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Journal of General Education and Humanities
Vol. 5, No. 1, February 2026, pp. 15 – 35, https://doi.org/10.58421/gehu.v5i1.709
ISSN 2963-7147

Interactive Teaching and Student Engagement: a case study at Preah Sihamoniraja Buddhist University (PSBU)

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Article Info

Article history:

Received 2025-09-13
Revised 2025-10-31
Accepted 2025-11-05

Keywords:

Interactive Teaching
Student Engagement

ABSTRACT

This study investigates the impact of interactive teaching methods on student engagement in English classes at Preah Sihamoniraja Buddhist University (PSBU) in Phnom Penh, Cambodia. This research aims to investigate how the use of more student-centred and interactive teaching methods can encourage students to become more involved and active in class, even when the class is perceived as boring, as traditional lecture-centred methods often are. The study used a quantitative method and collected data through structured questionnaires. Likert-scale questions were used to assess their thoughts and level of involvement in class; 63 students responded. Using the mean score and standard deviation, it was found which part of this interaction had the greatest effect on student involvement. The data clearly showed that this interactive teaching method enhances both student engagement and enthusiasm for learning new subject matter. The number of students who engaged in critical thinking was still insufficient in this experiment, a finding that suggests a need for more exercises that require them to solve problems or think more critically, though interactive teaching is effective.

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1. INTRODUCTION

In recent years, special instruction in English—a teaching method designed to enhance students' educational experience—has garnered considerable attention. Instruction is participative and less frequently reliant on rote memory in Cambodia. Students provide helpful critiques of lectures, or the instructors frequently pose inquiries; this is encouraged since the instructor values argument and discussion over passive silence [1]. Students now need to speak English to pursue academic studies in many countries where English is not the primary language, which significantly enhances their professional prospects. The quality of interactive teaching methods must be the primary focus, enhancing both the methods and student engagement. In addition, the education strategic plan 2014–2018 has taken another

step toward improvement, creating a framework for quality assurance in schools' responses to student engagement through various measures and the calibration of interactive teaching methods [2]. The Ministry of Education, Youth, and Sport (MoEYS) has updated the curriculum and its applicability, and has supplied textbooks for English language instruction, as well as technical tools to support English instruction and learning research, in an effort to raise the standard [3]. The interactive teaching method has gained widespread popularity both abroad and domestically gained widespread popularity [4]. Interactive teaching methods that prioritise rote learning and are uninteresting to many pupils, or that rely on passive memorisation, make English classes difficult. To increase students' enthusiasm. This problem has prompted educators everywhere to explore more dynamic and engaging teaching methods, such as interactive approaches. The interactive teaching method uses critical methods to assess students' level of engagement in their English classes at PSBU. Interactive teaching methods have become the standard in higher education institutions over time.

Instructional methods that actively involve students in the learning process and promote critical thinking are referred to as interactive teaching methods, which encourage their involvement and cooperation [5]. Teaching methods include engaging students in active learning activities, such as role-plays, group projects, and simulations, to promote active learning and student engagement. Sachan [6] stated that the interactive teaching method, rather than passive absorption, fosters a learning environment in which students actively generate their own knowledge. According to research, PSBU students are more engaged when taught interactively, encouraged to think critically, and assessed in depth, including synthesis, analysis, and higher-order cognitive functions. Additionally, these methods enhance student motivation, technology integration, and all of which are essential for success in the twenty-first-century workforce, information retention, and engagement. Adapting interactive teaching methods to students' different learning styles and preferences, receiving immediate feedback from lecturers and peers, and reflecting on what they have learned are among their main advantages, which give students the chance to study at their own pace. The interactive teaching method equips ownership-oriented learners with a crucial skill for lifelong learning, helping students develop into self-directed individuals [7].

A growing corpus of research at PSBU has examined the impact on student participation and the role of interactive teaching methods in recent years. Numerous studies have demonstrated the benefits of interactive teaching methods in enhancing students' overall learning experience, as well as their academic achievement and enjoyment. Cavanaugh [8] reported that a meta-analysis of interactive teaching methods, compared with conventional lecture-based methods, such as active learning, produced higher exam scores and a reduced failure rate. Kamran et al. [9]found that students in an interactive classroom performed better on problem-solving tasks than their counterparts in concept-mapping tasks. Interactive teaching methods enhance various aspects of student engagement and academic performance. Students who engaged in collaborative learning activities, a type of interactive teaching, reported higher levels of pleasure and engagement than those in conventional lecture-based classrooms. Burke and Fedorek [10] demonstrated that interactive teaching methods foster a desire for effective learning, establish behavioural patterns, impart

https://doi.org/10.58421/gehu.v5i1.709

information and skills, foster teamwork, promote freedom of expression, and, above all, help develop the complex capabilities of future specialists. To help shape the competencies of future professionals, lecturers will provide an overview of the most popular contemporary interactive teaching methods in the methodical English language literature. An interactive teaching method that uses a series of tasks, exercises, or games to build knowledge and abilities in any subject. This method enables the instructor to fill in the gaps in the participants' knowledge while also developing students' interactive teaching methods, abilities, and proper conduct when completing interactive teaching methods assignments. The benefit of learning is that it guarantees every student's active participation in the interactive teaching method, which can prepare students for successful learning, collaboration, and communication [11]. A good English language learning class must include engaged students, as more engaged students tend to speak the language more fluently [12]. Individual learner traits, such as self-efficacy, grit, motivation, and emotion, as well as contextual factors such as classroom environment, goal structure, and peer interactions, all affect student engagement in English language learning classes.

