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Article

Challenges and Effectiveness: Teacher and Student Perceptions of Formative Assessment Practice: Case study Obekkham Secondary School

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ABSTRACT

This study explores the challenges and effectiveness of formative assessment practices from the perspectives of teachers and students at Obekkham Secondary School to improve teaching and learning outcomes. The research employed a quantitative approach, using structured questionnaires to gather data from 24 science teachers and 700 students across grades 7 to 9 (using the Taro Yamane method). This research highlights the urgency of addressing the practices at the secondary level. The study focused on implementing formative assessments, feedback, and alignment with curriculum objectives. The findings indicate that formative assessments positively influence student motivation, engagement, and performance. However, challenges such as time constraints, inadequate training, and difficulties in adapting assessments to diverse learner needs exist. These results show the importance of immediate professional development for teachers and the adoption of adaptive strategies to integrate formative assessment practices into a more effective and inclusive secondary education system.

INTRODUCTION

Cambodia is in the middle of changes in the field of education that meet the global context and educational needs. The education sector in Cambodia plays an important role for human resource development as a catalyst for improvement in the education system (MoEYS, 2021a). Improving the quality of teaching is part of improving the quality of students' learning, which the Ministry of Education, Youth, and Sports is paying close attention to understand the proper use of teaching methods and teaching strategies in assessing the learning process to identify the level of ability, needs, attitudes, and misconceptions of students and provide feedback to help improve student learning to achieve better results, especially for students who are slow to learn, Student-centered teaching is very complex, requiring teachers to be intelligent, responsible, well-organized, and flexible in real-world teaching and learning processes (MoEYS, 2021b). In the learning process, engaging students in the classroom through using materials and the right teaching methods does not work well enough. For the teaching and learning process to be good, teachers need to play an important role as facilitators rather than just transferring knowledge, so teachers need to have a wide range of knowledge, not just content knowledge of the lesson but specific knowledge of teaching and learning methods

(Purnama, 2015). Student-centered approach is very effective, especially knowledge on how to assess student cognition. Through assessing students comprehension, teachers can identify students' level of knowledge, ability, confusion, and ability to solve problems. Reflection on participatory attitudes, student achievement, and teacher instruction. There are two types of assessments: stage assessment and total assessment, both formal and informal. Therefore, to decide whether a student should be promoted or retrained, the teacher must evaluate the student to find out the student's abilities (knowledge, behavioral skills), then apply their knowledge and skills to solve real-world problem in learning and information about students' progress in learning specific subjects (Dong et al., 2019).

Globally, the formative assessment has outstanding value in that it provides instant feedback, instruction to the student's individual needs, and support for the development of problem-solving and critical thinking skills (Qadir et al., 2020; To, 2022). Formative assessment is a range of strategies that include questioning, observation, peer assessment, self-assessment, and project-based activities (Black & London, 2010). Research also reports the role of formative assessment in terms of its success in motivating students, improving students' performance, and promoting equity in diverse classrooms (Montenegro & Jankowski, 2017; Ozan & Kıncal, 2018).

While it is a fact that formative assessment has many benefits, it is also true that we see many issues. Teachers report time constraints, lack of training, and the difficulty of aligning formative assessment with curriculum goals and diverse student needs (Eriksson et al., 2018; Schildkamp et al., 2020). In the case of Cambodia, which has an educational policy that puts forward formative assessment and student-centered learning, we see that there is very little research done on how these practices play out in the secondary science education setting.

This study explored the perceptions and practices of teachers and students in a Cambodian secondary school setting. We are taking a quantitative approach to put forth locally relevant data, which in turn will shed light on the issues, benefits, and implementation of formative assessment in science classes. In doing so, we are to put together a more in-depth picture of formative assessment in a Cambodian setting, and in the process, we will be able to use these insights to improve the teaching and learning practice.

