

TECHNOSTRESS and ICT Competencies as Mediated by Coping Strategies among Secondary School Teachers: An Explanatory Sequential DESIGN

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ABSTRACT

This study used an explanatory sequential mixed methods approach to explore how coping strategies affect the relationship between technostress and information and communication technology (ICT) competencies among public secondary school teachers. Quantitative data were collected from a sample of teachers in Department of Education Region XI using adapted five-point Likert scale survey questionnaires, subjected to content validity and reliability analysis. Statistical methods included mean, standard deviation, Pearson product-moment correlation, and Medgraph with the Sobel z-test. Statistical analysis showed that teachers have moderate status or sometimes experienced technostress, high status or oftentimes observed ICT competencies, and high status or oftentimes practiced coping strategies. While no significant relationship was found between technostress and ICT competencies, moderate correlations were observed between coping strategies and ICT competencies, and between technostress and coping strategies. The analysis also indicated that coping strategies fully mediate the relationship between technostress and ICT competencies. In the qualitative phase, in-depth interviews (IDI) and focus group discussion (FGD) were conducted with participants selected based on the quantitative findings. The qualitative data, analyzed thematically, confirmed the quantitative results and highlighted coping strategies as the key factor through which technostress influences ICT competencies. The study identified connecting-confirmation as the nature of data integration.

KEYWORDS: *Education, educational leadership, technostress, ICT competencies, coping strategies, public secondary school teachers, explanatory sequential design, Philippines*

INTRODUCTION

The integration of Information and Communication Technology (ICT) in education is increasingly recognized as essential for enhancing teaching effectiveness and student learning outcomes. ICT competency, which involves effectively utilizing digital tools to create engaging, interactive, and student-centered learning environments, is essential for modern education (Voogt & Knezek, 2020). However, insufficient ICT skills among educators hinder integration, leading to less engaging lessons, limited development of students' digital literacy (Pelgrum & Voogt, 2019; Tondeur et al., 2020), and restricted use of digital tools for assessment and feedback, which exacerbates educational inequities (Redecker & Punie, 2019; Grönlund, 2019).

Globally, disparities in ICT competency among teachers are evident. In the United States, despite widespread access to technology, many educators struggle with ICT integration due to insufficient training (Herold, 2019). In Arab countries, cultural preferences for traditional teaching methods and inadequate institutional support limit ICT adoption (Albugami & Ahmed, 2015; Alenezi, 2018). Asia presents mixed results, with inconsistent teacher training undermining government investments in ICT infrastructure (Wong & Li, 2018; Lim & Khine, 2020). In the Philippines, particularly in rural areas like Davao, poor ICT infrastructure and lack of formal training hinder technology integration, widening the digital divide (Rodriguez, 2019; Barrot, 2018).

The study adopts pragmatism as a guiding framework, employing both quantitative and qualitative methods to investigate how coping strategies mitigate technostress and promote ICT competency. Additionally, constructivism serves as the theoretical perspective, emphasizing the integration of ICT to foster problem-solving, critical thinking, and collaborative learning in student-centered environments. This aligns with constructivist principles, which view learners as active participants who use ICT to explore, create, and construct knowledge.

The theoretical framework of this study integrated Transformational Leadership Theory (Burns, 1978), the Transactional Theory of Stress and Coping (Lazarus & Folkman, 1991), and Human Capital Theory (Sweetland, 1996). Transformational Leadership Theory highlights the role of educational leaders in fostering supportive environments that inspire ICT adoption and technostress management (Burns, 1978). The Transactional Theory of Stress and Coping underscores how effective coping mechanisms mitigate the adverse effects of technostress (Lazarus & Folkman, 1991). Human Capital Theory emphasizes investing in continuous professional development to enhance

teachers' coping strategies and ICT skills, thereby improving teaching efficacy (Sweetland, 1996).

