

Handling Formative Assessment *for* and *as* Learning: The Role of Classroom Teachers

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Abstract

While many educationalists are extremely focused on national tests (high stake testing), it is imperative to consider that over the course of a year, teachers can build in many opportunities to assess how students are learning through self and peer assessment and then use this information to make useful changes in learning and teaching. The study investigated the role of Senior High School (SHS) teachers in handling formative assessments for and as learning. This study adopted a cross-sectional descriptive survey design with a quantitative approach. The respondents were SHS teachers selected from public Senior High Schools. Stratified proportionate sampling techniques were used in selecting 213 teachers (male = 126, female = 87) for the study. The data for the study were collected using a questionnaire with a reliability of 0.80. Frequencies, means (M) and Standard Deviations (SD) were employed for the data analysis. The findings revealed that SHS teachers have a high knowledge level required in using formative assessment in the classrooms. It was concluded that SHS teachers although have knowledge of formative assessment, lack the attitude and competencies in implementing it. It was recommended that Heads of the SHS should organise regular in-service training, seminars, and workshops for the teachers to sustain teachers' high knowledge level and improve their competencies in formative assessment. The study further recommends that stakeholders such as the Ministry of Education, Ghana Education Service, and Heads of SHS should encourage teachers to continuously incorporate all formative assessment activities in their daily classroom interactions.

Keywords

Formative Assessment, Assessment for Learning (AfL), Assessment as Learning (AaL)

1. Introduction

The drive to move every economy's development forward largely depends on the quantum of knowledge and skills endowed by the indigenes who occupy the space of that society (Li, 2022). On this note, the development of human capacity within a given society should be given a critical look. Education, and for that matter formal education, should be structured such that those committed are exposed to requisite experiences. As opined by Berliner (2001), experience explains the use of the senses to acquire knowledge, skills, and competencies. The senses here suggest that learners must be engaged to do more assessment tasks by hand order than the teacher. It, therefore, debunks the idea of learners just being spectators to what the teacher does in the classroom setting.

Truth to this explanation, teachers who are seen as trainers must endeavour to make teaching more learners centered than a teacher-centered approach. As suggested by Weimer (2013), a learner-centered approach is a situation in teaching where the learners are placed at the center of teaching. Placing learners at the center of teaching explains the fact that most of the activities regarding teaching and learning are executed by the learners (Weimer, 2013). In this case of teaching and learning, the teacher is seen as a facilitator by providing guidance to the learners (Weimer, 2013).

As posited by Weerts and Sandmann (2008), teaching and learning is a two-way street where the teacher sends information, and the learner acknowledges it through feedback. For this symbiotic activity to take its full course, the assessment method employed by the teacher must be carefully selected. This means that the assessment method that would foster the learner's active participation should be of concern to the facilitator. Formative assessment is an assessment that encourages active learners' participation, thus concepts of assessment as learning (AaL) and assessment for learning (AfL). The former concept includes peer-assessment and self-assessment while the latter on the other deals with a shared responsibility of both the learner and teacher.

Despite the importance of formative assessment, teachers are known to be using the traditional method (summative assessment) in assessing students' knowledge and skills in our contemporary education (Houston & Thompson, 2017). It must be noted that in most Senior High Schools there is a non-existence of formative assessment in the classrooms (Earl & Fullan, 2003). Reports (Wang, 2006; McMillan, Cohen, Abrams, Cauley, Pannozzo, & Hearn, 2010) have also shown that teachers lack the knowledge of practice formative assessment or even others do not practice at all. There is therefore the need for further studies to ascertain the reason(s) for the non-usage of formative assessment among Senior High School teachers.

2. Methodology

A cross-sectional descriptive survey design with the use of a quantitative ap-

proach was employed for this study. A stratified proportionate sampling technique was used to select 213 teachers from a population of 2403 subject teachers. A survey questionnaire with a reliability of 0.801 was used for data collection. It must be noted that the survey questionnaire measuring the constructs was scored on a four-point Likert scale namely Strongly Disagree (SD), Disagree (D), Agree (A), and Strongly Agree (SA) with one (1) representing the least agreement to the construct while four (4) indicating the strongest agreement to the statement. With regards to the negatively worded items, reverse coding was done before they were scored.

3. Results and Findings

From **Table 1**, most of the respondents were males representing 59.2% (126), while 40.8% (87) were females. This indicates that there were more male than female respondents in the study.

From **Table 2**, twenty-six of the thirty-three items measuring SHS teachers' knowledge level recorded means and standard deviations ranging from " $M = 3.29, SD = 0.75$ " to " $M = 2.63, SD = 0.92$ " which are above the grand mean of "2.5", indicating that majority of respondents have agreed to almost all the statements on formative assessment. Referring to the grand mean value of 2.89, it can be observed that SHS teachers have above-average formative assessment knowledge levels in formative assessment. This is because the mean of the means value (2.89) is greater than the grand mean of "2.5".

