European Journal of Education Studies
ISSN: 2501 - 1111
ISSN-L: 2501 - 1111
Available online at: www.oapub.org/edu

DOI: 10.46827/ejes.v11i11.5613 Volume 11 | Issue 11 | 2024

FORMATIVE ASSESSMENT PRACTICE AND ITS CHALLENGES ON TRAINEE'S LEARNING, MOTIVATION AND ACADEMIC ACHIEVEMENT AT BONGA COLLEGE OF EDUCATION, ETHIOPIA

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Abstract:
This research investigates formative assessment practices and their challenges regarding trainees' learning, motivation, and academic achievement at Bonga College of Education. A descriptive survey design using the census method was employed for the study. The research utilized a mixed-methods design, specifically an embedded mixed-method approach. The survey method included a questionnaire and an attitude rating scale for quantitative data collection, while qualitative data were gathered from semi-structured interviews, focus group discussions, and document analysis to complement the quantitative findings. Respondent characteristics were analyzed using frequency and percentage analysis, while data from the questionnaires and motivation rating scale underwent correlation, regression, and chi-square testing. The data collected through document review and interviews were carefully recorded, transcribed, and thoroughly analyzed. The results revealed that formative assessment practices across various fields of study at Bonga College of Education were inadequate, with significant gaps identified. Findings indicated that, for most teachers, formative assessment primarily referred to coursework assigned during the teaching and learning process and was closely associated with scored marks. Additionally, the research identified common challenges faced by teachers in implementing formative assessment across different fields of study within the college. Furthermore, the study showed a positive and significant correlation between instructors' formative assessment practices and students' motivation to learn. It also found that teachers' formative assessment practices positively correlated with

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students' academic achievements. Based on these findings, several recommendations were made.

Keywords: formative assessment, academic achievement, motivation, trainee's learning, practice, challenges

1. Introduction

Assessments carried out at different levels of education for administrative and evaluative purposes often lack the information needed to improve instruction and learning (Suskie, 2018). Moreover, the assessment process involves sampling students' behavior, drawing conclusions, and assigning a value to their performances (Shepard, 2001). Additionally, Safarath and Kingtin (2014) reported that the fundamental role of assessment is to provide authentic and meaningful feedback for improving student learning, instructional practice and educational options. On the other hand, formative assessment plays a crucial role in ensuring the quality of education in colleges and universities (Chen *et al.*, 2013). Formative assessment (FA), with its emphasis on the learning process, has the potential to be significantly more beneficial from a teaching-learning perspective (Bennett, 2011). One of the most important components of formative assessment is feedback, which provides evidence of student learning (Andersson and Palm, 2017). A robust assessment system is one of the preconditions for quality education. FA is an emerging approach that assesses students throughout the academic year to identify and address their weaknesses and enhance their learning outcomes (Hanefar *et al.*, 2022).

Research has produced extensive evidence demonstrating the advantages of incorporating FA into various subjects at different levels of students' learning. These advantages include positive effects on students' attitudes toward the subject, enhancements to learning and achievement, learner autonomy, and peer collaboration (Creswell and Clark, 2018; Ozan and Kensal, 2018; Prins *et al.*, 2005; Ratminingsih *et al.*, 2017; Topping, 2010; Wiliam, 2010; Wood and Kurzel, 2008; Xiao *et al.*, 2023). Nevertheless, due to a range of educational factors-including teachers' insufficient knowledge about FA and the lack of continuous professional support (Ulla *et al.*, 2017; Xie and Cui, 2021)-the effective implementation and practices of FA tend to be limited and superficial across all levels of educational contexts (Black and Wiliam, 2009; Clark, 2011, 2012; McMillan, 2010; Shepard *et al.*, 2018). The teaching-learning process in higher education needs FA to enhance quality and improve students' performance (Dessie and Heeralal, 2016). Furthermore, FA is not only an evaluation of student achievement; it is also a powerful diagnostic tool that enables students to identify areas of difficulty and focus their efforts accordingly. It allows teachers to monitor the impact of their lessons on student understanding and modify their pedagogical strategies (Hunduma *et al.*, 2023). Therefore, formative assessment requires careful implementation to sustain the quality of education and develop effective citizens throughout the country.

Additionally, in recent years, FA has become the preferred form of assessment worldwide, compared to summative assessment (Ozan and Kincal, 2018). Likewise, the World Bank directly links high-quality FA to better outcomes on standardized tests and associates improved learning outcomes with increased national prosperity (Browne, 2016). In line with this trend, Bangladesh has also experienced a shift from summative to formative assessment over the past decade (Hanefar *et al.*, 2022) and FA is gradually becoming more important in this context. However, the FA system in higher education remains inadequate in Bangladesh (Hanefar *et al.*, 2022), where there is little to no effective ongoing assessment or appropriate feedback system.

In the African context, there has been a paradigm shift over the past few decades from the assessment of learning to assessment for learning (FA). In this regard, strong support has emerged from institutions like the World Bank (2008), and studies have shown a connection between improved learning outcomes, greater national prosperity, and formative assessment (Browne, 2016; Ozan and Kincal, 2018; Rahman *et al.*, 2021).

In Ethiopia, the Ministry of Education has developed policies and curricula for students ranging from primary school to higher education, aiming to produce skilled human resources and achieve the best possible rankings. However, these policies have not yet been fully implemented by teachers (Tesfaye, 2017). Moreover, to ensure educational quality, FA was introduced at various levels of educational organizations by the Ethiopian Education and Training Policy (ETP, 1994). The policy states that academic and practical subjects, including aptitude tests, will be conducted to develop a comprehensive profile of students at all levels (MoE, 1994).

In addition to this policy, the Federal Democratic Republic of Ethiopia's Higher Education Proclamation (2009), Article 22, Sub-Article 2, states: "*The internal system of quality enhancement for every institution shall include clear and comprehensive measures of quality covering the professional development of academic staff, course content, teaching-learning processes, student evaluation, assessment, and grading systems. This shall also encompass student evaluations of course content, teaching methods, examinations, and grading*" (FDRE, 2009). The assumption behind Ethiopia's FA policy (TGE, 1994) is that integrating FA into instruction enhances the quality of students' learning by providing both students and teachers with comprehensive, day-to-day feedback on students' progress and learning needs while there is still time to make improvements (Abejehu, 2016). Although the 1994 Education and Training Policy recognized the importance of FA for improving instruction and student learning, its actual implementation in classrooms has varied across schools and encountered several challenges (Abejehu, 2016). Furthermore, within the curriculum contexts of Ethiopia's primary, secondary, and tertiary schools, teachers are expected to utilize various types of student assessment, with FA being one of them.

