

Teachers' Perceptions on Effective Resilience Strategies to Challenging Teaching Space in Tanzania: A Study of Selected Secondary Schools in Morogoro Municipality

Edgar Costantine*

Education Management and Policy Studies, College of Education, The University of Dodoma, Tanzania

Juma Saidi Mwinjuma

Education Management and Policy Studies, College of Education, The University of Dodoma, Tanzania

Joyce Nemes

Education Management and Policy Studies, College of Education, The University of Dodoma, Tanzania

***Corresponding Author- Emmanuel Edoja Achor:** edgarmsimbe3@gmail.com

Keywords

Teachers' Perceptions
Effective Resilience Strategies
Challenging Teaching Space
Tanzania

Article History

Received 2025-04-12

Accepted 2025-06-27

Copyright © 2025 by Author(s).
This is an open access article under
the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Abstract

This study investigates the perceptions of teachers regarding effective resilience strategies in challenging educational environments within secondary schools in Morogoro Municipality, Tanzania. Grounded in Pelidores' Resilience Theory and Conservation Resource Theory, the research highlights the importance of social interactions and resource management in fostering teacher resilience. Utilizing a mixed-methods approach, data were collected from 236 participants, including 234 teachers and 2 key informants, through simple random and purposive sampling techniques. Findings reveal a complex landscape of perceptions, with many teachers expressing skepticism about the effectiveness of various resilience strategies, particularly in creating positive school cultures and fostering supportive relationships. While some strategies, such as positive verbal reinforcement and interactive learning, received favorable evaluations, a majority of respondents rated these approaches as inadequately implemented. This suggests a significant gap between recognizing the value of resilience strategies and their practical applicability. The study underscores the need for targeted interventions, including professional development programs, mentorship networks, and policies that prioritize teacher well-being and resource allocation. By addressing these challenges and fostering a supportive educational environment, the resilience of teachers can be significantly enhanced, ultimately leading to improved educational outcomes for students.

INTRODUCTION

In our rapidly changing and interconnected world, knowledge and innovation are essential drivers of development. Quality education and effective learning are critical not just for individual well-being but also for national progress and the improvement of our shared future (Kozma, 2021). In Tanzania, teacher resilience emerges as a vital factor that significantly impacts both educators' professional longevity and the educational outcomes for their students (Mngumi, 2021). This study focuses on the perceptions of teachers regarding effective resilience strategies in challenging teaching environments, aiming to uncover the personal attributes and systemic challenges that influence their capacity to thrive. By examining these factors, we hope to address the pressing need for a conducive teaching and learning atmosphere, ensuring access to quality education for all, as highlighted by education policymakers.

The challenges facing teachers in Tanzania are multifaceted, ranging from personal stressors to systemic obstacles that inhibit their ability to perform optimally. Education policymakers emphasize the importance of a robust education system, which is heavily reliant on the quality and stability of its teachers and the learning environment (URT, 2010). Understanding these dynamics is critical; however, there remains a knowledge gap concerning the specific resilience strategies that teachers perceive as effective in overcoming the unique challenges they face (Papadakis, Kiv, Kravtsov, Osadchyi, Marienko, Pinchuk, & Semerikov, 2023). This study aims to fill that gap by exploring how personal traits, such as commitment and flexibility, interact with systemic issues to shape teachers' resilience.

Research has shown that the teaching profession is among the most stressful due to heavy workloads, overcrowded classrooms, and challenging student behaviors (Mashala, 2017; Carpenter, 2006). In an average African classroom, the student-teacher ratio can be as high as 120:1, far exceeding the accepted standards (Jensen, 2021). Such conditions make it difficult for teachers to implement effective teaching strategies, contributing to stress and a decline in job satisfaction. This study will investigate how teachers in Morogoro Municipality perceive the effectiveness of resilience strategies in managing these overwhelming circumstances, thereby contributing to the understanding of resilience in the Tanzanian context.

Despite existing literature on teacher resilience, there is still a lack of empirical studies addressing the specific perceptions of Tanzanian teachers regarding effective strategies for building resilience in challenging environments. Many existing studies have focused on the general concept of resilience without delving into the contextual challenges that Tanzanian educators face daily. This research will address this gap by examining the unique factors that influence teachers' perceptions of resilience strategies and how these perceptions affect their ability to cope with stressors in their teaching environments.