Recent studies highlight the impact of technostress, a stress arising from technology use, on teachers' ICT competencies and their ability to manage technological demands. High technostress levels correlate with reduced ICT skills, negatively affecting teaching effectiveness (Dong et al., 2020). However, research suggests that developing effective coping strategies can mitigate technostress and enhance teachers' technological proficiency, leading to better integration of ICT in education (Zhao et al., 2022; Howard et al., 2019). Despite the growing body of international research, there remains a significant gap in understanding how coping strategies mediate the relationship between technostress and ICT competency in the Philippine context, particularly in Region XI. Addressing this gap, the current study employs a sequential explanatory mixed-methods approach to provide a comprehensive analysis of these dynamics, aiming to inform targeted interventions and professional development programs that enhance ICT integration and educational outcomes in Philippine schools.

METHODS

Research Design

This study employed an explanatory sequential mixed methods design, integrating quantitative and qualitative approaches to provide a comprehensive understanding of how coping strategies mediate the relationship between technostress and ICT competencies among secondary school teachers. The study began with a quantitative phase, using a descriptive-correlational approach to examine statistical relationships between technostress, ICT competencies, and coping strategies. Descriptive research helped establish baseline data by observing and analyzing existing characteristics without manipulation, identifying trends, and patterns in teachers' experiences (Siedlecki, 2020). Correlational research, on the other hand, explored the strength and direction of relationships between variables, revealing associations without implying causation (Romley, 2017). These quantitative methods offered an objective and systematic analysis of numerical data, enhancing the reliability and generalizability of the findings (Cox, 2019; Skinner et al., 2020).

Following the quantitative analysis, the qualitative phase employed a phenomenological design to capture the lived experiences of secondary school teachers in Region XI. This phase involved in-depth interviews (IDIs) and focus

group discussion (FGD) to explore how teachers perceived and managed technostress and its impact on their ICT competencies. By focusing on shared experiences, the phenomenological approach provided nuanced insights into the coping strategies employed by teachers, enriching the quantitative findings with context and depth. The sequential integration of these methods allowed for a dynamic and holistic understanding of the research problem, where qualitative data elaborated on quantitative results, offering a well-rounded perspective. This mixed methods approach was chosen for its ability to cross-validate and corroborate findings, leveraging the strengths of both methods to enhance the study's validity and inform targeted interventions for improving ICT integration in educational settings.

Place of the Study

This study was conducted within Department of Education (DepEd) Region XI, located in the southeastern part of Mindanao, Philippines, also known as Davao Region. The region comprises eleven Schools Division Offices: Davao de Oro, Davao del Norte, Davao del Sur, Davao Occidental, Davao Oriental, and the cities of Davao, Digos, Mati, Panabo, Tagum, and the Island Garden of Samal.

The decision to conduct the research in Region XI was influenced by its strategic relevance and accessibility, given the researcher's affiliation with DepEd in this region. By focusing on Region XI, the researcher aimed to contribute directly to enhancing ICT competencies and technostress management strategies, ultimately supporting educational improvement within the region's public school system.

Participants

In the quantitative phase of this study, 330 public secondary school teachers from DepEd Region XI, all actively utilizing ICT, were selected using quota sampling. This non-probability technique ensured proportional representation of diverse subgroups, capturing variations in technostress levels and coping strategies across different ICT proficiency levels and educational settings. Quota sampling was chosen for its practicality and efficiency, especially when a complete population list was unavailable, enabling comprehensive data collection within time and resource constraints. To maintain homogeneity, only teachers with at least three years of experience were included, ensuring consistent insights into the study's focus on ICT integration and technostress management.

For the qualitative phase, 10 participants were selected for IDIs, and seven participated in FGD. These participants were drawn from the initial pool of quantitative respondents to provide deeper insights and elaborate on their survey responses. The qualitative sampling followed a purposive approach, focusing on participants whose responses indicated extreme variations in technostress and ICT competencies. According to Creswell (2013), a heterogeneous group between three to fifteen individuals can yield meaningful qualitative insights, enabling the researcher to explore patterns and themes emerging from lived experiences. By integrating the qualitative findings with the quantitative results, the study aimed to offer a comprehensive understanding of how teachers manage technostress and enhance their ICT capabilities.

