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Exploring the Influence of Primary School Teachers' Anxiety Levels on Attitudes Toward Technology Integration

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ABSTRACT: The integration of technology in the classroom is crucial for fostering a digital society, yet its success heavily relies on teachers' readiness. Despite the availability of technological tools, their effective adoption varies, often influenced by teachers' attitudes and anxiety levels. This study explores the the Influence of Primary School Teachers' Anxiety Levels on Attitudes Toward Technology Integration. Using a survey research design, data were collected from 126 teachers in government-owned primary schools. Attitudes were measured using a self-developed 4 Likert-scale instrument, while anxiety levels were assessed by adopting a standardized anxiety inventory. Results indicate that while teachers generally have positive attitudes toward technology integration, there is a notable prevalence of high anxiety levels that do not directly correlate with these attitudes. These findings suggest that other underlying factors contribute to anxiety, which warrants further investigation. The study recommends that schools establish support systems focused on enhancing teachers' mental well-being and competency in using technology. Future research should delve into identifying the specific factors that heighten anxiety in the context of technology adoption in education.

Keywords: anxiety, attitudes, professional development, technology integration.

ABSTRAK*: Integrasi teknologi di dalam kelas sangat penting untuk membangun masyarakat digital, namun keberhasilannya sangat bergantung pada kesiapan guru. Meskipun alat teknologi tersedia, adopsi yang efektif bervariasi, sering kali dipengaruhi oleh sikap dan tingkat kecemasan guru. Studi ini mengeksplorasi pengaruh tingkat kecemasan guru sekolah dasar terhadap sikap mereka terhadap integrasi teknologi. Menggunakan desain penelitian survei, data dikumpulkan dari 126 guru di sekolah dasar milik pemerintah. Sikap diukur menggunakan instrumen skala Likert 4 yang dikembangkan sendiri, sementara tingkat kecemasan dinilai dengan mengadopsi inventori kecemasan standar. Hasil menunjukkan bahwa meskipun guru umumnya memiliki sikap positif terhadap integrasi teknologi, terdapat tingkat kecemasan yang tinggi yang tidak secara langsung berkorelasi dengan sikap tersebut. Temuan ini menunjukkan bahwa faktor-faktor mendasar lainnya berkontribusi terhadap kecemasan, yang memerlukan penelitian lebih lanjut. Studi ini merekomendasikan agar sekolah-sekolah membangun sistem dukungan yang berfokus pada peningkatan kesejahteraan mental dan kompetensi guru dalam menggunakan teknologi. Penelitian di masa depan harus mengeksplorasi faktor-faktor spesifik yang meningkatkan kecemasan dalam konteks adopsi teknologi dalam pendidikan.*

Kata Kunci*: kecemasan, integrasi teknologi, pengembangan profesional, sikap.*

INTRODUCTION

Technology has become a cornerstone of modern education, fundamentally transforming how teaching and learning occur. Its integration is not merely an option but a necessity, reshaping educational methodologies and equipping students with the tools needed to thrive in a digitally driven world

(Dubey & Sahu, 2022). By offering diverse, interactive learning experiences, technology can cater to various student needs and learning styles, enhancing both engagement and outcomes (Raja & Nagasubramani, 2018). For example, virtual labs, interactive software, and multimedia technologies have proven to be effective supplements to traditional teaching methods, increasing student motivation and improving learning outcomes through gamification and immersive experiences (Abdulrahaman et al., 2020; Asare et al., 2023; Pang, 2021; Papp, 2017; Rasalingam et al., 2014; Smiderle et al., 2020).

However, the success of technology integration in education hinges on the role of teachers. Research suggests that while technology can enhance teaching effectiveness and student performance, its impact depends largely on how it is used in the classroom (Chacón-Prado, 2023; Chauhan, 2017; Gilakjani, 2017; Tamim et al., 2011). Despite the availability of technological tools, many teachers do not use them consistently or effectively. For instance, Fraillon et al. (2014) found significant disparities in the frequency of technology use among teachers across different countries, with some using it daily and others much less frequently.