Additionally, the role of inadequate resources, including teaching materials and infrastructure, often exacerbates the challenges faced by teachers in Tanzania (URT, 2010). Issues such as insufficient training in technology and teaching methods contribute to heightened stress levels among educators (Ndibalema, 2015). By investigating teachers' views on effective resilience strategies, this study aims to provide insights into how these strategies can be tailored to meet the specific needs of educators in Morogoro Municipality, thereby enhancing their job satisfaction and overall effectiveness.

Generally, this study seeks to illuminate the factors influencing teachers' perceptions of effective resilience strategies within the context of secondary education in Tanzania. By focusing on the specific challenges faced by teachers in Morogoro Municipality, the research aims to fill a critical knowledge gap and provide actionable insights that can inform education policy and practice. Understanding

these perceptions is essential for developing resilience-building initiatives that not only enhance teachers' well-being but also improve educational outcomes for students in Tanzania.

THEORETICAL UNDERPINNING OF THE STUDY

Pelidores' Resilience theory

Resilience theory, as discussed by Zohuri (2015), explores how individuals navigate changes and challenges in their social contexts, highlighting the role of various influencing factors in this adaptability. Pelidores' Resilience Theory (PRT), which emerged in 2004 from research on African American female educators, combines developmental and ecological viewpoints to suggest that resilience develops through a series of processes over time rather than being an inherent quality (Collins, 2022; Carlson et al., 2012). This framework emphasizes the importance of social interactions and external environments in fostering resilience, showcasing key attributes such as the capacity to rebound from setbacks, assume responsibility, adapt to change, and cultivate relationships traits that are particularly vital for effective teaching in difficult circumstances. Furthermore, Conservation Resource Theory (CRT) complements this understanding by addressing the sustainable management of limited resources in educational environments, asserting that effective resource use is essential; poor management or loss of these resources can diminish teachers' resilience, thereby impacting their ability to succeed in demanding teaching settings, such as those observed in Morogoro Municipality, Tanzania. This theoretical foundation is relevant to the research title "Perceptions of Teachers on Effective Resilience Strategies to Challenging Teaching Space in Tanzania: A Study of Selected Secondary Schools in Morogoro Municipality," as it seeks to investigate how teachers perceive and implement resilience strategies in response to the specific challenges they face in their teaching environments.

Conservation Resource Theory

The Conservation Resource Theory (CRT), developed by Holmgreen, Tirone, and Gerhart (2017), provides a foundational framework for understanding the interplay between resource management and resilience, particularly in high-stress environments such as education. This theory posits that individuals continually seek to acquire and maintain vital resources, personal, familial, social, and material, that are essential for effectively managing stress and overcoming challenges. In the context of the research title "Perceptions of Teachers on Effective Resilience Strategies to Challenging Teaching Space in Tanzania, CRT is particularly relevant as it offers a structured approach to resource management tailored for teachers facing difficult conditions. The theory suggests that by identifying and cultivating essential resources, such as self-efficacy, optimism, social support, and effective coping mechanisms, teachers can bolster their resilience and enhance their capacity to navigate the complexities of their roles.

The emphasis on resource management highlights how educators in Morogoro Municipality can strategically leverage their available resources to alleviate stress and promote well-being. For example, fostering social networks can provide emotional support, while developing self-efficacy enhances teachers' confidence in their ability to cope with challenges. By effectively managing these resources, teachers not only improve their resilience but also contribute to better educational outcomes for their students. Thus, CRT offers critical insights into the relationship between resource management and resilience in educational settings. It underscores the importance of equipping teachers with the tools and strategies needed to adeptly handle the demands of their profession. By focusing on resource management within the framework of resilience, the study aims to uncover teachers' perceptions of effective strategies that can empower them to thrive in challenging teaching environments. This

integrated approach emphasizes that resilience is not merely an individual attribute but is significantly shaped by the ability to manage and utilize resources effectively within the educational landscape of Tanzania.