Data Analysis

The quantitative analysis employed various statistical techniques to investigate the relationships and mediating effects between the study's primary variables: technostress, ICT competencies, and coping strategies. The mean was used to provide a central measure of tendency, allowing for an understanding of the general status of technostress, ICT competencies, and coping strategies among public secondary school teachers. The standard deviation was applied to measure the dispersion of data points, helping to gauge the variability within each of the key variables. To assess relationships among the variables, the study used the Pearson product-moment correlation which provided valuable insights into how technostress, ICT competencies, and coping strategies are interrelated among teachers. Additionally, Medgraph with the Sobel z-test was employed to assess the mediating role of coping strategies in the relationship between technostress and ICT competencies. The Sobel z-test facilitated the examination of indirect effects, offering a deeper understanding of how coping strategies influence the relationship between these two key variables.

For the qualitative phase, the researcher used thematic analysis, a flexible and iterative method that involves identifying and organizing recurring themes or patterns within the data. Rooted in the work of Braun and Clarke (2006), thematic analysis enabled the researcher to explore in-depth the participants' perspectives from the IDIs and FGD.

Upon completion of both quantitative and qualitative analyses, the researcher integrated the findings to assess the relationship between the two strands. This process of data integration allowed the researcher to examine whether the qualitative results supported or expanded upon the quantitative

findings. By cross-referencing patterns and conclusions from both phases, the study's explanatory sequential design was validated, offering a comprehensive understanding of how coping strategies mediate the relationship between technostress and ICT competencies. This integrative approach ensured that the results provided a holistic view of the factors influencing teachers' ICT experiences and strategies.

Trustworthiness of the Study

To enhance the study's trustworthiness, the researcher rigorously applied the four criteria for evaluating interpretive research outlined by Lincoln and Guba (1985): credibility, transferability, dependability, and confirmability. The study's trustworthiness was reinforced through a comprehensive data collection process, incorporating surveys, IDIs, and FGD to ensure comprehensive triangulation. By employing multiple data sources and methods, the researcher ensured the validity and reliability of the findings, allowing for a more nuanced and well-rounded understanding of the research problem.

RESULTS

Status of Technostress, ICT Competencies, and Coping Strategies Among Secondary School Teachers

Table 1

Status of Technostress, ICT Competencies, and Coping Strategies Among Secondary School Teachers

	Mean	SD	Description
Technostress	3.20	.60	Moderate
ICT Competencies	3.64	.68	High
Coping Strategies	3.53	.75	High

The technostress among public secondary school teachers acquired an overall mean score of 3.20 (SD=0.60), described as moderate and interpreted as sometimes experienced by the respondents. Meanwhile, the ICT competencies got an overall mean score of 3.64 (SD=0.68), described as high and interpreted as oftentimes observed. Lastly, coping strategies among public secondary school teachers obtained an overall mean score of 3.53 (SD=0.75), which is described as high, and interpreted as coping strategies is oftentimes practiced.

Significance of the Relationships Between Technostress, ICT Competencies, and Coping Strategies

Table 2

Significance of the Relationships Between Technostress, ICT Competencies, and Coping Strategies

<i>Variables</i>	r-value	p-value	Interpretation
Technostress (IV) and ICT Competencies (DV)	-0.018*	0.749	Not Significant
Technostress (IV) and Coping Strategies (MV)	0.277*	0.000	Significant
Coping Strategies (MV) and ICT Competencies (DV)	0.226*	0.000	Significant

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

The relationship between technostress and ICT competencies among teachers was found to be negative and not significant. This is indicated a p-value of 0.749, which exceeds the significance threshold of 0.05 (two-tailed) ($r = -0.018$, $p > 0.05$). In contrast, the results reveal a positive significant relationship between technostress and teachers' coping strategies, with a p-value of .000, which is less than the alpha level of .05 ($r = 0.277$, $p < 0.05$). Finally, the results indicate that coping strategies have a positive significant relationship with the ICT competencies of teachers, with a p-value of .000, also below the .05 significance threshold (two-tailed) ($r = 0.226$, $p < 0.05$).

