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Teacher's self-efficacy toward blended learning: A framework for teacher-training

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Abstract
The COVID-19 pandemic has catalyzed a significant shift in educational paradigms worldwide, necessitating rapid adaptation to blended learning approaches encompassing remote, hybrid, and socially distanced teaching modalities. This study investigates the challenges encountered by educators within the context of blended learning, particularly amidst the pandemic, while examining the influence of self-efficacy, technological proficiency, and goal-setting behaviors on teacher performance. Grounded in Albert Bandura's seminal self-efficacy framework, the research aims to unravel the intricate dynamics shaping teachers' beliefs in their instructional capabilities, their adeptness with technology, and their efficacy in goal attainment to foster student engagement and optimize learning outcomes. Through empirical analysis and situational assessments, this study offers insights into the coping mechanisms employed by teachers amidst unprecedented educational disruptions, shedding light on strategies to enhance their effectiveness within blended learning environments. By addressing the lacuna of post-pandemic data collection, this research contributes to a nuanced understanding of the evolving landscape of teaching practices and provides actionable recommendations for educational stakeholders and policymakers seeking to bolster resilience and efficacy among educators in the face of ongoing challenges.
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Introduction

Teachers provide a plethora of information for students' better success. They deliver facts, convey instructions, and relay knowledge focusing on excellence; self-efficacy among students for their educational achievements (Adu, *et al*. 2012; Bandura, 2002; Duncan & McKeachie, 2005) [1, 7, 15] in a diverse medium of educational viewpoint. Self-efficacy among the members of the academe plays an important part in their effectiveness as educators. When pandemic hit, COVID-19 has had a significant impact on the education system worldwide. Schools and universities have been forced to adapt to new teaching methods including remote learning, hybrid learning, and social distancing measures to prevent the spread of the virus within educational institutions. These changes have not only affected students but have also had a significant impact on teachers' performance and their confidence towards doing their tasks effectively. Thus, it is important to identify the impact of these changes towards the teachers' perceived self-efficacy in order to fill-in the gaps of how we perceive these challenges and create answers and solutions.

Despite numerous studies discussing the factors of what affects teacher's performance, there remains a need for evidence about how teachers' work changed as a result of the pandemic, requiring data collected after school closures. There is also a need for data on how teachers experienced specific work activities during this time. Teachers' in-the-moment responses to work changed as a result of the pandemic, due to elevated levels of stress and burn out caused by COVID-19. Such evidence would provide researchers, policymakers, and the public with a more accurate and more nuanced portrait of how teachers worked during this unprecedented time.

The research aims to investigate the challenges encountered in blended learning, particularly in the context of the COVID-19 pandemic, and how various factors such as self-efficacy, technological efficacy, and goal-setting behavior influence teacher performance within this framework. By situating the study within Albert Bandura's (1977) self-efficacy framework and examining the emerging forms of instructional delivery in response to the pandemic, the researcher seeks to understand the complex interplay between teachers' beliefs in their capabilities (Tschannen-Moran & Woolfolk Hoy, 2001), their adeptness with technology, and their ability to set and achieve goals in fostering student engagement and learning outcomes. Through this exploration, the study aims to provide insights into the coping mechanisms employed by teachers as they navigate the challenges of adapting to new learning modalities and to identify strategies for enhancing teacher effectiveness in blended learning environments.

This study explores the impact of the pandemic on teachers' self-efficacy in remote learning and proposes strategies to address these challenges, drawing from Bandura's self-efficacy theory. It identifies mastery experiences, social role models, social persuasion, and emotional states as key influencers of self-efficacy. The shift to remote learning during the pandemic prompted the adoption of various delivery modalities, including modular distance learning and online instruction. However, challenges arose due to technological proficiency and emotional strain. Research indicates that teachers' technological efficacy significantly affects their self-efficacy, with factors like gender and familiarity with technology playing roles. Goal-setting is also crucial, with specific and challenging goals enhancing performance and self-efficacy. Experience and age also influence teachers' self-efficacy. This study aims to assess

teacher self-efficacy levels and their technological-pedagogical efficacy to inform blended learning development.

