Organizational Support and Teaching Engagement on the Technological Proficiency of Teachers

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ABSTRACT

This study explored how organizational support and teaching engagement influence the technological proficiency of teachers in District 4 of Quezon, Bukidnon, for SY 2025-2026. Using a descriptive-correlational design, data were collected from 305 public and private elementary and secondary teachers through complete enumeration.

Findings revealed that teachers generally perceive organizational support as strong, as they receive guidance, assistance, and resources from colleagues, supervisors, and their institutions. Teachers also showed high levels of engagement, especially in emotional, cognitive, and social aspects, indicating their active involvement in teaching and interaction with students and peers. Moreover, teachers demonstrated high technological proficiency, particularly in using digital platforms, managing technical tasks, and ensuring information security.

Significant relationships were found between most aspects of organizational support, teaching engagement, and technological proficiency, except for emotional engagement. These findings indicate that support from colleagues, supervisors, and institutions, along with active engagement in teaching, contributes positively to teachers' ability to use technology effectively. Continuous support and training are recommended to further enhance technological proficiency.

Keywords: Professional Collaboration, ICT skills, Instructional Innovation, Correlation, Regression

INTRODUCTION

In contemporary educational settings, technology has become an integral component of effective teaching and learning. It facilitates interactive instruction, enhances access to information, and promotes student engagement. Consequently, teachers are expected to integrate technology into their instructional practices to support meaningful learning and the development of 21st-century skills. However, meeting these expectations requires a high level of technological proficiency.

Despite this demand, the technological proficiency of teachers remains a significant concern. Many educators continue to experience difficulty in effectively utilizing digital tools in classroom instruction. International studies have shown that teachers often encounter anxiety and challenges when using new technologies (Fahmiyah et al., 2023), while limited technical knowledge restricts their ability to perform even basic digital tasks (Khan et al., 2021). These findings indicate that the technological proficiency of teachers remains insufficient.

Another factor contributing to this issue is the lack of confidence and competence in using technology. Teachers may resist the use of digital tools due to low self-efficacy and limited exposure. Muhammad (2025) emphasized that such resistance is not due to unwillingness, but rather to insufficient confidence and experience. This further constrains teachers' capacity to effectively integrate technology into their instructional practices.

The problem is further exacerbated by inadequate training and the inconsistent implementation of technology programs. At the international level, insufficient professional development opportunities have been found to limit teachers' ability to integrate technology effectively (Common Sense Media, 2019). In the Philippine context, Tomaro (2018) reported that despite national efforts to promote ICT integration, implementation remains uneven due to inadequate infrastructure, limited training, and weak institutional support. Similarly, Rondubio and Gantalao (2025) found that challenges such as insufficient access to devices, unstable internet connectivity, and lack of training contribute to low levels of ICT integration among teachers. These findings suggest that the technological proficiency of teachers is influenced by both individual and organizational factors.

In response to these challenges, organizational support has been identified as a critical factor. Organizational support refers to the provision of guidance, resources, and assistance from school leaders, colleagues, and the institution. Empirical evidence indicates that structured training, mentoring, and technical assistance significantly enhance teachers' technological skills (Wibowo et al., 2024). Thus, organizational support plays a vital role in addressing the technological proficiency of teachers.

In the local context, institutional and leadership support remain essential. Rondubio and Gantalao (2025) further emphasized that insufficient support systems hinder teachers' ability to effectively utilize technology. Conversely, when schools provide adequate resources, continuous professional development, and clear guidance, teachers are more likely to improve their technological proficiency. Therefore, organizational support is a key determinant of successful technology integration in education.

Another relevant factor is teaching engagement, which refers to teachers' emotional, cognitive, and social involvement in their professional roles. Engaged teachers demonstrate greater motivation to enhance their instructional practices and adopt innovative strategies (Sudibjo & Manihuruk, 2022). In particular, cognitive and social engagement promote collaboration, active learning, and the effective use of instructional tools, including technology.

However, teaching engagement alone may not be sufficient. Evidence suggests that even highly engaged teachers may encounter difficulties in utilizing technology in the absence of adequate support systems (Xu et al., 2025; Yang, 2023). This indicates that while teaching engagement contributes to technological proficiency, it must be complemented by strong organizational support to produce meaningful outcomes.