Mediating Effect of Coping Strategies on the Relationship Between Technostress and ICT Competencies

Table 3

Mediating Effect of Coping Strategies on the Relationship Between Technostress and ICT Competencies

Path	Beta coefficient	Std. Error	p-value
Path C: Technostress (IV) → ICT Competencies (DV)	-0.020	0.040	0.063

Path B: Coping Strategies (MV) → ICT Competencies (DV)	0.225	0.050	0.000
Path A: Technostress (IV) → Coping Strategies (MV)	0.348	0.067	0.000
Total R Square			0.058

The mediating effect of coping strategies on the relationship between technostress and ICT competencies of teachers in secondary public schools was tested based on four-step test. In step 1 (Path C), technostress do not significantly predicts ICT competencies of teachers (B = -0.020, p>0.05). In step 2 (Path B), coping strategies as mediator, significantly predicts ICT competencies of teachers (B = 0.225, p<0.05). In step 3 (Path A) revealed that technostress significantly predicts coping strategies (B = 0.348, p<0.05). Additionally, step 4 showed a total r Square of .058, indicating that the combined effects of technostress and coping strategies is responsible for 5.80 percent of the variation in the teachers’ ICT competencies. Hence, 94.20 percent of the variation was not examined in this study and may be further investigated in subsequent studies.

To test the significance of the mediation effect, Sobel z-test was employed to analyze the significance of the three paths since it was necessary to consider the significance of each path. Shown in Figure 5 is the Sobel z-test result with a value of 3.40 (p<0.05), indicating that coping strategies mediates the relationship between technostress and ICT competencies of secondary school teachers in DepEd Region XI.

Significance of Mediation	Significance	
Sobel z-value	3.40	p = .001
95% Symmetrical Confidence Interval		
Lower	0.033	
Upper	0.123	
Unstandard indirect effect		
a*b	0.0783	

se	0.023
Effect Size Measures	
<u>Standard Coefficients</u>	
Total:	-0.020
Direct:	-0.098
Indirect:	0.078
Indirect to Total Ratio:	-3.90

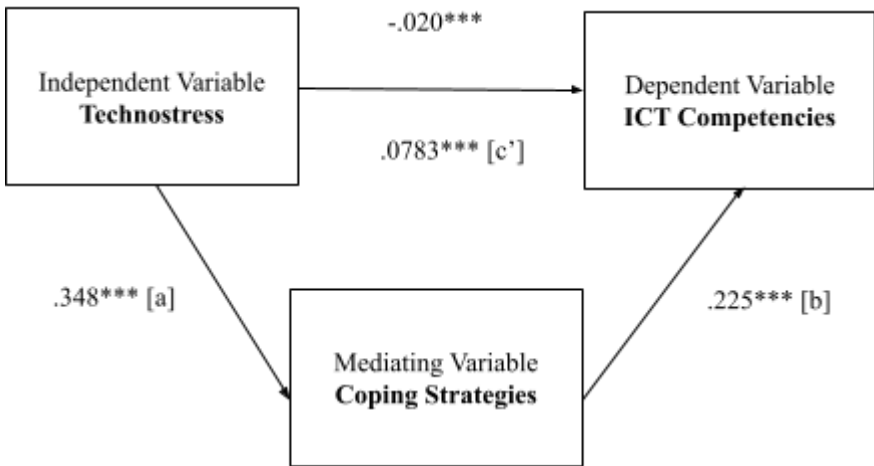


Figure 1. Mediation Model

Given the indirect effect of 0.078 and the total effect of -0.020, the ratio is -3.9. This ratio of -3.9 signifies that the indirect effect is 3.9 times the magnitude of the total effect but in the opposite direction. Such negative ratio indicates a suppression effect, where the mediator variable not only explains part of the relationship between technostress and ICT competencies but also reverses the direction of the total effect. This suggests that while technostress may negatively impact ICT competencies directly, the coping strategies employed by

teachers mitigate and even counteract this negative relationship, leading to an overall complex interplay between these variables. Therefore, this is a full mediation since the mediating variable, coping strategies, is responsible for the relationship between technostress and ICT competencies of teachers. Thus, if coping strategies are taken away, the relationship between technostress and ICT competencies of teachers disappears. This indicates that coping strategies is the only one reason how technostress can influence teachers' ICT competencies.