Method

The research methodology served as the cornerstone of scientific investigations, providing the systematic framework and analytical tools necessary to rigorously address research questions, test hypotheses, and make substantive contributions to the body of knowledge within a specific field. This pivotal section of the research study delineates the strategies, techniques, and procedures to be employed for data collection and analysis, thus enabling the exploration of research objectives and the derivation of empirically-grounded conclusions. The methodological choices made in the research process are of paramount importance, as they underpin the credibility, reliability, and validity of the study's findings.

Design

The study's research design is explanatory-sequential design. The researcher started with quantitative data collection and then followed by qualitative data collection and analysis, which leads to interpretation. This helped the researcher further analyze the nuanced results of the quantitative data by asking open-ended questions relevant to the variables studied.

This is to determine the level of perceived self-efficacy of 40 respondents from Cebu, Philippines and South Carolina, USA. The level of technology efficacy, perceived goal-setting abilities, years of teaching experience, years of online teaching experience, sex, age and socioeconomic status were identified to determine their relationships with their perceived level of self-efficacy towards remote learning.

Environment

In order to partially compare different educational settings, half of the data for this study were from the Philippines and the other half from South Carolina, America. For accessibility and practicality, the first half were collected in southern Cebu, specifically, the coastal municipality of Argao. This town is situated 66 kilometers away from Cebu City. The high school chosen for research is in a major barangay with a population of around 3,000. The school's structure initially offers grades 7-10 and has been extended after the establishment of the new curriculum to include grades 11 and 12. The other half of the data were collected from various school districts of South Carolina, United States of America namely: Sumter School District, Richlandone School District, Richland Two School District, Lexington School District and Orangeburg County School District.

Participants

This study utilized a purposive sampling for both respondent groups coming from Argao, Cebu Philippines and South Carolina, America. The researcher previously practiced their profession in Argao National High School and is now currently working in Lower Richland High School, Richlandone School District and have connections in other school districts such as Richlandtwo School District, Lexington School District, Sumter School District and Orangeburg County School District., thus, these groups were identified to be part of the study. For each group, 10 males and 10 females were chosen to participate in the study. The participants' identity were tagged confidential using an assigned number code.

Instrument

The questionnaire is composed of four sections. The first section is an introductory letter that explains to the participants, the institution and course where the researcher came from including the name and the researcher's study. Also, the researcher asked consent from the respondents in participating in the study. Lastly, they were informed that every data gathered will be kept confidential and the results will be for academic purposes only.

In the second section, it is composed of three (3) 7-point Likert scales with 1 labeled as strongly disagree and 7 labeled as strongly agree. To gather the level of Teacher Self-Efficacy towards remote learning the researcher will be adapting Bandura's (1993) [6] self-efficacy questionnaire framework into a 25-item questionnaire. Respectively, the independent variables will have 15-item questionnaires each. For the level of goal-setting, the researcher built on Lockeand Latham's formulated questionnaires. Respectively, Digital Technology Self-efficacy Measure (Holcomb *et al*, 2004) [18] was utilized to measure the technological efficacy of the respondents group.

In the third section, a series of three (3) open-ended questions were given. For the last section, socio demographic questions such as age, sex, and years of teaching.

The sampling procedure is non-probabilistic. Purposive Sampling was used in selecting the respondents, wherein the researcher secured the list of the school's entire faculty population. From there, eight subgroups or strata were created according to subjects they're handling. A random sampling with proportional ratio will be done for each class subject and the year level will be randomly selected down to the specific teachers asked to participate for the research.

Transmittal letters were forwarded to the school heads of Argao National High School, Richlandone School District, Richlandtwo School District, Sumter School District, Lexington School District and Orangeburg County School District and serve as permission to conduct study with teachers under their respective institutions. Pre-testing of the adapted quantitative questionnaires and open-ended questions were implemented on 12 to 50 test respondents (Sheatsley 1983; Sudman 1983) to check the reliability of the measurement materials.

All quantitative data were tallied and analyzed using the software IBM SPSS Statistics to initially check whether the gathered data are within the criteria of Linear Regression and Correlation. For the qualitative data, responses were checked whether all questions were answered properly to have ample time to reach out for a follow-up with the participants.

In the first part of the data analysis, quantitative data such as levels of teacher self-efficacy towards remote learning, levels of goal-setting behavior, and levels of technological efficacy were analyzed. The descriptive statistics result showed the t-scores, means, and standard deviation of each variable categorized to samples from South Carolina and Philippines. These showed which group showed low, average, and high scores.