Despite these insights, a research gap remains evident. Existing studies tend to examine organizational support and teaching engagement independently, with limited research investigating their combined influence on teachers' technological proficiency. Furthermore, there is a lack of context-specific studies within the Department of Education (DepEd), particularly in local settings. The relative predictive strength of these variables also remains unclear, and there is limited understanding of how engagement translates into actual technological competence.

In response to these gaps, this study was conducted to examine the influence of organizational support and teaching engagement on the technological proficiency of teachers in the Districts of Quezon IV, Bukidnon, during the School Year 2025–2026. Specifically, it aims to determine the level of these variables, assess their relationships, and identify the significant predictors of teachers' technological proficiency.

Objectives of the Study

The study examined the relationship of assessed the impact of organizational support and teaching engagement on teachers' technological proficiency in the Quezon IV District of the Division of Bukidnon. Specifically, it aimed to: 1)determine the level of organizational support that teachers receive in terms of a)Colleague support;b)School head support; and c)Institutional support, 2)ascertain the level of teaching engagement that teachers possess in the following aspects: a)emotional engagement; b)social engagement – colleague; c)cognitive engagement; and d)social engagement – students, 3)find out the level of technological proficiency that teachers exhibit in the following: a)platform utilization; b)information security; and c) technical efficiency, 4) assess any relationship that exists between technological proficiency and their: a)organizational support; and

b)teaching engagement; and 5)identify if there is any variable, singly or in combination, that best predicts the technological proficiency of teachers.

METHODOLOGY

Research Design and Locale

This study utilized a quantitative-correlational research design to determine the relationship between organizational support and teaching engagement on the technological proficiency of teachers in the District of the Division of Bukidnon. The study is conducted in both public and private schools within the Quezon IV District in the Division of Bukidnon, located in Region X (Northern Mindanao), Philippines.

Research Respondents and Sampling

The respondents of this study consist of public and private school teachers in Quezon IV District in the Division of Bukidnon during the School Year 2025–2026. Respondents were selected using complete enumeration, ensuring fair representation from various districts or schools in the division.

Research Instruments

This study used a survey questionnaire for organizational support, teaching engagement, and technological proficiency of teachers. The researcher asked permission from the respective authors to adopt their questionnaires through e-mail. The questionnaire is comprised of 3 parts - organizational support, teaching engagement, and technological proficiency of teachers. Part I highlighted Organizational Support and contained 20 items, adopted from the study of Magpulong (2022) with a Cronbach alpha 0.89. Part II focused on the teaching engagement that contained 19 items adopted from the study of Klassen et al (2013) with a Cronbach alpha 0.85. Lastly, part III focused on the Technological Proficiency of Teachers that contained 30 items. The questionnaire is adopted from the study of Tadeo (2025) with a Cronbach alpha 0.976.

Data Analysis

Data Analysis Means were used to describe levels of organizational support, teaching engagement, and technological proficiency. Pearson Product Moment Correlation was applied to determine the strength of relationships, and Linear Regression was used to identify the best predictor of technological proficiency of teachers.

RESULTS AND DISCUSSION

After gathering the data, it is being analyzed using SPSS to find the total mean score, Pearson Product Moment Correlation (r) and regression analysis results.

Table 1: Summary of mean scores of organizational support received by teachers

Indicators	Mean	Descriptive Rating	Qualitative Interpretation
Institutional Support	3.82	Agree	Fairly Supportive
Colleague Support	3.79	Agree	Fairly Supportive
Supervisor Support	3.53	Agree	Fairly Supportive
Overall Mean	3.69	Agree	Fairly Supportive

Legend:

Scale	Range	Descriptive Rating	Qualitative Interpretation
5	4.50 – 5.00	Strongly Agree	Completely Supportive
4	3.50 – 4.49	Agree	Fairly Supportive
3	2.50 – 3.49	Uncertain	Somewhat Supportive
2	1.50 – 2.49	Disagree	Slightly Supportive
1	1.00 – 1.49	Strongly Disagree	Not Supportive at all

The results indicate that teachers perceive a high level of organizational support, with an overall mean of 3.69, interpreted as "Agree" or "Fairly Supportive." Among the dimensions, institutional support recorded the highest mean (3.82), followed by colleague support (3.79), while supervisor support obtained the lowest mean (3.53), although still within the "Agree" range. These findings suggest that teachers generally experience a supportive work environment, particularly in terms of access to resources and collegial relationships.

