
Instructional Innovation and Emotional Resiliency on the Digital Expertise of Tenured Teachers Assigned in Marginalized Schools

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DOI - <http://doi.org/10.37502/IJSMR.2025.81012>

Abstract

This study explores how instructional innovation and emotional resiliency among tenured teachers in marginalized schools impact digital expertise. The research was conducted in Don Carlos District III, Don Carlos, Bukidnon for the school year 2025-2026. The study employed statistical methods like mean to describe the level of instructional innovation, emotional resiliency, and digital expertise of tenured teachers. Also, regression modelling was used to identify the predictors influencing digital expertise. The findings revealed that teachers highly practiced instructional innovation in teaching which reflects integration of new strategies and digital tools in instruction. Also, teachers exhibit high emotional resiliency, which means that they have better adaptation to stress and setbacks. Teachers also displayed high level of digital expertise which enables them to create more interactive and engaging activities for learners. The predictor variables in digital expertise were self-efficacy, emotional awareness and regulation, pedagogical adaptability, and instructional innovation. The Department of Education may implement targeted professional development programs that build self-efficacy, emotional regulation skills, pedagogical adaptability, and instructional innovation. These programs should be customized to teachers' specific needs, incorporate hands-on and collaborative learning, and provide ongoing support and mentorship.

Keywords: Instructional Innovation, Emotional Resiliency, Digital Expertise, Self-efficacy, Emotional Awareness and Regulation, Pedagogical Adaptability

1. Introduction

Instructional innovation in marginalized schools is important as it addresses educational differences and empower the learners who are socio-economically challenged. In the Philippine context, Pelayo-Dacanay (2021) revealed that technology-supported instruction, when thoughtfully integrated, can enhance learner engagement, critical thinking, and overall academic achievement.

Teachers in marginalized schools often encounter limited access to digital devices and inconsistent internet connectivity, which impede the consistent adoption of innovative teaching practices (Rivera, 2025). Additionally, the contextualization of the lesson materials to reflect learners' linguistic and cultural backgrounds is a notable form of instructional innovation that has shown promise in improving learner involvement and learning experiences (Basister, 2025). Yet, such innovations require teachers to be adaptable and skilled not only in pedagogy but also in digital tools, presenting a layered challenge for tenured teachers working in these

settings. The role of emotional resiliency is especially pronounced in these contexts, helping teachers manage stress, adapt to rapid changes in educational demands, and persist despite systemic challenges. Emotional resiliency functions through mechanisms such as cognitive reappraisal and self-regulation, which help teachers maintain emotional engagement and motivation in demanding environments (Ge, 2025).

Moreover, emotional resiliency and digital well-being are intertwined, as tenured teachers who possess strong digital skills tend to report higher emotional agility and confidence in navigating technology-enhanced classrooms (Khan, Smith, & Patel, 2023; Lee & Kim, 2022). This interplay points to the importance of professional development programs that concurrently enhance digital competencies and emotional coping strategies to support sustainable instructional innovation.

In analysing the relationship between instructional innovation, emotional resiliency, and digital expertise, it is evident that these variables are mutually reinforcing. Instructional innovation provides the impetus for adopting new digital tools and pedagogical techniques, while emotional resiliency ensures that teachers can persist through the challenges that such changes entail (Jennings & Greenberg, 2021). Digital expertise then serves as both an outcome and a facilitator within this cycle, enabling tenured teachers to effectively implement innovations and manage their teaching environment with confidence.

Teachers with higher emotional intelligence and resiliency are more likely to engage in innovative teaching practices despite external constraints (Villa & Valle, 2025). Similarly, emotional regulation strategies like cognitive reappraisal mediate the relationship between resilience and engagement in digital instruction (Ge, 2025). Understanding these interdependencies is crucial in designing interventions and policies that holistically address the needs of tenured teachers in marginalized schools, ensuring both their well-being and professional growth.

With this, the researcher prompted to identify which predicts the digital expertise of tenured teachers between instructional innovation and emotional resiliency in marginalized schools in Don Carlos III District, Don Carlos, Bukidnon, Philippines during the school year 2025-2026.

1.1 Statement of the problem.

1. What is the level of teachers' instructional innovation in terms of:
 - a. Technology integration in instruction;
 - b. Pedagogical adaptability;
 - c. Creative content delivery; and
 - d. collaborative instructional practices?
2. What is the level of teachers' emotional resiliency in terms of:
 - a. stress management;
 - b. adaptability to change;
 - c. self-efficacy; and
 - d. emotional awareness and regulation?
3. What is the level of teachers' digital expertise in terms of:
 - a. digital tool proficiency;
 - b. instructional design using technology; and
 - c. digital communication and collaboration?