Standpoints of the Participants on the Quantitative Results of the Study

Confirmed Moderate Status on Technostress. The study revealed that teachers experience technostress at a moderate status, with an overall mean of 3.20. Quantitative data, supported by qualitative insights from IDIs and FGDs, confirmed this status. Teachers often expressed feelings of insecurity regarding their technological skills and highlighted the need for further training. Additionally, the blurred boundaries between work and personal life, manifested in checking emails and preparing lessons at home, contributed to their stress. Teachers frequently relied on IT support or online resources for assistance, reinforcing the moderate technostress level. The integration of both quantitative and qualitative findings validated the consistency between numerical data and teachers' lived experiences.

Confirmed High Status on ICT Competencies. Teachers demonstrated a high status of ICT competency, with an overall mean of 3.64. Quantitative results were corroborated by qualitative data from IDIs and FGDs, where participants reported frequent involvement in ICT-related tasks. Workshops covering essential ICT skills, such as operating systems, peripherals, and computer security, played a significant role. Teachers also integrated technology into their teaching, engaging in hands-on experiences and adapting to new tools. The alignment of qualitative and quantitative findings highlighted a strong connection between teachers' ICT proficiency and their practical engagement in technological tasks, emphasizing their readiness and adaptability in technology-driven education.

Confirmed High Status on Coping Strategies. The study found that teachers frequently employed effective coping strategies, with an overall mean of 3.53, indicating a high status. Qualitative data from IDIs and FGDs confirmed these findings, as participants noted the importance of comprehensive documentation, responsive IT support, and organized workshops in managing

technostress. Teachers' active role in evaluating and implementing technological solutions further strengthened their coping strategies. The consistent alignment between quantitative and qualitative findings underscored that teachers regularly apply effective methods to handle the challenges associated with technology integration.

Confirmed No Significant Relationship Between Technostress and ICT Competencies. A statistically insignificant negative relationship ($p>0.05$) between technostress and ICT competencies is supported by the qualitative data. Teachers emphasized that their willingness to learn and adapt, along with support from colleagues and IT departments, outweighed the impact of technostress on their ICT skills. The findings demonstrated that technostress does not significantly hinder ICT competency development, provided adequate support systems are in place.

Confirmed Significant Relationship Between Technostress and Coping Strategies. The study identified a significant positive relationship ($p<0.05$) between technostress and coping strategies. Qualitative data confirmed this, with teachers describing vigorous coping strategies are essential for managing technostress, maintaining well-being, and fostering resilience. This strong alignment between the data sets emphasized that teachers actively develop coping strategies in response to increasing technostress, enabling them to maintain productivity and manage technological challenges effectively.

Confirmed Significant Relationship Between Coping Strategies and ICT Competencies. There was a significant positive relationship ($p<0.05$) between coping strategies and ICT competencies, suggesting that effective coping enhances ICT skills. Qualitative data reinforced this, highlighting how coping strategies helped manage ICT-related stress and improved time management, making the learning process more enjoyable. Teachers reported that these strategies not only reduced stress but also motivated them to enhance their ICT competencies, confirming that resilience and strategic problem-solving directly contribute to technological proficiency.

Confirmed Mediating Effect of Coping Strategies on the Relationship Between Technostress and ICT Competencies. Coping strategies were found to fully mediate the relationship between technostress and ICT competencies. Quantitative results indicated that technostress had no significant direct effect on ICT competencies ($B = -0.020, p>0.05$), while coping

strategies had a significant positive influence ($B = 0.225, p < 0.05$). Technostress significantly influenced coping strategies ($B = 0.348, p < 0.05$), confirming the mediating effect ($z = 3.40, p < 0.05$). Qualitative findings supported this, with participants emphasizing that coping strategies act as a critical bridge, enabling teachers to manage stress while maintaining and improving their ICT competencies. This dual-method validation highlighted the crucial role of coping strategies in mitigating the adverse effects of technostress and fostering continuous skill development.