As reported by the American Institutes for Research (AIR), 2018; Dessie and Heeralal, 2016; Figa *et al.*, 2020) teachers use few FA approaches and primarily rely on administering a series of paper-and-pencil tests to gauge student progress. Similarly, a study by Abejehu (2016) on continuous assessment issues and practices in secondary schools of the Oromia region in Ethiopia revealed that teachers' implementation of

formative assessment was poor. Although there are reports on research findings in FA practice, challenges, and their effect on students learning, attitudes, and academic achievement, a significant gap remains between theoretical and empirical knowledge and actual classroom practices. Figa *et al.* (2020)revealed that challenges to the effective implementation of FA can hinder students' learning and achievements in secondary schools in Ethiopia. Despite the few studies conducted on FA practices and their challenges regarding students' learning, attitudes, and academic achievement, reports on colleges of education are scarce. To ensure proper student learning and achievement, it is crucial to study the practice of FA and its relation to students' learning, attitudes, and academic achievements.

Additionally, the authors' many years of critical observation while teaching and working with college instructors, along with various literature sources, indicate that the practice of FA is not meeting expected standards (Bayissa and Jote, 2019; Dessie, 2015; Figa *et al.*, 2020; Weldmeskel, 2015). Moreover, instructors have raised several challenges regarding its implementation and believe that poor implementation significantly affects students' learning, attitudes, and achievements (Box *et al.*, 2015; Carless, 2005, 2012; Widiastuti *et al.*, 2020). Hence, this study will investigate the practice of FA, its challenges, and its effects on students' learning, attitudes, and academic achievements at Bonga College of Education.

2. Statement of the Problem

Classroom assessments are conducted daily. Consequently, increasing attention is being given to the quality of classroom assessment in education, as assessment plays a central role in determining the quality of education (Jote, 2019). To this effect, FA serves both as a means to ascertain the effectiveness of the curriculum and as an indirect indicator of the teaching-learning process (Jote, 2019). For several years, significant effort has been devoted to studying FA practices, their challenges, and students' learning attitudes and academic achievements at various levels. Numerous studies have found that effective FA practices and minimizing the challenges of implementation are fundamental to promoting students' learning (Andersson and Palm, 2017; Furtak *et al.*, 2016; López-Pastor and Sicilia-Camacho, 2017; L. A. Shepard *et al.*, 2018; Wiliam, 2010).

Formative assessment, along with understanding the problems associated with its practices and efforts to reduce them, has been a topic of discussion and research among scholars worldwide at all levels of educational organizations. Due to its abstract, complex, and implementation-demanding nature, effective formative assessment is challenging for most teachers, which negatively impacts students' learning, attitudes, and academic achievements (Andersson and Palm, 2017; Carless, 2012; Ozan and Kincal, 2018; Yin *et al.*, 2008).

The authors' long-year observation and experience indicate that, in practice, over the past one and a half decades, the performance, efficiency, and quality of graduate teachers from Bonga College of Education (BCE) have declined, even though the

qualifications and academic levels of the instructors have improved significantly. Additionally, the college's learning environment is improving; for example, library services, laboratory organization, IT infrastructure, and English language improvement centers are all showing relative advancements. Moreover, instructors have received short- and long-term training on the theoretical and practical implementation of FA through a higher diploma program (HDP), and technologies like student registration system (SRS) and relevant policies have been employed to enhance formative assessment practices in the college. However, the implementation of FA still does not meet the expected standards, as indicated by the quality and performance of graduates from the college. Furthermore, evidence from the certificate of competency (COC) exam results and feedback from various stakeholders regarding the quality and effectiveness of the graduates suggests a gap in students' learning related to FA practices. As a result, this research endeavor aims to address the issues of FA practices, challenges, and their effects on students' learning, attitudes, and academic achievements at Bonga College of Education, thereby filling the research gap through investigation.

3. Research Questions

The study addressed the following research questions:

1) To what extent do instructors practice FA techniques in their instruction to improve students' learning?
2) What are the challenges of FA practices faced by instructors and students at BCE?
3) Are there any variations in FA practice across the college's various fields of study?
4) Are there any variations in FA challenges across the college's various fields of study?
5) What is the relationship between instructors' FA practice and students' motivation towards learning at BCE?
6) Are there any variations in FA practice and students' achievement across the college's various fields of study?

4. Methods

4.1 Sources of Data

The sources of data for this research included both primary and secondary sources. Primary data were collected from instructors, academic commission members, students, and department heads. Secondary sources comprised records or documents from department heads and instructors, including assessment guidelines, legislation, assessment course plans, feedback documents, and assessment papers returned to students.

4.2 Participants

The target population for this study included instructors, students, department heads, and academic commission members at BCE, across 16 different departments. The college has four academic program directors overseeing the following programs: Language, Mathematics and Natural Science, Social Science, and Education. Each academic program director manages a minimum of three and a maximum of five departments. For this study, all instructors from two randomly selected departments within the Language, Social Science, and Education programs, each having four, four, and three departments, respectively, were included in the sample.

4.3 Sampling Techniques

Researchers employed a simple random sampling method to select the departments under each of the four academic program directors. A purposive sampling method was used for department heads and academic commission members. The respondents included a total of 55 instructors (52 males and 3 females), categorized by academic programs: Language, Mathematics and Natural Science, Social Science, and Education. Additionally, a total of 210 students (128 males and 82 females) from the same departments as the selected instructors participated in the study.