The attitudes of teachers toward technology play a critical role in this inconsistency. While there is growing interest in innovative classroom practices and many teachers are developing positive attitudes toward technology integration, the level of acceptance varies significantly. Factors such as gender, teaching experience, confidence, and technical skills influence teachers' readiness to adopt new technologies (Karaçöp & Inaltekin, 2022; OECD, 2021; Scherer et al., 2019; Uerz et al., 2018; Xiyun et al., 2022). Additionally, psychological factors like self-efficacy and emotional regulation are crucial in shaping teachers' ability to effectively integrate new tools into their teaching practices (Passey, 2021; Zhi et al., 2023).

Despite the potential benefits of technology in education, a significant barrier to its effective adoption is the anxiety that some teachers experience when using digital tools. This anxiety can stem from a lack of familiarity with technology, fear of failure, or insufficient training and support (Fernández-Batanero et al., 2021; Henderson & Corry, 2021). High levels of anxiety can lead to resistance or reluctance to use technology, ultimately affecting teaching practices and student learning outcomes (Scherer et al., 2019; Scherer & Teo, 2019).

This study addresses the gap in understanding the relationship between teachers' attitudes toward technology and their anxiety levels. While previous research has explored the factors influencing technology integration, the connection between teachers' attitudes and their anxiety remains underexplored. By investigating this relationship, this study aims to inform the development of professional development initiatives that address both the cognitive and emotional aspects of technology integration, ultimately supporting teachers in effectively adopting and utilizing technological tools in their classrooms.

Teachers' Attitudes and Anxiety Levels in Effective Technology Adoption

The successful integration of technology in educational settings is significantly influenced by teachers' attitudes and anxiety levels. As key agents of change

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within the educational system, teachers' perspectives on technology and their emotional well-being play a crucial role in determining how effectively new digital tools and methodologies are adopted in the classroom. Understanding these factors is essential for improving educational outcomes through the effective use of technology.

Teachers' attitudes toward technology encompass their beliefs, perceptions, and overall outlook regarding the use of digital tools in teaching. A positive attitude is closely linked to a greater likelihood of adopting and experimenting with innovative methodologies (Teo, 2011). Teachers who view technology favorably are more inclined to integrate it as a valuable resource to enhance student learning outcomes and engagement (Gümüş et al., 2024). This positive outlook enables teachers to employ technology creatively and effectively, fostering more dynamic and interactive learning environments. For instance, Blau and Shamir-Inbal (2017) emphasize that teachers with a willingness to explore new pedagogical approaches such as virtual and augmented reality, flipped classrooms, and blended learning can utilize technology to create enriched educational experiences. This highlights the need for targeted professional development to improve teachers' competence and comfort with technology, which in turn can enhance their attitudes toward its use (Scherer et al., 2019; Scherer & Teo, 2019).

However, the adoption of digital tools can be hindered by technology-related anxiety. This anxiety often stems from a lack of familiarity with digital technologies, fear of failure, or a perceived deficiency in technical skills (Fernández-Batanero et al., 2021; Henderson & Corry, 2021). Teachers may also struggle with managing technology in the classroom or feel unsupported due to insufficient training (Hur et al., 2021). Additionally, the time required to learn and integrate new technologies can contribute to this anxiety, leading to resistance or reluctance to use technology fully. Teachers experiencing high levels of anxiety may avoid or limit the use of technological tools, thereby missing out on their full potential to enhance teaching and learning (Scherer et al., 2019; Scherer & Teo, 2019).

The relationship between teachers' attitudes and anxiety levels is dynamic and interconnected. Elevated anxiety can negatively impact teachers' attitudes, leading to avoidance behaviors and a refusal to adopt new technological tools (Tondeur et al., 2017). Addressing this issue requires effective professional development programs that not only build technical skills but also reduce anxiety by fostering a sense of competence and confidence in using technology. Such programs can significantly influence teachers' attitudes, enabling them to embrace technology more fully and, ultimately, enhance their teaching practices.

