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The Mediating Effect of Teachers' Collaboration on the Relationship Between Technology Integration and Motivation to Stay in the Teaching Profession

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Abstract: In today's rapidly evolving educational landscape, integrating technology and fostering collaboration are essential in sustaining teachers' motivation and commitment to the profession. This study examined the influence of technology integration on teacher collaboration and motivation to stay in the teaching profession among 172 elementary teachers in the first four districts of the Ozamiz City Division during the school year 2025–2026. The study employed quantitative, explanatory, correlational design with a mediation analysis. Respondents were selected through stratified random sampling. Data were collected using three instruments: Technology Integration Questionnaire, Teacher Collaboration Questionnaire, and Motivation to Stay in the Teaching Profession Questionnaire, and were analyzed using descriptive statistics, Spearman correlation, regression, and mediation analysis. Results revealed that teachers demonstrated very high levels of technology integration, collaboration, and motivation to remain in the profession. Significant relationships were found among technology integration, teacher collaboration, and motivation to stay. Multimedia integration, shared vision and goals, and support and shared leadership significantly predicted motivation. Teacher collaboration partially mediated the relationship between technology integration and motivation, indicating both direct and indirect effects. The combined influence of effective technology integration and collaborative professional practices strengthens teachers' motivation to stay in the profession. Schools may enhance teacher retention by strengthening collaborative structures and supporting meaningful integration of technology in instructional and professional activities.

Keywords: *Instructional Innovation, Mediation, Professional Commitment, Teacher Engagement, Teacher Retention*.

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I. INTRODUCTION

The rapid evolution of digital technologies has fundamentally reshaped contemporary educational practice. Classrooms today are increasingly characterized by interactive platforms, multimedia resources, and networked communication tools that extend learning beyond traditional boundaries. For teachers, this transformation presents both opportunities for instructional innovation and challenges that require continuous adaptation. Technology integration has therefore become a defining feature of effective teaching, particularly in learning environments that serve Generation Alpha learners—students born between 2010 and 2025—who are immersed in digital environments from an early age (O'Farrell & Weaver, 2024).

Generation Alpha learners are accustomed to personalized, visually rich, and interactive experiences. As a result, conventional teaching approaches may no longer fully sustain their attention or meet their learning preferences. Teachers are now expected to employ digital tools, gamified activities, and immersive learning experiences that foster engagement, collaboration, and higher-order thinking skills (Zamiri & Esmaeili, 2024). While these expectations open opportunities for more dynamic instruction, they also increase professional demands on teachers, requiring them to continuously strengthen their technological competence and instructional adaptability. In this context, technology integration becomes closely tied to the quality and effectiveness of teaching practice.

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Among emerging technologies, tools such as augmented reality, multimedia simulations, and gamified platforms have shown strong potential to clarify abstract concepts and enhance student participation. For instance, augmented reality applications enable learners to visualize complex scientific processes, while game-based systems motivate students through interactive feedback and rewards (Lee, 2022; Leong, 2025). These innovations support more dynamic and learner-centered environments. However, the success of these tools depends largely on teachers' confidence, readiness, and sustained professional support (Perifanou et al., 2022). Without adequate preparation, technology may become a source of stress rather than empowerment.

In this regard, teacher collaboration plays a crucial role in strengthening instructional practice. Collaboration among teachers through shared planning, peer mentoring, reflective dialogue, and co-teaching creates opportunities for collective problem-solving and professional learning. When teachers work together, they can exchange strategies, refine instructional approaches, and improve the implementation of technology in the classroom. This shared practice enhances instructional coherence and contributes to more effective teaching outcomes (Vembye et al., 2024).

Collaborative professional environments, such as learning communities and team-based structures, enable teachers to continuously learn from one another while collectively addressing classroom challenges. These environments promote trust, shared responsibility, and collective improvement of practice. Teachers who experience strong collegial support are more willing to experiment with new instructional strategies, including the use of digital tools, because they perceive both risks and successes as shared rather than individual (Arefian, 2023). In this way, collaboration becomes a key mechanism that supports both instructional improvement and professional growth.

Despite these benefits, several barriers continue to affect both technology integration and collaboration in schools. Teachers often face limited access to training opportunities, time constraints for collaborative planning, insufficient resources, and uneven institutional support (Nettey et al., 2024). In some cases, differences in digital skills among teachers also lead to inconsistent implementation. These challenges can weaken teachers' confidence in using technology and reduce opportunities for meaningful collaboration, particularly in resource-limited settings where infrastructure constraints are more evident (Habibulloh, 2025).

Teacher motivation has therefore emerged as a central concern in educational research. Motivation influences teachers' instructional effectiveness, resilience, and decision to remain in the profession. When teachers experience professional fulfillment, recognition, and organizational support, they are more likely to demonstrate commitment and persistence. Conversely, chronic stress, isolation, and lack of resources may contribute to burnout and attrition (Koerber et al., 2023).

Importantly, both collaboration and technology integration have been linked to enhanced motivation. Collaborative cultures provide emotional and professional support that strengthens teachers' sense of belonging, while effective technology use allows teachers to experience instructional success and creativity. Teachers who observe positive student outcomes resulting from innovative practices often report renewed enthusiasm and professional satisfaction (Meredith et al., 2023). These reinforcing experiences suggest that technological and social supports may operate synergistically rather than independently.

Although prior studies have generally examined technology integration, teacher collaboration, and motivation to stay in the teaching profession as separate constructs, with limited exploration of how these variables are interconnected within a mediated framework, in particular, the role of teacher collaboration as a mechanism explaining the relationship between technology integration and teachers' motivation to stay remains underexplored, indicating a relationship or mediation gap in the existing literature.

Understanding these interrelationships is particularly important in the Philippine context, where policies such as Learning Action Cells and the Philippine Professional Standards for Teachers explicitly promote both collaborative engagement and effective technology use. Examining how these institutional supports translate into teacher motivation can yield evidence-based insights to strengthen professional development and retention strategies.

Therefore, this study seeks to investigate the combined influence of technology integration and teacher collaboration on teachers' motivation to stay in the profession. By examining collaboration as a potential mediating variable, the study aims to clarify how technological innovation and collegial support jointly shape teachers' professional commitment and long-term engagement. The findings are expected to contribute to the development of sustainable practices that foster both instructional excellence and teacher well-being.

The study aimed to explore the influence of technology integration on collaborative learning and motivation among Key Stages 1 and 2 teachers in the first four districts of the Ozamiz City Division during the school year 2025-2026.

II. RESEARCH METHODOLOGY

➢ *Design*

This quantitative study employed an explanatory correlational research design, using mediation analysis, to investigate the mediating effect of teachers' collaboration on the relationship between technology integration and motivation to remain in the teaching profession. Explanatory correlational research, as a non-experimental approach, was used to examine the strength and direction of relationships among variables based on numerical data (Seeram, 2019). This design was appropriate for the study as it sought to determine the extent of technology integration, the level of teacher collaboration, and the degree of motivation to stay in

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the profession. Moreover, it aimed to assess the relationships among these variables and to examine whether teachers' collaboration significantly mediated the link between technology integration and teachers' motivation to remain in the teaching profession.

➢ *Setting*

The study was conducted in the elementary schools within the first four districts of Ozamiz City Division. These districts encompassed a diverse mix of educational settings, including large, medium-sized, and small schools, reflecting varied teaching contexts and access to technological resources. These schools, led by principals and comprising teachers with varied experiences and roles, provided a suitable population for examining the extent of technology integration, the dynamics of teacher collaboration, and the factors influencing motivation to remain in the profession. The diversity in school size, infrastructure, and teacher composition provided a rich context for exploring how technology use, collegial practices, and institutional support shape professional engagement and retention among public elementary school teachers.