4.4. Data Collection Tools

The survey method utilized quantitative data collection instruments, such as questionnaires and attitude rating scales. Qualitative data were also collected through semi-structured interviews, focus group discussions, and document analysis to support the quantitative findings. For the quantitative aspect, a closed-ended questionnaire was designed, while the qualitative component included in-depth semi-structured interviews, focus group discussions, and document analysis. The closed-ended questionnaire was developed by the researchers and pilot-tested with instructors who were not participants in the actual study to evaluate the validity of each question. The instruments for the in-depth semi-structured interviews and the questionnaires for students were adapted from Zhang (2018). A focus group discussion was conducted to gather detailed information on the various FA methods instructors have used, the feedback and support provided, practical challenges faced in implementation, and the effects on students' learning, attitudes, and academic achievements. Additionally, data collected through semi-structured interviews with students allowed them to express their feelings and opinions about FA practices in their teaching and learning.

4.5 Validity and Reliability

The pilot test was conducted to ensure the validity and reliability of the instruments, checking whether the included items could effectively gather appropriate information at BCE with 15 instructors and 25 students. After the pilot testing, questions that were unclear, which could lead to biased answers, were identified and corrected. Additionally, Cronbach's alpha was calculated to be 0.859, indicating the internal consistency of the

instrument (Amirrudin *et al.*, 2021). The results of the pilot testing were statistically analyzed using SPSS version 23. All instruments were administered by the researcher and collected immediately. The reliability coefficient of the instrument was calculated based on the pilot test results. The participants of the pilot test were also informed firsthand about how to evaluate and give feedback on the relevance of the contents, item length, clarity of items, and layout of the questionnaire. Based on their reflections, the instruments were improved before being administered to the main participants of the study, removing any irrelevant items.

5. Result and Discussion

Table 5.1: Frequency and Percentage of Students' Response to Formative Assessment Practices

Description of items	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Teachers clearly explain the success criteria for each objective and explain the purpose and relevance of all tasks for each learning objective.	86 (41%)	111 (52.9%)	8 (3.8%)	3 (1.4%)	2 (1%)
Teachers communicate task criteria to complete given tasks with students in their teaching and learning process.	76 (36.2%)	117 (55.7%)	5 (2.4%)	6 (2.9%)	6 (2.9%)
Teachers ask challenging questions and prompts to articulate students' reasoning and keep track of each student's progress.	69 (32.9%)	128 (61.0%)	1 (0.5%)	4 (1.9%)	8 (3.8%)
Teachers examine students' work and provide timely, clear, constructive, and applicable feedback for the improvement of students' learning.	87 (41.4%)	113 (53.8%)	1 (0.5%)	4 (1.9%)	5 (2.4%)
Teachers ask for clarification about what has been done, is being done, or will be done.	72 (34.3%)	126 (60.0%)	2 (1%)	4 (1.9%)	8 (3.8%)
Teachers use various assessment activities in the classroom to check students' mastery of course content.	90 (42.9%)	111 (52.9%)	6 (2.9%)	-	3 (1.4%)

Item 1 examines teachers' explanations of success criteria and the relevance of tasks for each learning objective. According to Table 5.1, 41% of students strongly disagree, and 52.9% disagree regarding the clarity of these explanations, highlighting a key criterion for evaluating formative assessment practices in the classroom. This shows that teachers do not clearly explain the success criteria for each objective and the purpose and relevance of all tasks for each learning objective.

Item 2 explores students' perceptions of teachers' communication regarding task criteria. According to Table 5.1, 36.2% of students strongly disagree, and 55.7% disagree about the clarity of these criteria. Therefore, it can be concluded that teachers do not effectively communicate task criteria during the teaching and learning process.

Item 3 investigates students' perceptions of teachers' practices in asking challenging questions and prompts to encourage reasoning and track student progress.

According to Table 5.1, 32.9% of students strongly disagree, and 61.0% disagree with these practices. Therefore, it can be concluded that teachers lack effective practices in this area.

Item 4 examines students' perceptions of teachers' practices in reviewing their works and providing timely, clear, constructive feedback. According to Table 5.1, 41.4% of students strongly disagree, and 53.8% disagree with these practices. Therefore, it can be concluded that teachers do not effectively review student work or provide constructive feedback to enhance learning.

Item 5 explores students' perceptions of teachers' practices in seeking clarification on past, present, or future tasks. According to Table 5.1, 34.3% of students strongly disagree, and 60.0% disagree with these practices. Thus, it can be concluded that teachers do not effectively seek clarification on tasks.

Item 6 investigates students' perceptions of teachers' use of various assessment activities to gauge mastery of course content. According to Table 5.1, 42.9% of students strongly disagree, and 52.9% disagree with these practices. Therefore, it can be concluded that teachers do not effectively use assessment activities to check students' mastery.

In general, from students' responses to teachers' practices of formative assessment, it can be concluded that the practices of formative assessment in various departments are found to be poor. Moreover, students were asked to describe the practices of formative assessment in their teaching and learning, and the majority of them described as follows:

> *"We do not have any information regarding the success criteria, the purpose, and the importance of all tasks for each learning objective. We simply perform the tasks given and submit them to our teachers for each course"* (Students A, B, and C);
>
> *"The purpose and relevance of tasks for each learning objective were not explained, and the task criteria were not clearly outlined by the teachers offering the courses"* (Students D and E);
>
> *"Most teachers ask yes or no questions but don't prompt students to articulate their reasoning or keep track of each student's progress"* (Students F, G, H, and I);
>
> *"Teachers examine students' work in various courses through tests, assignments, and exams, but most do not provide timely, clear, constructive, and applicable feedback for improving students' learning. Sometimes they return marked assignments with only the scores"* (Students A, B, C, and D);
>
> *"Most teachers offering different courses assess our mastery of course content continuously through assignments and tests only"* (Students A, B, C, and D);
>
> *"The assessments given by teachers during the semester include assignments, tests, and the final exam"* (Students D and F);

"We took tests, mid-exams, and final examinations as course assessments in the classroom" (Students G, H, and I).

Therefore, from their responses, students revealed that the teachers' formative assessment practices in various courses in the college were found to be poor.