Formative assessment (FA) implementation in classrooms offers several difficulties that impact its efficacy and practical integration. According to Rakoczy et al., (2019), there is an excessive dependence on summative evaluations, primarily through standardized tests, which restricts the application of formative assessment techniques that could improve learning by giving students frequent feedback on their progress. Many teachers continue to rely on traditional, paper-and-pencil approaches to monitor student development, which can be easier to manage within existing routines but may need to be more effective in adapting instruction responsively (Tefera, 2014). Practical barriers also hinder the shift to formative assessment, as teachers find these practices time-consuming, requiring substantial changes in habits and student participation (Andersson & Palm, 2018). According to research indicated that some students increased stress due to frequent assessments, potentially impacting their academic achievement (Singh, 2014.) . Additionally, managing classroom dynamics and aligning formative practices within a fixed curriculum framework were extremely complicated (Penuel, 2018). This study addresses this gap by exploring the perceptions and practices of both teachers and students in a Cambodian secondary school context by using quantitative methods. The research provides new and relevant data on the utilization of formative assessment in science classes. And the study also highlights specific challenges faced by Cambodian educators, offering insights that can inform future improvements in teaching practices. Moreover, the research contributes to a deeper understanding of formative assessment in a previously understudied context.

The study aimed to investigate how staged assessments, which incorporate various content and activities to enhance teaching, support student engagement, motivation, and

achievement in the classroom, and encourage better student learning outcomes. It also examined the teacher's challenges in implementing these assessments in secondary science education. Research Question: How do teachers and students perceive the effectiveness of formative assessment techniques in supporting student motivation and achievement? and what is the difference between teacher and student perceptions of the formative assessment?

METHODS

Research design

The study utilized a quantitative research design (Creswell, 2013). The purpose of this study involved a quantitative analysis of the secondary school teacher's and students' perspectives of formative assessment practices at the beginning and during the learning process. This study consists of a questionnaire to evaluate and track the implementation of the formative assessment practice in the classroom at Obekkham Secondary School. This design was developed to collect data at one time about participants' attitudes, beliefs, and practices.

Instrument

A questionnaire is a useful tool that researchers use to gather primary data from participants on various topics. This data includes their opinions, knowledge, interests, and perceptions of specific issues. The questionnaire usually contains both open-ended and closed-ended questions. For instance, the questionnaire in this study is about perceptions of formative assessment in science topics. The teacher's questionnaire used in this study was specifically designed to gather information about formative assessment activities across the five phases of the formative assessment cycle. The questionnaire had 44 elements that were rated on a five-point Likert scale, ranging from 'almost never' (0) to 'almost usually' (1). These items were similar to the observable items in the teacher questionnaire, but they were written from the perspective of the student. The student questionnaire also asked about their background factors, such as gender, age, grade level, and type of education. This questionnaire tool was adopted from (Veugen et al., 2021).

Participants

1. Teacher

The participants in this study involved Obekkham secondary school, with science teachers in physics, chemistry, biology, and earth science selected to participate. There are 24 teachers (male 12 female 12). The teacher education system has separed into two parts: + 12 2and .4 + 12The selection process involved choosing teachers with experience in teaching science at grades 7to .9

2. Student

As part of a study, each teacher was asked to select one class that applied formative assessment by using Taro Yamane (1967) developed a method for determining the appropriate sample size to ensure a representative sample of a population. This method calculates the required sample size based on a given population size and a specified margin of error (MOE). The formula is: $n = \frac{N}{1+N(e)^2}$

Where:

n = Required sample size
N = Total population size
e= Margin of error (or level of accuracy)

In this case, the margin of error is set at 9%, corresponding to a 91% confidence level. This means the range of true values for the population is projected with 91% confidence based on the selected sample. By using this method, a representative sample is ensured, making it a reliable approach for statistical analysis and research. In total, 26 teachers and 700 students completed the student FA questionnaire. Out of these students, 300 were male and 400 were female, with ages ranging from 11 to 18 years old. The students varied in terms of grade level,

type of education, and subject field, based on their respective teachers. It should be noted that all students were required to complete the questionnaire.

