

TEACHERS Classroom Interactional Competence, Technological Pedagogical Content Knowledge and Student Engagement in English Language CLASSES

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ABSTRACT

This study addresses the growing challenge of sustaining active and meaningful student engagement in educational settings, particularly in English language classes. Recognizing that disengagement can negatively affect students' motivation and academic success, the research sought to determine the significant effect of Teachers' Classroom Interactional Competence (TCIC) and Technological Pedagogical Content Knowledge (TPACK) on student engagement among private senior high school learners. Guided by the TPACK framework and Sociocultural Theory, the study employed a quantitative-correlational research design. Data were collected using adapted survey questionnaires administered to 200 Grade 12 students, all aged 18 and above, from three private senior high schools in Davao City, Philippines. The study utilized statistical tools such as mean, standard deviation, Pearson correlation, and multiple linear regression to analyze the data. The findings revealed that teachers demonstrated "Very High" levels of Classroom Interactional Competence ($M = 4.36$) and TPACK ($M = 4.33$). Students, in turn, reported "Very High" engagement ($M = 4.08$), with cognitive engagement scoring the highest ($M = 4.41$) and behavioral engagement the lowest ($M = 3.61$). Correlation analysis showed moderate, positive, and significant relationships between both TCIC and TPACK with student engagement. Furthermore, multiple regression analysis indicated that TCIC and TPACK together explained 29.10% of the variance in student engagement ($R^2 = 0.291$, $F = 40.5$, $p < 0.05$). These findings highlight the importance of enhancing teachers' interactional and technological-pedagogical competencies to foster deeper student engagement. Professional development efforts should prioritize building these skills to create more dynamic and supportive English language classrooms that encourage active student participation.

KEYWORDS: *Pedagogical, content, English Language classes, student engagement.*

INTRODUCTION

Student engagement refers to a multi-level concept that includes behavioral involvement alongside emotional commitment and intellectual work alongside social interactions during learning activities (Fredricks et al., 2024). Although Japanese educational success gets great praise, yet many scholars believe that demanding academic environments contribute to student mental exhaustion and detachment from the learning process (Kim & Lee, 2023). Additionally, Durlak et al. (2011) pointed that such conditions diminish academic results, increase early school departures and create problematic behavior among students, and degrade the educational setting.

Recent international assessments in the Philippines continue to highlight student engagement as a specific problem. In particular, the Programme for International Student Assessment (PISA) (Organization for Economic Co-operation and Development, 2022) identifies student learning achievement gaps in national performance results. The endemic situation of Filipino students exists with lower classroom engagement and diminished intrinsic motivation (Perez, 2019). Student participation in educational activities directly depends on this particular reform. Accordingly, the 2022 PISA results showed that Filipino students ranked the lowest in reading comprehension, and over 80 percent failed to achieve the minimum proficiency level, a pattern often associated with disengagement, low motivation, and a lack of interactive learning environment.

Different academic findings from the Philippines establish the importance of developing student involvement methods. For instance, Obenza-Tanudtanud and Obenza (2023) revealed that teacher-student engagement shows a strong influence on student motivation at a Metro Manila public high school. The empirical research performed at a private university assessed the effects of technological integration on Metro Manila higher education student engagement (Cantoria et al., 2024). Their findings indicated that the use of digital tools paired with purposeful classroom interaction approaches by teachers led to higher student engagement.

Moreover, various studies related to student engagement modifying factors have been conducted throughout the Davao region. The study of Cubero and Villocino (2023) showed that student participation levels in Region XI state colleges and universities demonstrated statistically important connections to academic determination alongside school environment quality ratings. The

research results from Davao Region provide essential details about the elements that shape student engagement under the local environment of this region. Their findings indicated that student engagement, academic motivation, and school climate were very high, and these factors had a strong link with academic self-efficacy.

Student involvement gets significantly enhanced through teachers' classroom interactional competence (TCIC). Accordingly, the educational model of TCIC covers communication effectiveness and question technique development, along with classroom atmosphere management, which influences student engagement directly (Sert & Walsh, 2023). The reality, as research suggests, is that if educators have strong TCIC skills, they make a compelling learning experience for students, who further participate. Similarly, efficient questioning as well as the method for setting and offering constructive feedback might bring a change in TCIC once that would have a deep impact on student engagement (Hofkens et al., 2023).