Previous studies have shown that both are significant, but also have limitations [13]. There is much evidence in the literature linking student learning, student involvement, and student well-being. Promoting an optimal learning environment to support student engagement is the primary goal of the student. Lyndal [14] revealed that emphasising student participation improves student well-being. Goss et al. [15] demonstrated that students learn more when they actively participate in class. Lecturers must establish routines, encourage students to take risks, and create an ideal learning environment in the classroom by building rapport, raising expectations, and motivating students to participate. All of these factors impact the students' level of engagement and learning in class. Engagement is just as important as communicative competence in English language learning environments. It encompasses students' psychological commitment and their individual learning styles in education. The act of acting well also involves a connection to what is being learned; engagement goes beyond just attending class [16]. This study investigates the impact of interactive teaching methods on the participation of PSBU English students. Through a combination of performance evaluations and fostering more successful English language learning classes. This PSBU survey study will provide important information about whether interactive teaching helps close engagement gaps [17].

1.2. Statement of Problem

In Cambodia, there is growing concern about the benefits of improving student learning through teaching methods. The conventional lecturer-centred methods, in which students passively listen to lectures and do not actively participate in their own education, are still widely used in many universities in Phnom Penh. In this context, it is necessary to investigate universities in Phnom Penh and to understand how interactive teaching methods affect students' learning engagement in Cambodia [18]. Interactive teaching methods, such as active participation, team-based learning, and critical thinking, are emphasised to enhance student engagement, promote active learning, and foster teamwork. These methods improve students' academic achievement [19].

Furthermore, Phnom Penh's educational system is undergoing rapid changes due to the increasing demand for graduates who can compete globally and for high-quality postsecondary education. Therefore, it is essential to investigate whether interactive teaching methods are being employed in Phnom Penh to enhance student learning. Institutions must efficiently satisfy the evolving needs of the twenty-first century. This type of data can help administrators, lecturers, and legislators in Phnom Penh's institutions make informed choices about teaching methods to enhance student engagement. Additionally, there is a dearth of recent, locally relevant data for the Cambodian setting, as well as research on how interactive teaching methods affect student learning at Phnom Penh's universities. To enhance student learning, administrators at universities in Phnom Penh, policymakers, engagement specialists, and instructors can utilise this research to inform their decisions regarding instructional methods [9].

1.3. Research purposes

The purpose of this study is to examine the relationship between interactive teaching and student engagement in English classes at PSBU in Cambodia.

1.4. Research Objectives

1. To assess the level of interactive teaching at PSBU's English teaching
2. To assess the level of student engagement in PSBU's English teaching
3. To examine how interactive teaching methods affect PSBU students' engagement in English classes.

1.5. Research Questions

1. What is the level of interactive teaching in PSBU's English teaching?
2. What is the level of student engagement in PSBU's English teaching?
3. How does interactive learning affect university students' engagement in English studies at PSBU?

1.6. Significance, Limitations, and Assumptions of the Study

The results of the study will benefit both students and the institution upon completion of the research. The interactive teaching methods for student engagement in English classes offered by the institute's university programs will help students become accustomed to and prepared for them. Institutions will benefit from improved teaching quality, an enhanced reputation, better student learning outcomes, and alignment with educational standards and goals. More importantly, the institute can address any weaknesses that deter students and reduce or prevent dropout rates (PDR) among university students, thereby maintaining its reputation and ensuring its sustainability. Likewise, the government will not spend more resources to strengthen the policy and quality of year one students, as it can use this institute as a model.

Importantly, after this research is completed, students, lecturers, the institution, and the government will identify the challenges, understand which supportive policies should be implemented, recognise how students feel towards the PSBU, and determine which

programs should be introduced to meet students' needs. Improved learning engagement is directly linked to higher levels of concentration and better memory retention. Students who actively engage in their education tend to perform better and comprehend material more thoroughly. Although the research achieved its aims, it faced some unavoidable limitations.

First, due to the time limit, this research was conducted on only a small sample of the population. The study's results cannot be generalised to the population or to a broader context. This research has some limitations, including a sample size of 123 participants. The PSBU and the number of participants are divided, with participants selected from the morning and afternoon shifts. The reasons they are selected are: first, they are new students at PSBU, and second, they are outstanding students in the classroom. Second, the importance of a strong foundation in achieving a good score in the future. These individuals also serve as the primary protagonists in an interactive teaching method that engages students with researchers in English classes, aiming to identify the underlying factors that continue to motivate students to pursue their studies.

The purpose of this study is to investigate the impact of interactive teaching methods on PSBU students' engagement in their English language classes in Cambodia. The gauge how university students view the impact of the Institute of Foreign Languages' interactive teaching methods [20]. Interactive teaching methods positively impact student engagement. In an environment where teaching and learning are integrated through interactive teaching methods, this approach is essential. Students can fulfil their psychological requirements through interaction. Students who feel a strong sense of internal control are better at identifying and meeting their psychological needs. Thus, awareness of students' psychological needs can effectively support deep learning. Students engage more fully in interactive classroom activities. This shows a greater readiness to devote time and energy to in-depth study when they feel autonomous. Students who perceive themselves as more competent are better able to evaluate their current learning level, such as recognising issues and needs, and to choose the learning tactics and techniques that work best for them independently. Deep learning will be advanced by this autonomy, which will motivate students to study the material more thoroughly and apply what they have learned; thus, the theories presented in this study [21] are put forth.

1.7. Operational Definitions of Key Terms

This analysis identifies several key phrases. First of all, the phrase ‘interactive teaching methods refers to the goal of interactive teaching methods, which is to increase students' knowledge and skills in any subject by having them complete games, tasks, or activities in order. Using this method, the instructor can fill any knowledge gaps while helping students develop professional and appropriate conduct skills for handling job-related activities. One benefit of using interactive teaching methods is that they ensure every student actively participates in the training process [11].