This literature review underscores the importance of understanding the interplay between teachers' attitudes and anxiety levels in the context of technology adoption. Despite the recognized benefits of technology in education, its effective integration remains inconsistent, often due to the emotional and cognitive barriers teachers face. By addressing these barriers through targeted support and professional development, educators can be better equipped to

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harness the power of technology in their classrooms. This study aims to explore the relationship between teachers' attitudes toward technology and their anxiety levels, a crucial step toward improving technology integration in education.

RESEARCH METHOD

Research Design

This study employed a quantitative research design to examine the relationship between teachers' attitudes towards technology integration and their anxiety levels. A quantitative approach was chosen because it allows for the collection and analysis of numerical data, which is essential for identifying patterns and relationships between the dependent variable (anxiety levels) and the independent variables (attitudes toward technology integration).

Participants

The study participants consisted of 126 primary school teachers from government-owned schools. A simple random sampling technique was employed to ensure a representative sample across various demographic categories, including gender, age, qualifications, and years of teaching experience. This approach was selected to minimize selection bias and ensure that the sample reflected the diverse characteristics of the target population.

Instruments

To measure the variables, the study utilized two primary instruments. The "Computer Anxiety Rating Scale (CARS)" by Heinssen, Glass, and Knight (1987) was used adopted to assess teachers' anxiety levels related to the adoption of technological devices. The CARS scale, with a demonstrated reliability coefficient of .87, has been widely validated and is recognized for its accuracy in measuring computer-related anxiety. The "Teachers' Attitudes Toward Technology (TATT)" was a self-developed questionnaire used to assess teachers' perceptions, and dispositions toward integrating technology in the classroom. This scale was validated using Alpha Cronbach with the reliability coefficient of .79. The TATT evaluated teachers' attitudes toward technology usage.

The questionnaire was divided into four sections: demographic information, attitudes toward technology, anxiety levels, and teachers' engagement in professional development programs related to technology integration. The items on both the scales were rated on a 4-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree), allowing for a nuanced assessment of the participants' responses.

Data Analysis

Data analysis was conducted using descriptive statistics to summarize the data and provide an overview of the sample characteristics. Chi-square tests were used to assess the association between anxiety levels and attitudes toward technology integration. ANOVA was applied to compare the means across different groups, testing for statistically significant differences. Multiple regression analysis was performed to examine the influence of demographic variables such

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as age, gender, qualifications, and years of experience on both anxiety levels and attitudes toward technology integration. Also, Pearson correlation analysis was conducted to explore the relationship between professional development, attitudes toward technology integration, and anxiety levels. These analyses were chosen because they align with the study's objectives and provide a comprehensive understanding of the relationships between teachers' attitudes, their anxiety levels, and how these factors interact.

RESULT AND DISCUSSION

To determine the demographic characteristics of the participants, descriptive statistics were conducted on gender, age, qualifications, and years of experience, Table 1 presents the results.

Table 1. Descriptive statistics of demographic variables

		N	Mean	Std. Dev
Gender	Male	36	1.71	.454
	Female	90		
	Total	126		
Age	Below 30	12	3.14	1.269
	30-34	27		
	35-39	37		
	40-44	40		
	45-49	3		
	50-54	5		
	55-59	2		
Qualifications	NCE	84	1.33	.473
	B.Ed	42		
Years of Experience	Below 5	28	3.01	1.865
	5-9 years	23		
	10-14 years	51		
	15-19 years	18		
	20-24 years	4		
	25-29 years	2		

Table 1 shows the descriptive statistics of the demographic variables. The table presented the participants' gender as male = 36 and female = 90 with a mean of 1.71 and a standard deviation of .454. It also showed the age range of the participants with teachers between ages 40-44 as 40, followed by 35-39 as 37, 30-34 as 27, and below 30 as 12. Others fall between 45-49, 50-54, and 55-59 as 3, 5, and 2, respectively. The table also presents the qualifications of the participants. Teachers with NCE = 84 and B.Ed = 42. The years of teaching experience were also revealed in the table, with those within 10-14 years recording 51, below five years = 28, 5-9 years = 23, 15-19 years = 18, and 20-24 years = 4, and 25-29 years = 2. this implies that the schools have more female teachers. Most teachers are between 40 to 44 years of age and 35 to 39 years of age. Moreover, most of them

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possessed NCE, the lowest qualification required for teaching in primary schools. Also, most teachers are within 10-14 years in the classroom.