It is also very important to enhance student engagement to equip the Technological Pedagogical Content Knowledge or TPACK. Technology integration by teachers, when successful in the learning experience, produces an innovative, vibrant, and customized learning experience (Cantoria et al., 2024). Especially when the technology serves to increase students' language acquisition through the use of multimedia resources, online collaborative tools, as well as interactive work. TPACK's allure can be found in its drawing of different learning modalities for presentation, its ability to accommodate different learning preferences, as well as to provide access to many resources. Navarro et al. (2021) found that Filipino senior high school teachers faced difficulties in harmonizing content, pedagogy, and technology during emergency remote teaching. The study highlighted that while teachers had strong content and pedagogical knowledge, their technological knowledge and overall TPACK were at average levels. Challenges included limited access to digital tools, lack of training in online teaching modalities, and difficulties in selecting appropriate technological tools for instruction.

Statement of the Problem

1. What is the level of teachers' classroom interactional competence of private senior high school students in terms of visual organizer; sociocultural interaction; questioning; interactional patterns; repair; language modification; turn-taking; managerial interaction and

rhetorical script?

2. What is the level of Technological Pedagogical Content Knowledge of private senior high school students in terms of TK (Technology Knowledge); CK (Content Knowledge); PK (Pedagogical Knowledge); PCK (Pedagogical Content Knowledge); TCK (Technological Content Knowledge); TPK (Technological Pedagogical Knowledge); and, 2.7. TPACK (Technological Pedagogical Content Knowledge)?
3. What is the level of Student Engagement in English Language Classes of private senior high school students in terms of cognitive engagement; affective engagement; behavioral engagement and social engagement?
4. Is there a significant relationship between Teachers' classroom interactional competence and student engagement in English language classes; and Technological Pedagogical Content Knowledge and student engagement in English language classes?
5. Do teachers' classroom interactional competence and Technological Pedagogical Content Knowledge significantly affect student engagement in English language classes at private senior high schools?

METHODOLOGY

Research Design. This study employed a quantitative research approach defined as the systematic investigation through numerical data analysis with statistical methods, studying variable relationships (Creswell & Creswell, 2024). This is grounded in objective measurement and statistical analysis, which allowed the study to measure the connection between teacher competencies and student engagement systematically and objectively (Bryman, 2023). The methodology enabled hypothesis testing along with making inferences relevant to the entire research population (Creswell & Creswell, 2018).

More specifically, the research used a descriptive-correlational design to investigate its findings. Most of the variables in this descriptive-correlational design serve to identify population characteristics while analyzing the relationship patterns between multiple variables (Fraenkel et al., 2012). The objective of descriptive research is to present accurate and detailed information about the current conditions of investigated variables (McMillan & Schumacher, 2010).

Research Locale. The investigation unfolded in Davao City within the Philippines. Comprising numerous private educational facilities and fast

technological advancements, while serving a spectrum of diverse students, this area exists. The competitive academic environment throughout the area was maintained by private institutions, which conducted innovative instructional approaches with efficiency in mind.

Respondents of the Study. A total of 200 Grade 12 learners above 18 years old from three chosen private senior high schools in Davao City, Davao Region, Philippines, participated in this research. The researcher applied a stratified random method to pick their student participants. Stratified random sampling divides the population into strata through characteristic selection, after which researchers make random selections from each stratum (Creswell & Creswell, 2018). The research included students who were active participants in Grade 12 English language education at private senior high schools while also possessing full-age status during the study period. The study excluded learners who were in grade 12 or enrolled as irregulars or studying in public senior high schools, or younger than 17 years old. All participants who opted to decline completing the survey would be eliminated from the research according to the withdrawal criteria. The research strategy protected openness, combined with maintaining ethical boundaries throughout the study.