Data Collection Procedure

The questionnaire was designed to gather quantitative data on teachers' perceptions of factors influencing Formative Assessment. It included questions about participant profiles, including gender, age, teaching role, and subjects taught.Teachers were asked to assess their agreement with various statements regarding assessment using a five-point Likert scale, ranging from "strongly agree" (1) to "strongly disagree" (0). This scale made it possible to clear understanding of their perceptions and provided valuable insights into their attitudes towards the assessment form.

Data Analysis

The chart provides an overview of teaching practices, student demographics, and teacher qualifications in a lower secondary school, likely examining how these factors influence educational outcomes or assessment style. The study population comprises both teachers and students. Gender distribution is nearly equal across both groups, with a slight female majority among teachers. Students are predominantly from Grade 7 to 9, with Grade 7 having the largest representation. Teachers are assigned to these grades, covering the entire lower secondary range. Most teachers hold advanced "12+4" qualifications and have undergone extensive 16-year training programs. The curriculum primarily focuses on scientific subjects like physics, chemistry, biology, and earth science. All teachers are from Obekkhaom secondary school, suggesting a focus on institutional teaching practices. The study involves both shared and distinct formative assessment (FA) classes, indicating varied approaches to assessment implementation. Students are primarily aged 13 to 16, aligning with typical lower secondary school demographics.

The researchers analyzed the responses from the participants using a Likert scale to evaluate teacher`s perceptions in four categories: lesson planning & critirial, assessment & feedback, student engagement & self-reflection, and adaptability in teaching. For evaluate student`s perceptions in five categories: teacher`s role in study planning, Engagement & explanation, feedback & assessment, reflection & self-improvements, and encourageing independent learning. For every means produced with the Statistical Package for Social Sciences (SPSS) 25.0 were utilized (Mom et al., 2024). The maximum mean score in each ordinal category were linked to a particular interpretation, and the results were presented as mean values for the overall scale, subscales, or items with standard deviation (Reth et al., 2024).

RESULTS AND DISCUSSION

Result

Table 1: provides descriptive statistics for the data collection, summarizing demographic and educational background information for both teachers and students. Gender Distribution: For teachers: Fairly balanced gender distribution female = 12 (52.2%); Male = 11 (47.8%), Students: Nearly equal representation female = 190 (49.4%); Male = 195 (50.6%). Student Grade Levels: Majority of students are in Grade 7 (39.5%), followed by Grade 8 (35.1%) and Grade 9 (25.5%). Teachers by Teaching Grade: Most teachers handle multiple grades, with Grade 8 = 9 teachers (39.1%); Grade 7 = 8 teachers (34.8%); Grade 9 = 6 teachers (26.1%). Teacher Education Level & Training: Education Type: Majority have 12+4 education level (Bachelor’s degree equivalent) (78.3%). A few have 12+2 education level (Associate’s degree equivalent) (17.4%). Only one teacher has a 9+2 qualification (4.3%). Education Training System: Most teachers trained under the 16-year system (56.5%). Some completed 14-year (17.4%) and 18-year (17.4%) systems. Teacher Subject Specialization: STEM-focused distribution: Physics = 9 teachers (39.1%); Biology = 7 teachers (30.4%); Chemistry = 6 teachers (26.1%); Earth Science = 1 teacher (4.3%). Teacher Experience: Majority are early-career teachers: < 5 years = 15 teachers (65.1%) indicate a relatively young teaching workforce.

6-15 years = Only 2 teachers (8.8%). > 16 years = 6 teachers (26.1%) a minority of highly experienced teachers. Student Age Distribution: Most students are 13-14 years old (52.5%), aligning with middle school grades. Other groups: 15-16 years = 36.4%, 11-12 years = 7% 17-18 years: 4.2%.