➢ *Respondents*

The respondents in this study were 172 elementary teachers from the first four districts of the Division of Ozamiz City during the school year 2025–2026. This sample size was deemed appropriate for mediation analysis, ensuring sufficient statistical power and representation. The total teacher population in each district was first determined, and the required sample size was computed using the Raosoft calculator. Thereafter, respondents were selected using stratified random sampling to ensure proportional representation across schools, grade levels, and teaching experience, with specific participants identified through Research Randomizer.

To be included in the study, teachers had to be full-time elementary educators assigned to any of the first four districts and to have at least 1 year of teaching experience in their current school. They also had to be actively using or exposed to educational technology in their instructional practices or professional collaboration. Additionally, only those who voluntarily agreed to participate and provided informed consent were included in the study.

➢ *Instruments*

Data for this study were gathered using three sets of questionnaires:

- *Technology Integration Questionnaire.* This researcher-made questionnaire aimed to assess the extent of digital technology integration in classroom practices. It contained four constructs: (1) Digital Collaboration Tools, (2) Multimedia Integration, (3) Gamification in Learning, and (4) Digital Resources for Differentiated Instruction, with a total of 20 items equally distributed among the constructs.

Teachers responded on a 5-point Likert scale from 1 (Never) to 5 (Always). The instrument underwent expert review to validate its content and ensure alignment with best practices in technology-enhanced instruction. After validation, a pilot test was conducted with a separate group of teachers. The instrument's internal consistency was verified using Cronbach's alpha, which yielded a value of 0.964, indicating high reliability.

- *Teacher Collaboration Questionnaire.* The researcher-made Teacher Collaboration Questionnaire was designed to measure the level of collaborative practices among elementary teachers. It included four constructs: (1) Shared Vision and Goals, (2) Collaborative Practice and Planning, (3) Reflective Dialogue and Inquiry, and (4) Support and Shared Leadership, with a total of 20 indicators. Each construct captured a dimension of professional collaboration that fostered instructional improvement and collegial engagement.

Responses were rated on a 5-point Likert scale from 1 (Never) to 5 (Always). Expert educators and researchers validated the instrument to ensure content relevance and accuracy. A pilot test was then conducted, and the resulting data were analyzed using Cronbach's alpha to determine the instrument's internal reliability. The instrument yielded a Cronbach's alpha coefficient of 0.946, indicating high internal consistency and reliability.

- *Motivation to Stay in the Teaching Profession Questionnaire*. This researcher-developed instrument was designed to measure elementary teachers' motivation to remain in the teaching profession. It comprised three constructs: (1) Personal Fulfillment, (2) Career Rewards and Advancement, and (3) Organizational Commitment and Support, with a total of 20 items that reflected emotional, professional, and institutional factors influencing motivation.

Each statement was rated using a five-point Likert scale, from 1 (Never) to 5 (Always). The questionnaire was evaluated by a panel of experts for content validation and pilot-tested to ensure clarity and consistency. The responses were statistically analyzed to calculate Cronbach's alpha, which yielded a value of 0.962, indicating high reliability and internal consistency.

➢ *Data Gathering Procedure*

In gathering the data, the researcher obtained permission from the Graduate School of Misamis University to conduct the study. Subsequently, upon obtaining approval, permission was requested from the office of the Schools Division Superintendent in Ozamiz City to survey the selected respondents. Once the necessary permits were obtained, the researcher prepared a consent letter for the respondents and explained the study's importance to them. Data collection was conducted exclusively on the school premises. The researcher personally administered and managed the survey questionnaires to ensure respondents' full cooperation and facilitate data collection. The gathered data were then tallied, analyzed, and interpreted.

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➢ *Ethical Considerations*

The researcher ensured that respondents voluntarily participated to uphold the study's ethical standards. They were assured that no harm would be inflicted upon them. The respondents' dignity was treated with the utmost respect. Measures were taken to protect respondents' privacy, ensure each participant's anonymity, and maintain a high level of confidentiality for the research data. Regarding the study's purposes and goals, the researcher refrained from lying or exaggeration. All relevant affiliations, funding, and any conflicting financial interests were disclosed. False information and incorrect interpretations of primary data findings were avoided in all communications, and the research was conducted with honesty and transparency.

➢ *Data Analysis*

Mean and Standard Deviation were used to determine the extent of teacher collaboration and technology integration, as well as the level of motivation to remain in the teaching profession.

Spearman's Rank-Order Correlation (Spearman's ρ) was used to examine significant relationships among technology integration, teacher collaboration, and motivation to remain in the teaching profession. This nonparametric test was employed because the data were collected using Likert-scale instruments, which are ordinal and may not meet the normality assumptions required by parametric tests.

Stepwise Multiple Regression Analysis was used to identify the predictors of teachers' motivation to remain in the teaching profession.

General Linear Mediation Analysis was used to test the mediating effect of teacher collaboration on the relationship between technology integration and teachers' motivation to stay in the teaching profession.

III. RESULTS AND DISCUSSION

➢ *Extent of Technology Integration among Teachers*

Table 1 presents the extent of technology integration among teachers. The results reveal that the overall extent of technology integration was very great (M = 4.27, SD = 0.72). This finding indicates that teachers are highly engaged in integrating technology into their instructional practices. It implies that digital tools and resources are widely used to enhance teaching and learning. In contemporary education, technology has become an essential component of effective instruction, particularly in addressing the needs of digitally oriented learners. Teachers are expected to utilize interactive platforms, multimedia tools, and digital resources to create engaging and meaningful learning experiences (O'Farrell & Weaver, 2024; Zamiri & Esmaeili, 2024).

Technology integration refers to the intentional use of digital tools and platforms to support instruction, assessment, and learning. It encompasses practices such as multimedia integration, digital collaboration, gamification, and differentiated instruction. The overall result suggests that teachers demonstrate competence and readiness in integrating technology into their teaching practices. This reflects their ability to adapt to evolving educational demands and implement innovative pedagogical approaches. The use of digital tools not only enhances instructional delivery but also supports more dynamic, interactive, and learner-centered environments (Perifanou et al., 2022; Hlazunova et al., 2024).

Among the indicators, multimedia integration obtained the highest mean and was interpreted as to a very great extent (M = 4.37, SD = 0.60). This indicates that teachers extensively use videos, simulations, and other multimedia resources in their instruction. The use of multimedia enhances students' understanding of complex concepts by providing visual and interactive representations of content. This finding suggests that teachers recognize the value of multimedia in improving engagement and facilitating deeper Learning. Technologies such as multimedia simulations and augmented tools have been found to clarify abstract concepts and promote active Learning among students (Lee, 2022; Leong, 2025).

Similarly, digital collaboration tools and gamification in learning both yielded a mean of 4.25 (SD = 0.78; SD = 0.71, respectively), interpreted as to a very great extent. This indicates that teachers actively utilize platforms that promote interaction, communication, and engagement. Digital collaboration tools enable teachers to facilitate discussions, share resources, and support cooperative Learning, while gamification introduces interactive elements that enhance motivation and participation. These practices contribute to more engaging and student-centered learning environments. The use of digital platforms and gamified systems has been shown to increase learner engagement and promote higher-order thinking skills (Saleem et al., 2022; Hlazunova et al., 2024).