The integration of quantitative and qualitative results revealed a connecting-confirmation nature in the data regarding teachers' technostress, ICT competencies, and coping strategies.

DISCUSSION

Public secondary school teachers experience a moderate status of technostress, balancing the challenges of technology integration with its opportunities for professional growth. This quantitative finding aligns with the study of Syvänen et al. (2016) who attributed technostress to the learning curves of adopting new technologies, effectively managed through prior experience, while Lee and Lim (2020) highlight the role of supportive environments in countering technological pressures. Similarly, Hassan et al. (2018) emphasize that professional development and collegial support mitigate stress, showcasing teachers' adaptability and the importance of support systems. Qualitative findings confirm these results, with participants reporting challenges with new software, aligning with Çoklar et al. (2019), who observed heightened stress among beginning teachers adapting to unfamiliar technologies. Similarly, Harahap and Effiyanti (2015) noted that technostress hinders effective technology use, while Wang and Zhao (2023) underscore the adverse effects of frequent updates and proficiency demands on teachers' attitudes. These findings collectively emphasize the ongoing pressures of technology integration and the need for continuous support to alleviate stress and foster confidence.

Public secondary school teachers demonstrate high ICT competencies, effectively integrating digital tools to enhance teaching effectiveness and student outcomes. This quantitative finding is in consonance with the study of Malinina (2015) who emphasized teachers' proficiency in basic and advanced technologies, fostering interactive and personalized learning, while Almerich et al. (2016) emphasize the role of these skills in efficient classroom and administrative management, reducing workloads and boosting productivity.

Further, Chen et al. (2017) noted that teachers with advanced ICT skills often lead technological initiatives, mentoring peers and fostering innovation. Qualitative findings confirm these results, with participants from the Davao region attributing their proficiency to extensive training, aligning with Guillén-Gámez and Mayorga-Fernández (2022), who underscore the importance of digital communication within educational communities. Joshi et al. (2021) also affirm that teachers' proactive adoption of new technologies reflects their commitment to staying relevant and enhancing instructional strategies in a digital world.

Public secondary school teachers exhibit high coping strategies, demonstrating resilience and adaptability in managing educational technology challenges. This quantitative finding is in agreement with Howard and Gigliotti (2016) who emphasized that teachers' commitment to continuous learning, ensuring proficiency with evolving tools, while Kwaah and Essilfie (2017) highlight their ability to maintain work-life balance by managing techno-overload through clear boundaries. Further, Coban et al. (2015) underscore the role of collaborative networks with IT staff and peers in fostering knowledge exchange and problem-solving. Qualitative findings confirm these results, with participants noting the effectiveness of clear documentation, such as step-by-step guides, in using digital tools, aligning with Fernández-Arias et al. (2024), who stress robust coping strategies for resource management and instructional effectiveness. Similarly, Klapproth et al. (2020) affirm that active engagement with technology reduces stress and enhances teachers' capacity to handle online education demands, reinforcing the importance of well-developed coping mechanisms.

The non-significant relationship between technostress and ICT competencies among public secondary school teachers suggests that factors such as support networks, training, and experience play a greater role in shaping technological proficiency. This quantitative finding supports the view of Jena (2015) who emphasized that teachers counteract technostress through strong support systems and effective coping strategies, while Zhao et al. (2024) highlight the mitigating effects of infrastructure and institutional support in maintaining or enhancing ICT competencies. Dong et al. (2020) suggest that teachers may reach a skill plateau, where technostress no longer significantly impacts performance. Qualitative findings align with these results, as Solís et al. (2023) found that technostress does not hinder ICT skill development. Similarly, Dong et al. (2020) and Özgür (2020) underscore the critical role of school

community support and a positive environment in fostering resilience, professional growth, and the ability to navigate technological demands effectively.