Table 1: Overview of Descriptive Statistic of The Data Collection (Teacher and Student)

Descriptive		Teacher		Student	
		n	(%)	n	(%)
Gender	Female	12	52.2	190	49.4
	Male	11	47.8	195	50.6
Grade	Grade 7			152	39.5
	Grade 8			135	35.1
	Grade 9			98	25.5
Teaching lower secondary classes	7	8	34.8		
	8	9	39.1		
	9	6	26.1		
	9+2	1	4.3		
Education type	11+1	0	0		
	12+2	4	17.4		
	12+4	18	78.3		
	14+1				
Education training system	12	2	8.8		
	14	4	17.4		
	16	13	56.5		
	18	4	17.4		
Subject	Physics	9	39.1		
	Chemistry	6	26.1		
	Biology	7	30.4		
	Earth science	1	4.3		
School	OBK	23	100		
FA implementation approach	Shared FA class				
	Different FA class				
Teacher's years of experience	< 5 years	15	65.1		
	6 – 15 years	2	8.8		
	> 16 years	6	26.1		
Student age	11-12 years			27	7
	13-14 years			202	52.5
	15-16 years			140	36.4
	17-18			16	4.2

Table 2: indicates the results of a teacher-focused formative assessment (FA) questionnaire, showing the mean scores and standard deviations (SD) for various activities related to lesson planning, assessment methods, student engagement, and feedback practices. Lesson Planning & Criteria Setting: Teachers show strong engagement in lesson planning (e.g., creating lesson plans: Mean = 0.83, SD = 0.14). Clarity in lesson plans is well-practiced (Mean = 0.78, SD = 0.17). Lower scores for presenting plans to students (e.g., annual plan presentation: Mean = 0.61, SD = 0.24). Assessment & Feedback: Use of diverse assessment methods is common (Mean = 0.83, SD = 0.16). Teachers frequently provide feedback and ask students to revise their work (Mean = 0.84, SD = 0.13). Emphasis on both formal (tests, presentations) and informal (homework, observation) assessments. Student Engagement & Self-Reflection: Teachers encourage students to explain their work (Mean = 0.75, SD = 0.15) and share it with peers (Mean = 0.76, SD = 0.17). There is moderate support for student self-reflection (Mean = 0.77, SD = 0.16). Lower scores for encouraging students to create personal study plans (Mean = 0.62, SD = 0.20). Adaptability in Teaching: Some reluctance to adjust

lesson plans when objectives are not met (Mean = 0.63, SD = 0.25). Teachers are confident in facilitating next steps in learning (Mean = 0.82, SD = 0.15). The data suggests that while teachers are highly engaged in lesson planning, assessments, and feedback, there is room for improvement in student participation, self-directed learning, and adaptability when lesson objectives are not met. The high standard deviations in some areas indicate variability in teacher practices.

Table 2: Teacher FA Questionnaire, and mean scores of all Teachers (n = 23) on FA activities