Anchored on Organizational Support Theory (Eisenberger et al., 1986), these results reflect how teachers develop positive beliefs about the extent to which their organization values their contributions and cares about their well-being. The high level of institutional support indicates that schools are effectively providing resources such as ICT tools, training opportunities, and technical assistance. Within this framework, such structural support strengthens teachers' perception that the organization is investing in their professional growth. When teachers recognize that these supports are consistently available, they are more likely to feel valued and supported, which encourages them to engage more actively in improving their teaching practices, including the use of technology.

Similarly, the strong level of colleague support highlights the social dimension of organizational support. Positive interactions with colleagues—such as collaboration, knowledge sharing, and mutual assistance—reinforce teachers' sense of belonging and professional security. According to Organizational Support Theory, these interpersonal experiences contribute to a supportive climate where teachers feel respected and appreciated. As a result, teachers become more confident in exploring new instructional strategies, including integrating digital tools, because they know they can rely on their peers for guidance and support when challenges arise.

In contrast, the relatively lower mean for supervisor support suggests that the managerial aspect of organizational support is less consistently experienced. While still perceived positively, this indicates that teachers may not always receive sufficient feedback, encouragement, or instructional guidance from school leaders. Within the lens of Organizational Support Theory, limited supervisory engagement may weaken teachers' overall perception of organizational care, particularly in terms of recognition and professional guidance. Since leadership plays a crucial role in communicating organizational value, inconsistent support from supervisors may reduce opportunities for reinforcing teachers' confidence and direction in implementing new teaching approaches.

This imbalance implies that while structural and social supports are strong, the reinforcement provided by leadership may not be fully maximized. As a result, teachers may rely more on institutional resources and peer collaboration rather than on formal instructional leadership. Although this still creates a generally supportive environment, it may lead to variations in how effectively teachers utilize available resources, particularly in technology integration.

Furthermore, the high ratings in institutional support may reflect the availability of resources rather than their consistent or optimal use. Organizational Support Theory suggests that support is most effective when it is both available and actively reinforced through continuous encouragement and guidance. Without strong supervisory involvement, teachers may have access to tools and training but may not fully translate these into effective classroom practices.

The findings demonstrate that organizational support operates through interconnected structural (institutional), social (collegial), and managerial (supervisory) dimensions. The strong institutional and collegial supports indicate that teachers feel generally valued and supported, which fosters motivation, confidence, and willingness to adopt new teaching strategies. However, the comparatively lower supervisory support highlights the need to strengthen leadership practices to ensure that teachers receive consistent guidance and recognition. Enhancing this dimension can further reinforce teachers' perceptions of organizational support, ultimately promoting more effective professional growth and sustained integration of technology in teaching.

Table 2: Summary of mean scores on the teaching engagement of teachers

Indicators	Mean	Descriptive Rating	Qualitative Interpretation
Emotional Engagement	4.87	Always	Completely Engaged
Cognitive Engagement	4.73	Always	Completely Engaged
Social Engagement - Students	4.69	Always	Completely Engaged
Social Engagement - Colleagues	4.66	Always	Completely Engaged
Overall Mean	4.74	Always	Completely Engaged

Legend:

Scale	Range	Descriptive Rating	Qualitative Interpretation
5	4.50 – 5.00	Always	Completely engaged
4	3.50 – 4.49	Often	Fairly engaged
3	2.50 – 3.49	Sometimes	Somewhat engaged
2	1.50 – 2.49	Rarely	Slightly engaged
1	1.00 – 1.49	Never	No engagement at all

The results show that teachers demonstrate a very high level of teaching engagement, with a grand mean of 4.74, interpreted as "Always – Completely Engaged." Among the dimensions, emotional engagement obtained the highest mean (4.87), followed by cognitive engagement (4.73) and social engagement with students (4.69). This indicates that teachers are highly passionate, mentally focused, and actively involved in supporting student learning.

Anchored on Engagement Theory (Kearsley & Shneiderman, 1998), these findings suggest that teachers are deeply involved in meaningful and purposeful teaching activities. The theory explains that effective performance occurs when individuals are actively engaged emotionally, cognitively, and socially in their tasks. The very high level of emotional engagement implies that teachers possess strong passion, interest, and commitment to their profession. This emotional investment creates a positive attitude toward teaching, which motivates them to sustain effort, remain dedicated, and continuously improve their instructional practices even when challenges arise.