On the other hand, digital resources for differentiated instruction obtained the lowest mean, although still within the to a very great extent category (M = 4.21, SD = 0.77). This suggests that while teachers are integrating technology to address diverse learner needs, this area requires further strengthening. Differentiated instruction through technology involves tailoring learning experiences based on students' abilities, interests, and learning styles. The relatively lower mean may indicate challenges such as limited access to adaptive tools or difficulties in designing personalized learning activities. Research highlights that effective use of digital resources for differentiation requires both technological competence and pedagogical flexibility (Sharma, 2024; Perifanou et al., 2022).

Overall, the findings indicate that teachers demonstrate a consistent to a very great extent of technology integration across all domains. This reflects their strong capacity to incorporate digital tools, enhance student engagement, and implement innovative teaching practices. The integration of multimedia, collaboration tools, and gamification aligns with current educational trends that emphasize interactive and learner-centered instruction. However, the relatively lower mean in differentiated instruction suggests the need for continued support in implementing inclusive and

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personalized learning strategies. Institutional support and access to appropriate technologies are crucial for sustaining effective integration practices (Nettey et al., 2024; Habibulloh, 2025).

Enhancing technology integration to a very great extent requires continuous professional development, access to digital resources, and supportive school environments. Teachers may further improve differentiated instruction by utilizing adaptive technologies, personalized learning platforms, and data-driven strategies. Additionally, collaborative support systems and ongoing training can help teachers maximize the use of digital tools in addressing diverse learner needs. When teachers are adequately supported, technology becomes a tool for empowerment rather than a source of difficulty (Perifanou et al., 2022; Nettey et al., 2024).

The findings imply that strengthening the use of digital resources for differentiated instruction may require coordinated support from school heads, teachers, and ICT coordinators. There is a need to provide continuous professional development focused on adaptive technologies and personalized learning strategies, while encouraging teachers to gradually integrate flexible, inclusive digital practices into their instruction. Collaborative platforms such as Learning Action Cells can support peer sharing, mentoring, and reflective practice. Additionally, ensuring access to basic technological resources and providing regular feedback through monitoring may further enhance teachers' capacity to address diverse learner needs. These efforts may contribute to a more balanced and effective integration of technology in teaching.

Table 1 Extent of Technology Integration Among Teachers

Constructs	M	Sd	Remarks
Digital Collaboration Tools	4.25	0.78	Very Great Extent
Multimedia Integration	4.37	0.60	Very Great Extent
Gamification In Learning	4.25	0.71	Very Great Extent
Digital Resources For Differentiated Instruction	4.21	0.77	Very Great Extent
Overall Extent Of Integration	4.27	0.72	Very Great Extent

Note: 4.20-5.00 (Very Great Extent); 3.40-4.19 (Great Extent); 2.60-3.39 (Moderate Extent); 1.30-2.59 (Less Extent); 1.00-1.29 (Least Extent)

➢ *Level of Teacher Collaboration*

Table 2 presents the level of teacher collaboration. The results reveal that the overall level of collaboration was very high (*M* = 4.58, *SD* = 0.47). This finding indicates that teachers actively engage in collaborative practices within their professional environment. It suggests that collegial interactions, shared responsibilities, and collective efforts are strongly manifested in the school setting. Teacher collaboration plays a vital role in improving instructional practices and fostering a supportive learning environment where educators work together toward common goals (Vembye et al., 2024; Arefian, 2023).

Teacher collaboration refers to the process by which educators work collectively through shared vision, joint planning, reflective dialogue, and distributed leadership. It provides opportunities for teachers to exchange ideas, co-develop instructional strategies, and address classroom challenges collaboratively. The overall result suggests that teachers demonstrate strong engagement in collaborative practices, reflecting a culture of trust, shared accountability, and professional interaction. Such environments promote continuous professional Learning and enhance teaching effectiveness (Khasawneh et al., 2023; Coker et al., 2024).

Among the indicators, shared vision and goals obtained the highest mean and were interpreted as very high (*M* = 4.73, *SD* = 0.38). This indicates that teachers have a strong alignment between instructional objectives and educational priorities. A shared vision fosters coherence and consistency in teaching practices, allowing educators to work toward common outcomes. This finding suggests that teachers collectively understand and support the institution's goals, thereby strengthening collaboration and instructional alignment (Chin, 2024; Toikka & Tarnanen, 2024).

Similarly, reflective dialogue and inquiry yielded a high mean (*M* = 4.59, *SD* = 0.46), indicating that teachers actively engage in discussions, provide feedback, and engage in reflective practices. This suggests that educators are open to examining their teaching strategies, sharing insights, and learning from one another. Reflective dialogue supports continuous improvement by allowing teachers to critically evaluate their practices and explore alternative approaches. The integration of structured discussions and collaborative inquiry enhances professional growth and instructional quality (Nobutoshi, 2023; Ramos et al., 2022).

On the other hand, collaborative practice, planning, support, and shared leadership all had a mean of 4.50 (*SD* = 0.53; *SD* = 0.51, respectively), although still within the very high category. These findings indicate that teachers engage in joint lesson planning and shared responsibilities, but these areas may still benefit from further strengthening. Collaborative planning allows teachers to combine expertise and develop more effective instructional strategies, while shared leadership empowers teachers to take active roles in decision-making and school initiatives. Strengthening these practices can further enhance teacher engagement and

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collective responsibility (Väätäjä, 2025; Holcombe et al., 2023; Swart et al., 2022).

The findings indicate that teachers demonstrate a consistently very high level of collaboration across all domains. This reflects a strong professional culture characterized by shared vision, reflective practice, and collegial support. Such collaborative environments are essential in promoting effective teaching, improving student outcomes, and fostering continuous professional development. However, the relatively lower means in collaborative planning and shared leadership suggest the need to further enhance these areas to achieve a more balanced and sustainable collaborative practice. Collaborative structures supported by both interpersonal and technological means can strengthen teacher engagement and instructional coherence (Coker et al., 2024; Arefian, 2023).

Enhancing teacher collaboration to a very high level requires continuous support through structured collaborative opportunities, professional learning communities, and shared leadership practices. Schools may further strengthen collaboration by encouraging joint planning, allocating time for professional dialogue, and using digital platforms to facilitate communication and resource sharing. Creating an environment that promotes trust, openness, and shared responsibility can help sustain collaborative practices and improve overall teaching effectiveness (Khasawneh et al., 2023; Coker et al., 2024).

The findings reveal a consistently very high level of teacher collaboration; however, the relatively lower means in collaborative practice and shared leadership suggest a need to further strengthen these areas. This implies that while teachers are highly engaged in collaborative activities, enhancing opportunities for joint planning and distributed leadership may lead to more balanced and effective collaboration across all domains.

The findings imply that while teacher collaboration is already at a very high level, there is still a need to further strengthen collaborative practice and shared leadership. This may be addressed by providing more structured opportunities for joint planning, encouraging teachers to take active roles in decision-making, and promoting continuous professional dialogue through collaborative platforms such as Learning Action Cells. School leaders may support these efforts by creating an environment that fosters trust, shared responsibility, and open communication. Strengthening these aspects may contribute to more balanced, sustainable, and effective collaborative practices among teachers.

