
THE TRANSFORMATIVE ROLE OF TECHNOLOGY IN EDUCATION: INNOVATIVE STRATEGIES FOR TEACHER RETENTION IN PRIVATE PRIMARY SCHOOLS IN SURAT

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ABSTRACT

In today's age, technology has greatly affected all aspects of our lives. Therefore, the education sector has also been heavily influenced by technology and has been completely transformed. The integration of technology in teaching and learning, especially in private primary schools, has brought opportunities and challenges. Despite the many advantages of technology, it has also created challenges for the retention and sustainability of teachers. Thus, this research examines the role of technology in the retention of private primary school teachers in Surat city. The survey was conducted among 200 teachers in private primary schools in Surat city to identify perceptions, the coordinated use of technology, and its influence on teachers' job satisfaction and the challenges that have arisen for teacher retention. The collected data was analysed in the SPSS platform, 85% of the teachers mentioned the positive role of technology in increasing productivity in teaching and the accumulation of students. While 68% of teachers have considered the lack of sufficient knowledge as a major challenge to the use of technology. In addition, 55% of teachers have expressed the high rate and increasing workload as a major challenge in using technology. The findings show that the main challenges include a lack of knowledge and sufficient training, and the massive amount of administrative work. This study explores possible insights into coordinating effective technology use and human resource development and support in sustainable education in private primary schools.

Keywords: Technology Integration, Teacher Retention, job satisfaction, and professional Development.

1. INTRODUCTION

Background information: In today's world, the use of technology in learning is a major change in the field of education. Hence, it has increasingly increased and revolutionised the level of personal training, virtual classrooms, and efficient management. In addition, it has significantly increased learning and training opportunities. Technology can play an effective role in the development and improvement of education and management performance in private primary schools, especially in the city of Surat. The use of important technological tools, such as intelligent management and learning systems and information analysis systems, has a fundamental role in shaping the educational system. Despite these facilities and educational developments, teacher turnover remains a challenge for the education sector.

Problem statement: Despite the advantages of technology and its widespread use in the education sector, it has brought problems and dilemmas to the longevity of teachers, especially in private primary schools. The widespread integration of new technology and software in the education sector has made teachers face challenges such as a lack of sufficient knowledge and a multitude of tasks, which has increasingly raised the level of dissatisfaction, displacement, and job burnout. Surat is one of the cities that is developing rapidly. Hence, the widespread use of technology in private schools is questionable. Teachers often struggle to adapt to new tools, lack adequate training, and face increased workloads that contribute to dissatisfaction and burnout. Its purpose is to use technology in addition to the development of education as an important strategic factor in the innovation and sustainability of teachers.

Significance of research: This research aims to investigate and fill gaps in the widespread use of technology in teaching and retention of teachers with regard to new strategies among private school teachers in Surat. As a result of the investigations, this study has reached a strong understanding of how technology can be used to support teachers, reduce the level of burnout, and ultimately achieve a sustainable learning environment based on the use of technology. This research is also important in comprehensively examining the satisfaction and retention of teachers based on a developing educational model.

2. LITERATURE REVIEW

The world of technology is an important topic discussed by researchers, especially its use in the education sector. Teacher retention, which is an important factor affecting education, has also been affected by new technologies. Thus, the literature reviewed below clearly states the effects on education, especially on teacher retention. A study conducted by Bandyopadhyay et al. (2024) has mentioned the integration of education and technology, learning

productivity, and teacher retention. This study highlights the important concepts of technological tools along with teacher training in a private school. The findings in the article show that the use of technological equipment in teacher training and retention has a significant impact. Hence, its integration with training is considered vital for teacher retention and emphasises this. Another study that examined the different ways technology is used was conducted by Andrejko (2022). The study identified five effective ways technology can help teachers retain and assist them, including professional development infrastructure, classroom management, virtual teacher programs, virtual collaboration forums, and artificial intelligence support systems. In addition, the study discussed strategies such as creating effective professional learning plans and emphasised how technology can support and retain teachers. Based on Stone's (2022) that examined the role of technology in teacher resignation, with the focus on how legacy technology can increase teacher satisfaction and reduce teacher burnout. The findings in the study showed that technological developments have a direct impact on job satisfaction levels. According to the study (Van Cleef, 2022) Technology is a vital necessity for teachers. This research highlights that technology is an important factor in teachers' learning. In addition, this research clarifies the role of administrators in supporting teacher education and retention. Influencing factors such as social programs and opportunities that can significantly help increase teacher retention and create organisational fit have been studied by (Maddox Jr. (2024). Strategies that can help in teacher retention have been discussed in an article by Francis & Dixon, 2024) In this article, which conducted structured surveys among teachers, it has been pointed out the key role of leadership style in teacher retention. Hence, leadership style can eliminate teachers' anxieties and help in improving their retention. The importance of teacher turnover and the factors influencing its improvement have been investigated by Carver-Thomas & Darling-Hammond (2017) among mathematics and science teachers. In this way, this study highlights the challenges faced by teachers. The study emphasises strategies to address these challenges, and also suggests critical strategies to increase teacher turnover rates. Based on the analysis and interpretation (Ingersoll, 2001). support organizations are among the influential factors that contribute to reducing teacher turnover and teacher shortages, and propose solutions to reduce teacher turnover and shortages. According to Transcend Education (2023), exploring and creating innovative and creative ideas play an important role in teacher retention. Innovative ideas can motivate teachers, increase teacher satisfaction, and improve teacher retention. In addition, innovative