4. Which of the variables, singly, or in combination, best predicts teachers' digital expertise?

3. Materials and Methods

3.1 Respondents

The respondents of this study were the 263 public school teachers of Don Carlos District III, municipality of Don Carlos, Bukidnon for the school year 2025-2026. These teachers were purposely selected as they have rendered more than five (5) years in teaching.

3.2 Research Design

The study used the descriptive and correlational research design. Descriptive research was used to determine the level of practice in instructional innovation, emotional resiliency, and digital expertise of tenured teachers in marginalized schools. The independent variables were instructional innovation and emotional resiliency, while the dependent variable was digital expertise.

Lastly, linear regression analysis was used to identify which variable singly or in combination, best predict the level of digital expertise of tenured teachers in marginalized schools in Don Carlos III district.

3.3 Research Instrument

There were three (3) sets of instruments utilized by the researchers tailored to fit in the current study. To improve the reliability and to identify and correct the problems prior to the launching of the study, the instruments were validated by three (3) educational experts. The instruments were then pilot-tested to thirty- four public school teachers in Pangantucan South District. The first instrument used to measure instructional innovation is adapted from the study of Salavacion & Satojito (2025) with a Cronbach alpha of .933. The second instrument used to measure emotional resiliency was adapted from the study of Vicente and Abellana (2025) with a Cronbach alpha of .854. Lastly, the third instrument used to measure digital expertise was adapted from the study of Bagona & Paglinawan (2024) with a Cronbach alpha of .944.

3.4 Statistical Analysis

The results of the data gathered was analysed using different statistical techniques. Descriptive statistics were used to describe the Instructional Innovation, Emotional Resiliency, and Digital Expertise of teachers. This involved calculating measures such as averages or means to capture the central tendency of the data. This also involved fitting a regression model to estimate the impact of independent variable and determine their statistical significance.

4. Results and Discussion

Table 1. Mean scores of instructional innovations

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Pedagogical adaptability	4.16	Agree	Highly Practiced
Collaborative instructional practices	4.14	Agree	Highly Practiced
Creative Content Delivery	4.02	Agree	Highly Practiced
Technology integration in instruction	4.01	Agree	Highly Practiced
Overall Mean	4.08	Agree	Highly Practiced

LEGEND:

Scale	Range	Descriptive Rating	Qualitative Description
1	1.00-1.50	Strongly Disagree (SD)	Poorly Practiced
2	1.51-2.50	Disagree (D)	Less Practiced
3	2.51-3.50	Neutral (N)	Moderately Practiced
4	3.51-4.50	Agree (A)	Highly Practiced
5	4.51-5.00	Strongly Agree (SA)	Very Highly Practiced

The results from Table 1 on the level of instructional innovation of teachers indicate that teachers in Don Carlos III District demonstrate strong commitment to instructional innovations. The overall mean score of 4.08, categorized as “Agree” and interpreted as “Highly Practiced,” indicates a strong consensus among teachers regarding the importance of innovation in teaching. Specifically, the highest mean score was observed in pedagogical adaptability (4.16), indicate that teachers are flexible and adjust their methods and strategies according to the needs of their learners. This aligns with the study of Bongo & De Guzman (2022) who emphasized that teachers adapt to curricular reforms and flexible learning environment by continually modifying their instructional methods, assessment strategies, and student interactions to fit the diverse and evolving needs of teachers.

In addition, collaborative instructional practices received a mean score of 4.14, also categorized as “Agree” and interpreted as “Highly Practiced.” This demonstrate that teachers work collaboratively with their colleagues and superiors to address challenges and share ideas which benefits the learners. Collaborative practices among teachers which may include dialogs, joint decision-making, and collective evaluation- are highly practiced in order to enhance the teaching and learning process (Jalop & Paglinawan, 2025).

Lastly, creative content delivery and technology integration in instruction have mean scores of 4.02 and 4.01 respectively. Both were categorized as “Agree” and interpreted as “Highly Practiced.” This implies that teachers are making use of innovative methods not only to enhance learner outcome and satisfaction but also supports continuous development of teachers. Rocamora & Baguio (2025) stressed that teachers who effectively use diverse media forms also demonstrated creativity in teaching, which leads to a more dynamic and inclusive lessons for the learners. In addition, teachers who make use of technology in teaching increases student engagement deeper motivation, and enhanced learning outcomes (Priante & Tsekouras, 2025).