Table 2 Level of Teacher Collaboration

Constructs	M	SD	Remarks
Shared Vision and Goals	4.73	0.38	Very High
Collaborative Practice and Planning	4.50	0.53	Very High
Reflective Dialogue and Inquiry	4.59	0.46	Very High
Support and Shared Leadership	4.50	0.51	Very High
Overall Level of Collaboration	4.58	0.47	Very High

Note: 4.20-5.00 (Very High 3.40-4.19 (High); 2.60-3.39 (Moderately High); 1.30-2.1 (Low); 1.00-1.29 (Very Low)

- *Level of Motivation to Stay in the Teaching Profession Among Teachers*

Table 3 presents the level of motivation to stay in the teaching profession among teachers. The results reveal that the overall level of motivation to stay was very high (*M* = 4.69, *SD* = 0.41). This finding indicates that teachers demonstrate a strong commitment to remain in the profession. It suggests that teachers experience a high level of satisfaction, engagement, and dedication to their roles, which are essential factors in sustaining teacher retention. Teacher motivation plays a critical role in maintaining instructional quality and ensuring educational continuity (Koerber et al., 2023; Meredith et al., 2023).

Motivation to stay in the teaching profession refers to the internal and external factors that influence teachers' decisions to continue their careers. It includes dimensions such as personal fulfillment, career rewards and advancement, and organizational commitment and support. The overall result suggests that teachers are highly motivated due to both intrinsic and extrinsic factors, reflecting a positive professional outlook and a strong sense of purpose. When teachers feel valued, supported, and fulfilled, they are more likely to remain committed to their profession and demonstrate resilience in the face of challenges (Onyefulu et al., 2023; Xu & Pang, 2024).

Among the indicators, personal fulfillment obtained the highest mean and was interpreted as very high (*M* = 4.75, *SD* = 0.39). This indicates that teachers derive a strong sense of satisfaction and meaning from their work. Personal fulfillment reflects teachers' passion for teaching, their sense of purpose, and their emotional connection to student learning and development. This finding suggests that teachers view their profession as meaningful and rewarding, which strengthens their commitment to remain in the field. A strong sense of personal fulfillment has been linked to increased resilience and long-term engagement in teaching (Fairbairns & Gillespie, 2022; Wu et al., 2024).

Similarly, organizational commitment and support (*M* = 4.67, *SD* = 0.41) and career rewards and advancement (*M* =

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4.66, *SD* = 0.42) were both interpreted as very high. These findings indicate that teachers perceive strong institutional support and recognize opportunities for professional growth and career progression. Organizational support, including leadership, resources, and a positive work environment, contributes to teachers' sense of belonging and stability. Likewise, opportunities for advancement and recognition motivate teachers to remain engaged and committed to their profession. Supportive school environments and clear career pathways are essential in sustaining teacher motivation and reducing attrition (Dan, 2024; Zhao, 2024; Nwuke & Nwanguma, 2024).

Overall, the findings indicate that teachers demonstrate a consistently very high level of motivation to stay in the profession across all domains. This reflects a balanced combination of personal satisfaction, professional growth opportunities, and organizational support. Such conditions are essential in fostering long-term commitment, improving teacher retention, and maintaining the quality of education. However, the relatively lower mean for career rewards and advancement suggests that, while opportunities exist, there may still be room for improvement in career development and recognition systems. Strengthening these aspects can further reinforce teachers' motivation and professional engagement (Onyefulu et al., 2023; Xu & Pang, 2024).

Enhancing teachers' motivation to stay in the profession requires sustained support from school leaders and institutions. Providing opportunities for professional growth, recognizing teachers' contributions, and maintaining a supportive work environment can further strengthen motivation. Encouraging collaboration, innovation, and continuous Learning may also help teachers remain engaged and committed to their roles. When teachers feel supported both personally and professionally, they are more likely to sustain their motivation and continue contributing to the educational system (Meredith et al., 2023; Koerber et al., 2023).

The findings reveal a consistently very high level of motivation to stay in the teaching profession; however, the relatively lower mean in career rewards and advancement suggests a need to further strengthen opportunities for professional growth and recognition. This implies that while teachers are highly committed and fulfilled, enhancing career development pathways may foster more sustained, long-term motivation.

The findings imply that while teachers demonstrate a very high level of motivation to stay in the profession, there is a need to further strengthen career rewards and advancement opportunities. This may be addressed by providing clearer career pathways, increasing recognition of teachers' contributions, and offering continuous professional development opportunities. School leaders may also enhance motivation by maintaining supportive working conditions and encouraging a culture of growth and appreciation. Strengthening these aspects may help sustain teachers' commitment and promote long-term engagement in the profession.

Table 3 Level of Motivation to Stay in the Teaching Profession Among Teachers

Constructs	M	Sd	Remarks
Personal Fulfillment	4.75	0.39	Very High
Career Rewards and Advancement	4.66	0.42	Very High
Organizational Commitment and Support	4.67	0.41	Very High
Overall Level of Motivation to Stay	4.69	0.41	Very High

Note: 4.20-5.00 (Very High 3.40-4.19 (High); 2.60-3.39 (Moderately High); 1.30-2.59 (Low); 1.00-1.29 (Very Low)

- *Relationship Between the Teachers' Extent of Technology Integration and their Level of Collaboration*

Table 4 presents the results of the Spearman rank-order correlation (rs) analysis examining the relationship between teachers' extent of technology integration and their level of collaboration. The results reveal that all variables show a very highly significant positive relationship ($p < .001$), indicating that as teachers increase their use of technology, their level of collaboration also increases. This suggests that technology serves as a practical tool that enables teachers to communicate, share resources, and work together more effectively in their professional practice. For teachers, integrating digital tools offers opportunities for collaborative planning, reflective discussions, and shared leadership, thereby strengthening collegial relationships and professional interactions (Hlazunova et al., 2024; Coker et al., 2024). This finding is supported by Connectivism Theory (Siemens, 2005), which explains that Learning and professional growth occur through networks and digital connections, allowing teachers to collaborate beyond traditional boundaries.

Among the indicators, digital collaboration tools show the strongest relationships across all domains of collaboration, particularly with support and shared leadership ($\rho = .640$, $p < .001$), collaborative practice and planning ($\rho = .545$, $p < .001$), and reflective dialogue and inquiry ($\rho = .543$, $p < .001$). This indicates that when teachers actively use digital platforms such as communication tools and shared workspaces, they are more likely to participate in joint decision-making, co-plan lessons, and engage in professional dialogue. For teachers, these tools reduce isolation and make collaboration more accessible and continuous. This supports Social Constructivism (Vygotsky, 1978), which posits that Learning and knowledge are developed through social interaction and shared experiences. Through digital collaboration, teachers co-construct knowledge, exchange

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ideas, and strengthen their instructional practices within a supportive professional community.

Similarly, multimedia integration demonstrates significant relationships with all collaboration domains, with the strongest association observed in support and shared leadership ($\rho = .545$, $p < .001$). This suggests that when teachers use multimedia resources in their instruction, they are more likely to share materials, teaching strategies, and classroom innovations with their colleagues. For teachers, multimedia tools become not only instructional resources but also shared professional assets that promote collaboration. This finding aligns with the TPACK framework (Rosenberg & Koehler, 2015), which explains that effective teaching occurs when teachers integrate technology with pedagogy and content knowledge. As teachers develop their technological competence, they become more confident in sharing practices and collaborating with peers, thereby strengthening collective instructional improvement.