METHODS

Philosophy, approach and Design

The study was guided by the philosophy of pragmatism and utilized a mixed-methods approach to concurrently gather both qualitative and quantitative data, which is essential for understanding teachers' resilience within the challenging educational contexts of secondary schools in Morogoro Municipality, Tanzania. The pragmatism philosophy reshaped the researchers' perspectives by stressing the significance of practical outcomes and real-world applications relevant to the study. Following the recommendations of McMillan and Schumacher (2001), the mixed-methods approach enhanced data accuracy through simultaneous collection and analysis. As outlined by Creswell and Clark (2018), this approach improves the reliability of field data and is particularly effective for addressing complex research problems like teachers' resilience. A convergent parallel research design was employed to integrate both data types at various stages, facilitating a comprehensive understanding of the research issue by justifying the use of both quantitative and qualitative data (Creswell, 2019). This design not only aligns with the theoretical underpinnings of pragmatism but also serves as an efficient method for merging diverse research methodologies (Creswell & Clark, 2018). By allowing for simultaneous data collection and analysis, the convergent research design enables a detailed and nuanced exploration of teachers' resilience, ultimately enhancing the validity of the findings through triangulation and leveraging the strengths of both quantitative and qualitative approaches, which is particularly critical in the educational setting being studied.

Participants of the Study

The study involved a total of 236 participants, consisting of 234 teachers selected through simple random sampling and 2 key informants chosen via purposive sampling, which included 6 heads of secondary schools and the Municipal Education Officer, all from eight secondary schools in Morogoro Municipality. The researcher finds this sample size as appropriate to complement the study. The simple random sampling method ensured that both male and female teachers had an equal opportunity to be included in the sample. During data collection, the researcher obtained a complete list of teachers from the school heads and randomly selected names based on the desired sample size. According to Boru (2018), this method of simple random sampling adheres to the law of statistical regularity, indicating that a well-chosen random sample will reflect the same characteristics as the larger population. The purposive sampling technique was utilized to select informants in specific administrative roles, focusing on the heads of schools and the District Education Officer, with the principle of saturation guiding the selection process. Data collection tools were adapted from existing literature, refined, and tested in a pilot study, addressing any discrepancies before actual data collection commenced. Data analysis was conducted using both qualitative (thematic analysis) and quantitative methods (regression and chi-square tests). The thematic analysis provided additional insights and context to the quantitative findings, enriching the overall understanding of teachers' resilience in the study titled "Perceptions of Teachers on Effective Resilience Strategies to Challenging Teaching Space in Tanzania: A Study of Selected Secondary Schools in Morogoro Municipality." Since the study involved human subject, the researcher observed all important ethical guidelines including maintaining the privacy and confidentiality of all participants, ensuring that their identities remained anonymous throughout the study process.

FINDINGS AND DISCUSIONS

Resilience mechanism to challenging environment

There is no single strategy that is mostly acceptable for teachers to use in teaching challenging environment. Literature has identified many strategies that teachers can use to teach in any challenging environment, and they were tested on the field through a Likert scale question with a rating of five scales (thus, 1 as SD, 2 as D, 3 as N, 4 as A, and 5 as SD). However, the respondents had different response regarding the strategies that can be used to enhance the resilience of teachers in their daily undertakings. The distribution of responses by the respondents is seen in table 4.12 with varied responses in frequency and percentages. Then, responses from table 4.12 were categorized in two parts as adequate and inadequate strategies. Thus, those who rated between one to three (1-3) were considered indicating inadequate, whereas those rated between four and five (4-5) were considered as rating adequate strategy. This is indicated through the given pie chart (figure 1)

Table 1. Resilience strategies that teachers can use

Variable	Rating resilience strategies that teachers' use in challenging environment				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
The use of remedial program to accomplish the syllabus	5(2.14%)	34(14.53%)	71(30.34%)	88(37.61%)	36(15.38%)
The use of positive verbal reinforcement mechanism	1(0.43%)	25(10.68%)	71(30.34%)	95(40.6%)	42(17.95%)
Encourage interactive learning process	4(1.71%)	30(12.82%)	56(23.93%)	94(40.17%)	50(21.37%)
Assigning group works to students	15(6.41%)	23(9.83%)	61(26.07%)	78(33.33%)	57(24.36%)
Assigning tasks to students through class monitors	32(13.68%)	25(10.68%)	50(21.37%)	83(35.47%)	44(18.8%)
Provision of skills that encourage individual learning	11(4.7%)	22(9.4%)	60(25.64%)	82(35.04%)	59(25.21%)
Creating conducive teaching and learning environment	19(8.12%)	25(10.68%)	55(23.5%)	80(34.19%)	55(23.5%)
Handling classroom with great care during teaching process	19(8.12%)	26(11.11%)	59(25.21%)	77(32.91%)	53(22.69%)
The use of feedback from students on the teaching instructions	29(12.39%)	28(11.97%)	54(23.08%)	80(34.19%)	43(18.38%)
The use of pared share discussion and gallery work	29(12.39%)	32(13.68%)	54(23.08%)	70(29.91%)	49(20.94%)
The use of lecture method sometimes in teaching and process	6(2.56%)	23(9.83%)	52(22.22%)	88(37.61%)	65(27.78%)