The median calculation was used to determine the attitudinal levels of the teachers towards technology integration and the cut-off point for the positive and negative attitudes of teachers. This calculation was done using basic descriptive statistics in SPSS.

To assess teachers' attitudes toward technology integration, descriptive statistics were applied to the four sub-scales of the research instrument. The frequency and percentage values reflecting these attitudes are shown in Table 2.

Table 2. Descriptive statistics of teachers' attitude towards technology integration

	Frequency (N)	**Percent (%)**
Negative attitude	42	33.3
Positive attitude	84	66.7
Total	**126**	**100.0**

Table 2 shows the descriptive statistics of teachers' attitudes towards technology integration. Teachers with positive attitudes toward technology integration were 84, accounting for 66.7% of the participants, while those with negative attitudes were 42, accounting for 33.3%. The result suggests that most teachers displayed a positive attitude towards technology integration.

The percentile calculation was used to determine the anxiety levels from the overall anxiety scores. The 25th and 75th percentile were used for categorizing the anxiety levels into low, medium, and high.

To assess teachers' anxiety levels toward technology integration, descriptive statistics were applied to the four sub-scales of the research instrument. The frequency and percentage values reflecting the anxiety levels are shown in Table 3.

Table 3. Descriptive statistics of teachers' anxiety levels

	Frequency (N)	Percent (%)
Low anxiety	30	23.8
Medium anxiety	54	42.9
High anxiety	42	33.3
Total	**126**	**100.0**

Table 3 presents the descriptive statistics of the anxiety levels of the teachers. The table revealed that 54 teachers, resulting in 42.9%, showed medium anxiety towards technology integration, 42 teachers, accounting for 33.3%, showed high anxiety, and 30, resulting in 23.8%, revealed low anxiety. This indicates that most teachers are anxious to integrate technology into their classrooms.

Research Hypotheses

This study examined three hypotheses to provide empirical evidence to supporting its findings.

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Ho1: Teacher's anxiety levels are associated with teachers attitudes toward technology integration

A crosstabulation was performed to display the distribution of participants across different levels of attitude and anxiety. Table 4 presents the results.

Table 4. Anxiety level and Attitude levels Crosstabulation

		Attitude levels		Total
		Negative attitude	Positive attitude	
Anxiety levels	Low anxiety	21	42	63
	Medium anxiety	9	12	21
	High anxiety	12	30	42
Total		**42**	**84**	**126**

Table 4 reveals the crosstabulation of the anxiety levels against the attitude levels of teachers toward technology integration. The table showed that 21 teachers with low anxiety have a negative attitude toward technology integration, and the remaining 42 teachers with low anxiety have a positive attitude towards technology integration. This indicates that among teachers with low anxiety, 66.7% of them still have a positive attitude toward technology integration. On the medium anxiety level, nine teachers have a negative attitude towards technology, while 12 have a positive attitude towards technology integration. This accounts for 57.1% of the teachers on the medium anxiety scale possessing a positive attitude towards technology integration, which implies a fair balance. Moreover, the table revealed that on the high anxiety level, 12 teachers have a negative attitude towards technology integration. In comparison, 30 teachers with high anxiety still possess a positive attitude toward technology integration. This suggests that a significant % of the teachers, 71.4%, possess a positive attitude towards technology integration.

These findings generally revealed that most teachers have a positive attitude toward technology integration regardless of their anxiety levels. Although teachers with lower anxiety should likely correlate with positive attitudes, it is also found that teachers with high anxiety possess positive attitudes. This suggests that other factors might be influencing their attitude toward technology integration.