In analyzing the qualitative data, the researcher employed the analytical framework proposed by Braun and Clarke

(2006) for thematic analysis. This involved categorizing responses from open-ended questions into similar topics and coding each response with a "one" (1) to indicate a positive response to a particular category. By systematically organizing the data in this manner, the researcher was able to identify recurring themes and patterns within the responses. Additionally, the statistical mean of the data was utilized to provide a quantitative perspective, complementing the qualitative insights. Furthermore, the nuanced understanding of each response was achieved by referring back to relevant literature, thereby enriching the interpretation of the findings and ensuring a robust analysis of the qualitative data within the context of the study.

Results and discussion

This section shows the results of the gathered data along with the analysis and discussion relevant to the questions raised in the previous chapter. The order of presentation observes the sequence of questions in the problem statement section.

Descriptive statistics

Respondents from South Carolina had moderately higher levels of of teaching self-efficacy (M=4.96, SD=0.66) compared to respondents from the Philippines (M=5.21, SD=0.80) and relatively higher goal-setting behavior (M=6.13, SD=0.99) for South Carolina Teachers and (M=6.18, SD=0.62) for Philippines Teachers. Another notable variable was that they had slightly average levels of technological efficiency (M=3.48, SD=0.66) for South Carolina Respondents and (M=3.78, SD=0.82) for respondents from the Philippines.

Table 1: Level of Teacher Self-efficacy Towards Remote Learning Descriptive Statistics and T scores using one sample T-test of respondents from both groups

Variables	*n*	M	sd	t	p	Description Code
SC - Self-Efficacy	20	4.96	0.66	2.17	0.04*	HL
SC - Goal-setting	20	6.13	0.99	0.02	0.98	EHL
SC - Technological Efficacy	20	3.48	0.66	0.47	0.64	AL
PH - Self-Efficacy	20	5.21	0.80	0.33	0.74	MHL
PH - Goal-setting	20	6.18	0.62	0.29	0.77	EHL
PH - Technological Efficacy	20	3.78	0.82	3.43	0.00*	AL

*Correlation is significant at the 0.05 level (1-tailed)

This table shows the result of the summarized mean scores of each group in their levels of each of the three (3) variables, emphasizing the (a) mean, (b) standard deviation, (c) t-score, and (d) probability value. Average scores are consistent with Bandura's discussion towards how individuals with moderate levels of self-efficacy tend to approach challenges with confidence and persistence, leading to successful outcomes. Moderate levels of teacher efficacy, therefore, are seen as more sustainable and conducive to effective teaching practices.This aligns with the notion of average levels of self-efficacy being conducive to effective performance which extends to average scores to both independent variables. (Bandura, 1997; Tschannen-Moran and Woolfolk Hoy, 2001)

Table 2: Significant Difference in the Level of Self-Efficacy Independent Samples Test (N=40)

Variable	Alpha	df	Sig. (2-tailed)
Self-Efficacy	0.05	38	0.28
Goal Setting Behavior	0.05	38	0.86
Technological Efficacy	0.05	38	0.21

An independent-samples t-test was run to determine if there were differences in level of self-efficacy, goal-setting behavior, and technological efficacy between teachers from South Carolina and Argao. There were no outliers in the data, as assessed by inspection of the boxplot. Engagement scores for each level of self-efficacy were normally distributed, as assessed by Shapiro-Wilks test ($p > .05$). Homogeneity of variances was violated, as assessed by Leven's Test for Equality of Variances. This study found that the group means are statistically insignificant. Thus, any difference between the groups' results will not be interpreted.