Activity	Mean	SD	Notify
1. I created a lesson plan for the next lesson	0.83	0.14	Strongly Agree
2. I have developed an annual lesson plan for the long term.	0.75	0.14	Agree
3. I create clear criteria in the lesson plan.	0.78	0.17	Agree
4. I create an appropriate lesson plan, focusing on the curriculum.	0.86	0.14	Strongly Agree
5. I can identify the confusing provisions contained in the text of the lesson	0.75	0.18	Agree
6. I present the content of the lesson plan to students	0.66	0.23	Agree
7. I present the annual plan to the students.	0.61	0.24	Agree
8. I discuss the importance of lesson plans with students	0.67	0.21	Agree
9. I regularly check to see if students understand the lesson plan or lesson content.	0.74	0.20	Agree
10. I ask students to create a personal study plan.	0.62	0.20	Agree
11. I discuss the task criteria with the students in detail	0.72	0.17	Agree
12. I give examples when doing something.	0.80	0.19	Agree
13. I use different assessment methods (homework assignments, oral questions, group discussions, short test presentations, feedback, etc.) to determine students' knowledge and abilities.	0.83	0.16	Strongly Agree
14. I chose a step-by-step assessment method that fits the lesson plan.	0.80	0.16	Agree
15. I use formal methods of stage assessment, such as short tests, oral exams, book editing, presentation presentations, and group discussions.	0.81	0.18	Strongly Agree
16. I use informal methods of phase assessment, such as questioning, homework, and observation.	0.78	0.17	Agree
17. I use this assessment to understand students' erroneous provisions.	0.76	0.17	Agree
18. I ask students to show what they have learned.	0.77	0.14	Agree
19. I ask students to explain the answers to their assignments.	0.75	0.15	Agree
20. I ask students to share the answer to the assignment with the whole class.	0.76	0.17	Agree
21. I know the strengths of each team.	0.78	0.12	Agree
22. I know the improvement of each team.	0.82	0.16	Strongly Agree
23. I know the strengths of each student.	0.78	0.16	Agree
24. I know the improvement of each student.	0.78	0.17	Agree
25. Teachers identify confusing rules related to content.	0.72	0.17	Agree
26. I spend a lot of time analyzing student work.	0.79	0.18	Agree
27. I ask students to review their assignments based on the criteria set.	0.69	0.20	Agree
28. I let students review tasks with friends, focusing on the criteria.	0.70	0.17	Agree
29. I review students' work by focusing on defined criteria.	0.80	0.10	Agree
30. I show the strengths and weaknesses of each team.	0.80	0.13	Agree
31. I give improvement points to each team.	0.83	0.11	Strongly Agree
32. I show the good points of the students with the students themselves.	0.78	0.12	Agree
33. I show the improvement of each student with the students themselves.	0.73	0.14	Agree
34. I let students discover their own strengths and weaknesses.	0.77	0.16	Agree
35. Let me understand each other's strengths and weaknesses.	0.74	0.16	Agree
36. I give feedback while students do something.	0.80	0.12	Agree
37. I ask students to edit assignments after receiving feedback.	0.84	0.13	Strongly Agree
38. I provide materials to students in group discussions.	0.77	0.16	Agree
39. I will not use teaching materials or planned goals when learning goals are not achieved.	0.63	0.16	Agree

Activity	Mean	SD	Notify
40. I do not continue to follow the lesson plan when the objective or goal is not achieved.	0.63	0.25	Agree
41. I facilitate the next step in the learning process.	0.82	0.15	Strongly Agree
42. I encourage students to make their own plans for the next step of the task.	0.75	0.14	Agree
43. I ask students to discuss and find additional points or ideas to develop better work.	0.78	0.20	Agree

Noted: 0.00-0.20 = Strongly Disagree, 0.21-0.40 = Disagree, 0.41-0.60 = Neutral , 0.61-0.80 = Agree, 0.81-1.00 = Strongly Agree

Table 3: reveals the results of a student-focused formative assessment (FA) questionnaire, showing the mean scores and standard deviations (SD) for various teacher-led activities related to lesson planning, student engagement, feedback, and self-reflection. Teacher's Role in Study Planning: Students acknowledge that teachers present study plans (Mean = 0.70, SD = 0.20) and discuss their importance (Mean = 0.72, SD = 0.20). However, fewer students feel encouraged to create their own study plans (Mean = 0.64, SD = 0.23), indicating a potential gap in fostering independent learning. Engagement & Explanation: Teachers effectively illustrate tasks with examples (Mean = 0.83, SD = 0.17). Students feel encouraged to show what they've learned (Mean = 0.77, SD = 0.19) and explain their answers (Mean = 0.74, SD = 0.21). Less frequent is the practice of sharing answers with the whole class (Mean = 0.63, SD = 0.24), suggesting limited peer learning. Feedback & Assessment: Teachers assess students based on clear criteria (Mean = 0.78, SD = 0.19). Teachers effectively highlight strengths (Mean = 0.83, SD = 0.19) and areas for improvement (Mean = 0.82, SD = 0.19). Individual discussions on student strengths (Mean = 0.67, SD = 0.23) and improvement areas (Mean = 0.68, SD = 0.23) are slightly weaker, indicating room for more personalized feedback. Student Reflection & Self-Improvement: Teachers provide students time to reflect on strengths and weaknesses (Mean = 0.74, SD = 0.21). Students are encouraged to analyze their own and peers' strengths/improvements (Mean = 0.73, SD = 0.21). Teachers actively provide feedback during tasks (Mean = 0.79, SD = 0.19) and request revisions based on feedback (Mean = 0.77, SD = 0.19). Encouraging Independent Learning: Students feel supported in taking the next steps in learning (Mean = 0.76, SD = 0.17). Teachers encourage students to develop next steps themselves (Mean = 0.81, SD = 0.17). Students are motivated to discuss improvements with peers (Mean = 0.82, SD = 0.19).