Student engagement has been defined as “participation in educationally effective practices both inside and outside the classroom. The which leads to a range of measurable outcomes” and as “the extent to which students are engaging in activities that higher education research has shown to be linked with high-quality learning outcomes” Similarly,

define engagement as “the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes”. By way of contrast, others have defined engagement as the process by which institutions and sector bodies deliberately involve and empower students in shaping the learning experience. Combining these two perspectives has defined student engagement as the time and effort students devote to activities that are empirically linked to desired learning outcomes in college, as well as the actions institutions take to encourage students to participate in these activities. Describes engagement as a broad construct intended to encompass both salient academic and certain non-academic aspects of the student experience, including active and collaborative learning.

Participation in challenging academic activities, formative communication with academic staff, involvement in enriching educational experiences, and feeling legitimised and supported by university learning communities. These five facets form the basis of the national survey of student engagement, the university survey of student engagement, and an annual survey of public and private higher education institutions in Cambodia, which has been modified to include a sixth aspect. The survey defines student engagement as "students' involvement with activities and conditions likely to generate high-quality learning," measured along six engagement scales, academic challenge, the extent to which expectations and assessments challenge students to learn; active learning students’ efforts to construct their knowledge actively; student and staff interaction level nature of students’ contact with teaching staff enriching educational experiences. Participation in broadening educational activities, a supportive learning environment, feelings of legitimation within the university community, and work-integrated learning, integration of employment-focused work experience into the study [22].

2. METHOD

2.1. Design

The purpose of this study is to investigate how PSBU English language instruction uses the interactive teaching method. Descriptive analysis is thus used using a quantitative method. Descriptive analysis is thus used using a quantitative method to characterise a phenomenon within a specific context [23]. As the primary technique, it covers a survey study. Additionally, it examines how quantitative research in PSBU English language learning facilitates students' sharing of ideas and knowledge. This study employs a survey to inform the design, as students investigate and characterise a transient phenomenon within the context of an interactive teaching method for English. The survey study looks into a modern phenomenon in its actual setting. The researcher then examined the range of interactive teaching methods used by PSBU students. In this instance, the setting will be an interactive teaching method in PSBU English language learning, and quantitative research will be used, as a survey study is preferable for analysing current events [24]. The interactive teaching method is uniquely applied in this study. The primary research method employed in this study is a survey-based methodology. Survey studies are beneficial for studying phenomena in their natural environments, as they provide a thorough understanding of the phenomena. In particular, the survey study methodology allows the researcher to analyse.

They describe fleeting events in detail, offering important insights into the challenges of applying the interactive teaching method to PSBU Students' English language.

Furthermore, this study aims to shed light on the wide range of interactive teaching strategies university students use. The study aims to clarify the various methods and approaches that students use when learning English within the context of the interactive teaching method. Students can communicate their views and the depth of the study's findings, thereby enhancing the range and expertise through quantitative research. Moreover, quantitative research is the method of choice due to its flexibility in the context of PSBU English language instruction and the ability to capture the complexity of educational processes. This study has implications for English language instruction in PSBU settings, utilising quantitative research methods, and aims to provide a deeper understanding of the interactive teaching method. In the end, raising the standard of English language instruction in PSBU settings and the knowledge gained from this study project could influence teaching methods.

2.2. Sample Size and Sampling Technique

To recruit respondents from the study population, the sample size was determined using Taro Yamane's [25] formula. The sample size was determined using a formula based on a 9% precision level. According to Kotrlik and Higgins [26] and Israel [27], a 90% confidence level can be used to study the marginal relationship, comparison, or difference as a preliminary analysis before further research. Therefore, this study used a confidence level of 91%. The formula used for the computation was as follows:

$$n = \frac{N}{1+n(e)^2} \quad (1)$$

Where

N = Total population size

n = Sample size

e = level of precision/or Standard error

Table 1. Study Areas and Sample Size

No	Study Site (PSBU) Year of Student	Number of Students	Number of Samples Size
2	Year 02	45	23
3	Year 03	51	26
4	Year 04	27	14
	Overall	123	63

Source: from the head of Academic and Student Affairs (PSBU, 2025)

Table 1 shows that a purposive sampling strategy was employed to recruit bachelor's students in years 2 to 4 and English students studying at PSBU to participate in online surveys (i.e., Google Forms[28]. The research study focuses on 2- to 4-year English students at PSBU. This study selected English students from PSBU as respondents because the researchers have a strong interest in interactive teaching methods for enhancing student

engagement. Based on strategies for using the sample to generalise the research's validity. Through a series of networking procedures, the researcher distributed a Google Form link to multiple PSBU student groups in Cambodia via Telegram group conversations, resulting in the online sample. Using the provided link, students were asked to assist the researcher in completing the student questionnaire. Simultaneously, the students received the questionnaire link from their classmates. The students included in the online sample were those who volunteered to complete the survey [29].

2.3. Participants

The students studied at PSBU in Cambodia. There were 123 contestants, and the participants in this survey were 123 English students. The researcher involved these subjects in an online focus survey using techniques and questionnaires (i.e., Google Forms) to explore their viewpoints and experiences with the interactive teaching method. Every participant in the study was specifically selected for their willingness to participate and background, and the study's duration aligned with the selection criteria.