An additional analysis was conducted to examine the association between teachers' anxiety levels and their attitudes toward technology integration. The results of the Chi-square tests, which highlight this association, are presented in Table 5.

Table 5. Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.286[a]	2	.526
Likelihood Ratio	1.264	2	.532

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Linear-by-Linear Association	.176	1	.675
N of Valid Cases	126		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.00.

Table 5 presents the chi-square test results of the association between teachers' anxiety and attitude toward technology integration. The table revealed that teachers' anxiety is not significantly associated with their attitudes towards technology integration. The p-values of the Pearson chi-square and the likelihood differences were more significant than 0.05. This indicated that another factor and not a relationship influenced any differences observed in the crosstabulation table.

Ho2: Teachers' demographic variables are associated with anxiety levels and attitudes toward technology integration

To determine the associated between teachers' demographic variables and anxiety levels, a regression analysis was performed.

Table 6. Model Summary of Anxiety level

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.318[a]	.101	.071	3.33326	.101	3.400	4	121	.011

a. Predictors: (Constant), yearsofexperience, qualification, age, gender

Table 6 reveals the regression model of the anxiety levels. The table showed that there is a significant relationship between the predictors (age, gender, qualification, and years of experience) and the anxiety levels ($r = .318$, $p < .05$). It showed that the predictors have a moderate relationship with anxiety levels. The table revealed that about 10.1% of the predictors account for the variance in anxiety levels. Also, the table has some explanatory power, indicating that other factors not included in the model may significantly influence anxiety levels.

Table 7. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	151.112	4	37.778	3.400	.011[b]
	Residual	1344.388	121	11.111		
	Total	**1495.500**	**125**			

a. Dependent Variable: Anxiety Levels

b. Predictors: (Constant), yearsofexperience, qualification, age, gender

Table 7 reveals the ANOVA table of the regression model. The table showed a significant relationship in the regression model ($F = 3.400$, $p < 0.05$). The result

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showed that the predictors explain a significant portion of the variance in anxiety levels. This implies that the model is substantial, and it justifies the amount of variance in total.

Table 8. Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
1		B	Std. Error	Beta		
	(Constant)	11.319	1.586		7.138	.000
	Gender	-.769	.667	-.101	-1.152	.252
	Age	-.266	.237	-.097	-1.122	.264
	Qualification	2.043	.637	.280	3.207	.002
	Years of experience	.203	.161	.109	1.256	.211

a. Dependent Variable: Anxiety Levels

Table 8 presents the regression model of the predicting factors (gender, age, qualifications, and years of experience). The findings show that only the qualifications of the participants influence their anxiety levels, indicating p-values < .05. Other predictors, such as gender, age, and years of experience, are not significant with anxiety levels with a p-value that is greater than .05. This suggests that qualification has the most substantial relationship with anxiety levels.

Furthermore, a regression analysis was carried out to determine the associated between teachers' demographic variables and teachers' attitudes towards technology integration.

Table 9. Model Summary of Teachers' Attitude

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.112[a]	.013	-.020	2.23539	.013	.386	4	121	.818

a. Predictors: (Constant), yearsofexperience, qualification, age, gender

Table 9 reveals the regression model of the teachers' attitudes toward technology integration. The table showed no significant relationship between the predictors (age, gender, qualification, and years of experience) and the teachers' attitude toward technology integration ($r = .112$, $p > .05$). It showed that the predictors have a weak positive correlation with teachers' attitude toward technology integration. The R Square revealed that only 1.3% of the predictors account for the variance in the teachers' attitudes toward technology integration. This implies that the model only explains a little of the variance in teachers' attitudes toward technology integration.

Table 10. ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.

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1	Regression	7.723	4	1.931	.386	.818[b]
	Residual	604.635	121	4.997		
	Total	612.357	125			

a. Dependent Variable: Attitude
b. Predictors: (Constant), yearsofexperience, qualification, age, gender

Table 10 reveals the ANOVA table of the regression model of teachers' attitudes toward technology integration. The table showed no significant relationship in the regression model ($F = .386$, $p > 0.05$). The result showed that the predictors do not explain any significant portion of the variance in teachers' attitudes toward integration. This implies that the model only explains some variance in teachers' attitudes toward technology integration.