Comparison with Teacher Data (Table 2)

Alignment in Feedback & Assessment: Both teachers and students acknowledge strong use of feedback and assessment strategies. Student Independence Needs Improvement: Teachers report encouraging students to create study plans (Mean = 0.62 in Table 2), but student responses indicate they rarely create their own (Mean = 0.64 in Table 3). Peer Interaction is Limited: Both datasets suggest that students rarely share their answers with peers (Mean = 0.63 in Table 3, similar trend in Table 2). Teachers provide clear assessments, structured feedback, and encourage self-reflection. More emphasis is needed on student independence in study planning and peer learning. Encouraging students to share answers, discuss work with peers, and develop study habits can enhance engagement.

Table 3: Student FA Questionnaire, and mean scores of all Student (n = 385) on FA activities

Activity	Mean	SD	Notify
1. Teacher presents a study plan for students	0.70	0.20	Agree
2. Teachers show the importance of study plans with students.	0.72	0.20	Agree

Activity	Mean	SD	Notify
3. Teachers always check to see if students understand the lesson plan.	0.75	0.22	Agree
4. Teacher let me create my study plan.	0.64	0.23	Agree
5. Teacher gives an example to illustrate the task.	0.83	0.17	Strongly Agree
6. Teacher let me show you what I learned.	0.77	0.19	Agree
7. Teacher let me explain my answer or assignment.	0.74	0.21	Agree
8. Teacher let me share the answer with the whole class.	0.63	0.24	Agree
9. Teacher asked me to review my work by focusing on the criteria.	0.71	0.20	Agree
10. Teacher asked me to cooperate in supervising the work with friends, focusing on the criteria.	0.73	0.18	Agree
11. Teacher supervises my work by focusing on clearly defined criteria.	0.78	0.19	Agree
12. Teacher shows the strengths of each team.	0.83	0.19	Strongly Agree
13. Teacher points out the improvement points for each group.	0.82	0.19	Strongly Agree
14. Teacher discusses my good points with me	0.67	0.23	Agree
15. Teacher discusses my improvement points with me.	0.68	0.23	Agree
16. Teachers give me time to think about my strengths and weaknesses.	0.74	0.21	Agree
17. Teachers make me think of the good points and points of improvement between each other.	0.73	0.21	Agree
18. Teacher gives feedback while doing something.	0.79	0.19	Agree
19. Teacher asked me to edit the assignment after receiving the feedback.	0.77	0.19	Agree
20. Teacher provided me with materials for the group discussion.	0.68	0.22	Agree
21. Teachers facilitate the next step in the learning process.	0.76	0.17	Agree
22. Teachers encourage me to create the next step of the assignment myself.	0.81	0.17	Strongly Agree
23.Teacher asked me to discuss finding additional points or ideas for the next task.	0.82	0.19	Strongly Agree

Noted: 0.00-0.20 = Strongly Disagree, 0.21-0.40 = Disagree, 0.41-0.60 = Neutral , 0.61-0.80 = Agree, 0.81-1.00 = Strongly Agree