2.4. Instrument

The survey questionnaire, developed by the researchers, consisted of two sections and was used to collect data. The first section comprises 29 items about the participants' interactive teaching methods, including 21 items. (1) Columbia (2001) stated that active participation (AP) includes 03 items, which are AP1 to AP3. (2) Surveyshare (2022) revealed that interactive collaboration consists of 03 items, namely IC1 to IC3. (3) Castle (2006) contended that interactive critical thinking consists of 03 items, there are ICT1 to ICT3. (4) Omar (2013) stated that interactive problem-solving contains 03 items, namely IPS1 to IPS3. (5) Henderson et al. (2016) showed that interactive technology integration consists of 03 items, such as ITI1 to ITI3. (6) Ashrafzadeh & Sayadian (2015) revealed that interactive feedback consists of 03 items, there are IF1 to IF3. (7) Tadesse (2020) stated that the interactive student-centred approach consists of 03 items: ISCA1 to ISCA3. The second section consists of 2 items on participants' student engagement. (1) AnnJoli (2015) revealed that behavioural engagement involves 03 items, BE1 to BE3. (2) Pacificneuroscienceinstitute (2018) stated that cognitive engagement, the authors employed a five-point scale, the same as the original scale of 5 items, such as CE1 to CE5. Who employed a five-point scale? The authors used the same scale as the original (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree).

Cronbach's alpha, developed by Lee Cronbach in 1951, is a measure of internal consistency that assesses the reliability of a test or scale [30]. It displays the degree to which a set of test items measures a single fundamental idea; values range from 0 to 1. This statistic is important because it helps determine the degree of measurement error and ensures that a test yields consistent results; a larger number indicates greater reliability.

Researcher and Cronbach's alpha are frequently within the range of 0.70 to 0.95. Educators can also use it to assess if test items measure a single concept and are related to one another. Values between 0.70 and 0.80 indicate reliability, whereas values below 0.70 indicate poor reliability. The good scores range from 0.80 to 0.95; a score above 0.95 would

https://doi.org/10.58421/gehu.v5i1.709

suggest removing items to shorten the test, indicating that some items are too similar. Cronbach's alpha does not measure validity; despite being an essential tool for assessing reliability, researcher must carefully interpret its results to ensure the effectiveness of their instruments.

2.5. Procedure

The purpose of the primary survey is to gather data from the participants. Online questionnaires are sent to individuals who have already participated and to those interested in learning more about interactive teaching methods in the future, using a purposive selection strategy. The data were gathered using an online survey (specifically, a Google Forms survey). The respondents are then formally asked to grant permission via Telegram Messenger to participate in an online survey. A Google Form survey link was sent to 123 respondents, who were asked to complete it independently. Sixty-three population members completed questionnaires, which were then returned. As a result, 63 participants in this study were formally gathered for additional data analysis.

Because participants were questioned individually, they took between 30 and 40 minutes to answer each question, and the process lasted throughout both the morning and the afternoon. The participants were selected to answer the questions for 15 minutes, allowing the researcher sufficient time. More significantly, participants were able to attend to the questions and had enough time to fill in their names, addresses, and telephone numbers before answering the question. As a result, the research took considerable time to complete. Since the participants were generally from PSBU in Phnom Penh, break time was most likely the best time for data collection. Participants were assigned a specific date and time; they were then to answer the questions after gathering. The participants answered every question. The researcher played a crucial role in facilitating the process of answering the question and in regulating and limiting any issues that might have arisen, either accidentally or from the participants. In this answer-the-question procedure, the researcher served as both the participant and the monitor/facilitator.

2.6. Analysis

The social sciences (SPSS) version 27, the statistical package for descriptive statistics, was used to analyse the data. After cleaning, the raw survey data were transferred into a Microsoft Excel spreadsheet. SPSS v.27, the Statistical Package for the Social Sciences, was used to analyse the data. The first and second research questions were analysed using the interactive teaching method and student engagement ratings, while the third research question was analysed using regression and simple linear regression.

3. RESULTS AND DISCUSSION

3.1. Results

Table 5 presents the demographic information for the 63 participants in the study, revealing a predominance of female respondents (35, 59.4%), while male participants comprise 28 (40.6%). In terms of age distribution, the largest group of participants was aged 23 to 26 years, comprising 27 individuals (43.5% of the sample). This was followed by the 19- to 22-year-olds, at 20, accounting for 33.3%. The 27- to 30-year-olds, at 9, accounted

for 13.0%, and the 31 and over group, at 6, accounted for 8.7%. Only one participant, who was 1 year old, accounting for 1.4%, was 18 years old or younger. As for academic year, most were third-year students (25 at university, 40.6%), followed by second-year students (20 at university, 33.3%) and fourth-year students (18 at university, 26.1%). This spread indicates a relatively even distribution of participants across various academic years, with the majority graduating or about to graduate, and spans a range of young adult ages.

Table 5. Demographic information of the participants (N = 63)

Demographic	Value	Frequency	Percentage
Gender	Male	28	40.6
	Female	35	59.4
Age group	18 and below 18 years old	1	1.4
	19-22 years old	20	33.3
	23-26 years old	27	43.5
	27-30 years old	9	13.0
	31 years old and over	6	8.7
Years at University	Year 2	20	33.3
	Year 3	25	40.6
	Year 4	18	26.1

The Level of Interactive Teaching Method

Table 6. Mean and Standard Deviation of the seven components and 21 items

Variables	Number of Items	Mean (N=63)	Standard Deviation
AP	3	3.58	1.07
IC	3	3.50	1.13
ICT	3	3.28	1.00
IPS	3	3.23	0.95
ITI	3	3.05	0.95
IF	3	3.52	1.08
ISCA	3	3.22	0.89
ITM	21	3.34	0.85

Table 6 presents descriptive statistics for 21 items of interactive learning, with seven components shown. Every component is assessed using three items, including all 21 items except the total interactive teaching method (ITM). The mean and standard deviation for each component, based on a sample size of 63 (N=63), are displayed in the table.