Statistical Tools. Three statistical tools enabled a thorough analysis of data variables and variable relationships by examining the variable levels: **Mean.** The research tool established statistics which measured the three variables – classroom interactional competence and technological pedagogical content knowledge, and student engagement – in private senior high school English language classes. **Standard Deviation.** Standard deviation served as a statistical tool to evaluate the measure of data point variation that existed about mean scores for every variable. Statistical data with a higher standard deviation displayed expanded response ranges since the data points existed at increased distances from the mean. **Pearson Product-Moment Correlation Coefficient (Pearson r).** The statistical method analyzed the strength, together with the direction of linear correlations that existed between major study variables. The research examined the relationships that existed between teachers' classroom interactional competence, together with their technological pedagogical content knowledge, and student engagement within English language educational environments at private senior high schools. **Multiple Linear Regression Analysis.** A multiple linear regression technique served to study the individual together with the combined effects of teachers' classroom interactional competence and technological pedagogical content knowledge on student

English class engagement within Philippine private senior high schools.

Data Gathering Procedure. The data collection process started with approval acquisition from the Dean of the Graduate School. The researcher obtained a Certificate of Ethical Clearance from the University of Immaculate Conception Research Ethics Committee (UIC-REC) to confirm that the study met all ethical requirements. The researcher received ethical approval before seeking authorization from the officials of selected private senior high schools located in Davao City. Research objectives and methodologies, along with ethical guidelines, were explained through formal request letters sent to authorities. The researcher received written authorization to consult with experts, including a statistician, for evaluating the research instrument and finalizing the data collection procedures.

Ethical Considerations. Every research participant received informed consent following the agreed-upon inclusion and exclusion requirements before questionnaire distribution. These documents explained that the study aimed to explain the choice between voluntary participation and response privacy, as well as withdrawal rights without punishment. A structured survey containing 101 items was used to collect results from Grade 12 students who reached 18 years old or above. The Consent Form (ICF) was given to participants before their involvement. Participating students and their guardians who engaged in the study had to both sign an Informed Consent Form known as ICF.

RESULTS AND DISCUSSION

Level of Teachers' Classroom Interactional Competence in English Language Classes

The findings demonstrate that Teachers' Classroom Interactional Competence (TCIC) obtained an overall mean score of 4.36 with a standard deviation (SD) of 0.47, indicating a *very high* descriptive level as shown in Table 1. The student participants demonstrate that their instructors present reliable, strong interactional competencies during classroom activities. It indicates that English language teachers in the involved private senior high schools have excellent classroom interaction skills, which are similarly recognized and felt by most of their students. The results additionally strengthen earlier research highlighting the significance of strong teacher-student engagement in language learning environments. Research by Hofkens et al. (2023) indicates that

interactions between teachers and students are crucial in shaping the influence of teachers on student growth and learning. Likewise, a study by Pianta et al. (2021) has shown that when educators enhance their methods following training and coaching on teacher-student interactions. These findings confirm that teachers’ classroom interactional competence (TCIC) is an essential element of efficient English language teaching.

Table 1
Level of Teachers’ Classroom Interactional Competence in English Language Classes

INDICATORS	Mean	SD	DESCRIPTION
1.1 Visual Organizers	4.31	0.64	Very High
1.2 Sociocultural Interaction	4.19	0.79	High
1.3 Questioning	4.50	0.97	Very High
1.4 Interactional Patterns	4.49	0.63	Very High
1.5 Repair	4.29	0.69	Very High
1.6 Language Modification	4.25	0.59	Very High
1.7 Turn-Taking	4.13	0.70	High
1.8 Managerial Interaction	4.49	0.59	Very High
1.9 Rhetorical Script	4.56	0.59	Very High
Overall Mean	4.36	0.47	Very High

Among the indicators, Rhetorical Script achieved the highest category mean of 4.56, accompanied by a standard deviation of 0.59, categorized as *very high*. The evaluation demonstrates that teachers possess both the ability and skill to use speech acts for teaching their students genuine English communication skills. The teachers demonstrate strong abilities to introduce actual communication roles within educational discussions through their outstanding scores. This research supports Hu et al. (2020) by showing how teacher skill in implementing speech act tactics enhances classroom interaction quality for language teaching functions.

The item “*Using speech acts (e.g., questioning, requesting) during instruction*” achieved 4.60 in the Rhetorical Script component, demonstrating a *very high* measure. This indicates that teachers extensively make use of genuine speech acts throughout their instruction to generate effective classroom communication. The result affirms the study of Hofkens et al. (2023) which stated that the consistent application of pragmatic language strategies by teachers using speech acts produces better linguistic responsiveness among students

while building educational environments for communication.