Table 5.2: Frequency and Percentage of Formative Assessment Practices Based on Responses from Department Heads and Academic Program Directors

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Teachers clearly explain the success criteria for each objective and explain the purpose and relevance of all tasks for each learning objective.	1 (6.7%)	9 (60.0%)	1 (6.7%)	3 (20.0%)	1 (6.7%)
Teachers communicate task criteria to complete given tasks with students in their teaching and learning process.	4 (26.7%)	7 (46.7%)	2 (13.3%)	1 (6.7%)	1 (6.7%)
Teachers ask challenging questions and prompts to articulate students' reasoning and keep track of each student's progress.	3 (20.0%)	8 (53.3%)	1 (6.7%)	2 (13.3%)	1 (6.7%)
Teachers examine students' work and provide timely, clear, constructive, and applicable feedback for the improvement of students' learning.	2 (13.3%)	9 (60.0%)	-	-	4 (26.7%)
Teachers ask for clarification about what has been done, is being done, or will be done.	2 (13.3%)	8 (53.3%)	1 (6.7%)	-	4 (26.7%)
Teachers use various assessment activities in the classroom to check students' mastery of course content.	1 (6.7%)	9 (60.0%)	-	5 (33.3%)	-

Item 1 examines the explanations of success criteria for each objective and the relevance of tasks provided by department heads and academic program directors. The table above shows that 6.7% of teachers strongly disagree and 60% disagree with these explanations, indicating a lack of clarity regarding success criteria and task relevance for each learning objective.

Item 2 examines department heads' and academic program directors' views on communicating task criteria to students. Table 5.2 shows that 26.7% of students strongly disagree, and 46.7% disagree with how teachers communicate these criteria. This indicates that teachers do not effectively convey task criteria in the teaching and learning process.

Item 3 examines department heads' and academic program directors' views on their practices for asking stimulating questions and prompts to encourage student reasoning and track progress. According to Table 5.2, 20.0% of students strongly disagree, and 53.3% disagree with teachers' practices in this area. This suggests that teachers do

not effectively use challenging questions and prompts to foster reasoning and monitor student progress.

Item 4 investigates department heads' and academic program directors' views on their practices for examining students' work and providing timely, constructive feedback. Table 5.2 shows that 13.3% of department heads and academic program directors strongly disagree and 60.0% disagree with how teachers provide feedback for improving learning. This indicates that teachers do not effectively examine student work or offer the necessary feedback.

Item 5 explores department heads' and academic program directors' views on their practices for seeking clarification on completed, ongoing, or future tasks. According to Table 5.2, 13.3% of department heads and academic program directors strongly disagree, and 53.3% disagree with teachers' practices. This suggests that teachers do not effectively ask for clarification about tasks.

Item 6 examines department heads' and academic program directors' views on using various assessment activities to evaluate students' mastery of course content. Table 5.2 shows that 6.7% of department heads and academic program directors strongly disagree and 60.0% disagree with teachers' practices, suggesting that teachers do not effectively use diverse assessments to gauge student mastery.

Therefore, the quantitative data obtained from department heads and academic program directors regarding items 1 to 6 reveal that formative assessment practices in the college are poor.

Table 5.3: Teachers' Response Regarding the Frequency and Percentage of Formative Assessment Practices

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Teachers clearly explain the success criteria for each objective and explain the purpose and relevance of all tasks for each learning objective.	20 (36.4%)	26 (47.3%)	2 (3.6%)	3 (5.5%)	4 (7.3%)
Teachers communicate task criteria to complete given tasks with students in their teaching and learning process.	18 '(32.7%)	29 (52.7%)	1 (1.8%)	4 (7.3%)	3 (5.5%)
Teachers ask challenging questions and prompts to articulate students' reasoning and keep track of each student's progress.	11 (20.0%)	32 (58.2%)	3 (5.5%)	7 (12.7%)	2 (3.6%)
Teachers examine students' work and provide timely, clear, constructive, and applicable feedback for the improvement of students' learning.	17 (30.9%)	31 (56.4%)	5 (9.1%)	1 (1.8%)	1 (1.8%)
Teachers ask for clarification about what has been done, is being done, or will be done.	15 (27.3%)	30 (54.5%)	-	5 (9.1%)	5 (9.1%)
Teachers use various assessment activities in the classroom to check students' mastery of course content.	17 (30.9%)	32 (58.2%)	-	3 (5.5%)	3 (5.5%)

Item 1 investigates teachers' explanations of success criteria for each objective and the relevance of tasks associated with those objectives. According to Table 5.3, 36.4% of teachers strongly disagree, and 47.3% disagree with the clarity of their explanations, a vital criterion for evaluating formative assessment practices. This indicates that teachers do not effectively clarify success criteria and task relevance.

Item 2 explores teachers' views on their communication of task criteria for completing assignments with students. Table 5.3 shows that 32.7% of teachers strongly disagree and 52.7% disagree with how teachers communicate these criteria. This suggests that teachers do not effectively communicate task criteria in the teaching and learning process.

Item 3 surveys teachers' practices in asking stimulating questions and prompts to encourage student reasoning and track individual progress. Table 5.3 shows that 20.0% of teachers strongly disagree and 58.2% disagree with these practices. This indicates that teachers do not effectively use challenging questions and prompts to support student reasoning and keep track of each student's progress.

Item 4 examines teachers' practices in reviewing students' work and providing timely, constructive feedback to enhance learning. Table 5.3 shows that 30.9% of teachers strongly disagree and 56.4% disagree with these practices, indicating that teachers do not effectively review student work or provide the necessary feedback for improvement.

Item 5 explores teachers' practices in seeking clarification about completed, ongoing, or future tasks. According to Table 5.3, 27.3% of teachers strongly disagree, and 54.5% disagree with these practices, suggesting that teachers do not effectively ask for clarification regarding tasks.

Item 6 surveys teachers' practices in using various assessment activities to evaluate students' mastery of course content. Table 5.3 shows that 3.09% of teachers strongly disagree and 58.2% disagree with these practices, indicating that teachers do not effectively use assessments to gauge student mastery. Overall, the quantitative data from items 1 to 6 suggest that formative assessment practices in the college are poor.