The significant relationship between technostress and coping strategies among public secondary school teachers indicates that higher levels of technostress drive greater engagement with coping mechanisms. This quantitative finding aligns with the study of Nang et al. (2022) that emphasize increased technostress prompts teachers to adopt various strategies, while Tagurum et al. (2017) highlight seeking technical support, professional development, and stress management techniques as effective methods. Joo et al. (2016) underscore the role of schools in providing resources and training to help teachers manage stress, ensuring effective technology integration and safeguarding well-being and job satisfaction. Qualitative findings confirm this relationship, as participants reported adaptive strategies such as problem-solving, peer collaboration, and professional development to mitigate technostress and build resilience. This aligns with Nang et al. (2022), who cautioned that maladaptive coping hinders effective integration, and Sharma and Gupta (2023), who emphasized proactive strategies like time management and social support in reducing anxiety. Muslimin (2023) and Banaticla and Yango (2023) further support these findings, highlighting the benefits of professional development and peer support across teaching fields in preserving psychological health and fostering effective use of educational technology.

The significant relationship between coping strategies and ICT competencies among public secondary school teachers underscores the role of effective stress management in enhancing technological proficiency. This quantitative finding supports the view of Talahiban et al. (2022) that teachers with strong coping mechanisms are better equipped to manage technology challenges, while Ashraf et al. (2022) emphasize the benefits of professional development, peer collaboration, and time management in improving ICT skills and reducing technostress. Albion et al. (2015) further stress the importance of robust school support systems in fostering both ICT competencies and teacher well-being. Qualitative findings confirm these results, with participants citing proactive strategies such as problem-solving and seeking support, aligning with Saro et al. (2022), who linked these behaviors to higher ICT competencies, and Kwaah et al. (2022), who noted reduced stress and enhanced digital skills through effective coping. Liu et al. (2022) also highlight resilience as a key mediator in ICT success, while Ashraf et al. (2022) reinforce the value of

adaptive strategies in supporting innovative curriculum delivery.

The study establishes that coping strategies fully mediate the relationship between technostress and ICT competencies among secondary school teachers, emphasizing their pivotal role in reducing stress and enhancing technological proficiency. This quantitative finding aligns with Zhao et al. (2022) who found that effective coping strategies improve ICT tool use, while Nitzl et al. (2016) confirm full mediation, showing that coping strategies entirely explain the link between technostress and ICT competencies. Sidhu et al. (2021) validate the mediation analysis through statistical tools like the Sobel test, and Wen et al. (2004) and Rucker et al. (2011) reinforce that coping strategies eliminate direct effects of technostress, advocating for their development to foster ICT competency. Qualitative findings affirm these results, with participants identifying problem-solving, emotional regulation, and social support as critical strategies for mitigating technostress and boosting ICT skills, aligning with Gaudioso et al. (2017) and Kwaah et al. (2022), who confirmed the mediating role of coping mechanisms. Sweetland's (1996) Human Capital Theory supports these insights, emphasizing the development of coping strategies and ICT competencies to enhance professional growth and educational outcomes.

CONCLUSION

This study established that coping strategies fully mediate the relationship between technostress and ICT competencies among secondary school teachers. Although technostress alone does not significantly predict ICT competencies, it significantly influences coping strategies, which, in turn, have a significant positive effect on ICT competencies. Coping strategies serve as a crucial mechanism for mitigating the adverse effects of technostress on ICT competencies.

The findings emphasized that effective technostress management is vital for improving educational outcomes. Cultivating a culture that prioritizes mental well-being and continuous professional development enables teachers to integrate technology seamlessly, enhance instructional quality, and improve student performance. Qualitative insights reinforce these results, with teachers affirming that coping strategies transform technostress into manageable challenges. Additionally, teachers emphasized the importance of IT support and proactive engagement in professional development, demonstrating the vital role of institutional support in strengthening ICT competencies.

Overall, this study emphasized the need for targeted interventions that enhance coping strategies, ensuring teachers receive the necessary support to manage technostress, optimize technology use, and foster innovative, high-quality education. By addressing both technical proficiency and stress management, schools can build a resilient, tech-savvy teaching workforce capable of delivering outstanding educational outcomes.

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