Source: Survey data 2023

The findings regarding resilience strategies that teachers employ in challenging environments indicate a generally positive attitude toward various techniques, though with notable reservations. The use of remedial programs to accomplish the syllabus received strong agreement from 37.61% of respondents, suggesting that teachers see value in this approach for addressing learning gaps. Similarly, positive verbal reinforcement was supported by 40.6% of participants, highlighting its importance in fostering an encouraging classroom atmosphere. Interactive learning processes and group work were also recognized, with 40.17% and 33.33% agreeing on their effectiveness,

respectively, indicating a preference for collaborative and engaging teaching methods. However, there are significant portions of educators who remain neutral or disagree with several strategies, particularly in assigning tasks through class monitors and using feedback from students, where a lack of strong agreement suggests a need for more effective implementation or training. The notion of creating a conducive teaching and learning environment was similarly endorsed, with 34.19% agreeing that it is crucial, yet the presence of disagreement points to variability in actual classroom conditions. Overall, while many teachers acknowledge the importance of these resilience strategies, the mixed responses indicate that further support and professional development may be necessary to enhance their application and effectiveness in diverse teaching contexts.

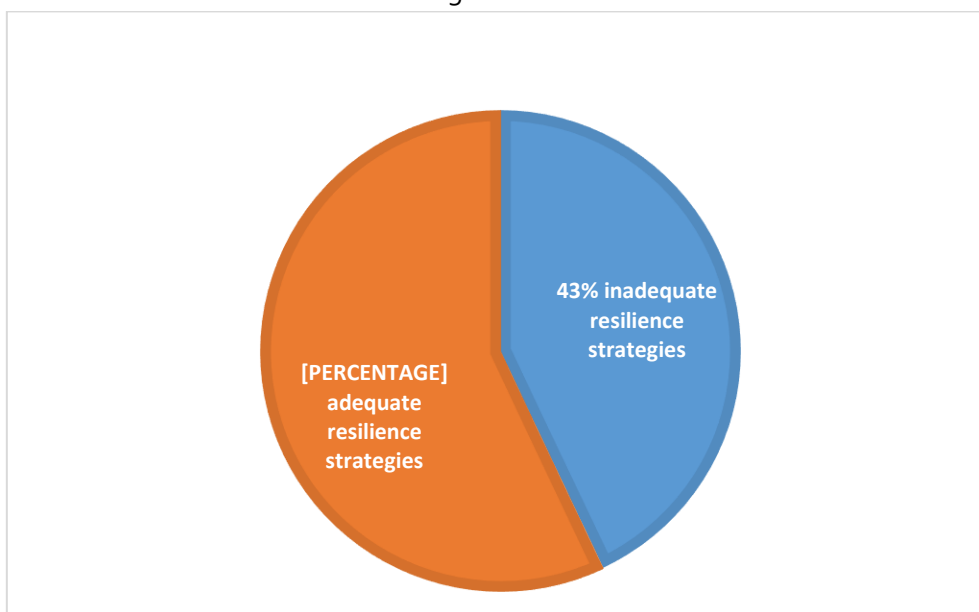


Figure 1. Resilience Strategies

Basing on the findings from the pie chart 4.4, it indicated that there is a good response of respondents rating between four and five (4-5) from the Likert scale questions. That means, such responses indicated adequate strategy, with 1468 (57%) scores, over its counterpart that scored 1106 (43%). Basing on those findings, it implies that most of the strategies that were identified through the literature review, and tested in the field can adequately help teachers in teaching and learning process to any challenging environment that characterize in their daily undertakings. Here, the findings entail that, the use of numerous strategies facilitates the teaching and learning process in any challenging environment. Establishing a positive classroom climate for example help to create a more supportive and inclusive classroom environment where students feel safe, respected, and valued in the course of their learning activities. This can also encourage a more collaboration, and active participation of students in the teaching and learning process. A detailed interview session has also reported;

In short, teachers can reduce their stress through establishing a strong support network that includes colleagues, mentors, and administrators. Collaborating in professional learning communities allows them to share experiences and resources, fostering a sense of community that reduces feelings of isolation. Regular professional development also equips teachers with new skills and strategies, boosting their confidence and effectiveness in navigating challenges. (R8 on 26th June 2023).