The least rated item in the top indicator was “*Teaching speech acts (e.g., greetings, requesting) to students,*” which had a mean of 4.53 still classified as *very high*. Even though this figure is slightly lower than the highest-rated item, it still indicates that direct teaching of speech acts is frequently practiced, highlighting the significance teachers attribute to pragmatic language instruction. The result supports the study of Taguchi (2012) which posed that teaching speech acts directly enables teachers to build learners’ pragmatic understanding as well as their cultural competence.

The indicator with the lowest score was Turn-Taking, which had a category mean of 4.13 and a standard deviation of 0.70, but is still regarded as *high*. This indicates that turn-taking strategies exist in the English classroom. The further data implies that students have better involvement opportunities, together with equal time for speaking in classroom interactions. This result confirms Darong and Guna’s (2023) study which stated that English language classrooms should promote balanced student participation opportunities. Teachers who do not master appropriate turn-taking management become obstacles to student dialogic participation and fulfillment of speaking rights.

The participants scored the highest on the item “*Emphasizing turn management to include all students*” with an average rating of 4.18 and a standard deviation of 0.82. The high rating demonstrates educators understand equity in discourse distribution stands essential for language classrooms. Educators display clear intent toward intentional integration of all students. This result supports the study of researchers at Darong and Neldis (2023) where it stress that managing speaking turns stands as a core requirement for multilingual environments since these environments trigger linguistic hierarchies among students. Their findings affirm that formal methods of turn regulation consisting of nomination techniques and extended wait time and scaffolded participation create equitable distribution and increase opportunities for students who are less outspoken.

The indicator received its lowest score from “*Encouraging turn extension during discussions,*” obtaining a mean of 4.05, albeit still high. The data demonstrates the utilization of scaffolding methods as they help students improve their contributions when participating in discussions. Educational practices allow professionals to gain experience using prompts and follow-ups

for enhancing student responses. This result affirms the study of Limberg (2015), emphasizing that scaffolding prolonged learner discussions through clarification requests and prompts proves essential to develop learner abilities. Students need these methods for both developing their discourse skills and building their self-assurance during prolonged language conversations.

Level of Technological Pedagogical Content Knowledge of Teachers in English Language Classes

Table 2 shows the level of TPACK in English classes in private senior high schools which gained mean score of 4.33 which indicate a *very high* level. The standard deviation reached 0.50 enabling researchers to identify minimal response inconsistency. The very high level of TPACK indicates that teachers combined extensive technology knowledge with both pedagogical and content knowledge while teaching English language. Most students view teachers' knowledge integration as consistently unified since they consistently observe technology and teaching methods blended in different educational environments. This is similar to the finding of the research of Abubakir and Alshaboul, (2023) regarding EFL educators' command of TPACK in writing classes in Qatar which revealed that teachers exhibited high knowledge levels across all TPACK components.

Among the indicators, Content Knowledge (CK) recorded the highest category mean of 4.52 (SD = 0.57), categorized as *very high*. This suggests that educators have a solid grasp of the content, particularly in teaching the English language. Educational experience at this level enables instructors to pick appropriate learning materials while determining lesson duration and adapting content for different student levels. The result affirms the study of Shafie et al. (2019) that content mastery proves necessary for effective teaching. Similarly, the researchers Liu and Kleinsasser (2015) explicitly support this result, noting that teachers with a deep understanding of content generate better teaching quality combined with better student performance in language teaching.