Table 2. Mean scores of emotional resiliency

Indicator	Mean	Descriptive	
		Rating	Qualitative Interpretation
Adaptability to change	4.36	Agree	High Emotional Resiliency
Emotional awareness and regulation	4.29	Agree	High Emotional Resiliency
Self-efficacy	4.26	Agree	High Emotional Resiliency
Stress management	4.02	Agree	High Emotional Resiliency
Overall Mean	4.23	Agree	High Emotional Resiliency

LEGEND:

Scale	Range	Descriptive Rating	Qualitative Description
1	1.00-1.50	Strongly Disagree (SD)	Poor Emotional Resiliency
2	1.51-2.50	Disagree (D)	Less Emotional Resiliency
3	2.51-3.50	Neutral (N)	Moderate Emotional Resiliency
4	3.51-4.50	Agree (A)	High Emotional Resiliency
5	4.51-5.00	Strongly Agree (SA)	Very High Emotional Resiliency

The results from Table 2 on the level of emotional resiliency indicate that teachers in Don Carlos III district can effectively adapt and manage emotional demanding situations at work. The overall mean score of 4.23 categorized as “Agree” and interpreted as “High Emotional Resiliency,” indicates that teachers stay balanced, motivated, and effective despite challenges. Specifically, the highest mean was observed in adaptability to change (4.36), indicating that teachers. This aligns with the findings of Perez et. al. (2023) where they stressed that teachers are highly adaptive to the constant change process in teaching and learning.

In addition, emotional awareness and regulation received a mean score of 4.29, also categorized as “Agree” and interpreted as “High Emotional Resiliency.” This demonstrates that teachers have the ability to recognize, understand, and manage their own emotions especially in professional and classroom settings. Alan (2025) highlighted that high emotional awareness and regulation among teachers is strongly associated with improvement of instructional quality, greater classroom management, and lower levels of burnout.

Also, self-efficacy received a mean score of 4.26, categorized as “Agree” and interpreted as “High Emotional Resiliency.” Stress management of teachers received a mean score of 4.02, categorized as “Agree” and interpreted as “High Emotional Resiliency”. This supports the study of Pelingon et. al. (2024) which highlighted that self-efficacy among teachers creates high confidence in their teaching and decision-making abilities. Thus, it makes teachers apply more effective teaching strategies, classroom management, and engagement practices of learners (Muamaroh & Thoyibi, 2025).

On the other hand, stress management got the lowest mean among the four sub-variables of emotional resiliency. Although it has a mean score of 4.02, categorized as “Agree” and interpreted as High Emotional Resiliency. Teachers may have lower levels of stress management due to various reasons. Señal & Abellana (2025) cited that teacher experienced

moderate to high level of occupational stress with major stressors includes administrative demands, working environment, and professional distress.

Table 3. Mean scores of digital expertise

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Digital communication and collaboration	4.16	Agree	High Digital Expertise
Digital tool proficiency	4.05	Agree	High Digital Expertise
Instructional design using technology	4.04	Agree	High Digital Expertise
Overall Mean	4.08	Agree	High Digital Expertise

LEGEND:

Scale	Range	Descriptive Rating	Qualitative Description
1	1.00-1.50	Strongly Disagree (SD)	Poor Digital Expertise
2	1.51-2.50	Disagree (D)	Less Digital Expertise
3	2.51-3.50	Neutral (N)	Moderate Digital Expertise
4	3.51-4.50	Agree (A)	High Digital Expertise
5	4.51-5.00	Strongly Agree (SA)	Very High Digital Expertise

The results from Table 3 on the level of digital expertise of teachers indicate that teachers in Don Carlos District III demonstrate proficiency in the use of technological digital technologies in the teaching and learning process. The overall mean score of 4.08, categorized as “Agree” and interpreted as “High Digital Expertise,” indicates that teachers make use of available technology in making instructional materials and as part of teaching strategies. Specifically, the highest mean was observed in digital communication and collaboration (4.16), indicating that teachers make use of technology to communicate and work collaboratively with colleagues. This is supported by the study of Zuo (2025) and Villanueva (2023), who emphasized that digital technologies increased the opportunities for teacher interactions and collaboration regardless of their physical location.

Digital tool proficiency has mean score of 4.05, categorized as “Agree” and interpreted as “High Digital Expertise.” This implies that teachers perceived themselves as confident in the use of digital tools in instruction. This supports the study of Penote-Alipao and Galigao (2025) that teachers with high digital proficiency are more effective in designing interactive lessons and can easily adapt to hybrid learning modalities.

Lastly, instructional design using technology got a mean score of 4.05, categorized as “Agree” and interpreted as “High Digital Expertise.” This implies that teachers are proficient in the integration of technology into the process of instructional planning and delivery. This supports the study of Mane (2025) that teachers demonstrated high proficiency in the use of technology in the teaching-learning process which may contribute to effective and efficient instruction.