In other ground, another respondent demonstrated;

You know, involving self-care practices into daily routines is essential for reducing stress. Teachers can prioritize their psychological well-being through mindfulness techniques, exercise, and setting boundaries between work and personal life. By allocating time for hobbies and relaxation, they can recharge and prevent stress development. Recognizing importance of self-care can models healthy coping mechanisms for their students, creating a more positive classroom environment that support effective learning to occur. (R4 on 22nd August 2023).

These findings are also supported by recommendations made by Cornelissen, (2016) in South Africa, who reported that effective use of various techniques by teachers can facilitate in teaching students with challenging behavior instead of using a single technique. This can include teaching social and emotional skills, promoting mindset, building relationship for both teachers and students, building supportive network, teaching stress management skills, and encouraging self-reflections. Also, Wabule, (2020) in Uganda had a similar views that teachers' successful and sustainable long standing career development in their varied context depends on their ability to use various teaching and learning strategies in any challenging teaching and learning environment that characterize their daily undertakings. Therefore, using multiple resilience technique facilitate effective delivery of the teaching and learning activities in any adverse environment that may characterize a particular institution.

The findings from the survey data further indicate that teachers employ a variety of resilience strategies to navigate the challenges they face in their educational environments as illustrated by Castro et al., (2010). The responses reveal a significant reliance on methods such as positive verbal reinforcement, interactive learning processes, and the creation of conducive teaching environments. Notably, a majority of respondents rated these strategies positively, suggesting that they are perceived as effective in enhancing the teaching and learning experience. This aligns with the literature that emphasizes the importance of a supportive classroom climate, which fosters collaboration and active participation among students, ultimately contributing to better educational outcomes (Gates, 2018;Habibu et al., 2023) However, despite the apparent effectiveness of these strategies, there remains a critical policy gap in the formal recognition and support of these resilience-building practices within the Tanzanian education system.

One of the key implications of these findings is the need for educational policies that explicitly incorporate and promote resilience strategies among teachers. Currently, many teachers report feeling isolated and unsupported in their efforts to implement these strategies, which can lead to increased stress and burnout (Inmaculada et al., 2019). The lack of structured mentorship programs and professional development opportunities further exacerbates this issue, as teachers are not provided with the necessary resources to enhance their skills and resilience (Msuya, 2016). Global frameworks, such as the United Nations Sustainable Development Goal 4, advocate for quality education and the need for trained teachers who can adapt to various challenges. By aligning Tanzanian educational policies with these global standards, there is an opportunity to create a more supportive environment that recognizes and nurtures the resilience of teachers, thereby improving overall educational quality.

Moreover, the findings highlight the importance of integrating self-care practices into the professional lives of teachers. Respondents emphasized the need for mindfulness techniques and personal well-being practices as essential components of their resilience strategies (Wabule, 2020). This reflects a growing recognition of the role that mental health plays in educational effectiveness. Regional frameworks, such as the East African Community Education Strategy, also stress the importance of teacher well-being as a means to enhance educational outcomes (UNESCO, 2019; Masalu, 2020;Stoloff et al., 2019) Therefore, policymakers must prioritize the development of comprehensive support systems that include mental health resources, professional development

focused on resilience strategies, and a culture that values work-life balance. By addressing these policy gaps, Tanzania can foster a more resilient teaching workforce capable of meeting the demands of modern education.