Table 2
Level of Technological Pedagogical Content Knowledge of Teachers in English Language Classes

INDICATORS	Mean	SD	DESCRIPTION
2.1 Technology knowledge	4.15	0.86	High
2.2 Content Knowledge	4.52	0.57	Very High

2.3 Pedagogical Knowledge	4.24	0.67	Very High
2.4 Pedagogical Content Knowledge	4.45	0.62	Very High
2.5 Technological Content Knowledge	4.43	0.60	Very High
2.6 Technological Pedagogical Knowledge	4.29	0.67	Very High
2.7 Technological Pedagogy Content Knowledge	4.24	0.62	Very High
Overall Mean	4.33	0.50	Very High

Under the Content Knowledge indicator, the highest rated item was *"Having sufficient knowledge about English,"* with respondents giving it a mean score of 4.63 while demonstrating a standard deviation of 0.63, indicating a *very high* level. The educators demonstrate strong beliefs in their mastery of the language, while they believe this gives them the power to deliver content with precision to their students. This result confirms the study of Limbong (2017), who asserts that teachers who deeply understand their subject matter enhance curriculum delivery, thus enabling students to gain a better understanding of language education.

According to the survey results, *"Deciding on the scope of concepts taught within the class"* scored 4.48 (SD = 0.69), which indicates *very high* performance. Teachers demonstrate excellent abilities, yet their definition and modification methods for instructional content boundaries demonstrate slight variations. The result attests the study of Yeh et al. (2019), which confirms that teachers' capacity for content modification and determination depends on their gained expertise and school guidelines.

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Technology Knowledge (TK) scored the lowest among all indicators with a category mean of 4.15 (SD = 0.86) at a *high* level. Student teachers demonstrate proficient technology skills, but there is a potential for growth, and particularly, in aligning with the changing needs of educational technology, much can be done if it is sustained and geared towards unearthing specific

professional development. The result supports the findings by Yeh et al. (2021), documenting that educators have adequate pedagogical abilities. Similarly, research conducted by Bugueño (2013) demonstrated that teachers' technological confidence develops through the combination of technology access alongside positive views and adequate training practices.

The survey participants rated "*Knowing how to solve their technical problems*" as the highest item in the Technology Knowledge with a mean score of 4.36 and a standard deviation of 0.99, indicating a *very high* rating. Educators have shown themselves capable of resolving little technology-related problems while maintaining independence in their problem-solving approach. This verifies the findings of the study of Yerdelen-Damar et al. (2021) which showed that students who felt capable of fixing technology problems developed greater confidence as well as autonomy in school environments.

The item "*Frequently playing around with technology*" obtained the lowest score with an average of 3.92 and a standard deviation of 0.96 which is still at the *high* level. The results show that teachers possess excellent computer capabilities, and are engaged with new tools strictly for educational purposes only. The finding directly confirms the study of Wu and Wang (2021), which emphasized that teachers are testing new technologies since they have limited training options and time limitations. Educational innovation training coupled with playful experimentation training about new educational technologies remains a professional development necessity for schools.

Level of Student Engagement in English Language Classes

The overall mean for Student Engagement in English Language Classes was 4.08, interpreted as "Very High." This suggests that students view themselves as very involved in the cognitive, emotional, behavioral, and social aspects. The standard deviation was 0.45, indicating a small dispersion of scores and a high level of uniformity in student responses. The minimal variability implies that the majority of students encountered comparable levels of engagement in their English classes, signifying a positive and consistent learning atmosphere.

Table 3
Level of Student Engagement in English Language Classes

INDICATORS	Mean	SD	DESCRIPTION
3.1 Cognitive Engagement	4.41	0.51	Very High
3.2 Affective Engagement	3.94	0.76	High
3.3 Behavioral Engagement	3.61	0.62	High
3.4 Social Engagement	4.37	0.51	Very High
Overall Mean	4.08	0.45	Very High

This result expands the proposition of Fredricks et al. (2004), who emphasized the importance of student engagement, particularly in language courses, resulting in enhanced learning and better academic results. Likewise, Mekki et al. (2022) highlighted the multifaceted aspect of engagement and students are observed to acquire elevated levels of different engagement forms.

The result further affirms previous literature on student engagement. A study conducted by Peng (2021) confirmed that students display high levels of student engagement who consequently demonstrate positive learning outcomes in secondary education. Additionally, Nasrollahi Shahri (2017) found a similar position that when students feel behaviorally and emotionally involved, they participate more actively and persist longer in learning tasks.