Discussion

The results from the study on student and teacher perceptions of formative assessment practice indicated that generally teacher has positive perceptions of the usefulness of formative assessment of their students in the classroom. The study's findings provide a comprehensive analysis of teaching practices within the context of established research on lesson planning, assessment, feedback, student self-reflection, collaborative learning, and instructional flexibility. Teachers display a notable commitment to both short-term and long-term lesson planning, evidenced by high mean scores on curriculum-focused planning (mean = 0.86). This aligns with Rusznyak et al., (2011) pedagogical content knowledge theory, which stresses the importance of aligning lesson plans with curriculum goals while considering student needs. Schmoker (2019) further reinforces the need for transparent learning objectives to help students understand the lesson's purpose, suggesting an area where teachers could improve. Straessle (2014) Planning contributes to a coherent learning structure, enhancing students' overall outcomes in effectively communicating lesson goals to students. Additionally, the results demonstrate teachers' commitment to formative assessment practices, utilizing both formal and informal assessments to monitor and adjust teaching in response to student progress (mean = 0.80). Oktavia (2021) highlight the critical role of ongoing assessments in enhancing student learning, while Cohen et al., (2020) emphasizes the importance of timely, actionable feedback, which is evident in the high scores for feedback in this study. Teachers encourage self-reflection (mean = 0.74) and support students in creating personal study plans, fostering metacognitive skills that align with Azevedo et al., (2012) theory of self-regulated learning. Iqbal et al., (2024) also underscores that self-reflection improves students' ability to understand and correct errors, promoting better learning outcomes. Yet, the moderate scores in self-reflection practices suggest there is room to further enhance these skills. The study also highlights collaborative learning and peer feedback as areas where teachers actively engage students (mean = 0.75 for sharing answers, mean = 0.74 for peer feedback). Research by Wigal

(2007) indicates that peer feedback supports critical thinking and interpersonal skills, while Parsons et al., (2018) emphasize the cognitive and social benefits of collaborative learning. Teachers demonstrate flexibility in adapting lesson plans when learning objectives are unmet (mean = 0.80), Wanner & Palmer (2015) similarly finds that adaptable teaching supports diverse learning paces, suggesting that such flexibility is valuable for achieving learning goals. Finally, the study's findings on feedback and motivation show that teachers provide both positive and constructive feedback, aiding students in recognizing their strengths and improvement areas (mean = 0.80 for discussing strengths). Malecka et al., (2023) Show that positive feedback fosters intrinsic motivation, enhancing performance and commitment. Overall, this finding is critical in Cambodia's educational landscape because it highlights the emphasis on rote learning and teacher-centered methods, which limit opportunities for student activities and reflective practices. The study not only confirms patterns noted in other research but also underscores the urgency of shifting towards more student-centered pedagogies that empower students to take a more active role in their learning. Moreover, it aligns with Cambodia's current educational reforms aimed at improving teaching quality and student engagement. Thus, this research provides practical insights that can inform policy, teacher training programs, and curriculum development, contributing to ongoing efforts to strengthen the Cambodian education system.

CONCLUSION

The present study demonstrates that teachers involved in it use effective teaching practices, particularly lesson planning, assessment methods, feedback, and adaptability. These methods positively contribute to student motivation and engagement. However, specific areas for improvement were also identified, including enhancing the clarity of lesson goals, fostering student self-reflection, and expanding collaborative learning and peer feedback practices. Educators are encouraged to take actionable steps to improve formative assessment practices by clearly defining the learning objectives, facilitating student self-assessment, and promoting peer interaction. Additionally, targeted training programs can support teachers in integrating the formative assessment methods to ensure that students actively engage and address diverse learning needs.

According to the result of this study, there are many good points in the teaching and learning process, but there are still some shortcomings, such as a small sample size, which may not fully capture the diversity of teaching practices across different Cambodian schools. Furthermore, this research was conducted in a specific educational context within Cambodia; the findings may not be generalizable to other regions or countries.

To address these limitations and expand the findings, we recommend that future researchers increase the sample size and include schools from various regions and educational levels in Cambodia. Additionally, comparative studies with other Southeast Asian countries help highlight regional similarities and differences. Finally, future researcher explores the impact of targeted teacher training programs to improve the bridge gap between educational policy, classroom practice, and student outcomes.

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Ethical Considerations

Ethics approval was obtained from the institute ethics committee, and written informed consent was taken from all participating students. The researchers ensured the anonymity of responses and followed ethical guidelines throughout the study.

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