Table 3: Strategies adopted during the shift

Themes	Description	Subcategories
Adaptation to Change	Teachers adjust their teaching methods, lesson plans, and classroom dynamics to accommodate shifts in learning environments, embracing flexibility and innovation in response to evolving circumstances.	Flexibility in Instructional Delivery, Adjustment of Curriculum, Modification of Assessment Methods
Utilization of Technology	Teachers effectively integrate digital tools and platforms into their instructional practices, leveraging technology to enhance learning experiences, facilitate communication, and engage students in diverse learning activities.	Integration of Learning Management Systems, Use of Educational Apps and Tools, Digital Content Creation
Flexibility and Backup Plans	Teachers develop contingency plans and alternative approaches to instruction, allowing for seamless transitions between in-person and online learning modalities and addressing unforeseen challenges with	Development of Alternative Teaching Strategies, Preparedness for Technical Issues, Implementation of Remote

	adaptability and resilience.	Learning Protocols
Diverse Teaching Approaches	Teachers employ a variety of instructional strategies and methodologies to cater to the diverse needs, learning styles, and preferences of students, fostering inclusivity and promoting equitable access to learning opportunities.	Differentiated Instruction, Project-Based Learning, Collaborative Learning Activities
Engagement and Communication	Teachers prioritize active engagement and open communication with students, establishing clear expectations, providing regular feedback, and cultivating a supportive learning environment that encourages participation and collaboration.	Active Participation Strategies, Regular Feedback Channels, Transparent Communication Practices
Parental Involvement and Support	Teachers collaborate with parents and caregivers to support student learning, fostering partnerships that facilitate home-school communication, reinforce academic concepts, and promote student success in blended learning environments.	Parent-Teacher Communication Channels, Home Learning Support Resources, Family Engagement Initiatives
Professional Development	Teachers engage in ongoing professional development and learning opportunities to enhance their skills, knowledge, and expertise in blended learning pedagogy, technology integration, and effective teaching practices, ensuring continuous improvement and growth in their teaching profession.	Participation in Workshops and Webinars, Collaboration with Colleagues, Continuing Education Opportunities

Adaptation to Change: Teachers acknowledge the need to be patient and adaptable in the face of inevitable changes, particularly in incorporating technology into their teaching methods. One respondent stated that it's important to equip "time management, patience, hardwork and determination to use the technology, especially the different computer platforms. This is coherent with related studies that found adaptability to be an important disposition for teachers as response to change, novelty and uncertainty is central to their daily work. Teacher adaptability is an emerging construct in research on teacher classroom behaviors with evidence of correlation to improved outcomes for both teachers and students (Collie & Martin, 2016; Collie & Martin, 2017) [13, 14]

Utilization of Technology was the most repeated response among the different strategies stated by the respondents. There's a clear emphasis on the use of technology in various aspects of teaching, including delivering lessons, engaging students, and communication. It's not surprising since especially during the pandemic, many educators and support staff were inexperienced using online tools on a daily basis and insufficient technological and pedagogical support made remote learning especially challenging (Shamir-Inbal & Blau, 2021). Thus, adopting and accepting technology was necessary to break through that challenge.

Flexibility and Backup Plans were one of the recurring themes answered by the respondents when they were asked about their strategies towards remote learning. They highlighted the importance of flexibility and having backup plans to address unforeseen problems or challenges, especially in the context of blended or online learning.

Many respondents also responded to have diverse teaching approaches as their main strategy to cope with remote learning. They mentioned employing a variety of teaching approaches, including project-based learning, personalized learning, cooperative learning, inquiry-based learning, and utilizing different types of learning materials.

Few others revolved around the themes of enhancing communication skills. Four (4) of the respondents emphasized the importance of keeping students engaged and maintaining communication channels, such as group chats or other means of communication, to facilitate learning.

Interestingly enough, two (2) of the respondents tackled parental involvement and support as an important topic to prioritize more so during remote learning. Some responses mention leveraging parental participation in student learning and using technology and apps as rewards for students.

Lastly, three (3) of the respondents mentioned the importance of continuing professional development. They mentioned engaging in professional development activities, such as workshops or seminars, to enhance their teaching skills and adapt to new methodologies or strategies.