Table 5.4: Frequency and Percentage of Formative Assessment Practices from Classroom Observation

Statement	Observed with defined evidence	Observed with ideas for growth	Not observed or Evident	Not applicable to the lesson
Teachers clearly explain the success criteria for each objective and explain the purpose and relevance of all tasks for each learning objective.	-	-	5 (41.7%)	7 (58.3%)
Teachers communicate task criteria to complete given tasks with students in their teaching and learning process.	1 (8.3%)	1 (8.3%)	8 (66.7%)	2 (16.7%)
Teachers ask challenging questions and prompts to articulate students' reasoning	-	2 (16.7%)	-	10 (83.3%)

and keep track of each student's progress.				
Teachers examine students' work and provide timely, clear, constructive, and applicable feedback for the improvement of students' learning.	-	-	6 (50%)	6 (50%)
Teachers ask for clarification about what has been done, is being done, or will be done.	-	2 (16.7%)	7 (58.3%)	3 (25%)
Teachers use various assessment activities in the classroom to check students' mastery of course content.	-	1 (8.3%)	9 (75.0%)	2 (16.7%)

Item 1 investigates teachers' experiences with success criteria and the relevance of tasks for each learning objective. The classroom observation data show that 41.7% and 58.3% of data revealed that the practices of formative assessment were not observed or evident and not applicable to the lesson, respectively. This suggests that teachers do not clearly explain the success criteria and relevance of tasks for each learning objective.

Item 2 examines teachers' practices in communicating task criteria for completing assignments with students. As shown in Table 5.4, 66.7% of the classroom observation data indicated that these practices were not observed, and 16.7% were deemed not applicable to the lesson. Consequently, it can be concluded that teachers do not effectively communicate task criteria in their teaching and learning process.

Item 3 examines teachers' practices in asking stimulating questions and prompts to encourage students' reasoning and track their progress. As indicated in Table 5.4, 83.3% of the observation data revealed that these practices did not apply to the lesson. Consequently, it can be concluded that teachers do not effectively use challenging questions and prompts to support student reasoning and progress tracking.

The classroom observation under item 4 examines teachers' practices in reviewing students' work and providing timely, clear, constructive, and applicable feedback to enhance learning. As shown in Table 5.4, 50% of the observation data confirmed that this practice was not observed, while another 50% indicated that it did not apply to the lesson. Therefore, it can be concluded that teachers do not effectively examine students' work or provide the necessary feedback for improving students' learning.

The classroom observation under item 5 highlights teachers' practices regarding clarification of past, present, and future activities. According to Table 5.4, 58.3% of the observations indicated that such practices were not evident, while 25% deemed them not applicable to the lesson. Therefore, it can be concluded that teachers generally do not engage in clarifying what has been done, is being done, or will be done.

The classroom observation under item 6 examines teachers' use of various assessment activities to evaluate students' mastery of course content. Table 5.4 shows that 75.0% of observations indicated these practices were not evident, while 16.7% deemed them not applicable. Therefore, it can be concluded that teachers generally do not utilize assessment activities to check students' mastery of the material. As a result, the analysis

of teachers' classroom observation data revealed that teachers' formative assessment practices in BCE were poor.

Additionally, qualitative data were collected from department heads and academic program directors through focus group discussions.

Academic Program Directors (APDs) and Department Heads (DHs) were asked to describe their understanding of formative assessment during focus group discussions. The majority described it as follows:

> *"Formative Assessment is a type of assessment which is given throughout the teaching-learning process. Example: test, quiz, assessment, presentation (reflection)."* (APDs and DHs)

> *"It is an assessment for learning in every classroom instruction to achieve stated learning objectives, and we use classroom activities through peer discussion, questioning and answering, etc."* (APDs and DHs)

> *"It is a kind of assessment used to check whether the teaching and learning process has achieved its objectives or not (tests, oral questions, quizzes, etc.)."* (APDs and DHs)

> *"It is a process of recording students' results and academic progress; for example, quiz, test, correcting assignment."* (APDs and DHs)

In their description of formative assessment practices, the college APDs and DHs overlooked key aspects, particularly the necessity of constructive, immediate, and ongoing feedback for enhancing student learning. Furthermore, their expressions indicated that formative assessment is primarily seen as various tests used to determine what students have learned.

On the other hand, they described the teachers' practices of using formative assessment in their teaching and learning processes as follows:

> *"(…) there are gaps in providing feedback to students and conducting various types of formative assessments in teachers' teaching. Specifically, these gaps relate to the frequency and quality of formative assessments. Additionally, there is a lack of common understanding and agreement among teachers regarding the planning of formative assessments, as well as shortcomings in delivering ongoing, timely, and constructive feedback."* (APDs and DHs)

> *"(…) sharing learning aims, providing constructive and immediate feedback, and using various formative assessment strategies are rarely practiced."* (APDs and DHs)

> *"(…) Teachers' use formative assessment because it is mandatory. Without it, they cannot determine if students are achieving the learning objectives."* (APDs and DHs)

The focus group discussion with Academic Program Directors and Department Heads indicated significant gaps in teachers' use of formative assessment within teachers' teaching and learning processes. Both qualitative and quantitative analyses revealed that teachers' formative assessment practices in BCE to improve student learning and achievement were poor.

5.1 Challenges of Formative Assessment Practices Faced by Instructors and Students at BCE

From the teachers' questionnaire responses and focus group discussions, the challenges faced by college teachers in implementing formative assessment include:

- Lack of commitment from teachers to use formative assessment in their teaching.
- Insufficient and continuous feedback from teachers to enhance student learning and achievement.
- Students' limited understanding of formative assessment.
- Teachers' negative attitudes toward using formative assessment.
- Rigid curricula that do not allow for flexible classroom assessments.
- The college uses fixed assessment schemes.
- Large class sizes.
- Broad course content that is difficult to cover within a semester.
- Students' poor proficiency in the medium of instruction.
- Students' inadequate academic backgrounds.
- Lack of sufficient resources for effective formative assessment practices.

5.2 Variations in Formative Assessment Practices across the College's Various Fields of Study

A correlation test was conducted to examine the relationship between formative assessment practices across the college's various fields of study. The table below shows the correlation between these practices and the different fields of study.

