofo (2013) that teachers use both types of assessments but frequently choose the conventional forms over the alternative types. This is not consistent with the socio-constructivists' perspective on assessment, which favors alternative modes of assessment since they guarantee assessment for learning. This may be influenced by how people think about mathematics evaluation. Susuwele-Banda (2005) asserts that teachers who do not view assessment as a tool to inform instruction have a tendency to stick with the conventional ways of evaluation. The effects on the students' performance are significant. Teachers also had a favorable opinion of the assessment's feedback, which had an overall mean rating of 3.20 out of 4. For instance, most teachers believe that using a variety of strategies is better than relying just on one type of feedback.

8. Conclusion

Teachers usually had good attitudes about what should be assessed, how it should be tested, and the feedback to give to students, even though their perception of mathematics assessment is generally not in line with contemporary assessment thinking. This suggests that assessment-related training is generally lacking for teachers. Consequently, it is important to plan professional development programs and courses for in-service mathematics instructors (Kadroon & Inprasitha, 2013). Future studies should examine how Ghanaian mathematics instructors see evaluation, concentrating primarily on student gender and grade level.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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