The findings of the study highlight a critical policy gap in the Tanzanian education system concerning the formal recognition and support of resilience strategies for teachers, which is essential for their professional effectiveness and mental well-being. Despite the evident reliance on diverse resilience mechanisms such as positive verbal reinforcement, interactive learning, and the establishment of conducive teaching environments, many educators feel isolated and unsupported in their efforts to implement these approaches, leading to increased stress and potential burnout. The absence of structured mentorship programs and limited professional development opportunities exacerbates this issue, preventing teachers from acquiring the necessary skills and resources to navigate the daily challenges of their profession. Global frameworks, including the United Nations Sustainable Development Goal 4, emphasize the necessity of quality education and the importance of well-trained educators who can adapt to varied teaching environments effectively. However, the Tanzanian policies currently lack explicit incorporation of resilience-building practices, which could foster a more supportive climate for teachers. Additionally, while the findings underscore the significance of integrating self-care practices into teachers' routines, the prevailing educational framework does not prioritize mental health resources or work-life balance initiatives, further contributing to the disempowerment of educators. By failing to address these gaps, Tanzania risks undermining its educational quality and overlooking the vital role of teacher resilience in achieving positive student outcomes, hence necessitating urgent policy enhancements that align with international standards and prioritize the holistic well-being of teachers.

Generally, the findings regarding strategies to enhance teachers' resilience resonate deeply with both Pelidores' Resilience Theory (PRT) and Conservation Resource Theory (CRT), highlighting the intricate interplay of social and resource factors in shaping educators' adaptive capacities. PRT emphasizes that resilience is a developmental process influenced by a myriad of environmental factors and social interactions, which is reflected in the teachers' responses indicating a reliance on collaborative strategies such as creating supportive school cultures, fostering positive relationships, and engaging in professional development to bolster resilience over time. The skepticism noted in the responses suggests that these strategies, while recognized as potentially beneficial, necessitate more effective implementation and cultural acceptance within the educational framework; this aligns with PRT's assertion that resilience does not merely emerge but needs nurturing through structured processes and external support systems. Concurrently, CRT underscores the critical importance of resource management in enhancing well-being and resilience, as evidenced by teachers' calls for adequate support systems, including mentorship and coaching. This correlation is particularly evident in the strong emphasis respondents placed on professional development, stress management techniques, and the cultivation of social support networks, suggesting that effective utilization of both personal and institutional resources is pivotal for mitigating stress and improving adaptable skills in demanding teaching environments. The findings underscore the necessity for educational policies to bridge identified gaps in support mechanisms, thereby aligning with CRT's call for strategic resource management which can empower teachers to traverse challenges more effectively, thereby enhancing their resilience and ultimately contributing to better educational outcomes within the complex landscape of Tanzanian education. Hence, integrating PRT and CRT within this context reinforces the understanding that a teacher's resilience is profoundly shaped by both environmental practices and

the strategic management of resources, advocating for a holistic approach to fostering resilience that encompasses personal development, resource allocation, and community support.

Therefore, while the survey findings indicate that Tanzanian teachers are employing various resilience strategies, there is a pressing need for policy interventions that formally support these practices to enhance their capacity building. By recognizing the importance of mentorship, professional development, and self-care, educational authorities can create an environment that not only enhances teacher resilience but also improves student academic performance. Aligning local policies with global and regional frameworks can help to address the challenges faced by teachers and ensuring a sustainable and effective education system in Tanzania.

CONCLUSION

The conclusion of the study effectively highlights the pressing need for enhanced support systems to bolster teachers' resilience in challenging educational environments; however, to strengthen its impact, it requires greater specificity in outlining actionable reforms for educational policymakers. Rather than providing generic recommendations, the study could benefit from a detailed framework that delineates concrete steps for implementing comprehensive training programs focused on stress management, self-care, and the development of mentorship networks tailored to the unique challenges faced by educators in Tanzania. Furthermore, by referencing global education frameworks such as the UNESCO Teacher Task Force and the United Nations Sustainable Development Goal 4, the manuscript would not only underscore the international relevance of these resilience strategies but also provide a roadmap for aligning local educational policies with proven global best practices that enhances effective provision of education. This alignment could also facilitate the integration of mental health resources, professional development opportunities, and the promotion of a positive school culture in a way that resonates with global standards while addressing local needs. Such explicit recommendations would empower policymakers to translate the study's findings into sustainable reforms that enhance teacher well-being and resilience, ultimately leading to improved educational outcomes for students in Tanzania and similar low-resource contexts.