Among the four dimensions, Cognitive Engagement had the highest category mean at 4.41 (SD = 0.51), classified as *very high*. This is indicative that students exert effort to understand and connect English class content to prior knowledge and real-life applications. Such engagement reflects higher-order thinking and deeper processing of learning materials. This result is consistent with the findings of Peng (2021), who stated that students must develop cognitive engagement - manifested in effortful learning, elaboration, and metacognitive strategies which are essential for achieving academic success. Moreover, Wang (2021) emphasized the role of cultivating students' cognitive skills since it is needed for meaningful student learning.

The highest scoring item within the Cognitive Engagement dimension was “*Trying to put the ideas in my own words when learning English,*” with a mean of 4.56 (SD = 0.71), interpreted as *very high*. The students' active interpretation of English content improves their retention along with comprehension abilities. This confirms the idea of Nasrollahi Shahri (2017) stating that self-regulation and engagement levels among students who rephrase

academic material through their native language show high academic achievement. Likewise, according to Mekki et al. (2022), deep learning occurs when students both process information mentally while maintaining control over their knowledge-building process.

Results showed that students rated *“Trying to think through the English topics and decide what I’m supposed to learn from them, rather than studying topics by just reading them over”* with a score of 4.18 (SD = 0.83). categorized as *high*. There is evidence of promising amounts of critical reflection among students with their learning of contents of English lessons which is an indicator of the depth of thinking in the process. However, according to Mekki et al. (2022), there remain some students who benefit from further guidance to go above and beyond foundational strategies, again, primarily because of restricted exposure to metacognitive instruction.

The dimension with the lowest score was Behavioral Engagement, showing a category mean of 3.61 (SD = 0.62), categorized as *high*. The dimension with the lowest score was Behavioral Engagement, which still attained a ‘High’ category mean of 3.61 (SD = 0.62), This is still indicative of a relatively positive level of student involvement, although, it lagged a bit behind the other engagement dimensions, the result points to opportunities to augment how students engage and remain engaged in class tasks. This observation corresponds to Froiland and Oros (2014) who discovered that the levels of behavioral engagement are usually different based on instructional practices, teacher expectations, and the learning environment.

The highest item within the Behavioral Engagement indicator was *“Working as hard as I can in the English class,”* with a mean of 4.36 (SD = 0.79), rated as *very high*. This indicates that numerous students exert considerable effort in their English classes, reflecting a favorable attitude toward their academic success. This aligns with the findings of Dykstra et, al (2015), who discovered that measures of engagement based on effort can predict both academic success and student retention.

On the other hand, the lowest item was *“Taking an active role in the English extra-curricular activities in my school as English Speech Contest,”* with a mean of 2.77 (SD = 1.51), interpreted as *moderate*. This suggests that although students are active in the classroom, there is still room for student pupil to extend their involvement in English associated extracurricular activities.

This goes along Wayne and Zaheer (2021) who have reported that students may encounter logistical, motivational or self-confidence challenges, which may constrain their participation in academic activities outside classroom setups.

Relationship Between Teachers’ Classroom Interactional Competence and Technological Pedagogical Content

The data in Table 4 shows that both independent variables present a moderate, statistically positive relation with student engagement. The research indicates that Teacher Classroom Interactional Competence achieved an r value of 0.516 at $p < 0.05$ to show that students engage more when their educators demonstrate high interactional competence. Students become more engaged in English language classes when teachers implement proper questioning approaches, discussion facilitation, turn-taking, and response-based communication adjustments. This finding strongly affirms the study of Walsh (2011), which revealed that teacher talk and educational dialogue forms and interaction patterns serve as essential factors in increasing student classroom involvement, especially within language education settings.

Table 4
Correlation of Variables

Variables paired with Student Engagement in English Language Classes	r	p-value	Remarks
Teachers Classroom Interactional Competence	0.516	0.000	Significant
Technological Pedagogical Content Knowledge	0.506	0.000	Significant

**Significant at 0.05*

Furthermore, this result supports the findings of Hofkens et al. (2023), who highlighted that elevated CIC correlates with enhanced classroom engagement and greater learner involvement. Likewise, Yu et al. (2022) pointed out that educators with high interactional competence often promote improved classroom participation and more significant communicative interactions in English language learning settings.