Output of the Study

Teacher Training Framework

Table 4: Program profile for smart+r goals training

Program Title	School-based Training of Teachers on SMART+R Goals
Rationale	Setting clear, achievable goals is a fundamental aspect of effective teaching practice. In the context of blended learning, where educators face unique challenges and opportunities, the ability to set and pursue goals with precision becomes even more critical. Implementing a training program focused on the SMART+R (Specific, Measurable, Achievable, Relevant, Time-Bound, Reflective) framework can empower teachers to enhance their goal-setting behavior and adapt their methods to navigate the complexities of blended learning effectively. **Clarity and Focus** 1. The SMART+R framework provides a structured approach to goal setting, ensuring that objectives are Specific, Measurable, Achievable, Relevant, and Time-Bound (Locke & Latham, 1990). By guiding teachers through the process of defining clear and focused goals, the training cultivates a sense of purpose and direction in their instructional practice. In the context of blended learning, where educators must balance in-person and online components, clarity in goal setting is paramount to success. **Adaptability and Flexibility**

	2. Blended learning environments require teachers to be adaptable and flexible in their approach to instruction. Through the SMART+R training, educators learn to set goals that are not only specific and achievable but also adaptable to changing circumstances. By incorporating reflection into the goal-setting process (the "+R" component), teachers develop the capacity to assess progress, adjust strategies, and overcome obstacles, thus enhancing their resilience in the face of challenges. **Alignment with Pedagogical Objectives** 3. The relevance criterion of the SMART+R framework ensures that goals align with broader pedagogical objectives and the unique needs of students in a blended learning environment. By examining the relevance of their goals to student learning outcomes and instructional priorities, teachers can make strategic decisions about where to allocate their time and resources, maximizing the impact of their efforts. **Accountability and Evaluation** 4. The SMART+R framework facilitates accountability by establishing clear criteria for success and providing benchmarks for progress evaluation. Teachers are encouraged to set measurable indicators of achievement, enabling them to track their performance and identify areas for improvement. By fostering a culture of accountability, the training encourages teachers to take ownership of their professional development and continuously strive for excellence in their practice. **Continuous Improvement:** 5. The reflective component of the SMART+R framework promotes a culture of continuous improvement, where educators engage in ongoing self-assessment and learning. By regularly reflecting on their goals, strategies, and outcomes, teachers can identify strengths, areas for growth, and opportunities for innovation. This iterative process of goal setting and reflection enables teachers to refine their practice over time, ultimately enhancing their effectiveness as educators in the blended learning context.
Program outcome	Ensure improved teacher's goal-setting strategies towards their competencies
Major final outcome	By the end of the one-day program, **the teachers will be able:** 1. To enhance goal-setting practices through compounding exercise **the teachers will be able:** 1. To formulate a SMART+R worksheet for the next quarter of the school year.

Table 5: Program profile for digital learning platform training

Program title	**School-based Training of Teachers on Digital Learning Platforms**
Rationale	As education continues to evolve, the integration of technology into pedagogy has become increasingly vital. With the accelerated shift towards blended learning, where traditional classroom instruction is supplemented with digital tools and platforms, teachers are required to adapt and enhance their technological efficacy to effectively engage students in this new learning environment. **Adaptation to Changing Educational Landscape** 1. In recent years, there has been a significant transformation in educational practices due to advancements in technology. Blended learning, which combines face-to-face instruction with online learning, has emerged as a prominent model. To meet the Needs of 21st-century learners, teachers must be proficient in leveraging digital platforms seamlessly within their curriculum. **Equity and Access** 2. Blended learning has the potential to address disparities in education by providing students with access to resources and opportunities that may not be available in a traditional classroom setting. However, to ensure equitable access, educators must be proficient in utilizing digital tools effectively, thus mitigating the risk of leaving behind students who lack technological fluency. **Enhanced Student Engagement and Learning Outcomes** 3. Integrating technology into instruction can enhance student engagement and motivation by offering interactive and personalized learning experiences. When teachers are adept at using digital platforms, they can create dynamic lessons that cater to diverse learning styles, thereby improving learning outcomes and fostering a deeper understanding of subject matter. **Preparation for Future Challenges** 4. The COVID-19 pandemic has underscored the importance of technological readiness in education. While the immediate crisis may subside, the integration of technology into teaching practices is likely to persist. By equipping educators with the skills and confidence to navigate digital platforms effectively, schools can better prepare for future disruptions and ensure continuity of learning. **Professional Growth and Collaboration** 5. Offering training to enhance teachers' technological efficacy not only benefits students but also supports educators'