RECOMMENDATION OF THE STUDY

Based on the findings and conclusions of the study, it is recommended that educational authorities in Tanzania implement a comprehensive framework aimed at enhancing teachers' resilience in challenging teaching environments. This should include the development of targeted professional development programs focused on stress management, mindfulness techniques, and self-care practices, equipping teachers with the skills necessary to cope with the demands of their profession. Additionally, establishing structured mentorship and peer support networks will facilitate collaborative environments where educators can share experiences and coping strategies, thereby reducing feelings of isolation. It is also crucial to create policies that promote a positive school culture, emphasizing the importance of supportive relationships among staff and leadership that values teacher well-being. Furthermore, integrating mental health resources and wellness initiatives within schools will provide teachers with immediate access to professional support when needed. By aligning these recommendations with global educational standards and frameworks, Tanzania can foster a resilient teaching workforce, leading to improved job satisfaction and ultimately enhancing the quality of education for students across secondary schools in Morogoro Municipality and beyond.

ACKNOWLEDGMENT

The current study is partly based on the collected data for a PhD study in 2023 of Morogoro Region in Tanzania. Special thanks are granted to my supervisors, the government of Tanzania for granting a study leave for me to pursue a PhD study, as well as my respondents who voluntarily provided data to compliment this study.

REFERENCES

- Abdullah, M., Husin, N. A., & Haider, A. (2020). Development of Post-Pandemic Covid19 Higher Education Resilience Framework in Malaysia. *Archives of Business Research*, 8(5), 201–210. <https://doi.org/10.14738/abr.85.8321>
- Allen, P. (2024). *A Qualitative Examination of Teachers' Experiences Building Student Resilience in Rural Kenya*. (Msters dissertation). Nairobi University.
- Brouskeli, V., Kaltsi, V., & Loumakou, M. (2018). Resilience and occupational well-being of secondary education teachers in Greece. *Issues in Educational Research*, 28(1), 43–60.
- Carlson, L., Basset, G., Buehring, W., Collins, M., Folga, S., Haffenden, B., Whitfield, R. (2012). Resilience: Theory and Application. *Argonne*, 7(2).
- Carmel, R., & Badash, M. (2021). Who is the effective teacher? Perceptions of early career English teachers in Israel. *Language Learning Journal*, 49(5). <https://doi.org/10.1080/09571736.2019.1656767>
- Collins, P. H. (2022). The Politics of Black Feminist Thought. In *Black Feminist Thought, 30th Anniversary Edition*. <https://doi.org/10.4324/9781003245650-2>
- Cornelissen, T. P. (2016). *Exploring the Resilience of Teachers Faced With Learners' Challenging Behaviour in the Classroom*. (December). Retrieved from <https://scholar.sun.ac.za>
- Creswell, J. W. (2019). *Research design: Qualitative, Quantitative and Mixed methods approaches* (4th ed; Qassim University, Ed.). Thousand Oaks, CA: SAGE Publication.
- Daniilidou, A., & Platsidou, M. (2018). Teachers' resilience scale: An integrated instrument for assessing protective factors of teachers' resilience. *Hellenic Journal of Psychology*, 15(1), 15–39.
- Gates, Z. (2018). *A Study of the Protective Factors that Foster Resilience in Teachers*. Retrieved from <https://aquila.usm.edu/dissertations/1540>
- Gu, Q., & Day, C. (2013). Challenges to teacher resilience: Conditions count. *British Educational Research Journal*, 39(1), 22–44. <https://doi.org/10.1080/01411926.2011.623152>
- HakiElimu. (2005). *Working Conditions of Teachers in Tanzania A research report*.
- Holmgreen, L., Tirone, V., & Gerhart, J. I. (2017). *Conservation of Resources Theory*. (February). <https://doi.org/10.1002/9781118993811.ch27>
- Kimaro, J. . (2015). *Strategies to reduce teachers turnover in Tanzania*. Mzumbe University.
- Le Cornu, R. (2009). Building resilience in pre-service teachers. *Teaching and Teacher Education*, 25(5). <https://doi.org/10.1016/j.tate.2008.11.016>
- Linkov, I., Trump, B. D., & Hynes, W. (2019). Resilience-based Strategies and Policies to Address Systemic Risks. *Organisation for Economic Co-Operation and Development*, (September), 1–36.
- Lucumay, L. S., & Matete, R. E. (2024). Challenges facing the implementation of fee-free education in primary schools in Tanzania. *Heliyon*, 10(2), e24172. <https://doi.org/10.1016/j.heliyon.2024.e24172>