The learning process and active participation (AP) are indicated by a 1.07 standard deviation, with a high level of active participation of 3.58. Interactive collaboration (IC) has a standard deviation of 1.13, indicating a mean of 3.50. The interactive critical thinking (ICT) standard deviation of 1.00 of as indicated by a mean score of 3.28, indicates a moderate degree of interactive critical thinking. Using interactive problem-solving (IPS), a standard deviation of 0.95 suggests a relatively small range of answers, with a mean of 3.23 indicating a modest degree of interactive problem-solving. Interactive technology integration (ITI) and reception of feedback through interactive means measure the provision. The standard deviation is shown as 0.95. A reasonably consistent response pattern. The component with

the lowest mean, 3.05, indicates a somewhat lower perceived level of interactive feedback. The standard deviation indicates a respectable range of responses of 1.08. Suppose the mean is 3.52, a moderate to high degree of perceived. The interactive student-centred approach (ISCA) has a standard deviation of 0.89, indicating the least variation around a mean of 3.22. Among all components, it measures the degree to which the learning method is student-centred and interactive. The term interactive teaching method (ITM) refers to the entire set of 21 interactive teaching components. The standard deviation is indicated by 0.85. The moderate degree of total perceived interaction is indicated by the mean of 3.34.

The Level of Student Engagement

Table 7. Mean and Standard Deviation of the two components and eight items

Variables	Number of Items	Mean (N= 63)	Standard Deviation
BE	3	3.75	1.06
CE	5	3.08	0.92
SE	8	3.42	0.85

Table 7 presents descriptive statistics for the three variables—behavioural engagement (BE), cognitive engagement (CE), and student engagement (SE)—based on data from 63 participants. The number of survey items used to gauge each form of engagement is shown in this column. Three questions were used to evaluate (BE), five for (CE), and eight for student engagement.

The results suggest that, with a mean score of 3.75, students demonstrated the highest level of engagement in behavioural aspects. However, this dimension also showed the greatest variability (SD = 1.06), resulting in the lowest mean score (3.08) and moderate variability (0.92). Cognitive engagement showed that some students participated at lower levels, while others were highly behaviorally engaged, with the least consistent student engagement in cognitive learning activities. The overall student engagement score of 3.42, with a lower of 0.85, reflects a moderate but relatively stable level of engagement across participants.

The Implications for Teaching and Learning

The results demonstrate the importance of providing students with feedback and opportunities to participate more if lecturers aim to enhance their engagement. Lecturers may need to explore more effective ways to utilise technology in class to maximise the benefits of interactive technology integration. Additionally, given the low ratings for deep thinking, it would probably be wise for lecturers to concentrate more on posing challenging questions and assigning pupils real-world problems to address. They can think more critically and analyse more effectively as a result.

Table 8. Impact of Interactive Teaching Method on Student Engagement

Variable Name	N	Skewness	Kurtosis
Interactive Teaching	63	-0.68	-0.21
Student Engagement	63	-0.75	0.30

Table 8 shows that Skewness and Kurtosis were examined to assess the distribution of the variables. For interactive instruction, the skewness and kurtosis were -0.68 and -0.21, respectively. This suggests a somewhat flat distribution and a slight negative skew, suggesting that more students gave interactive instruction a slightly higher overall rating. Student participation had a skewness of -0.75 and a kurtosis of 0.30. The distribution still appears to be in a regular form, but it is slightly more peaked and slightly negatively skewed. Since both values are within the usual range of ±1, the data is generally rather normal. As a result, nothing notable stood out or diverged greatly from the normal curve.

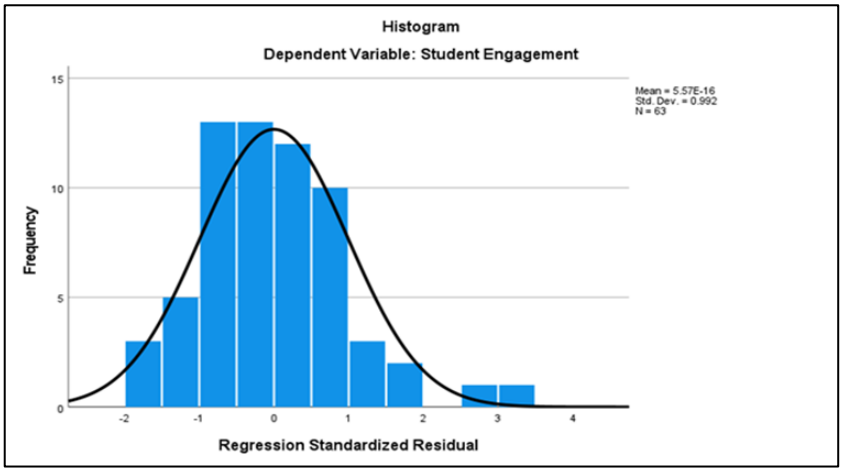

Figure 1. The Histogram of Standardised Residuals for Student Engagement

Figure 1 shows the normality assumption of the histogram of the standardised residuals. There were no significant problems, but a slight skew in the residuals was observed. Still, they looked normal overall. Since the mean of the residuals was super close to zero ($M = 5.57 \times 10^{-16}$, $SD = 0.992$), and the histogram shape looked pretty much like a normal curve, it is safe to say the normality assumption was mostly met.