	professional development. By fostering a culture of continuous learning and collaboration, schools can create opportunities for teachers to share best practices, troubleshoot challenges, and explore innovative ways to integrate technology into their pedagogy.
Program outcome	Ensure improved teacher's skillsets around the curriculum's assigned digital platforms and increase their technological efficacy
Major final outcome	By the end of the one-day program, **the teachers will be able:** 1. To enhance goal-setting practices through compounding exerciseExploring various assessment methods available on the platform (quizzes, surveys, peer reviews, etc.). 2. Design effective assessments aligned with learning objectives. 3. Grade and provide feedback efficiently using platform tools. 4. Analyze assessment results to measure student learning and adjust teaching strategies as needed. 5. Understanding data analytics tools provided by the platform for tracking student progress. 6. Interpreting data to identify areas of improvement and student engagement. 7. Analyzing student performance on various activities and assessments. 8. Utilizing analytics to personalize learning experiences for students.

Summary, conclusion and recommendation

Summary

In this study, we investigated the impact of remote learning on teacher's self-efficacy in schools from Cebu, Philippines, and South Carolina, United States of America, conducted between November 11 to December 30, 2023. A total of 40 teachers were interviewed, with an equal distribution of 20 males and 20 females in each group. The findings revealed that while both groups exhibited average levels across all three variables, teachers from the Philippines demonstrated relatively higher levels of self-efficacy compared to those from South Carolina.

Specifically, respondents from South Carolina had moderately higher levels of teaching self-efficacy (M = 4.96, SD = 0.66) compared to respondents from the Philippines (M = 5.21, SD = 0.80). Additionally, South Carolina teachers displayed relatively higher levels of goal-setting behavior (M = 6.13, SD = 0.99) compared to their counterparts from the Philippines (M = 6.18, SD = 0.62). Notably, both groups exhibited slightly average levels of technological efficiency, with South Carolina respondents scoring (M = 3.48, SD
= 0.66) and respondents from the Philippines scoring (M = 3.78, SD = 0.82).

Despite the variations between the two groups, the majority of respondents reported that their strategies for adapting to remote learning, particularly by utilizing and accepting technology as an essential tool, were effective. However, the paired t-test analysis indicated that the differences in the data between the two groups were insignificant. This suggests that while there were differences in specific variables between the two regions, these differences did not significantly impact overall teacher self-efficacy.

Conclusion

Based on the data analysis, respondents demonstrated their ability to cope with and formulate strategies during the shift towards blended learning. They employed a variety of strategies, both internal and external, to address challenges effectively. Many respondents focused on personal adaptations, such as developing new habits, acquiring skills, and adjusting behaviors. They also emphasized the importance of continuous learning, including attending seminars to enhance their knowledge of different platforms used in blended learning and to improve their teaching practice.

However, some respondents suggested that while personal growth is essential, involving parents and other stakeholders in the education industry is crucial for a more seamless transition to blended learning. Despite these efforts, the analysis revealed that respondents, in general, had average levels of self-efficacy (M=4.96 and M=5.21). Interestingly, the differences in variables between groups were found to be insignificant.

Contrary to expectations based on the literature, it was anticipated that Philippine teachers would have lower technological efficacy, which would in turn affect their self-efficacy. However, the findings rejected this theory, indicating that the variables did not influence each other as anticipated based on existing literature. This suggests that factors influencing self-efficacy in the context of blended learning may differ from what has been previously theorized and warrants further investigation.

The current study not only intends to find out the relationship among technological efficacy and goal-setting behavior towards teacher's self-efficacy, but also to find out what teacher-training framework can be designed for blended learning. Based on the results and discussions, it could be concluded that it is important to aid and equip teachers in adapting through personal growth such as ensuring their well-being and supporting them to enhance needed technical skills. Alongside this, the educational system must implement changes towards blended learning that is also practical to both teachers and students alike. It was evident in this study, aside from the predictors that were found to be significant, there are more factors that should be considered to maximize teacher's self-efficacy. From this study, key points that should be considered for future training are; (a) A *comprehensive technological training* about an established platform that is universally used in the entire division or educational system; (b) *team-building* exercise within schools to strengthen and formulate strategies regarding goal-setting behaviors and how to effectively apply them within the organization; (c) a thorough feedback session wherein all participants can air out more specific concerns to make the training holistic.