Gamification in Learning also shows significant positive relationships with all aspects of collaboration, although with relatively lower coefficients, particularly in shared vision and goals ($\rho = .335$, $p < .001$). This indicates that while gamification supports interaction and engagement at the classroom level, its influence on broader institutional collaboration among teachers may be less pronounced. For teachers, gamification is often implemented individually, focusing on student engagement rather than collective goal-setting. However, it still contributes to collaboration by encouraging the sharing of innovative teaching strategies and classroom experiences. This finding can be explained through Self-Determination Theory (SDT) (Deci & Ryan, 1985), where gamified approaches enhance teachers' sense of competence and creativity, motivating them to experiment and share practices, even if alignment at the organizational level remains limited.

Furthermore, digital resources for differentiated instruction show significant positive relationships with all collaboration domains, with the highest association observed in support and shared leadership ($\rho = .543$, $p < .001$). This suggests that when teachers use digital tools to address diverse learner needs, they are more likely to collaborate with colleagues in designing inclusive and adaptive instructional strategies. For teachers, differentiated instruction often requires collective effort, including sharing materials, discussing student needs, and co-developing solutions. This supports Social Constructivism (Vygotsky, 1978), as teachers engage in collaborative problem-solving and shared meaning-making to improve instructional practices for diverse learners.

Overall, the findings indicate that all dimensions of technology integration are significantly and positively associated with teacher collaboration. For teachers, technology functions as an enabler of professional interaction, making collaboration more efficient, accessible, and sustained. However, the relatively lower correlations observed in shared vision and goals, particularly in gamification, suggest that while technology enhances day-to-day collaboration, aligning teachers toward common institutional goals may require additional leadership support and structured collaboration. This reflects the idea in Connectivism (Siemens, 2005) that while networks facilitate interaction, intentional structures are still needed to guide shared direction and purpose.

The results suggest that technology integration and collaboration are interconnected processes in teachers' professional practice. As teachers become more engaged in using digital tools, they also become more involved in collaborative activities such as planning, reflection, and shared leadership. This interconnected relationship is supported by the combined perspectives of TPACK, which emphasizes competence in technology use, and Social Constructivism, which highlights the importance of social interaction in professional Learning. Together, these theories explain how technology not only enhances instruction but also strengthens collaborative engagement among teachers.

The findings imply that strengthening teachers' use of digital tools may further enhance collaborative practices within schools. Schools may support teachers by encouraging the use of digital collaboration platforms, promoting shared planning activities, and providing opportunities for reflective dialogue through structures such as Learning Action Cells. Providing continuous training and fostering a supportive environment may help teachers maximize the benefits of technology for collaboration, ultimately improving instructional practices and professional engagement.

The findings reveal that technology integration is significantly associated with teacher collaboration across all domains; however, the relatively lower relationships observed in shared vision and goals suggest a need to further strengthen alignment in collective objectives. This implies that while technology supports interaction and coordination among teachers, fostering a shared sense of purpose may require additional emphasis on collaborative leadership and institutional direction.

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Table 4 Relationship Between the Teachers' Extent of Technology Integration and their Level of Collaboration

Variables		Support and Shared Leadership	Reflective Dialogue and Inquiry	Collaborative Practice and Planning	Shared Vision and Goals
Digital Collaboration Tools	r_s	0.640***	0.543***	0.545***	0.404***
	p	< .001	< .001	< .001	< .001
Multimedia Integration	r_s	0.545***	0.515***	0.447***	0.397***
	p	< .001	< .001	< .001	< .001
Gamification in Learning	r_s	0.493***	0.425***	0.410***	0.335***
	p	< .001	< .001	< .001	< .001
Digital Resources for Differentiated Instruction	r_s	0.543***	0.476***	0.438***	0.399***
	p	< .001	< .001	< .001	< .001

****p<0.01 (Very Highly Significant); **p<0.01 (Highly Significant); *p<0.05 (Significant)*

- *Relationship Between the Teachers' Level of Collaboration and their Motivation to Stay in the Teaching Profession*

Table 5 presents the results of the Spearman rank-order correlation (ρ) analysis examining the relationship between teachers' level of collaboration and their motivation to stay in the teaching profession. The results reveal that all variables show a very highly significant positive relationship (p < .001), indicating that higher levels of teacher collaboration are associated with greater motivation to remain in the profession. This suggests that when teachers actively engage in collaborative practices, they are more likely to feel supported, fulfilled, and committed to their roles. For teachers, collaboration provides opportunities for shared Learning, emotional support, and professional interaction, which contribute to a stronger sense of belonging and sustained engagement in their work (Vembye et al., 2024; Meredith et al., 2023). This finding is supported by Self-Determination Theory (SDT) (Deci & Ryan, 1985), which explains that motivation is strengthened when individuals experience relatedness, or a sense of connection with others in their professional environment.

Among the indicators, support and shared leadership show the strongest relationships with all aspects of motivation, particularly with organizational commitment and support (ρ = .604, p < .001), career rewards and advancement (ρ = .492, p < .001), and personal fulfillment (ρ = .470, p < .001). This indicates that when teachers are given opportunities to participate in decision-making and leadership roles, they develop a stronger sense of ownership, recognition, and commitment to their institution. For teachers, shared leadership fosters trust, empowerment, and professional value, which are essential in sustaining motivation to stay. This supports Social Constructivism (Vygotsky, 1978), where collaborative environments enable teachers to co-construct meaning and develop a stronger sense of professional identity through shared experiences (Holcombe et al., 2023; Swart et al., 2022).

Similarly, reflective dialogue and inquiry demonstrate strong relationships with all motivation domains, with the highest association observed in organizational commitment and support (ρ = .584, p < .001) and career rewards and advancement (ρ = .535, p < .001). This suggests that when teachers engage in reflective discussions, feedback, and professional inquiry, they become more invested in their roles and more aware of their professional growth. For teachers, reflective dialogue provides a space to share experiences, address challenges, and continuously improve instructional practices. This process enhances their sense of competence and professional fulfillment, which strengthens their motivation to remain in the profession. This finding aligns with Self-Determination Theory, as reflective practices support teachers' sense of competence and relatedness (Nobutoshi, 2023; Ramos et al., 2022).

Collaborative practice and planning also show significant positive relationships with motivation, particularly with organizational commitment and support (ρ = .561, p < .001). This indicates that when teachers engage in joint lesson planning and shared instructional design, they develop stronger connections with their colleagues and the institution. For teachers, collaborative planning reduces professional isolation and enhances confidence in teaching practices, which contributes to greater job satisfaction and commitment. This supports the TPACK framework (Rosenberg & Koehler, 2015), which emphasizes that collaborative engagement enhances teachers' ability to integrate knowledge and improve instructional effectiveness, thereby strengthening their professional confidence and motivation (Väätäjä, 2025).

On the other hand, shared vision and goals show relatively moderate but still significant relationships with motivation, particularly with career rewards and advancement (ρ = .443, p < .001). This suggests that while goal alignment supports collaboration, its direct influence on motivation may be less pronounced than that of more interactive and participatory practices. For teachers, having a shared vision provides direction, but motivation is more strongly influenced by active engagement, recognition, and professional interaction. This finding aligns with Connectivism (Siemens, 2005), in which motivation is strengthened through active participation in networks and relationships rather than solely through shared institutional goals (Chin, 2024; Toikka & Tarnanen, 2024).

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The findings indicate that all dimensions of teacher collaboration are significantly and positively associated with motivation to stay in the teaching profession. For teachers, collaboration serves as a critical support system that enhances professional satisfaction, reduces isolation, and fosters a sense of belonging. When teachers feel connected, valued, and supported within their professional community, they are more likely to remain committed to their roles. This interconnected relationship between collaboration and motivation is explained by the combined perspectives of Social Constructivism, which highlights the importance of social interaction, and Self-Determination Theory, which emphasizes the role of relatedness, competence, and autonomy in sustaining motivation.