The Scatterplot of Standardized Residuals for Student Engagement

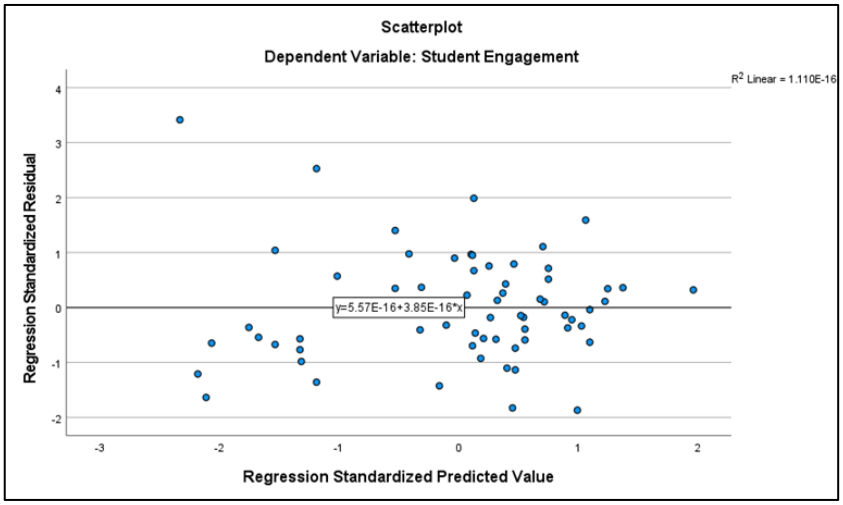

Figure 2. Scatterplot of Standardised Residuals for Student Engagement

Figure 2 shows the assumptions underlying the formula: linearity, polynomial relationships, homoscedasticity, and independence of errors. The scatterplot of standardised residuals versus predicted values for net cash flows was analysed. The dots seemed fairly evenly distributed along the horizontal line and showed no systematic movement in any direction. Moreover, it was easier to account for the random nature of errors under the independence assumption. In addition, the fact that the R^2 result is so close to zero ($R^2 = 1.11 \times 10^{-16}$) explains that there is no clear structure or trend in residuals, while still confirming the hypothesis relies on 'randomness'.

Table 9. Linear Regression Predicting Student Engagement from Interactive Teaching

Predictor	B	SE B	β	T	p
(Constant)	0.61	0.25	—	2.50	0.02
Interactive Teaching	0.86	0.07	0.82	11.74	< .001

Note. $R^2 = 0.673$, Adjusted $R^2 = 0.668$, $F(1,67) = 137.83$, $p < .001$.

$$y = \beta_o + \beta_1 x + \varepsilon \quad (2)$$

y = Student Engagement, β_o=0.61, β_1=0.86, ε =error

y = Student Engagement

x = Interactive Teaching Method

Table 9 presents the results of a simple linear regression analysis to determine whether interactive teaching can accurately predict student engagement. The results showed that the model was statistically significant, $F(1, 67) = 137.83$, $p < .001$, indicating a strong model. It explained approximately 67.3% of the changes in student engagement ($R^2 = 0.673$, Adjusted $R^2 = 0.668$), which is a significant portion. The R^2 value ($R^2 = 0.673$) of 0.67 shows the coefficient of determination, or how much variation in student engagement can be explained by the interactive teaching method. In this case, the R^2 value of 0.67 indicates that about 67.3% of the variation in student engagement, or the dependent variable, the R^2 value of 0.67 provides a relatively strong explanatory power, and is explained by interactive teaching, which has a significant effect on student engagement and is a positive predictor of student engagement. The regression equation was something like:

student engagement = 0.61 + 0.86 * interactive teaching.

That means that if interactive teaching increases by 1 unit, student engagement also increases by around 0.86. This result was also statistically significant (T = 11.74, $p < .001$), and the beta value ($\beta = 0.82$) indicates a strong, positive relationship. Based on these findings, interactive teaching has a significant impact on student engagement.

3.2. Discussion

This study aimed to evaluate the impact of interactive teaching methods on the participation of PSBU English students and found a significant, strong correlation between participation, feedback, and peer contact. Students strongly valued participation, feedback, and peer contact, with active participation, interactive feedback, and interactive collaboration ranking among the seven highest-rated components. This finding is consistent

with the views of others who have reported the crucial role that appropriate, timely, and specific feedback plays in enhancing students' learning and motivation [31]. In line with their findings, this study discovered that students prefer clear communication from their instructors and become more engaged when feedback is incorporated into the learning cycle. Furthermore, educational findings support the role of active involvement, and those who argue that assessing learners' involvement will genuinely increase engagement [32]. Fredricks et al. [33] contended that the strong focus in this study on behavioural engagement supports the claims of those who indicated that behavioural engagement, the students' involvement in doing the task, attention to the task, and participation in learning, is often the starting point for more sophisticated forms of engagement, cognitive and emotional engagement. Peer collaboration was the most significant factor in the PSBU situation, which illustrates that not only does cooperative learning lead to increased academic success, but it also develops the social and interpersonal skills required for language learning[34]. PSBU students, the collaboration aspect implies that group activities promote anxiety reduction, confidence building, and a space for students to play with language more freely. The use of classroom response systems (i.e., Socrative) has been shown to improve purposeful, interactive, and collaborative learning and engagement [35]. Peer and self-feedback mechanisms in technology-based writing tasks demonstrated higher levels of engagement, metacognition, and reflection, with a greater focus on feedback use than on the lecturer's feedback [36], [37]. The findings suggest that PSBU may increase engagement through digital platforms that complement traditional forms of interaction, particularly writing and speaking. Feedback is multifaceted, and this study has demonstrated that feedback from both the lecturer and peer/self-feedback creates optimal learning outcomes [38]. Peer feedback increases students' likelihood of engaging in critical thinking, co-constructing meaning, and working collaboratively to address problems, thereby increasing cognitive engagement [39]. Reciprocal peer feedback in oral communication tasks has been shown to improve speaking proficiency [40].