Recommendation

As with any research endeavor, this study is not without its limitations. In recognizing these limitations, we acknowledge the need for further exploration and refinement in understanding the complexities surrounding teacher self-efficacy in the context of blended learning. In

light of the insights gained from this study, we present the limitations encountered and offer corresponding recommendations aimed at enhancing the depth and breadth of future research in this field.

Since this research study is confronted by a number of limitations, the limitations are thus presented and its corresponding recommendations to further better the study. In the current study, qualitative answers were only categorized into themes. Based on the discussion, external factors beyond the school system were clearly evident in the qualitative data.

Initially, the results showing only two variables were significant in the descriptive statistics. Both self-efficacy (SD = 0.66, p = 0.04*) and technological efficacy score (SD = 0.82, p = 0.00*) showed significant results thus proving it difficult to extract substantial analysis to further expand the topic in the related literature. For future similar studies, the researchers suggest exploring levels of stress and other related constructs as a factor for self-efficacy. In the study, the respondents' year of experience and age were taken into account and that researchers saw that this was not enough to give more information about their actual relationship with the dependent variable and thus recommend that future studies should incorporate adding categorical age groups and years of experience to further discover the differences in their relationship with self-efficacy. And since the two significant predictors were found to have small significance in terms of predicting the dependent variable and their correlation between each other, the researchers suggest exploring other constructs that might factor in or mitigate teacher self-efficacy. It is suggested for future studies to gather an equal number of data for each age group to further clarify the shape of the relationship between age, year of teaching experience and level of teacher self-efficacy. Also, it is recommended by the researchers that future similar studies be done to analyze the qualitative responses of individuals by country to find out if the difference in culture does have effects on their overall self-efficacy in life. The researchers also recommend that a similar study can be conducted with a larger sample size, so that one may be able to use the diverse demographic information when comparing the results. To further identify the effectiveness of the intervention, future researchers can explore a varied population in terms of presence and absence of training if it significantly influences teachers' self-efficacy.

References

1. Adu EO, Tadu R, Eze I. Teachers' self-efficacy as correlates of secondary school students' achievement in southwestern Nigeria. Discovery,2012:2(4):8-16.
2. Andreou E, Roussi C, Tsermentseli S, Menabò L, Guarini A. Teachers' Self-Efficacy during the COVID-19 Pandemic in Greece: The Role of Risk Perception and Teachers' Relationship with Technology. Education Sciences,2022:12(9):600. https://doi.org/10.3390/educsci12090600.
3. Asmundson GJG, Taylor S. How health anxiety influences responses to viral outbreaks like COVID-19: What all decision-makers, health authorities, and health care professionals need to know. Journal of Anxiety Disorders,2020:71:102211. https://doi.org/10.1016/j.janxdis.2020.102211.
4. Ayanwale, *et al*. Learning through radio and television during COVID-19: perspectives of K-12 stakeholders. EUREKA: Social and Humanities, 2023, 61-72. 10.21303/2504-5571.2023.002663.
5. Bao W. COVID-19 and online teaching in higher education: A case study of Peking University. Human Behavior and Emerging Technologies,2020:2(2):113-115.
6. Bandura A. Perceived Self-Efficacy in Cognitive Development and Functioning. Educational Psychologist,1993:28(2):117–148. doi:10.1207/s15326985ep2802_3.
7. Bandura A. Social cognitive theory in cultural context. Applied Psychology: An International Review,2002:51:269-290. doi:10.1111/1464-0597.00092.
8. Brooks S, *et al*. The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. The Lancet,2020:395(10227):912–920. https://doi.org/10.1016/S0140-6736(20)30460-8.
9. Cohen JR, Healey K, Hoberman G. Supporting teachers during the COVID-19 crisis: Challenges and opportunities for teacher professional development. Journal of Teacher Education,2021:72(1):44-56.
10. Cooper J. The digital divide: The special case of gender: The digital divide. Journal of Computer Assisted Learning,2006:22:320–334.
11. Castroverde Felicisimo, Acala M. Modular distance learning modality: Challenges of teachers in teaching amid the Covid-19 pandemic. International Journal of Research Studies in Education, 2021, 10. 10.5861/ijrse.2021.602.
12. Cavanaugh CS, Barbour MK, Clark T. Research and practice in K-12 online learning: A review of open access literature. International Review of Research in Open and Distance Learning, 2009, 10(1). https://doi.org/10.19173/irrodl.v10i1.607.
13. Collie RJ, Martin AJ. Adaptability: An Important Capacity forEffective Teachers. Educational Practice and Theory,2016:38(1):27-39. https://doi.org/10.7459/ept/38.1.03
14. Collie RJ, Martin AJ. Teachers' sense of adaptability: Examininglinks with perceived autonomy support, teachers' psychological functioning,and students' numeracy achievement. Learning and Individual Differences,2017:55:29-39. https://doi.org/10.1016/j.lindif.2017.03.003
15. Duncan TG, McKeachie WJ. The making of the motivated strategies for learning questionnaire. Educational Psychologist,2005:40:117-128. doi:10.1207/s15326985ep4002_6.
16. Gómez-Salgado J, *et al*. Related health factors of psychological distress during the COVID-19 pandemic in Spain. International Journal of Environmental Research and Public Health,2020:17:3947. https://doi.org/10.3390/ijerph17113947.
17. González-López JR, *et al*. Design and Validation of a Questionnaire on Risk Perception, Coping Behaviors, and Preventive Knowledge against COVID-19 among Nursing Students. Journal of Personalized Medicine,2022:12(4):515. https://doi.org/10.3390/jpm12040515.
18. Holcomb L, King FB, Brown SW. Student traits and attributes contributing to success in online courses: Evaluation of university online courses. The Journal of Interactive Online Learning,2004:2(3):1-16.