Table 11. Coefficient Table

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.800	1.064		23.319	.000
	gender	-.172	.448	-.035	-.384	.701
	age	-.002	.159	-.001	-.014	.989
	qualification	.380	.427	.081	.889	.376
	Years of experience	.086	.108	.072	.791	.431

a. Dependent Variable: Attitude

Table 11 presents the regression model of the predicting factors (gender, age, qualifications, and years of experience). The findings show that none of the predictors influence teachers' attitudes toward technology integration, indicating p-values> .05. Despite the positive coefficient for qualifications and years of experience, their lack of statistical significance suggests that they do not meaningfully influence teachers' attitudes in this context. The result of the model indicates that demographic variables do not significantly affect teachers' attitudes toward technology integration.

Ho3: Professional development will positively influence teachers' attitudes toward technology use and anxiety levels

Table 12 presents the Pearson correlation coefficients examining the relationships between professional development, teachers' attitudes, and anxiety levels. This analysis aims to identify the strength and direction of the associations among these key variables.

Table 12. Pearson Correlation table between professional development, teachers' attitudes and anxiety levels

	Professional Development	Attitude	Anxiety Levels

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Professional Development	Pearson Correlation	1	.844**	-.122
	Sig. (2-tailed)		.000	.173
	N	126	126	126
Attitude	Pearson Correlation	.844**	1	-.086
	Sig. (2-tailed)	.000		.337
	N	126	126	126
Anxiety Levels	Pearson Correlation	-.122	-.086	1
	Sig. (2-tailed)	.173	.337	
	N	126	126	126

**. Correlation is significant at the 0.01 level (2-tailed

Table 12 presents the Pearson correlation table of the relationship between teachers' professional development, attitudes toward technology integration, and anxiety. The table revealed a significant positive relationship between professional development (r = .844, p <.01) and teachers' attitudes toward technology integration. This implies that professional development programs are associated with positive attitudes toward technology integration. On the other hand, there is no significant relationship between (r = -0.122, p >.01) professional development and anxiety levels. Also, there is no significant relationship between attitudes and anxiety levels (r = -0.086, p = 0.337), suggesting that teachers' attitudes toward technology integration are not related to anxiety levels.

This section is the main part of the research article and is the longest section. It should comprise 50-60% of the total article length and should include the results and discussion of the research.

The results presented in this section are the interpretation of the field data. For quantitative research, statistical calculations and hypothesis testing processes are not necessary to be presented. Only the analysis results and hypothesis testing results need to be reported. For qualitative research, the results section should contain detailed sub-topics that are directly related to the research focus.

Discussion

This study contributes to existing research by providing empirical evidence about teachers and their relationship with technology integration. The study found more female teachers, indicating a gender imbalance among the teachers aged 35–44. The age distribution of the teachers suggests that they are relatively experienced, as most of them fall within 10–14 years in the classroom, which can contribute meaningfully to technology integration and the teachers having pedagogical experience. This finding aligns with the study by the Organisation for Economic Co-operation and Development (OECD) (OECD, 2021), indicating that

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teaching staff at the pre-primary and primary school levels are predominantly female. Also, Tondeur et al. (2019) and Uerz et al. (2018) found that teachers' classroom experiences are pivotal to their technology integration.