Firstly, interactive teaching methods, such as student participation, collaboration, and feedback, should be emphasised in TESOL rather than treated as optional. In situations like this, the role of the lecturer is to set students up with activities that will encourage observable participation and, through collaboration, prompt them to self-reflect and problem-solve together. The second suggestion would be to use a layered approach to feedback, encouraging ongoing feedback as a lecturer's explicit feedback in conjunction with a structured peer/self-assessment to spur further feedback and complete the feedback loop.

Thirdly, when using a collaborative tasking approach, students should be purposeful in creating peer support by considering group size, cohesiveness, and group task design to avoid disengagement. Last, emotional engagement cannot be dismissed—a sense of belonging, interest, and motivation will help retain the learner outside the classroom and beyond set deadlines. The additional cultural or institutional contexts were also taken into consideration when implementing interactive teaching methods. For a long time, Cambodian higher education has been largely focused on a lecturer-centred approach. However, the students in this study appear willing to engage in, and even prefer, interactive teaching and student-centred learning when appropriately implemented. Studies have revealed similar

findings in other proximate contexts. Research on peer feedback has shown that it increases learner engagement in English classes, and a study in China demonstrated that collaborative tasks can enhance self-esteem and increase class participation. However, the success of collaborative learning relies on the class structure and cultural expectations [41].

Collaborative learning, also known as cooperative learning, emphasises positive interdependence, individual accountability, and group processing, which can ultimately enhance student academic achievement and interpersonal skills [42]. The current study at PSBU also showed that students regarded interactive collaboration very positively, ranking it among the top three engagement elements. Nicol and Macfarlane-Dick [43]found that formative feedback leads to self-regulated learning and can be explained by enabling learners to monitor, reflect, and regulate their own learning in relation to judgments of personal performance.

This supports those who stated that feedback can create an interactive dialogue between students and lecturers, thereby encouraging active participation and increased cognitive engagement [44]. The findings were also consistent with heretical views globally, which stress that active participation is a non-negotiable facet of contemporary pedagogy. Mobile technologies have opened the possibilities for learning experiences that are even more flexible, collaborative, and interactive [45].

Technology-mediated interaction can provide alternative communication and feedback pathways. Digital tools create opportunities for dialogic learning, enabling students to receive immediate feedback and to collaborate asynchronously or synchronously [46]. Regarding PSBU, the conclusion might be that, although in-person contacts remain the most common, the use of digital technology may expand opportunities for feedback and collaboration in line with global trends. The results must also be situated within broader debates regarding a student-centred approach to learning. When students are central to learning, the role of lecturers shifts from information deliverer to facilitator, encouraging students to take responsibility for their learning [47]. The results of the PSBU show that students appreciated interactive teaching when it was delivered in line with face-to-face teaching, as they value being active participants. It is also essential to situate the results within the context of Cambodian higher education, which is dominated by traditional teaching practices that emphasise lectures [48]. This supports the results of the present study, indicating that students at PSBU are more actively involved in participatory, observable forms of learning, such as teamwork-based classes, discussions, and presentations. That behavioural engagement was the highest among all engagement dimensions. In a collateral line of reasoning, bolstering the claim that meaningful, interactive classrooms increase motivation and connection, the author argues that allowing students to engage enhances participation at both behavioral and emotional levels [49].

Furthermore, the results of this study lend support to those who argue that student participation in the classroom promotes academic interest and social skills [7]. Using a relatively strong mean for collaborative interaction, PSBU indicates that peer interaction remains a key aspect of learning, particularly because working with others motivates students. The study emphasised connections among academic performance, active engagement, and school attachment, thereby enhancing the focus on collaborative work. In

keeping with PSBU's high level of behavioural engagement, their results suggest that engaged students are less likely to withdraw or drop out [50]. However, the results identified two significant limitations: low levels of cognitive engagement and concerns about the use of interactive technology, despite claims about the positive aspects of participation, collaboration, and feedback. The results also raise a disconcerting distinction between participation as mere surface engagement and the various levels of consideration or analysis. Cognitively engaged students must be mentally engaged in what they learn, think critically about their engagement in conceptual analysis, and apply the knowledge effectively, while reflecting on the concepts in their daily lives. Students in this study, on the other hand, participated in cognitive tasks less frequently, suggesting that classroom methods today are not sufficiently demanding or inquiry-based [51].

The poor grade for interactive technology integration may be due to insufficient lecturer training, underutilization of interactive formats such as online quizzes and virtual discussions, and limited access to modern digital resources and media tools. This finding contradicts the suggestion that technology can enhance engagement and foster self-directed learning when used effectively [52]. The data, however, suggests that instructors at PSBU have not yet completely incorporated technology in a way that improves the strong learning environment.

Research on second-language acquisition has confirmed the effectiveness of explicit feedback, particularly when provided through an interactive medium, in helping learners recognise and correct linguistic errors [53]. The current findings suggest that feedback increases accuracy and maintains motivation and engagement when it is part of an interactive cycle. Active participation was the most supported aspect of the interactive teaching method. Prince [54] reported that, in his review, active learning was found to have widespread evidence supporting its enhancement of student performance across various disciplines. Freeman et al. [55]reported that a large-scale meta-analysis indicates that students in active classrooms achieved higher levels and had lower failure rates than those taught in traditional lecture formats.