- Mansfield, C. F. (2020). Cultivating Teacher Resilience: Introduction. In *Cultivating Teacher Resilience*. https://doi.org/10.1007/978-981-15-5963-1_1
- Masten, A. S., & Powell, J. L. (2003). A resilience framework for research, policy, and practice. In *Resilience and Vulnerability: Adaptation in the Context of Childhood Adversities*. <https://doi.org/10.1017/CBO9780511615788.003>
- Matete, R. E. (2021). Heliyon Teaching profession and educational accountability in Tanzania. *Heliyon*, 7(June), e07611. <https://doi.org/10.1016/j.heliyon.2021.e07611>
- McMillan, J. H., & Schumacher, S. (2001). Research in Education. A Conceptual Introduction. *Research Design and Methodology*.
- Mhando, L. (2018). *Challenges facing secondary school teachers in Tanzania: A case of Morogoro region*. *Journal of Education and Practice*, 9(10), 1-10. <https://doi.org/10.7176/JEP>.
- Moore, C. (2020). Resilience Theory: What Research Articles in Psychology Teach Us. *Positive Psychology*.
- Msuya, O. W. (2016). Exploring Levels of Job Satisfaction Among Teachers in Public Secondary Schools in Tanzania. *International Journal of Educational Administration and Policy Studies*, 8(2), 9–16. <https://doi.org/10.5897/IJEAPS2015.0435>
- Noble, T., & McGrath, H. (2012). Wellbeing and resilience in young people and the role of positive relationships. In *Positive relationships: Evidence based practice across the world* (Vol. 9789400721, pp. 17–33). https://doi.org/10.1007/978-94-007-2147-0_2
- Papadakis, S., Kiv, A. E., Kravtsov, H., Osadchyi, V. V., Marienko, M. V., Pinchuk, O. P., ... & Semerikov, S. O. (2023). Revolutionizing education: Using computer simulation and cloud-based smart technology to facilitate successful open learning. In Joint proceedings of the 10th Illia O. Teplytskyi Workshop on Computer Simulation in Education, and Workshop on Cloud-based Smart Technologies for Open Education (CoSinEi and CSTOE 2022) co-located with ACNS Conference on Cloud and Immersive Technologies (No. 3358, pp. 1-18). CEUR Workshop Proceedings.
- Papadakis, S., Kiv, A. E., Kravtsov, H. M., Osadchyi, V. V., Marienko, M. V., Pinchuk, O. P., ... & Striuk, A. M. (2023). Unlocking the power of synergy: The joint force of cloud technologies and augmented reality in education. In Joint proceedings of the 10th Workshop on Cloud Technologies in Education (CTE 2021) and 5th International Workshop on Augmented Reality in Education (AREdu 2022), Kryvyi Rih, Ukraine, May 23, 2022. CEUR Workshop Proceedings.
- Selvaraj, V. (2022). *Impact of Resilience Theory on Student Learning Outcomes in an ESL classroom: An Intervention Study*. (August). <https://doi.org/10.14704/nq.2022.20.6.NQ22820>
- Stavrou, E., & Piki, A. (2024). Cultivating self-efficacy to empower professionals' re-up skilling in cybersecurity. *Information and Computer Security*. <https://doi.org/10.1108/ICS-02-2024-0038>
- Ungar, M. (2018). Systemic resilience: principles and processes for a science of change in contexts of adversity. *Ecology and Society*, 23(4). <https://doi.org/10.5751/ES-10385-230434>
- Vol, S. P. (2021). *Determinants of the Resilience of Teachers Working in Difficult Conditions in Mbama School District in Congo Brazzaville Kouyimoussou virginie Maître Assistant Marien NGOUABI University (ENS)*. 8(1), 97–103. <https://doi.org/10.30845/jesp.v8n1p11>
- Wabule, A. (2020). Resilience and care: How teachers deal with situations of adversity in the teaching and learning environment. *Independent Journal of Teaching and Learning*, 15(1), 76–90.
- Xu, R. (2021). Book Review: Cultivating Teacher Resilience: International Approaches, Applications, and Impact. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.706751>

Zohuri, B. (2015). Similitude Theory and Applications. *Dimensional Analysis and Self-Similarity Methods for Engineers and Scientists*, 93–193. https://doi.org/10.1007/978-3-319-13476-5_2