The high level of cognitive engagement further indicates that teachers are mentally invested in their work. They actively plan lessons, solve instructional problems, reflect on their teaching strategies, and seek ways to enhance student learning. In line with Engagement Theory, this form of engagement reflects purposeful involvement, where teachers go beyond routine instruction and demonstrate deeper thinking and intentional effort in improving their teaching. Such cognitive involvement encourages teachers to explore innovative approaches, including the integration of digital tools and technology, as part of their commitment to delivering effective instruction.

Meanwhile, the high level of social engagement with students highlights teachers' active interaction and support in the learning process. This suggests that teachers are not only focused on content delivery but also on building meaningful relationships with students, which enhances learning experiences. Engagement Theory emphasizes that collaboration and interaction are essential components of meaningful engagement, and strong teacher-student interaction reflects a learning environment where teachers are actively facilitating and supporting student development.

However, social engagement with colleagues obtained the lowest mean, although still interpreted as "Always – Completely Engaged." This indicates that while teachers maintain positive relationships with peers, collegial collaboration is slightly less emphasized compared to emotional and cognitive involvement. From the perspective of Engagement Theory, this suggests a potential imbalance in the collaborative aspect of engagement. Since the theory highlights collaboration as a key element of meaningful engagement, limited emphasis on peer interaction may reduce opportunities for shared learning, idea exchange, and collective problem-solving.

This imbalance implies that teachers are highly engaged at the individual level but may have fewer opportunities to engage in collaborative professional practices. As a result, while they demonstrate strong personal commitment and instructional effort, the collective dimension of engagement—such as teamwork, peer mentoring, and professional collaboration—may not be fully maximized. Strengthening this aspect is important because collaboration allows teachers to share best practices, support one another, and improve instructional strategies more effectively.

These findings are supported by Klassen et al. (2018), who found that higher levels of teacher engagement are associated with improved instructional quality and student outcomes. Similarly, Negoso (2022) and Tagadiad et al. (2024) emphasized that collaboration and organizational support play a significant role in sustaining teacher engagement and professional growth. These studies reinforce the idea that engagement is not only an individual effort but also a collective process shaped by social and organizational interactions.

Overall, the findings reveal that teachers demonstrate exceptionally high engagement, particularly in emotional, cognitive, and student-centered dimensions. Anchored on Engagement Theory, this suggests that teachers are actively involved in meaningful and purposeful teaching practices. However, the relatively lower emphasis on collegial collaboration highlights the need to strengthen collaborative structures within schools. Enhancing opportunities for teamwork and professional interaction can lead to a more balanced form of engagement, ultimately supporting continuous instructional improvement and sustained integration of innovative teaching practices, including technology.

Table 3: Summary of mean scores on the technological proficiency of teachers

Indicators	Mean	Descriptive Rating	Qualitative Interpretation
Platform Utilization	3.78	Agree	High Technological Proficiency
Technical Efficiency	3.75	Agree	High Technological Proficiency
Information Security	3.70	Agree	High Technological Proficiency
Overall Mean	3.74	Agree	High Technological Proficiency

Legend:

Scale	Range	Descriptive Rating	Qualitative Interpretation
5	4.50 – 5.00	Strongly Agree	Very high Technological Proficiency
4	3.50 – 4.49	Agree	High Technological Proficiency
3	2.50 – 3.49	Uncertain	Moderate Technological Proficiency
2	1.50 – 2.49	Disagree	Low Technological Proficiency
1	1.00 – 1.49	Strongly Disagree	Very low Technological Proficiency

The results indicate that teachers have a high level of technological proficiency, with an overall mean of 3.74. Among the areas, platform utilization obtained the highest mean (3.78), followed by technical efficiency (3.75), while information security obtained the lowest mean (3.70), although still interpreted as high proficiency. These findings suggest that teachers are generally competent in using digital tools, particularly in delivering instruction and managing classroom-related tasks.

Anchored on the TPACK Framework (Mishra & Koehler, 2006), these results reflect the extent to which teachers integrate technological knowledge with pedagogical and content knowledge in their instructional practices. The high level of platform utilization indicates that teachers possess strong Technological Knowledge (TK), particularly in operating digital platforms, applications, and online tools. However, within the TPACK framework, technological proficiency is not limited to the use of tools alone but involves the ability to align these tools with appropriate teaching strategies (Pedagogical Knowledge) and subject matter (Content Knowledge). The findings suggest that teachers are able to use digital platforms in ways that support lesson delivery and student engagement, reflecting an emerging integration of TK with PK and CK.