Moreover, TPACK also showed a significant moderate positive relation with Student Engagement based on a correlation coefficient of $r = 0.506$, which

reached $p < 0.05$. The results suggest that students demonstrate positive reactions through their performance when teachers unite technology with pedagogy and content into coherent learning designs. This outcome aligns with Chai et al (2013) who confirmed that TPACK proficiency has significant correlation with effective classroom management, especially within digitally supported settings. Likewise, Angeli and Valanides (2009) observed that professional skills that unite technology tools with pedagogical strategies alongside content knowledge directly shape how students interact with learning resources. Graham (2011) proclaimed that TPACK functions independently only if practices are coordinated with purposeful instructional design since strategy selection is more vital than tool selection alone.

Influence of Teachers’ Classroom Interactional Competence and Technological Pedagogical Content Knowledge on Student Engagement

The Multiple Linear Regression Analysis results for evaluating Teachers’ Classroom Interactional Competence (TCIC) and Technological Pedagogical Content Knowledge (TPACK) effects on Student Engagement can be found in Table 5. The method of regression enables scientists to establish the extent to which separate variables contribute to varying patterns in the dependent variable. The research method proves suitable for identifying the relationship between teaching competencies and student classroom engagement. Table 5 shows the result of the study.

Table 5
Influences of Student Engagement in English Language Classes

Individual Predictors	Standard Coefficient Beta	t	p-value	Remarks
Teachers Classroom Interactional Competence	0.295	3.15	0.002	Significant
Technological Pedagogical Content Knowledge	0.235	2.67	0.008	Significant

Predictors Combined

Holistic Model

R ²	F	p-value	Remarks
0.291	40.5	0.000	Significant

**Significant at 0.05*

Student engagement receives meaningful statistical influence from the two independent variables according to the regression analysis. Data showed that Teachers’ Classroom Interactional Competence produced the strongest relationship ($\beta = 0.295$) with an evaluation significance of $t = 3.15$ and a $p = 0.002$. This suggests that students are more likely to participate and remain engaged when teachers exhibit high levels of interactional competence. This result supports the findings of Sert (2015) and Walsh (2013), who emphasized the central role of teacher-student interaction in promoting student learning engagement.

Similarly, TPACK was found to be a significant predictor of student engagement ($\beta = 0.235$, $t = 2.67$, $p = 0.008$). This finding confirms that teachers’ proficiency in integrating technology, pedagogy, and content knowledge significantly contributes to a more interactive and engaging classroom experience. When technology is integrated intentionally to support pedagogical aims and content delivery, students report higher levels of involvement. This aligns with the TPACK framework of Koehler and Mishra (2016) and is further Bugueñosupported by Communities of Practice (Wenger, as cited in Cook, 2023), which highlight that learning occurs within social groups where knowledge is shared and built collaboratively.

Further, the finding affirms the study of Graham (2011) which revealed the impact of TPACK on student engagement depends on how effectively teachers integrate technology tools into meaningful lesson strategies. Meaningful student engagement develops from teachers connecting digital resources to both instructional goals and content requirements rather than from digital resources’ presence alone.

When considered together, the regression model ($R^2 = 0.291$, $F = 40.5$, $p < 0.05$) indicates that 29.10% of the variance in student engagement can be explained by teachers’ TCIC and TPACK. This is considered a moderate explanatory power, suggesting that while these variables are important, other unmeasured factors, such as student motivation, classroom environment, and

school policies, may also play significant roles (Bakker et al., 2014). This aligns with Sociocultural Theory and the concept of the Zone of Proximal Development (Vygotsky, as cited in McLeod, 2024), stressing that learning is most effective when students engage with more knowledgeable others within a supportive and interaction-rich environment. Teachers who scaffold student learning through interaction foster development within the ZPD including the integration of technology. This interpretation is further grounded in Communication Accommodation Theory (Gabunia, 2023) and Interactional Sociolinguistics (Toomaneejinda & Saengboon, 2022), which assert that teachers who adapt their communication to students' sociocultural and linguistic needs are better able to build rapport and encourage deeper participation. Overall, the findings affirm that enhancing teacher competencies in classroom interaction and integrated pedagogy-technology-content delivery supports student engagement. This is deeply rooted in the study's conceptual framework, which integrates multiple theoretical lenses to capture the complexity of language learning interactions and engagement dynamics.

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