4. Use of Formative Assessment

Descriptive statistics such as means, and standard deviation were to explore the most frequently used activities that characterize the use of formative assessment among SHS teachers. Teachers were asked to choose among these activities regarding the use of formative assessment in their profession. We believed that the teachers had a good understanding of formative assessment, and therefore should select according to the activities they use in their respective classrooms. Mean values above 2.5 show that most of the respondents agreed with the activities while a mean value below 2.5 shows that most of the respondents disagreed with the activities. A summary of the responses is presented in **Table 3**.

From **Table 3**, it is evident that the items which recorded the means above 2.5 are the most frequently used activities that characterize the use of formative

Table 1. The demographics of the respondents.

Gender	Frequency	Percentage (%)
Male	126	59.2
Female	87	40.8
Total	213	100.0

Table 2. Teachers' knowledge of formative assessment.

Statement	M	SD
Formative assessment takes place during the process of teaching and learning encounters.	3.23	0.76
Formative assessment provides ongoing feedback to improve teaching and learning.	3.29	0.74
Clarification of specific learning intentions in teaching is required in formative assessment.	3.11	0.71
Sharing learning objectives with students in teaching is not part of formative assessment.	2.38	1.01
Formative assessment allows teachers to discover the way students think about what is being taught in the classroom	3.13	0.83
Engaging students in asking relevant questions during lessons is not part of formative assessment.	1.87	0.99
Criteria for success need to be specified in practicing formative assessment in the classroom.	2.90	0.66
Formative assessment is an integral part of teaching and learning in my subject.	3.16	0.85
Feedback can be delayed when practicing formative assessment in my classroom.	2.39	0.98
Formative assessment improves learning and achievement in the classroom.	3.23	0.88
The use of professional knowledge in teaching is very relevant in formative assessment.	3.27	0.77
Formative assessment is used by teachers to modify their teaching methods.	3.22	0.73
Formative assessment has a negative impact on student learning.	1.99	0.99
Formative assessment is for grading subjects' scores.	2.35	0.90
Formative assessment is not necessarily tied to a specific subject learning pathway.	2.63	0.92
Formative assessment is not mostly interactive in teaching my subject.	2.25	1.03
The teacher must consciously plan for formative assessment while teaching.	3.11	0.76
Formative assessment involves actively both the teacher and students in teaching and learning.	3.19	0.79
Formative assessment involves the various ways in which teachers find out the progress of learners.	3.18	0.75
Formative assessment is embedded in my classroom lessons.	2.95	0.79
Formative assessment brings about my subject's instructional correctives.	3.05	0.77
Formative assessment has a strong positive impact on students learning in my subject.	3.20	0.79

Continued

Feedback can be immediate when practicing formative assessment in the classroom.	3.03	0.78
Formative assessment requires students to take responsibility of their own learning.	2.85	0.84
Formative assessment helps students to focus on their learning goals.	3.09	0.75
Formative assessment leads to collaboration among students and teachers in the classroom.	3.14	0.80
Formative assessment uses continuous and diverse forms of assessment in learning.	3.07	0.71
Formative assessment has a long-lasting impact on students learning.	3.14	0.74
Formative assessment has little or no point value	2.07	0.97
Formative assessment is a high stake in nature.	2.69	0.89
Entering behaviour of learners can be ascertained by formative assessment.	2.83	0.81
Formative assessment helps to identify learners' strengths and weaknesses in the content taught in my classroom.	3.29	0.75
Formative assessment enriches teaching by employing varieties of activities.	3.26	0.73
Mean Total	95.54	
Mean of Means	2.895*	

M = Mean, SD = Standard Deviation, Number of items = 33.

Table 3. Teacher activities that characterize use of formative assessment.

Items	M	SD
Classwork	3.10	0.83
Home	2.68	0.89
Observation	2.90	0.88
Questioning	3.21	0.82
Discussion	2.49	0.91
Short test	2.68	0.90
Presentation	2.23	0.94
Peer-assessment	2.11	0.93
Self-assessment	2.37	0.98
Project work	2.30	0.97
Interview	2.14	0.92
Exams	3.12	0.92

M = Mean, SD = Standard Deviation.

assessment by the respondents. These activities include “Questioning”, “Exams,” “Classwork”, “observation”, “homework” and “short test”, with mean scores and standard deviations of “ $M = 3.21, SD = 0.82$ ”, “ $M = 3.12, SD = 0.92$ ”, “ $M = 3.10, SD = 0.83$ ”, “ $M = 2.90, SD = 0.88$ ”, “ $M = 2.68, SD = 0.89$ ” and “ $M = 2.68, SD = 0.90$ ” respectively. However, “Peer assessment”, “Presentation” and “self-assessment” among others obtained the lowest mean scores of “ $M = 2.11, SD = 0.93$ ”, “ $M = 2.23, SD = 0.94$ ” and “ $M = 2.37, SD = 0.98$ ” respectively.