Moreover, most teachers meet the minimum required qualifications for teaching in primary schools in Nigeria. However, there is a need for further professional development to enhance their technology integration skills. This supports (Akram et al., 2022) findings on the need for the quality of teacher professional development for technology integration in classroom teaching. The study also highlights that most teachers have positive attitudes toward technology integration, with 66.7% having these promising views. However, some of the teachers, about 33.3% of whom constitute the minority, are still lagging in integrating technology into their classrooms. This findings support the work of Fraillon et al. (2014) indicating that less than half of teachers frequently use technology, with significant differences in educational systems across countries. Abba (2024) and Akram et al. (2022) posited that targeted professional development is essential in supporting teachers lagging in technology integration to bring about successful implementation of technology-enhanced learning. Moreover, the findings of the study identified the anxiety levels of the teachers in the study and found that most teachers have medium anxiety 42.9% and high anxiety 33.3%. These high and medium levels of anxiety found among teachers suggested that integrating new technologies into the classroom may be demanding and overwhelming for teachers, and they fear failure in handling technology. This supports previous studies' findings as teachers highlight their challenges in integrating technology into their classrooms (Fernández-Batanero et al., 2021; Henderson & Corry, 2021).

One of the major hypotheses of this study is to determine the association between the teachers' anxiety levels and their teachers' attitudes toward technology integration. The study found that most teachers have positive attitudes toward technology integration, regardless of their anxiety level. This finding indicates teachers' attitudes toward technology integration may not necessarily be influenced by their anxiety level; other factors that are not addressed in this study may have contributed to the high anxiety level of teachers. These findings imply that efforts to improve teachers' attitudes toward technology should focus mainly on enhancing teachers' competence in handling technology by providing professional development training rather than reducing anxiety in teachers (Scherer et al., 2019; Scherer & Teo, 2019).

Another hypothesis investigated the association between teachers' demographic variables (age, gender, qualifications, and years of experience) and anxiety levels. The findings of the study found a moderate correlation between the demographic variables and the anxiety levels of teachers, which accounted for 10.1% of the variance in anxiety levels. This finding corroborates with the study concluded by Zhi et al. (2023), which indicated that individual and contextual factors have a contributing effect on anxiety experiences. A further analysis of the individual contribution of the demographic variables found that teachers' qualifications significantly influence teachers' anxiety levels. This study's finding

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aligns with previous research that higher qualifications can enhance teachers' self-efficacy and reduce anxiety (Passey, 2021a; Xiyun et al., 2022). Moreover, the study's findings revealed a weak correlation between teachers' demographic variables and attitudes toward technology integration. This indicated that the demographic variables do not have a significant relationship with teachers' attitudes toward technology integration. This suggests that other factors not examined in this study could have contributed to the teachers' attitudes toward integrating technology in the classroom.

Also, the study's findings indicate that professional development programs enhance teachers' attitudes toward technology integration. A strong positive correlation observed in the study suggests that teachers' attitudes will become increasingly positive through continuous professional development programs. This finding is consistent with earlier studies emphasizing professional development in improving teachers' orientation and readiness to integrate technology into their classrooms (Scherer et al., 2019). On the other hand, the study found that professional development does not directly relate to reducing anxiety related to technology use; this implies that other factors, such as self-efficacy, lack of confidence, and technical skill, may influence teachers' anxiety. This suggests that professional development must be paramount in enhancing teachers' attitudes and building their technical skills to integrate technology into their teaching practices.

CONCLUSION

In conclusion, this study highlights the gender imbalance in primary schools, where the teaching workforce is predominantly female. The findings reveal that most teachers hold positive attitudes toward integrating technology into their teaching practices, despite experiencing relatively high anxiety levels. However, the data do not indicate a direct link between these attitudes and anxiety levels, suggesting that other factors not explored in this study may contribute to the observed anxiety.

The study underscores the critical role of professional development in fostering positive attitudes toward technology integration. Consequently, efforts to improve teachers' attitudes should prioritize enhancing their technological competence through targeted professional development rather than focusing solely on reducing anxiety. While addressing teachers' mental well-being remains important, future research should delve deeper into understanding the factors contributing to their anxiety and developing strategies to support their overall mental health.

For policymakers and educators, the study recommends investing in comprehensive professional development programs that enhance teachers' technological skills and address technology-related anxiety. Future research should further investigate the causes of anxiety among teachers and develop support systems that promote their mental well-being in the evolving technological landscape of education.

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