19. Karsenti T, Fievez A. COVID-19, distance learning, and remote teaching: Lessons learned and possibilities. Pedagogical Research,2020:5(4):1-13.
20. Reyes J, Del Valle J. Learning Quality of Senior High School Distance Education during the COVID-19 Pandemic. International Journal of Educational Management and Development Studies,2023:4(1):24-48. https://doi.org/10.53378/352961
21. Lieberman A, Miller L. Teacher learning in the time of COVID-19: A shared experience of distance learning. Journal of Teacher Education,2020:71(5):437-447.
22. Mazza C, *et al*. Nationwide survey of psychological distress among Italian people during the COVID-19 pandemic: Immediate psychological responses and associated factors. International Journal of Environmental Research and Public Health,2020:17:3165. https://doi.org/10.3390/ijerph17093165.
23. Milman E, Lee SA, Neimeyer RA. Social isolation as a means of reducing dysfunctional coronavirus anxiety and increasing psychoneuro immunity. Brain, Behavior, and Immunity,2020:87:138–139. https://doi.org/10.1016/j.bbi.2020.05.007.
24. Pomerantz J, Brooks DC. ECAR study of faculty and information technology,2017:97(80):94. Retrieved from https://benchmarks.it.unt.edu/sites/default/files/facultyitstudy2017.pdf.
25. Perera HN, Calkins C. Teacher self-efficacy profiles: Determinants, outcomes, and generalizability across teaching level. Contemporary Educational Psychology,2019:58:186–203.
26. Pereira H, Gonçalves VO, Assis RM. Burnout, Organizational Self-Efficacy, and Self-Esteem among Brazilian Teachers during the COVID-19 Pandemic. European Journal of Investigation in Health, Psychology, and Education,2021:11(3):795-803. https://doi.org/10.3390/ejihpe11030057
27. Petzold MB, *et al*. Risk, resilience, psychological distress, and anxiety at the beginning of the COVID-19 pandemic in Germany. Brain and Behavior, 2020, e01745. https://doi.org/10.1002/brb3.1745
28. Potane Joel. Design and Utilization of Television and Radio Lessons amid COVID-19: Opportunities, Challenges, and Initiatives. SSRN Electronic Journal, 2022, 10.2139/ssrn.4065169.
29. Shahla Shabeeh Shaheen PhD, Hoque A. Online Teaching and Challenges of Teachers. Journal of Studies in Social Sciences and Humanities,2021:7(1),61-65. Retrieved from http://www.jssshonline.com/.
30. Tschannen-Moran M, Woolfolk Hoy A. The differential antecedents of self-efficacy beliefs of novice and experienced teachers. Teaching and Teacher Education,2007:23(6):944–956.
31. Qiu J, *et al*. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: Implications and policy recommendations. General Psychiatry,2020:33(2):e100.