Notably, this study contributes to a substantial body of research and provides further evidence for the importance of interactive teaching practices, as well as for the impact of collaborative work, teamwork, and feedback on student engagement. However, the research also points to significant problems that distinguish it from some earlier studies. Chief among these is the poor integration of technology and the neglect of cognitive participation. These findings suggest that to maximise the benefits of an interactive teaching method, more attention will need to be placed on designing critical-thinking activities, improving inquiry-based learning, and funding infrastructure and technology training at PSBU. By systematically embracing interactive teaching methods, PSBU and similar institutions can foster classrooms that are dynamic, participatory, and responsive to learners' needs. More importantly, these strategies help prepare students with the communication, critical thinking, and collaborative skills that are vital for academic success and future professional life. Resolving these problems would improve the overall standard of English-language instruction in the Cambodian higher education system and align PSBU's practices with international research.

4. CONCLUSION

The present research revealed that interactive strategies, especially those that promote active engagement, feedback, and collaboration, play a crucial role in student engagement in English language studies at PSBU. A multiple regression analysis indicated that interactive strategies accounted for approximately 67% of the variance in engagement, providing evidence of their influence on student learning.

Practical Implications

For Educators: Educators should employ more student-centred, interactive strategies, such as group discussions, problem-based learning, and just-in-time feedback, to promote behavioural and cognitive engagement.

For Institutions: PSBU and similar institutions of higher education should consider implementing professional development that promotes classroom engagement, such as credentialing instructors and educators in interactive and technology-enhanced pedagogies.

For policymakers: Policymakers should consider policies that support educational innovation, including, but not limited to, increased digital learning across the curriculum and the institutionalisation of professional development for educators.

Limitations and Future Research

Because the current research focused on a small sample from a single institution (PSBU), the findings are not transferable to other contexts. Future research should include a larger and more diverse sample from multiple institutions in Cambodia to confirm the current findings. In addition, future research can incorporate longitudinal and/or mixed-methods approaches to investigate the long-term effects of interactive pedagogies on student learning and motivation.

Recommendation

Based on this study's results, discussion, and conclusion regarding the effect of the interactive teaching method on student engagement in English class at PSBU, the researcher provides four practical recommendations:

a. **Strengthen Interactive Technology Integration (ITI).** Professors and lecturers should use digital resources more effectively in their classes; PSBU should provide them with support and training in using technology. This can include slideshows or films, as well as interactive tests and online learning environments such as Google Classroom or Kahoot. For students who are proficient with technology, this can significantly improve learning, increase participation, and enjoyment.

b. **Enhance Cognitive Engagement through Critical Thinking and Inquiry-Based Learning.** Professors and lecturers should incorporate more inquiry-based activities to help students think critically and analyse more effectively, such as surveys, group problem-solving exercises, and debates. Assignments should be designed to encourage students to think more deeply and creatively, such as by combining ideas and making informed judgments.

c. **Increase the Use of Interactive Feedback**. Professors and lecturers should establish more transparent feedback mechanisms, such as exit slips, peer reviews, and one-on-one

conversations with students, to further improve this process. Additionally, they ought to encourage students to participate more in group projects and role-defined discussions. Students may become more accountable and engaged in class as a result.

d. **Conduct Continuous Professional Development on Interactive Teaching Methods.** Provide lecturers and professors with regular seminars and team-building exercises to share best practices in interactive teaching and learning. Implementing student-centred techniques in all courses and across all morning and afternoon shifts is crucial to ensure quality and equity.

ACKNOWLEDGEMENTS

I am **Mr. Roth Baraing**, and as a student in the Faculty of Pali Sangskrit and Foreign Language, Department of Foreign Language, **PREAH SIHAMONIRAJA BUDDHIST UNIVERSITY (PSBU)**. Master of Arts in Teaching English to Speakers of Other Languages (MA in TESOL), Cohort 7, I would like to express my gratitude to:

My father, **Mr. Em Thy**, and my mother, **Mrs. Kory Phal**, who gave birth to me and have supported me since my birth, I am grateful for everything they have done to support me. I want to thank them immensely. I wish them good health, thank them for their good luck, and hope they inspire me to be successful in life. Their support and encouragement have changed my life so far.

I would like to express my heartfelt gratitude to my advisor, Dr. Thy Savrin, who has played a crucial role at every stage of my thesis and has been instrumental in my work. My master's study could not have been completed without his patient guidance and friendly methods.

I want to extend my sincere thanks to Dr. Chok Sophat, Head of the Department of Foreign Languages, for granting me the opportunity to study this particular program and review my thesis progress. Special thanks are also due to Mr. Suon Sokroeun, Deputy of the Department of Foreign Languages, for his outstanding leadership and coordination. I gratefully acknowledge Mr. Suon Mach, as Junior Reviewer at the Cambodian Education Forum, for supporting me in writing the thesis from the beginning until completion. Additionally, I greatly appreciate the time the external examiners spent on marking and providing further advice to improve my thesis. I want to express my respect and thank them very much. It is my sincere hope that Samdech Preah Abhisiri Sugandha Mahasangharajah Dhipati **BOUR KRY, Dr. Chok Sophat**, **Dr. Thy Savrin**, and **Mr. Suon Sokroeun** enjoy continued vitality and fortune.

Last but not least, I would like to take this opportunity to express my sincere gratitude and appreciation to all my lecturers and friends for their invaluable help with reviews, counseling, and other forms of support. I was able to achieve my academic objectives thanks to my knowledgeable and experienced lecturers and the support of my significant others. No academic success of mine would have been possible without their help.

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