Table 4.7a: Correlation between Formative Assessment Practices and the College's Various Fields of Study

Correlations										
			Existence of Formative Assessment Practices	**Kafinoono Department**	**Amharic Department**	**Dawrootsuwa Department**	**English Department**	**General Science Department**	**Env. Sci. Department**	**Maths Department**
Spearman's rho	Existence of Formative Assessment Practices	Correlation Coefficient	1.000	.244	.324*	.383**	.105	.835**	.259	.673**
		Sig. (2-tailed)	.	.072	.016	.004	.447	.000	.057	.000
		N	55	55	55	55	55	55	55	55
	Kafinoono Department	Correlation Coefficient	.244	1.000	-.202	.122	.198	.238	.053	.212
		Sig. (2-tailed)	.072	.	.138	.376	.147	.080	.703	.121
		N	55	55	55	55	55	55	55	55
	Amharic Department	Correlation Coefficient	.324*	-.202	1.000	.421**	-.054	.356**	-.030	.373**
		Sig. (2-tailed)	.016	.138	.	.001	.695	.008	.828	.005
		N	55	55	55	55	55	55	55	55
	Dawrootsuwa Department	Correlation Coefficient	.383**	.122	.421**	1.000	-.246	.379**	-.307*	.382**
		Sig. (2-tailed)	.004	.376	.001	.	.070	.004	.023	.004
		N	55	55	55	55	55	55	55	55
	English Department	Correlation Coefficient	.105	.198	-.054	-.246	1.000	.053	.508**	-.042
		Sig. (2-tailed)	.447	.147	.695	.070	.	.701	.000	.760
		N	55	55	55	55	55	55	55	55
	General Science Department	Correlation Coefficient	.835**	.238	.356**	.379**	.053	1.000	.129	.652**
		Sig. (2-tailed)	.000	.080	.008	.004	.701	.	.347	.000
		N	55	55	55	55	55	55	55	55
	Environmental Science Department	Correlation Coefficient	.259	.053	-.030	-.307*	.508**	.129	1.000	-.008
		Sig. (2-tailed)	.057	.703	.828	.023	.000	.347	.	.954
		N	55	55	55	55	55	55	55	55
	Mathematics Department	Correlation Coefficient	.673**	.212	.373**	.382**	-.042	.652**	-.008	1.000
		Sig. (2-tailed)	.000	.121	.005	.004	.760	.000	.954	.
		N	55	55	55	55	55	55	55	55
*. Correlation is significant at the 0.05 level (2-tailed).										
**. Correlation is significant at the 0.01 level (2-tailed).										

Table 4.7b: Correlation between Formative Assessment Practices and the College's Various Fields of Study

Correlations										
			Existence of Formative Assessment Practices	**Maths & Env. Science Department**	**Sport Science Department**	**IT Department**	**Moral Education Department**	**Social Studies Department**	**Citizenship Department**	**Basic Integrated Science Department**
Spearman's rho	Existence of Formative Assessment Practices	Correlation Coefficient	1.000	.896**	.624**	.971**	.583**	-.101	.662**	.555**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.463	.000	.000
		N	55	55	55	55	55	55	55	55
	Mathematics and Env. Science Department	Correlation Coefficient	.896**	1.000	.772**	.902**	.572**	-.170	.608**	.404**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.214	.000	.002
		N	55	55	55	55	55	55	55	55
	Sport Science Department	Correlation Coefficient	.624**	.772**	1.000	.675**	.597**	-.297*	.612**	.140
		Sig. (2-tailed)	.000	.000	.	.000	.000	.028	.000	.308
		N	55	55	55	55	55	55	55	55
	IT Department	Correlation Coefficient	.971**	.902**	.675**	1.000	.579**	-.077	.664**	.506**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.577	.000	.000
		N	55	55	55	55	55	55	55	55
	Moral Education Department	Correlation Coefficient	.583**	.572**	.597**	.579**	1.000	-.130	.741**	.171
		Sig. (2-tailed)	.000	.000	.000	.000	.	.344	.000	.213
		N	55	55	55	55	55	55	55	55
	Social Studies Department	Correlation Coefficient	-.101	-.170	-.297*	-.077	-.130	1.000	-.242	-.069
		Sig. (2-tailed)	.463	.214	.028	.577	.344	.	.075	.619
		N	55	55	55	55	55	55	55	55
	Citizenship Department	Correlation Coefficient	.662**	.608**	.612**	.664**	.741**	-.242	1.000	.230
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.075	.	.091
		N	55	55	55	55	55	55	55	55
	Basic Integrated Science Department	Correlation Coefficient	.555**	.404**	.140	.506**	.171	-.069	.230	1.000
		Sig. (2-tailed)	.000	.002	.308	.000	.213	.619	.091	.
		N	55	55	55	55	55	55	55	55
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

The correlation analysis in tables 4.7a and 4.7b shows Spearman's rho (r_s) values for formative assessment practices in the Kafinoono, Amharic, Dawrootsuwa, English, Environmental Science, and Social Studies departments as 0.244, 0.324, 0.383, 0.105, 0.259 and 0.101, respectively, all of which are below 0.5. This indicates a low correlation in these fields. Additionally, the p-values for Amharic, Dawrootsuwa, English, General Science, and Mathematics are 0.072, 0.016, 0.004, 0.000, and 0.057, respectively, with values below 0.05, indicating statistical significance in these areas.

In contrast, Spearman's rho (r_s) values for formative assessment practices in the Mathematics, Sports Science, Moral Education, Citizenship, and Basic Integrated Science departments are 0.673, 0.624, 0.583, 0.662, and 0.555, respectively. These values, ranging from 0.50 to 0.75, indicate a moderate to good correlation. Consequently, the correlation in these fields is considered strong. Furthermore, the p-value for all these fields is 0.000, which is less than 0.05, confirming that the results are statistically significant.

The Spearman's rho (r_s) values for General Science, Mathematics, Environmental Science, and Information and Communication Technology are 0.835, 0.896, and 0.971, respectively, indicating a high correlation in formative assessment practices. Additionally, the p-value for these fields is 0.000, which is less than 0.05, confirming that the results are statistically significant.

In addition to examining the correlation between formative assessment practices and the college's various fields of study, a correlation test was conducted, as shown in the following table.

H0: There is no correlation between formative assessment practices and the college's fields of study.

Ha: There is a correlation between formative assessment practices and the college's fields of study.

Table 4.8: The Correlation between Formative Assessment Practices and Students' Various Fields of Studies

Correlations				
			Existence of Formative Assessment Practice	**Students Department**
Spearman's rho	**Existence of Formative Assessment Practice**	Correlation Coefficient	1.000	.200**
		Sig. (2-tailed)	.	.004
		N	210	210
	Students Department	Correlation Coefficient	.200**	1.000
		Sig. (2-tailed)	.004	.
		N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).				