Table 4. Summary of the Multiple Regression for the Independent Variables and Digital Expertise of Teachers

Variables in the Model	Unstandardized Coefficients			Standardized Coefficients T	Sig.
	B	Std. Error	Beta		
Constant	3.157	.384		.464	.000
Self-efficacy	.181	.049	.217	3.654	.000
Emotional Awareness and Regulation	.140	.048	.170	2.891	.004
Pedagogical Adaptability	.135	.064	.124	2.111	.036
Instructional Innovation	.109	.055	.119	1.985	.048

R= .372 R²= .139 Adj. R²= .125 Sig = .000

The regression model equation based on the information provided in Table 4 would be:

$$\hat{y} = 3.157 + .181x_1 + .140x_2 + .135x_3 + .109x_4$$

Where:

\hat{y} = Digital expertise

x_1 = Self-efficacy

x_2 = Emotional awareness and regulation

x_3 = Pedagogical adaptability

x_4 = Instructional innovation

The results from Table 4 present a multiple regression analysis examining the relationship between various independent variables and the digital expertise of teacher in marginalized schools. The overall model demonstrates a strong fit, with an R² value of .064, indicating that approximately 64% of the variance in digital expertise can be explained by the independent variables included in the model.

Among the independent variables, self-efficacy emerged as the strongest predictor of digital expertise of teachers, with a standardized coefficient (β) of .217 and a significance level (p) of .000. This finding highlights the importance of teachers' self-confidence and trust in their abilities, they are more willing to adopt, experiment with, and master new digital tools. This finding resonates the studies of Cabaron (2023) and Cahapay & Anoba (2021) where both stressed that teachers' self-efficacy significantly influenced teachers' ability to teach digital technology. This confidence leads to greater competence and persistence when integrating technology into their teaching practices.

Emotional awareness and regulation also significantly predicted digital expertise of teachers with a standardized coefficient of .170 and a p -value of .004, highlighting that teacher who can stay calm, adapt, and manage frustration or anxiety are better able to tackle new digital challenges, learn from setbacks, and persist in adopting technology. This is supported by the study of Audrin (2023) which highlighted that those who are more adept at recognizing and managing their emotions in digital contexts are also more skilled in digital tasks, such as navigating online interactions, curating content, and protecting themselves from negative digital experiences.

Another significant predictor is pedagogical adaptability with a standardized coefficient of .124 and a p -value .036, although with a smaller effect. It presented that teacher who adapt their

pedagogy can seamlessly adjust lesson plans, try new digital resources, and respond effectively to rapidly changing educational environments. This is supported by Mardiana (2020) where it was highlighted that adaptability to technological change is strongly correlated with improved digital expertise in teaching.

Also, instructional innovation predicts digital expertise with a standardized coefficient of .119 and a p-value of .048, highlighting that innovative teacher seek out, experiment with, and master new digital solutions, which leads directly to enhanced digital expertise. This is supported by the study of Zuo et. al. (2025) where it was highlighted that teachers who engage in innovative instructional practices demonstrate higher levels of digital expertise.

5. Conclusion

The findings of this study highlight the significant role of instructional innovation and emotional resiliency on the digital expertise of tenured teachers assigned in marginalized schools in Don Carlos District III. The high level of instructional innovation and emotional resiliency, as indicated by mean scores across indicators, suggests that teachers are well equipped for professional competence and effectiveness. Research demonstrates that instructional innovation—marked by proactive adaptation of teaching strategies, creative problem-solving, and ongoing refinement of teaching practices—is significantly associated with improved teacher performance and student outcomes. At the same time, emotional resiliency enables teachers to effectively manage stress, overcome challenges, and maintain a positive, motivated outlook even under pressure.

When teachers believe in their ability to use technology, manage their emotions effectively, adapt their teaching strategies, and embrace creative instructional approaches, they are more likely to develop strong digital skills. Fostering these qualities through targeted support and professional development is essential for empowering educators to thrive in technology-rich educational environments.

It is recommended that school administrators and policy makers may design professional development initiatives that enhances the digital expertise of teachers especially in marginalized schools. Additionally, school administrators may advocate for an equitable access to digital tools, which includes reliable internet connection, digital devices, and provide technical support to teachers. Schools may give emphasis for a systemic investment in school-level readiness by strengthening partnerships with stakeholders, including government agencies, local government units, and the private sectors. Also, mentoring systems and collaborative learning communities may also be included to encourage instructional innovation and shared practices among teachers. Further research may be conducted to explore additional variables that may deepen the understanding of factors influencing digital expertise in the teaching and learning process.

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