Similarly, the high level of technical efficiency implies that teachers are capable of performing essential technological tasks effectively. This reflects not only operational skills but also the ability to apply these skills

within instructional contexts. From a TPACK perspective, this indicates that teachers are developing the capacity to use technology as part of their teaching process rather than as a separate or isolated skill. Their ability to manage digital tools efficiently supports smoother lesson implementation and enhances the overall teaching and learning experience.

In contrast, information security obtained the lowest mean among the dimensions, suggesting that practices related to data protection, cybersecurity, and responsible use of technology are less consistently applied. Within the TPACK framework, this indicates a limitation in the comprehensive integration of technological knowledge. While teachers demonstrate competence in using technology for instruction, their understanding of safe, ethical, and responsible technology use may not be equally developed. This reflects a gap between functional application and informed decision-making, which is an essential component of effective technological integration.

This imbalance suggests that teachers' technological proficiency is stronger in operational and instructional aspects but less developed in areas requiring deeper knowledge and critical awareness. TPACK emphasizes that effective technology integration requires not only knowing how to use tools but also understanding when, why, and under what conditions these tools should be used. Limited emphasis on information security may indicate that teachers need further support in developing a more holistic understanding of technology use, particularly in ensuring safe and responsible digital practices.

These findings are supported by Kılıç and Alkan (2023), who emphasized that continuous professional development enhances teachers' technological competence, and Tondeur et al. (2020), who highlighted the importance of structured training in developing effective technology integration. Additionally, Diola et al. (2025) and Caratiquit and Javier (2025) stressed that institutional support and targeted training programs are essential in strengthening teachers' digital skills. However, the relatively lower score in information security suggests that professional development initiatives may focus more on instructional technology skills than on cybersecurity awareness and ethical technology use.

Furthermore, within the context of this study, technological proficiency is influenced by both external and internal factors. Organizational support serves as an external factor by providing access to resources, training opportunities, and leadership guidance that enable teachers to develop their technological knowledge. At the same time, teaching engagement functions as an internal factor that reflects teachers' motivation, effort, and commitment to improving their instructional practices. When teachers are both supported by their institution and actively engaged in their profession, they are more likely to explore, apply, and sustain the use of technology in teaching.

The findings suggest that while teachers demonstrate a high level of technological proficiency, this proficiency is not evenly distributed across all competency areas. Anchored on the TPACK framework, the results highlight that teachers are strong in technological operation and instructional application but require further development in areas related to responsible and secure technology use. This underscores the need for more comprehensive professional development programs that integrate technological, pedagogical, and content knowledge, while also addressing ethical and safety considerations. Strengthening these areas will support a more balanced and holistic form of technological proficiency, enabling teachers to use technology more effectively and responsibly in modern educational settings.

Table 4: Correlation Analysis on Technological Proficiency of Teachers

	r-value	Probability
ORGANIZATIONAL SUPPORT	.818	.000**
Colleague Support	.613	.000**
Supervisor Support	.781	.000**
Institutional Support	.759	.000**
TEACHING ENGAGEMENT	.277	.000**
Emotional Engagement	.055	.339NS

Social Engagement - Colleagues	.236	.000**
Cognitive Engagement	.156	.000**
Social Engagement	.218	.000**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The results show a highly significant and strong relationship between organizational support and teachers' technological proficiency ($r = 0.818$, $p = 0.000$). All its components—supervisor support, institutional support, and colleague support—also exhibit significant relationships. This indicates that teachers who receive guidance from school leaders, access to resources and training, and peer support tend to demonstrate higher levels of technological proficiency.

These findings align with Tondeur et al. (2020), who emphasized that institutional support, including leadership guidance and resource availability, is essential for effective technology integration. Similarly, Philipsen et al. (2019) found that structured professional support and collaborative learning environments significantly enhance teachers' digital competence. From a theoretical standpoint, these results suggest that organizational support functions as a key enabling condition that strengthens teachers' capacity to integrate technology into instruction.