As shown in the correlation analysis Table 4.8, the p-value is lower than the conventional 5% ($p < 0.05$), indicating that the correlation coefficient is statistically significant. Therefore, the null hypothesis is rejected, and it can be concluded that there is a correlation between formative assessment practices and the college's various fields of study.

5.3 Regression Analysis

Table 4.9: The Parametric Estimates for the Analysis of Ordinal Regression between Formative Assessment Practices and Students' Various Fields of Studies

Parameter Estimates								
		Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**95% Confidence Interval**	
							Lower Bound	**Upper Bound**
Threshold	[Existence of FAP = 6]	-1.560	.590	6.996	1	.008	-2.716	-.404
	[Existence of FAP = 7]	-.875	.542	2.608	1	.106	-1.937	.187
	[Existence of FAP = 8]	.535	.535	1.000	1	.317	-.513	1.583
	[Existence of FAP = 9]	1.834	.553	11.014	1	.001	.751	2.917
	[Existence of FAP = 10]	2.762	.563	24.069	1	.000	1.659	3.866
	[Existence of FAP = 11]	3.094	.567	29.774	1	.000	1.983	4.206
	[Existence of FAP = 12]	4.301	.590	53.193	1	.000	3.145	5.457
	[Existence of FAP = 13]	4.845	.609	63.288	1	.000	3.652	6.039
	[Existence of FAP = 14]	5.805	.676	73.807	1	.000	4.481	7.130
	[Existence of FAP = 15]	7.091	.903	61.665	1	.000	5.321	8.860
Location	[Q1Department=1]	1.412	.687	4.220	1	.040	.065	2.760
	[Q1Department=2]	2.691	.690	15.198	1	.000	1.338	4.044
	[Q1Department=3]	2.201	.705	9.736	1	.002	.818	3.583
	[Q1Department=4]	2.570	.646	15.820	1	.000	1.304	3.837
	[Q1Department=5]	2.848	.712	16.016	1	.000	1.453	4.243
	[Q1Department=6]	2.035	.731	7.753	1	.005	.603	3.467
	[Q1Department=7]	2.050	.662	9.587	1	.002	.752	3.348
	[Q1Department=8]	1.767	.672	6.912	1	.009	.450	3.084
	[Q1Department=9]	2.185	.718	9.273	1	.002	.779	3.592

	[Q1Department=10]	3.052	.726	17.666	1	.000	1.629	4.476
	[Q1Department=11]	3.195	.717	19.885	1	.000	1.791	4.600
	[Q1Department=12]	2.126	.706	9.080	1	.003	.743	3.509
	[Q1Department=13]	3.295	.743	19.660	1	.000	1.839	4.752
	[Q1Department=14]	0[a]	.	.	0	.	.	.
	[Q2Gender=1]	-.076	.249	.093	1	.761	-.564	.412
	[Q2Gender=2]	0[a]	.	.	0	.	.	.
Link function: Logit.a. This parameter is set to zero because it is redundant.								

The parameter estimates shown in Table 4.9 above provide insights into the relationship between the existence of formative assessment practices and various factors, including department and gender. Overall, the analysis indicates a strong positive correlation between the existence of formative assessment practices and specific departments, while gender does not appear to influence these practices. This suggests that departmental performance significantly impacts the implementation of formative assessments.

5.4 Formative Assessment Challenges across the College's Various Fields of Study

To analyze the challenges of formative assessment across various fields of study, both quantitative and qualitative data were collected. The correlation analysis yielded a p-value of 0.03, which is less than 0.05, indicating statistical significance. Thus, the null hypothesis, which states that there are no challenges in implementing formative assessment, should be rejected. It can be concluded that there is a linear relationship between formative assessment challenges in the college's different fields of study.

5.5 Nonparametric Correlations

Table 4.10: The Correlation Table for the Analysis of Variation between Formative Assessment Practices and Students' Various Fields of Studies

Correlations				
			Formative Assessment Challenges	**Fields of studies in BCE**
Spearman's rho	Formative Assessment Challenges	Correlation Coefficient	1.000	.399**
		Sig. (2-tailed)	.	.003
		N	55	55
	Fields of studies in BCE	Correlation Coefficient	.399**	1.000
		Sig. (2-tailed)	.003	.
		N	55	55
**. Correlation is significant at the 0.01 level (2-tailed).				

The correlation analysis in Table 4.10 reveals a significant relationship between formative assessment challenges and the fields of study in BCE. The Spearman's rho (r_s) value is 0.399, with a p-value of 0.003, indicating a statistically significant correlation at the 0.01 level. This suggests a moderate positive correlation: as challenges in implementing formative assessment increase, there is a corresponding increase in the difficulties faced across different fields of study. Consequently, it can be concluded that addressing the challenges of formative assessment practice is essential for improving students' learning in these fields.

Furthermore, common challenges across the college's various fields of study include a lack of teacher commitment, insufficient feedback to enhance student learning, low frequency and quality of formative assessments, broad course content that cannot be covered in a semester, teachers' perceptions of formative assessment as time-consuming, large class sizes, and insufficient resources for effective implementation.

6. Discussions

The findings of this study revealed significant gaps in formative assessment practices across various fields of study at BCE that hinder effective student learning. The overall poor implementation of formative assessments is a cause for concern as research has demonstrated that well-implemented formative assessments can greatly improve students' learning and motivation (Johnson *et al.*, 2019; Li, 2016; Johnson *et al.*, 2019; Tan, 2013; Wafubwa, 2020; Yan and Pastore, 2022). Moreover, the study disclosed low motivation among students toward their teacher assessments. The findings of this study are in agreement with the findings of previous research: Widiastuti *et al.* (2020) studied that the dissonances between teachers' beliefs and practices of formative assessment in EFL classes. Similarly, the findings are found to be analogous with Arrafii and Sumarni (2018), who examined teachers' understanding of formative assessment. Teachers have a poor understanding and practices of formative assessment, and insufficient training in assessment. Furthermore, the study highlights that many teachers primarily perceive formative assessment as a series of assignments, tests, and quizzes, often viewing feedback merely as numerical scores. This limited perspective undermines the potential of formative assessment to foster a supportive learning environment. The results of this study are consistent with those of previous research (Carless, 2007; Morris *et al.*, 2021; van der Kleij, 2019). Research indicates that effective feedback should be timely, specific, and actionable, allowing students to understand their progress and areas for improvement (Cohen and Singh, 2020; Haughney *et al.*, 2020).