The results imply that the most frequently used activities that characterize the use of formative assessment among SHS teachers are “Classwork”, “Questioning”, “Exams”, “Homework”, “Observation”, and “Short test”. However, the least used activities for formative assessment among SHS teachers were “Peer learning/assessment”, “Presentation” and “Self-learning/assessment” among others.

5. Discussion

It is obvious that SHS teachers have high knowledge it takes in implementing formative assessment taking into consideration how it was measured. Of course, the finding does not resonate with what has been established in the literature (Alufohai & Akinlosotu, 2016; Amoako, Asamoah, & Bortey, 2019). Among the activities characterizing the use of formative assessment, are “Classwork”, “Questioning”, “Exams”, “Homework”, “Observation”, and “Short test.” As suggested by Bennett (2011) “questioning” helps to keep learning on track. Thus, adequate classroom questioning provides an avenue for teachers to pool students along in their teaching and plays an important role in ascertaining students understanding through feedback. “Exams” on the other hand are reported to be one of the most classroom techniques teachers use to assess their students (Tamakloe, Amedahe, & Atta, 2005). Moreover, for Asare (2015) “Short test” is regarded as one of the formative assessment activities. However, “Peer assessment”, “Presentation” and “Self-assessment” which are believed to be the very tenants of formative assessment are underutilized. This finding, therefore, contradicts Bekoe et al. (2014), who in their study found these activities to be the major formative assessment tutors use to assess teacher-trainees learning in Social Studies.

From the prior discussion, formative assessment tasks/activities are not comprehensively implemented. Thus, there seems to be a conflict regarding SHS teachers’ knowledge of formative assessment and the use of formative assessment. Meanwhile, it is what we know that we practice, but this is not the case for SHS teachers. A brief look at the phenomenon connotes there are certain hindrances accompanied by using “Peer assessment”, “Presentation (individual/group)” and “Self-assessment.” As opined by Noori et al. (2017), instructional time serves as a constraint to the implementation of peer assessment and self-assessment. Moreover, since peer assessment and self-assessment gear toward meeting the unique needs of every student, small class size is paramount to its implementation. However, large class size puts great demands on teachers’ use of formative assessment (Noori et al., 2017). Hence, peer learning/assessment

and self-learning/assessment are unutilized due to large class sizes and limited instructional periods allotted to the SHS subject teachers.

6. Conclusion

From the findings, SHS teachers are endowed with the knowledge required in using formative assessment. However, SHS teachers do not exhaust all tenants needed in faithfully implementing formative assessment. And as such, it defies the assessment principle which talks about good assessment being comprehensive. This is because, for a good assessment to be comprehensive, all activities regarding the use of formative assessment must be implemented or used by the respondents surveyed.

7. Recommendations

The findings of the study recommend that Heads of the SHS should organize regular in-service training, seminars, and workshops for SHS teachers to sustain their high knowledge level in formative assessment. The study also recommends that stakeholders such as the Ministry of Education, Ghana Education Service, and Heads of SHS should encourage teachers to continuously incorporate all formative assessment activities in their daily classroom interaction. Moreover, the study also recommends that the Director of Education, Ghana Education Service, and the Head of Schools must ensure teachers' use of "Peer assessment", "Presentation", and "Self-assessment" among others in their formative assessment activities. This activity must be included in their school-based in-service training so that teachers could advance their knowledge. Furthermore, Head-teachers should encourage subject Associations and District Teacher and Support Team (DTST) to include formative assessment skills in the workshops they organize. Lastly, donor agencies should support SHS by providing appropriate logistics to improve the execution of formative assessment practices.

8. Implication for Theory and Practice

The findings of this research provide a strong foundation for teachers to make use of all formative assessment activities in their classrooms. Of course, teachers have demonstrated a high knowledge level of formative assessment per how it was measured. Teaching by nature should be effectively delivered. As such, teachers must endeavour to engage in adaptive teaching to help seek the unique needs of every learner. The truth is that formative assessment techniques or activities such as peer assessment, self-assessment, and presentation must not be underutilized. But they (SHS teachers) must continuously incorporate in their routine formative assessment since they will go a long way to help students develop progression in their learning.

Conflicts of Interest

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

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