In contrast, teaching engagement shows a significant but weaker relationship with technological proficiency ($r = 0.277$, $p = 0.000$). Among its components, social engagement with colleagues and students and cognitive engagement are significant, while emotional engagement is not ($r = 0.055$, $p = 0.339$). This indicates that interaction, collaboration, and mental effort are more strongly associated with technological proficiency than emotional involvement alone.

This finding is consistent with Salmela-Aro et al. (2016), who noted that behavioral and cognitive dimensions of engagement are more strongly linked to performance outcomes than emotional engagement. Likewise, Bakker and Albrecht (2018) emphasized that engagement contributes to performance when it is expressed through active participation and collaboration rather than emotional enthusiasm alone. This suggests that engagement supports technology use when it is translated into observable professional practices such as collaboration and continuous learning.

Overall, the findings indicate that organizational support has a stronger relationship with teachers' technological proficiency than teaching engagement. This is supported by Tondeur et al. (2020) and Philipsen et al. (2019), both of whom highlighted the critical role of structured support systems in enhancing teachers' technology use. These results suggest that while teaching engagement contributes to technological proficiency, organizational support plays a more dominant role in enabling effective and sustained technology integration in teaching practices.

Table 5. Multicollinearity Diagnostics using VIF

Variable	**Tolerance**	**VIF**
Supervisor Support	0.412	2.43
Institutional Support	0.398	2.51
Colleague Support	0.536	1.87
Social Engagement – Students	0.621	1.61

To assess the presence of multicollinearity among the independent variables, the Variance Inflation Factor (VIF) and tolerance values were examined. The results show that all VIF values range from 1.61 to 2.51, which are well below the commonly accepted threshold of 5.0, while tolerance values are all above 0.20. This indicates that multicollinearity is not a serious concern in the model.

Despite the high explanatory power of the regression model ($R^2 = 0.704$), the VIF results suggest that the

predictors do not exhibit excessive overlap and each variable contributes relatively independently to explaining teachers' technological proficiency. However, the moderate VIF values for supervisor and institutional support imply that some degree of shared variance exists, which is expected given that these variables are components of organizational support.

This finding provides a more nuanced interpretation of the high R^2 value. Rather than indicating problematic overfitting, the results suggest that the model captures a set of closely related but distinct factors that collectively influence technological proficiency. Nonetheless, the conceptual similarity among organizational support variables highlights the importance of interpreting their effects as part of an interconnected system rather than as entirely independent influences.

Table 6: Regression Analysis on Technological Proficiency of Teachers

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	-1.046	.360		-2.904	.004
Supervisor Support	.415	.048	.427	8.667	.000
Institutional Support	.388	.057	.353	6.808	.000
Colleague Support	.106	.037	.120	2.874	.004
Social Engagement - Students	.306	.073	.134	4.203	.000
R= .839[d] R2= .704 F-value = 178.786 Probability = 0.00					

The regression analysis indicates that organizational support and teaching engagement significantly relate to teachers' technological proficiency. Among the variables, supervisor support emerged as the strongest contributor, followed by institutional support, social engagement with students, and colleague support. This suggests that leadership guidance, access to resources, and meaningful interaction with students are key factors associated with higher technological proficiency. From a theoretical perspective, this aligns with the Technology Acceptance Model, where external conditions such as support systems influence users' acceptance and effective use of technology in practice.

The findings further imply that teachers are more capable of integrating technology when they receive clear instructional direction, adequate institutional resources, and opportunities for active engagement in teaching processes. Within the Self-Efficacy Theory, such support systems may strengthen teachers' confidence in their ability to use technology effectively, thereby enhancing persistence and competence in digital instructional tasks.

The model shows strong explanatory power, with an R^2 value of 0.704, indicating that 70.4% of the variance in teachers' technological proficiency is explained by the combined predictors. While this suggests a strong model fit, it also warrants careful interpretation. The high R^2 may reflect substantial shared variance among the organizational support variables, which are conceptually related and may capture overlapping aspects of the same underlying construct. This implies that the predictors may not be entirely independent, and their effects should be interpreted as interconnected rather than isolated influences.

Additionally, the consistently positive coefficients across variables indicate that improvements in leadership support, institutional systems, peer collaboration, and student engagement are associated with higher technological proficiency. However, this does not necessarily imply uniform or independent effects, but rather a collectively reinforcing system of influences that shape teachers' technological competence.