The study also found that challenges such as low teacher commitment, students' poor academic backgrounds and language proficiency, students' limited understanding of formative assessment and broad course content complicate the implementation of effective assessment practices. These challenges mirror the results of earlier findings, which suggest that teachers may feel overwhelmed and unable to implement effective formative assessments in large classes (Nicol and Macfarlance-Dick, 2006), students' poor academic backgrounds and language proficiency issues further complicate the landscape of formative assessment (Andersson and Palm, 2018; Evans *et al.*, 2020; Herman *et al.*, 2015).Interestingly, the study also found a positive correlation between teachers' formative assessment practices and students' motivation. This aligns with research indicating that when teachers engage in formative assessment, students are more likely to feel motivated and take ownership of their learning (Hameed and Akhter, 2020; Sunra and Samtidar, 2023). The varying strengths of correlation across different fields of study suggest that some departments showed better effective formative assessment than others, highlighting the importance of context in educational practices (Leenknecht *et al.*, 2021).In conclusion, while formative assessment holds significant potential to enhance student motivation and academic achievement, the study underscores the need for comprehensive strategies to address existing barriers. Professional development for teachers, increased awareness of effective feedback practices, and resource allocation are critical to improving formative assessment implementation. By fostering a more

supportive environment for formative assessment, colleges can enhance student learning outcomes and motivations across all fields of study.

The findings of this research on formative assessment practices and their challenges provide several important insights into the field of education. They offer a comprehensive analysis of how formative assessment is currently implemented across various domains, highlighting significant gaps and variations in practices in the college and informing future training and policy development. The research also emphasizes the impact of formative assessment on student motivation, revealing a positive correlation between effective practices and increased motivation. It underscores the role of assessment not merely as a measurement tool but as a crucial component of the learning process that can enhance student engagement and learning. Additionally, the study identifies specific barriers to effective formative assessment, such as low teacher commitment, insufficient feedback, and challenges related to class size and course content. This detailed understanding of these challenges can guide targeted interventions to improve formative assessment practices. Finally, the study offers context-specific insights and provides a framework for addressing the identified challenges. It suggests the need for professional development for teachers, enhanced understanding of formative assessment among students, and adequate resource allocation.

7. Conclusions

The research on formative assessment practices and their challenges at Bonga College of Education highlights critical insights into the current state of assessment within the institution. The findings indicate that formative assessment practices are poorly implemented across various fields of study, resulting in significant gaps that hinder student learning and motivation. Low student motivation toward teacher assessments points to broader engagement issues, primarily arising from the perception of assessments as mere grading tools rather than opportunities for learning enhancement. Furthermore, challenges such as insufficient teacher commitment, students' limited understanding of formative assessment, broad course content, students' poor academic backgrounds, language proficiency issues, lack of continuous feedback, and large class sizes worsen the difficulties in effectively utilizing formative assessment. The study also identifies the correlation between formative assessment practices and students' motivation and academic achievements.

7.1 Recommendations

Based on the findings of this study, the researchers recommend the following:

- **Teacher Support:** Provide training, resource-sharing opportunities, and necessary tools to help teachers effectively implement formative assessment, ensuring it enhances student learning and achievements.
- **Feedback Improvement:** Address the lack of effective and continuous feedback from teachers by offering ongoing consultative training on formative assessment

characteristics and classroom practices, encouraging teachers to reflect on their practices and challenges.

- **Student Training:** Train students on the basic concepts of formative assessment to improve their understanding and prepare them for future careers.
- **Regular Discussions**: Facilitate regular discussions in academic meetings among department heads, academic program directors, and teachers about the importance of implementing formative assessment, despite its challenges, to enhance student learning and motivation.
- **Assessment Schemes**: Consult with academic staff to develop assessment schemes that meet teachers' needs and support effective formative assessment implementation.
- **Curriculum Evaluation**: Encourage teachers to evaluate course content and curriculum materials, identifying challenges related to time, resources, and student abilities, and submit their findings to the Ministry of Education for future curriculum development.
- **Material Design**: Educational curriculum designers and stakeholders should create materials based on feedback from college teachers to improve teacher training programs and overall education quality.
- **Language Proficiency Training**: Implement continuous training for all students through the well-organized English Language Instruction Center (ELIC) to enhance their language proficiency.
- **Final Year Training**: Train final-year students on the concepts, applications, and benefits of formative assessment to ensure they grasp its fundamentals.
- **Resource Provision**: Provide the necessary resources to support the effective implementation of formative assessment in the college.

Ethical Statement

Hereby, the authors consciously assure that for the manuscript: Formative Assessment Practice and its Challenges on Trainee's Learning, Motivation and Academic Achievement at Bonga College of Education: South West Ethiopia Region, Ethiopia the following is fulfilled:

1) This material is the authors' own original work, which has not been previously published elsewhere.
2) The paper is not currently being considered for publication elsewhere.
3) The paper reflects the authors' own research and analysis in a truthful and complete manner.
4) The paper properly credits the meaningful contributions of co-authors and co-researchers.
5) The results are appropriately placed in the context of prior and existing research.
6) All sources used are properly disclosed (correct citation). Literally copying of text must be indicated as such by using quotation marks and giving proper references.

7) All authors have been personally and actively involved in substantial work leading to the paper, and will take public responsibility for its content.

Acknowledgements
All through the writing of this research, we have acquired a great deal of support and assistance. We would like to acknowledge and give our warmest thanks to Bonga College of Education which made this work possible. It allows us to use the resources needed for the successful completion of this work. Furthermore, we would like to thank all the participants in our study. Finally, we would like to thank the research and community service directorate, who has supported us throughout the entire process, both by keeping us harmonious and helping us put pieces together.

Authors Contribution
MTG and SA: Designed the research, executed the research, drafted the manuscript, and edited it.

Funding Statement
Research-conducting support was provided by Bonga College of Education, Ethiopia.

Consent Statement
The authors have received a consent letter from the institution in which the research is carried out.

Computing Interests Statement
The authors declare that there are no competing interests.

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