The results suggest that collaboration is not only a professional practice but also a motivational factor that influences teachers' decisions to stay in the profession. As teachers engage more in collaborative activities such as shared planning, reflective dialogue, and leadership roles, they develop stronger emotional and professional connections within the school environment. This reinforces their commitment and enhances their overall teaching experience.

The findings imply that strengthening collaborative practices may further enhance teachers' motivation to remain in the profession. Schools may support teachers by promoting shared leadership, encouraging reflective dialogue, and providing opportunities for collaborative planning through structured programs such as Learning Action Cells. Creating a supportive and collegial environment may help sustain teachers' motivation, improve professional satisfaction, and reduce attrition.

The findings reveal that teacher collaboration is significantly associated with motivation to stay in the teaching profession across all domains; however, the relatively lower relationships observed in shared vision and goals suggest a need to further strengthen alignment between institutional objectives and teachers' personal and professional aspirations. This implies that while collaboration enhances motivation, ensuring that teachers are actively engaged in shaping shared goals may further strengthen their long-term commitment to the profession.

Table 5 Relationship Between the Teachers' Level of Collaboration and their Motivation to Stay

Variables		Organizational Commitment and Support	Career Rewards and Advancement	Personal Fulfillment
Shared Vision and Goals	r_s	0.496***	0.443***	0.472***
	p	< .001	< .001	< .001
Collaborative Practice and Planning	r_s	0.561***	0.473***	0.490***
	p	< .001	< .001	< .001
Reflective Dialogue and Inquiry	r_s	0.584***	0.535***	0.527***
	p	< .001	< .001	< .001
Support and Shared Leadership	r_s	0.604***	0.492***	0.470***
	p	< .001	< .001	< .001

****p<0.01 (Very Highly Significant); **p<0.01 (Highly Significant); *p<0.05 (Significant)*

- *Relationship Between the Teachers' Extent of Technology Integration and Motivation to Stay in the Teaching Profession*

Table 6 presents the results of the Spearman rank-order correlation (ρ) analysis examining the relationship between teachers' extent of technology integration and their motivation to stay in the teaching profession. The results reveal that all variables show a very highly significant positive relationship (p < .001), indicating that increased technology use is associated with higher motivation to remain in the profession. This suggests that when teachers effectively integrate digital tools into their instructional practices, they are more likely to experience satisfaction, engagement, and commitment to their roles. For teachers, technology offers opportunities for creativity, efficiency, and meaningful interaction with learners, thereby enhancing their overall teaching experience and professional fulfillment (Perifanou et al., 2022; Meredith et al., 2023). This finding supports Self-Determination Theory (SDT), proposed by Deci and Ryan (1985), which posits that motivation is enhanced when individuals experience autonomy, competence, and relatedness in their professional practice.

Among the indicators, multimedia integration shows the strongest relationships across all domains of motivation, particularly with personal fulfillment (ρ = .613, p < .001), organizational commitment and support (ρ = .546, p < .001), and career rewards and advancement (ρ = .545, p < .001). This indicates that when teachers utilize multimedia tools, they experience greater satisfaction and engagement in their teaching. For teachers, multimedia enhances lesson delivery, improves student understanding, and enables more dynamic, interactive instruction. These positive teaching experiences contribute to a stronger sense of accomplishment and motivation to remain in the profession. This aligns with the TPACK framework (Rosenberg & Koehler, 2015), which emphasizes that effective integration of technology enhances teachers' instructional competence and confidence, thereby strengthening their professional motivation (Staneviciene & Žekienė, 2025).

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Similarly, digital collaboration tools demonstrate strong relationships with motivation, particularly with personal fulfillment (ρ = .563, p < .001) and organizational commitment and support (ρ = .509, p < .001). This suggests that when teachers use digital platforms for communication and collaboration, they feel more connected to their colleagues and institution. For teachers, these tools foster interaction, reduce professional isolation, and support collaborative engagement, which enhances their sense of belonging and commitment. This finding supports Connectivism Theory (Siemens, 2005), which explains that Learning and professional engagement are strengthened through digital networks and connections that enable continuous interaction and knowledge sharing (Hlazunova et al., 2024).

Gamification in Learning also shows significant positive relationships with all aspects of motivation, particularly with personal fulfillment (ρ = .527, p < .001). This indicates that when teachers incorporate gamified strategies, they experience greater enjoyment and engagement in their teaching. For teachers, gamification introduces creativity, innovation, and interactive learning experiences, which enhance both teacher and student motivation. These positive classroom experiences contribute to greater satisfaction and enthusiasm for teaching. Self-Determination Theory can explain this finding, as gamification supports teachers' sense of competence and autonomy by enabling them to design engaging, interactive learning activities (Saleem et al., 2022).

On the other hand, digital resources for differentiated instruction show significant but relatively moderate relationships with motivation, particularly with organizational commitment and support (ρ = .470, p < .001). This suggests that while differentiation supports inclusive teaching, it may also present challenges that influence teachers' motivation. For teachers, designing differentiated digital instruction requires additional effort, planning, and skill, which may affect their perception of workload and complexity. However, it still contributes positively to motivation by enabling teachers to effectively address diverse learner needs. This aligns with the principles of TPACK, which hold that effective integration requires aligning technology, pedagogy, and content, and that developing such expertise strengthens teachers' professional efficacy over time (Sharma, 2024).

The findings indicate that all dimensions of technology integration are significantly and positively associated with teachers' motivation to stay in the profession. For teachers, technology enhances instructional effectiveness, supports creativity, and improves engagement, thereby contributing to a more fulfilling teaching experience. When teachers feel capable of using technology and observe positive outcomes in their teaching, their motivation and commitment are strengthened. This relationship is supported by the combined perspectives of Self-Determination Theory, which explains motivation through psychological need satisfaction, and TPACK, which highlights the role of competence in technology integration.

The results suggest that technology integration serves not only as an instructional tool but also as a motivational factor that influences teachers' decisions to stay in the teaching profession. As teachers become more proficient and confident in using digital tools, they are more likely to experience professional satisfaction, sustained engagement, and a stronger sense of fulfillment in their roles. The findings further imply that strengthening teachers' capacity for technology integration may enhance their motivation to remain in the profession. In this regard, schools may support teachers by providing continuous training, access to digital resources, and opportunities to explore innovative teaching strategies. Encouraging the use of multimedia, collaborative platforms, and interactive tools may further promote professional growth and sustained commitment to teaching.

The findings reveal that technology integration is significantly associated with teachers' motivation to stay in the profession across all domains; however, the relatively lower relationships observed in digital resources for differentiated instruction suggest a need to further support teachers in this area. This implies that while technology enhances motivation, providing additional guidance and resources for differentiated instruction may further strengthen teachers' confidence, satisfaction, and long-term commitment to the profession.