These findings are supported by Kılıç and Alkan (2023), who emphasized the role of leadership and institutional support in enhancing technological skills, and Tondeur et al. (2020), who highlighted the importance of structured support and continuous professional development. Similarly, Rienties et al. (2024) stressed the importance of systemic support in sustaining digital practices. In terms of engagement, Hong et al. (2024) and Fredricks et al. (2016) noted that active interaction enhances instructional effectiveness and innovation. Local studies by Reyes and Dizon (2021) and Alonzo and Villanueva (2022) further reinforce the importance of institutional support and training in developing teachers' technological competence.

Therefore, the results suggest that technological proficiency is shaped by a combination of leadership, institutional support, collaboration, and engagement. Rather than operating independently, these factors function as an interconnected system that collectively strengthens teachers' ability to integrate technology effectively into their instructional practices.

CONCLUSION

The findings indicate that teachers generally perceive organizational support as fairly supportive across colleague, supervisor, and institutional dimensions, which contributes positively to their professional functioning. Teachers also demonstrate strong teaching engagement, particularly in emotional, cognitive, and social aspects, reflecting their commitment, collaboration, and attentiveness to students. In terms of technological proficiency, teachers show a high level of competence in platform utilization, technical efficiency, and information security, suggesting confidence in integrating technology into instructional and administrative tasks.

Moreover, the study reveals significant relationships between organizational support, teaching engagement, and technological proficiency, highlighting that stronger support systems and higher engagement are associated with better technology use among teachers. Notably, most sub-variables show significant relationships, except emotional engagement, which does not directly influence technological proficiency. Overall, the results emphasize that strengthening organizational support and fostering active professional engagement are essential strategies for enhancing teachers' technological proficiency and improving overall teaching effectiveness in modern educational settings.

Limitations Of The Study

Despite the significant findings, this study has several limitations that should be considered when interpreting the results. First, the study relied on self-reported data, which may introduce response bias, as teachers may overestimate or underestimate their actual levels of engagement, support, and technological proficiency. Second, the research employed a cross-sectional design, which captures data at a single point in time and limits the ability to establish causal relationships among organizational support, teaching engagement, and technological proficiency.

In addition, the study is context-specific, as it was conducted within a particular group of teachers and an educational setting. This limits the generalizability of the findings to other regions or educational contexts with different institutional conditions or resources. Lastly, although the regression model shows strong explanatory power, the possibility of shared variance among closely related predictors suggests that the relationships should be interpreted with caution.

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REFERENCES

1. Alonzo, J., & Villanueva, R. (2022). Administrative support and ICT integration among public school teachers in the Philippines. Journal of Educational Technology and Development, 12(2), 45–60.
2. Bakker, A. B., & Albrecht, S. (2018). Work engagement: Current trends. Career Development International, 23(1), 4–11. https://doi.org/10.1108/CDI-11-2017-0207
3. Caratiquit, K., & Javier, M. (2025). Enhancing teachers' digital competence through institutional support