Table 6 Relationship Between the Teachers' Extent of Technology Integration and Motivation to Stay in the Teaching Profession

Variables		Organizational Commitment and Support	Career Rewards and Advancement	Personal Fulfillment
Digital Collaboration Tools	r_s	0.509***	0.447***	0.563***
	p	< .001	< .001	< .001
Multimedia Integration	r_s	0.546***	0.545***	0.613***
	p	< .001	< .001	< .001
Gamification in Learning	r_s	0.502***	0.451***	0.527***
	p	< .001	< .001	< .001
Digital Resources for Differentiated Instruction	r_s	0.470***	0.477***	0.536***
	p	< .001	< .001	< .001

*** p<0.01 (Very Highly Significant); ** p<0.01 (Highly Significant); * p<0.05 (Significant)

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- *Predictors of Teachers' Level of Motivation to Stay in the Teaching Profession*

Table 7 presents the results of the regression analysis identifying the significant predictors of teachers' motivation to remain in the teaching profession. The results reveal that the model is statistically significant ($F = 56.5$, $p < .001$), indicating that the selected variables significantly predict teachers' motivation to remain in the profession. The model explains 48.6% of the variance (*Adjusted* $R^2 = .486$), suggesting that multimedia integration, shared vision and goals, and support and shared leadership are important factors influencing teachers' motivation. This implies that both technology integration and collaborative practices play a substantial role in shaping teachers' commitment and engagement in their profession. For teachers, these factors contribute to a more meaningful, supported, and fulfilling teaching experience (Meredith et al., 2023; Onyefulu et al., 2023).

Among the predictors, shared vision and goals emerged as the strongest predictor ($\beta = .315$, $p < .001$). This indicates that when teachers are aligned with the school's goals and instructional direction, they are more likely to remain motivated and committed to their profession. For teachers, having a clear and shared purpose fosters a sense of direction, belonging, and professional identity. It strengthens their connection to the institution and reinforces their commitment to achieving common educational objectives. This finding is supported by Social Constructivism (Vygotsky, 1978), which emphasizes that shared understanding and collective meaning-making enhance engagement and professional commitment (Chin, 2024; Toikka & Tarnanen, 2024).

Support and shared leadership also significantly predict motivation ($\beta = .219$, $p < .001$). This suggests that when teachers are given opportunities to participate in leadership roles and decision-making processes, their motivation to stay in the profession increases. For teachers, shared leadership fosters empowerment, trust, and recognition, which are essential in sustaining engagement and job satisfaction. When teachers feel valued and supported within their professional environment, they are more likely to develop long-term commitment. This aligns with Self-Determination Theory (SDT) (Deci & Ryan, 1985), which highlights the importance of relatedness and autonomy in strengthening intrinsic motivation (Holcombe et al., 2023; Swart et al., 2022).

Similarly, multimedia integration is a significant predictor of motivation ($\beta = .164$, $p < .001$). This indicates that the use of multimedia tools enhances teachers' motivation by improving instructional delivery and classroom engagement. For teachers, multimedia integration enables more creative, interactive, and effective teaching practices, leading to a greater sense of accomplishment and professional satisfaction. When teachers observe improved student understanding and engagement, their motivation to continue teaching is reinforced. This finding supports the TPACK framework (Rosenberg & Koehler, 2015), which explains that effective integration of technology enhances teachers' competence and confidence, thereby contributing to sustained motivation (Staneviciene & Žekienė, 2025).

Overall, the findings indicate that both collaborative practices and technology integration significantly influence teachers' motivation to stay in the profession. For teachers, motivation is shaped not only by individual factors but also by the professional environment in which they work. A supportive, collaborative, and technology-enabled environment enhances teachers' sense of purpose, competence, and belonging. This interconnected relationship is further explained by Connectivism (Siemens, 2005), which highlights the role of networks and interactions in sustaining professional engagement and continuous Learning (Hlazunova et al., 2024).

The regression model indicates that teachers' motivation to stay can be predicted using the equation "Motivation to Saty= 1.50+(0.164* Multimedia Integration) +(.315* Shared Vision and Goals)+(.219* Support and Shared Leadership". This suggests that increases in these predictors correspond to increases in teachers' motivation, with shared vision and goals having the strongest influence, followed by support and shared leadership, and multimedia integration.

For teachers, this implies that while technology enhances instructional engagement, motivation is more strongly influenced by collaborative and organizational factors. A shared vision strengthens teachers' sense of purpose and alignment with school goals (Chin, 2024; Toikka & Tarnanen, 2024), while supportive and shared leadership fosters empowerment, recognition, and belonging (Holcombe et al., 2023; Swart et al., 2022). These findings are consistent with Social Constructivism and Self-Determination Theory, which emphasize the role of shared meaning, autonomy, and relatedness in sustaining motivation.

Although multimedia integration contributes to motivation by enhancing teaching effectiveness and teacher competence, as explained by the TPACK framework (Staneviciene & Žekienė, 2025), its relatively lower influence suggests that technology alone is not sufficient. Instead, motivation is strengthened when technology use is supported by a collaborative and enabling professional environment, consistent with Connectivism (Hlazunova et al., 2024). Overall, the model highlights that teachers' motivation to stay is shaped by the combined influence of technology and a supportive, collaborative work environment, with social and organizational factors playing a more dominant role.

The findings imply that strengthening both collaborative practices and technology integration may further enhance teachers' motivation to remain in the profession. Schools may focus on aligning teachers with institutional goals, promoting shared leadership, and supporting the use of multimedia tools in instruction. Providing opportunities for collaboration, recognition, and professional growth may help sustain teachers' engagement and commitment.

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The findings reveal that shared vision and leadership-related factors are stronger predictors of motivation compared to technology integration alone. This implies that while technology enhances teaching practices, fostering a supportive and collaborative professional environment plays a more critical role in sustaining teachers' long-term motivation and commitment to the profession.

Table 7 Predictors of Teachers' Level of Motivation to Stay in the Teaching Profession

Predictors	Coef (β)	SE Coef	t- value	p-value
(Constant)	1.500	0.2606	5.76	< .001
Multimedia Integration	0.164	0.0369	4.45	< .001
Shared Vision and Goals	0.315	0.0597	5.28	< .001
Support and Shared Leadership	0.219	0.0473	4.62	< .001
Adjusted r^2	0.486			
F value	56.5			
p-value	< .001			
Motivation to Saty= 1.50+(0.164* Multimedia Integration) +(.315* Shared Vision and Goals) +(.219* Support and Shared Leadership)				

- *Mediation and Path Estimates of Teachers' Collaboration on the Relationship Between Technology Integration and Teachers' Motivation to Stay in the Teaching Profession*

Table 8 presents the mediation analysis examining whether teachers' collaboration mediates the relationship between technology integration and teachers' motivation to stay in the teaching profession. The results reveal that the total effect of technology integration on motivation to stay is significant (*Total* = 0.270, $p < .001$), indicating that greater technology use is associated with higher levels of teachers' motivation. For teachers, integrating digital tools enhances instructional practices, promotes engagement, and contributes to a more meaningful teaching experience, thereby strengthening their commitment to the profession (Perifanou et al., 2022; Meredith et al., 2023).

The indirect effect through teacher collaboration is also significant ($a \times b = 0.135$, $p < .001$), accounting for 50% of the total effect. This indicates that teacher collaboration serves as a key mechanism through which technology integration influences motivation. For teachers, technology facilitates collaboration by enabling communication, shared planning, and reflective dialogue. These collaborative interactions provide professional support and a sense of belonging, which, in turn, enhance motivation to stay. This finding is supported by Social Constructivism (Vygotsky, 1978) and Connectivism (Siemens, 2005), which explain that Learning and professional engagement are strengthened through social interaction and digital networks (Hlazunova et al., 2024; Coker et al., 2024).

The direct effect remains significant ($c = 0.135$, $p < .001$) and accounts for 50% of the total effect. This indicates that technology integration influences teachers' motivation independently of collaboration. For teachers, technology directly enhances teaching effectiveness, classroom interaction, and professional satisfaction. This aligns with the TPACK framework (Rosenberg & Koehler, 2015), which emphasizes that teachers' competence in integrating technology strengthens their confidence and motivation (Staneviciene & Žekienė, 2025).

The path estimates further support the mediation model. Technology integration significantly influences teacher collaboration ($a = 0.289$, $p < .001$), indicating that teachers who use digital tools are more likely to engage in collaborative practices. Teacher collaboration also significantly influences motivation to stay ($b = 0.467$, $p < .001$), indicating that collaborative engagement enhances teachers' commitment and professional satisfaction. This is consistent with Self-Determination Theory (SDT) (Deci & Ryan, 1985), which explains that motivation is strengthened when teachers experience relatedness, competence, and support (Vembye et al., 2024; Meredith et al., 2023).

All paths are significant, indicating partial mediation in which both the direct and indirect effects contribute equally. This suggests that teachers' motivation is shaped by both their individual experiences with technology and their collaborative professional environment. Technology enhances instructional practices, while collaboration strengthens social and professional support systems.

The findings imply that strengthening teacher collaboration is essential in maximizing the impact of technology integration on motivation. Schools may support this by promoting collaborative practices, shared leadership, and continuous professional interaction alongside technology use.

The findings reveal that while teacher collaboration plays a significant mediating role, technology integration also independently contributes to motivation. This implies that a balanced focus on both technology and collaboration is necessary to sustain teachers' motivation and long-term commitment to the profession.

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Table 8 Mediation and Path Estimates of Teachers' Collaboration on the Relationship between the Technology Integration and Teachers' Motivation to Stay in the Teaching Profession

Mediation Estimates				95% Confidence Interval				
Effect	Label	Estimate	SE	Lower	Upper	Z	P	% Mediatio
Indirect	a × b	0.135	0.0256	0.0848	0.185	5.28	< .001	50.0
Direct	c	0.135	0.0355	0.0654	0.204	3.80	< .001	50.0
Total	c + a × b	0.270	0.0373	0.1967	0.343	7.23	< .001	100.0
Path Estimates								
TECH INTEGRATION→COLLABORATION	A	0.289	.0425	0.2055	.372	.79	< .001	
COLLABORATION → MOTIVATION TO STAY	b	.467	.0558	0.3580	.577	.37	< .001	
TECH INTEGRATION → MOTIVATION TO STAY	c	.135	.0355	0.0654	.204	.80	< .001	

The mediation model illustrated in Figure 2 supports the findings presented in Table 8 by visually depicting the relationships among technology integration, teacher collaboration, and teachers' motivation to stay in the teaching profession. The path coefficient from technology integration to teacher collaboration (β = 0.29) indicates a positive influence, suggesting that increased use of digital tools encourages teachers to engage in collaborative practices. For teachers, technology provides platforms for communication, resource sharing, and joint planning, making collaboration more accessible and effective (Hlazunova et al., 2024). This supports Connectivism, which explains how digital networks facilitate interaction and professional engagement.

The path from teacher collaboration to motivation to stay (β = 0.47) further confirms that collaboration significantly contributes to teachers' motivation to stay. This indicates that when teachers actively participate in collaborative activities, they develop stronger professional connections, receive support, and experience greater job satisfaction. For teachers, collaboration reduces isolation and enhances their sense of belonging, which strengthens their commitment to remain in the profession. This aligns with Self-Determination Theory (SDT), which highlights the importance of relatedness and support in sustaining motivation (Vembye et al., 2024).

The direct path from technology integration to motivation to stay (β = 0.14) remains significant, indicating that technology also influences motivation independently of collaboration. For teachers, technology enhances instructional effectiveness and classroom engagement, contributing to professional fulfillment and motivation. This finding supports the TPACK framework, which explains that effective technology integration strengthens teachers' competence and confidence (Staneviciene & Žekienė, 2025).

Overall, the model demonstrates that teacher collaboration serves as an important pathway through which technology integration influences motivation, while also confirming that technology has a direct effect on motivation. The stronger path from collaboration to motivation compared to the direct path highlights the importance of social and professional interaction in sustaining teachers' commitment. This suggests that while technology is important, its greatest impact occurs when it supports collaboration among teachers.

The model therefore supports a dual pathway in which both technological and collaborative factors contribute to teachers' motivation to stay. This highlights the need for schools to integrate technology use with collaborative structures to create a more supportive, engaging, and sustainable professional environment for teachers.

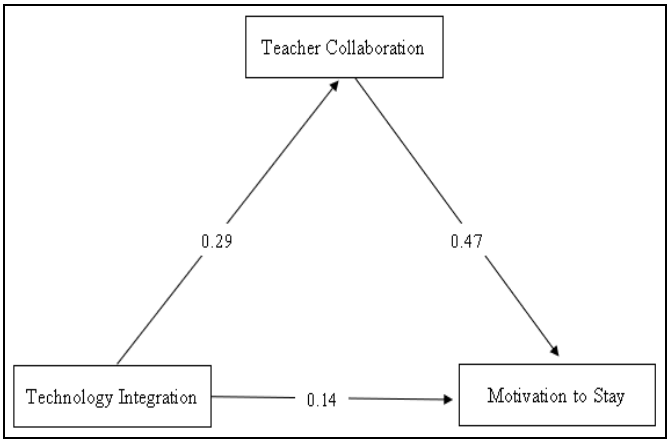

Fig 1 Visual Path Model of Teachers' Collaboration on the Relationship between Technology Integration and Teachers' Motivation to Stay in the Teaching Profession

IV. CONCLUSIONS AND RECOMMENDATIONS

➢ *Conclusions*

Based on the findings of the study, it was concluded that teachers demonstrate strong competence and readiness in integrating technology into instruction through the use of multimedia resources, digital collaboration tools, gamified strategies, and differentiated learning technologies. Teachers also maintain a positive collaborative culture characterized

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by shared vision, collaborative planning, reflective dialogue, and supportive leadership practices. Furthermore, teachers exhibit a high level of motivation to remain in the teaching profession, reflecting strong commitment, satisfaction, and professional engagement. The findings further revealed that technology integration significantly strengthens teacher collaboration and motivation by improving communication, instructional experiences, and professional interaction. Teacher collaboration also plays a significant role in sustaining teachers' motivation, emphasizing the importance of collegial support and shared professional practices in teacher retention. Moreover, both technology integration and collaborative practices were identified as important determinants of teachers' motivation to stay in the profession. Lastly, teacher collaboration serves as a significant mediating mechanism linking technology integration and motivation, suggesting that the positive effect of technology on teachers' motivation is partly strengthened through collaborative engagement.

- *Recommendations*

Based on the findings and conclusions, it is recommended that school heads, ICT coordinators, and instructional leaders strengthen technology integration through continuous professional development programs, training workshops, coaching sessions, and technical support focused on differentiated digital instruction and innovative teaching practices. Schools may also strengthen teacher collaboration by promoting structured collaborative activities such as Learning Action Cells (LAC), peer mentoring, joint planning, reflective dialogue, and shared leadership opportunities. School administrators and policymakers may further sustain teachers' motivation by improving support systems, recognition programs, career development opportunities, and positive working conditions. Additionally, integrating digital platforms into collaborative work and promoting technology-based collaborative teaching strategies may further strengthen the relationship between technology integration, collaboration, and motivation. Future researchers may also conduct longitudinal and mixed-methods studies to further examine the long-term influence of technology integration on teacher collaboration and motivation.

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