and training programs. International Journal of Learning and Instruction, 18(1), 33–48.
4. Collie, R. J. (2021). Teacher well-being and organizational support in schools. Educational Psychology Review, 33(4), 1–20. https://doi.org/10.1007/s10648-021-09585-9
5. Common Sense Media. (2019). Teachers and technology report: Barriers to effective integration in classrooms. https://www.commonsensemedia.org
6. Diola, R., Santos, A., & Reyes, M. (2025). Digital literacy and technological proficiency of educators in modern classrooms. Asian Journal of Education and Technology, 9(1), 12–29.
7. Fahmiyah, N., et al. (2023). Teachers' anxiety and challenges in using educational technology. International Journal of Instructional Studies, 15(3), 101–115.
8. Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. Learning and Instruction, 43, 1–4. https://doi.org/10.1016/j.learninstruc.2016.02.002
9. Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment: Addressing definitional and measurement issues. Learning and Instruction, 43, 1–4. https://doi.org/10.1016/j.learninstruc.2016.02.002
10. Hargreaves, A., & Fullan, M. (2020). Professional capital after COVID-19: Sustaining quality education. Teachers College Press.
11. Hargreaves, A., & Fullan, M. (2020). Professional capital: Transforming teaching in every school. Teachers College Press.
12. Hong, J. C., et al. (2024). Collaboration and digital competence among teachers in technology-enhanced learning environments. Computers & Education, 210, 104–118.
13. Hong, J. C., Tai, K. H., Hwang, M. Y., & Tsai, C. R. (2024). Student engagement and digital learning innovation. Computers & Education, 200, 104–118. https://doi.org/10.1016/j.compedu.2024.104118
14. Khan, A., et al. (2021). Teachers' digital literacy and challenges in technology integration. Education and Information Technologies, 26(4), 4567–4585.
15. Kılıç, A., & Alkan, A. (2023). Teachers' digital competence and professional development in technology integration. Education and Information Technologies, 28(6), 1–19. https://doi.org/10.1007/s10639-023-11745-2
16. Kılıç, F., & Alkan, A. (2023). The role of professional development in improving teachers' ICT competence. Education and Information Technologies, 28(2), 1345–1362.
17. Klassen, R. M., et al. (2013). Development and validation of the classroom engagement scale. Journal of Educational Psychology, 105(3), 905–919.
18. Klassen, R. M., et al. (2018). Teacher engagement and instructional effectiveness. Teaching and Teacher Education, 72, 56–67.
19. Magpulong, J. (2022). Organizational support and teacher performance in public schools. Unpublished master's thesis, University of the Philippines.
20. Muhammad, S. (2025). Teacher self-efficacy and resistance to technology adoption in education. Journal of Educational Psychology and Practice, 10(1), 22–35.
21. Negoso, J. (2022). Teacher engagement and organizational support in public schools. International Journal of Educational Research, 115, 102–110.
22. Negoso, P. (2022). Teacher engagement and instructional quality in public schools. Philippine Journal of Education, 15(2), 77–90.
23. Philipsen, B., et al. (2019). Teacher professional development for ICT integration. Computers in Human Behavior, 92, 1–12. https://doi.org/10.1016/j.chb.2018.11.020
24. Philipsen, B., Tondeur, J., Pareja Roblin, N., Vanslambrouck, S., & Zhu, C. (2019). Improving teacher professional development for technology integration. Computers in Human Behavior, 92, 1–12. https://doi.org/10.1016/j.chb.2018.11.020
25. Reyes, L., & Dizon, M. (2021). Leadership support and ICT integration in Philippine schools. Asian Education Review, 14(3), 88–102.
26. Rienties, B., et al. (2024). Professional development and digital transformation in education. Computers in Human Behavior, 150, 107–118.
27. Rienties, B., Nguyen, Q., Holmes, W., & Reedy, K. (2024). Institutional systems and digital transformation in education. British Journal of Educational Technology, 55(2), 345–360. https://doi.org/10.1111/bjet.13321

28. Rondubio, J., & Gantalao, R. (2025). ICT integration challenges among Filipino teachers: Infrastructure and training gaps. Philippine Journal of Educational Research, 19(1), 1–18.
29. Salmela-Aro, K., Upadyaya, K., & Hietajärvi, L. (2016). Engagement in work and school contexts. Journal of Youth and Adolescence, 45(12), 2463–2478. https://doi.org/10.1007/s10964-016-0504-5
30. Sudibjo, N., & Manihuruk, C. (2022). Teacher engagement and innovative teaching practices in digital learning environments. Journal of Education and E-Learning Research, 9(2), 145–153.
31. Tadeo, R. (2025). Technological proficiency of teachers in blended learning environments. Unpublished doctoral dissertation, [University name not provided].
32. Tagadiad, J., et al. (2024). Collaboration and engagement among teachers in modern classrooms. International Journal of Educational Studies, 16(1), 55–70.
33. Tomaro, M. (2018). ICT integration in Philippine education: Challenges and implementation gaps. Philippine Journal of Education, 12(1), 33–50.
34. Tondeur, J., van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2020). Understanding the relationship between teachers' pedagogical beliefs and technology use. Educational Technology Research and Development, 68, 1–17.
35. Tondeur, J., van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2020). Understanding the relationship between teachers' beliefs and technology use. Educational Technology Research and Development, 68(5), 1–18. https://doi.org/10.1007/s11423-020-09767-8
36. Wibowo, A., et al. (2024). Impact of training and mentoring on teachers' digital competence. International Journal of Educational Development, 102, 102–112.
37. Xu, Y., et al. (2025). Teacher engagement and technology integration in digital classrooms. Journal of Computer Assisted Learning, 41(1), 12–28.
38. Yang, H. (2023). Barriers to technology integration in teaching: A behavioral perspective. Computers & Education Open, 4, 100–115.