ideas can help raise the level of knowledge and create expertise among students. The supportive and nurturing role of leadership, which has a critical impact on teacher retention, has been studied by Mungal & Sorenson (2022). This article examines how the nurturing role of principals can help facilitate recruitment and retention. In this way, it can be translated into long-term strategies for teacher retention. UNESCO, in a report on the importance of technology and its impact on various aspects of teachers, which includes the creation of a flexible and learning environment, the increasing participation of teachers for collective learning, and the supportive role of teachers in effective management styles (UNESCO, 2023). How the factors influencing the burnout and leaving of teachers in (Peck, n.d., 2025) have been investigated. The findings in the research show that the number of teachers decreases significantly over time. One of the important factors in leaving teaching is job burnout. Therefore, this article considers research and investigation on this issue as important in retaining teachers and emphasises its development. Solutions to deal with the problem of teacher turnover have been evaluated. Wellington's (2017) article deals with the prediction of challenges facing teachers and their solutions, and highlights the effects of the prediction of challenges on school strategies and teacher retention. In addition, it helps in identifying at-risk teachers and leadership solutions.

The critical impact of data on teacher recruitment and retention is discussed in research. In this article, the use of data is considered important in the retention of teachers and their growth and strengthening and emphasises its implementation in hiring and supporting the teacher's ability to teach. (Toomer, 2019) Another study has examined technology-aligned strategies in combating barriers to teacher retention. This has emphasised the development of education in schools to find solutions to the problems of teachers' longevity (Jhala & Mistry, 2024). Creative learning methods and their integration with technology plans and programs have been studied by (ngage2learn, 2023). This study considers the integration of innovative teaching with technology as important, which can help in increasing the level of teachers' job satisfaction and its sustainability. Various aspects of teacher retention, including existing teachers, motivating factors, and their burnout, have been researched by the National Centre for Education Statistics (2024). Predictions in this research showed that strategic processes can help in retaining teachers. In the report, which refers to the low rate of teachers in two cities, it shows that there is a severe shortage of teachers in rural areas. Therefore, this report deals with targeted solutions, which can reduce the shortage of teachers (Herald Sun, 2024). An article on the efforts and accomplishments of teachers that can help in teacher

retention has been reviewed by The Courier Mail. (2024). This study considered teachers' achievements as one of the supporting factors for teachers' retention. In addition, the efforts and achievements of teachers also increase their job satisfaction. The role of technology in the satisfaction and retention of teachers in private schools has been evaluated by Foina, Paulo. (2024) As a result of this research, it is understood that the implementation of technology and its support is extremely necessary. In this research, a comprehensive study was done on the vital role of technology, which has significant effects on the learning and retention of teachers, especially in private primary schools.

3. METHODOLOGY

3.1. Study design

The research method in this article is quantitative, which examines the effects of technology on the training and retention of teachers in private primary schools in Surat city. Based on statistical analysis, descriptive and exploratory methods have been used to identify modern processes, problems, and solutions. In addition, in this research, a systematic examination has been used as a preliminary study based on teachers' understanding, job satisfaction rate, and retention problems of teachers.

3.2. Data collection methods

In this research, data have been collected through a systematic questionnaire from existing teachers in private primary schools in Surat city. The questionnaire in this research consisted of closed and open questions, which helped in gathering comprehensive perceptions from both quantitative and qualitative aspects. The Likert scale has been used in closed questions in order to measure coordinated technology in different aspects. While open questions have been used to understand teachers' perceptions about challenges and proposed solutions. Collecting information through structured questions took 3 months. During this time, data has been collected through both physical means and the Google online platform. It should be added that the response rate in this survey was quite satisfactory.

3.3. Sample selection

The sample size was 200 among the teachers in the target private primary schools; more than 200 teachers participated in the survey. In this way, using stratified random sampling in order to represent all teachers with all differences in gender, age, teaching experience, and knowledge of technology has taken place in private primary schools in Surat city. In addition, the theoretical differences of teachers in different schools about the transformative role of technology and its effects on their retention and sustainability were considered.

3.4. Data analysis techniques

The collected information has been analysed based on descriptive and inferential methods. Descriptive statistics, including percentages and frequencies, have been used for the purpose of summarising demographic data and information collected from teachers. Variables such as technology education and teachers' job satisfaction have been evaluated using correlation analysis. Open questions have been used in this study in order to understand and recognise promotional models and innovative proposals. Therefore, the answers to the open questions have been analysed thematically. Platforms such as SPSS and Excel have been used in this research. SPSS was used to examine statistical data, and Excel was used to highlight charts and tables. The mentioned method has increased reliability and validity in this research. Finally, this article provides practical solutions with the effective coordination of technology.

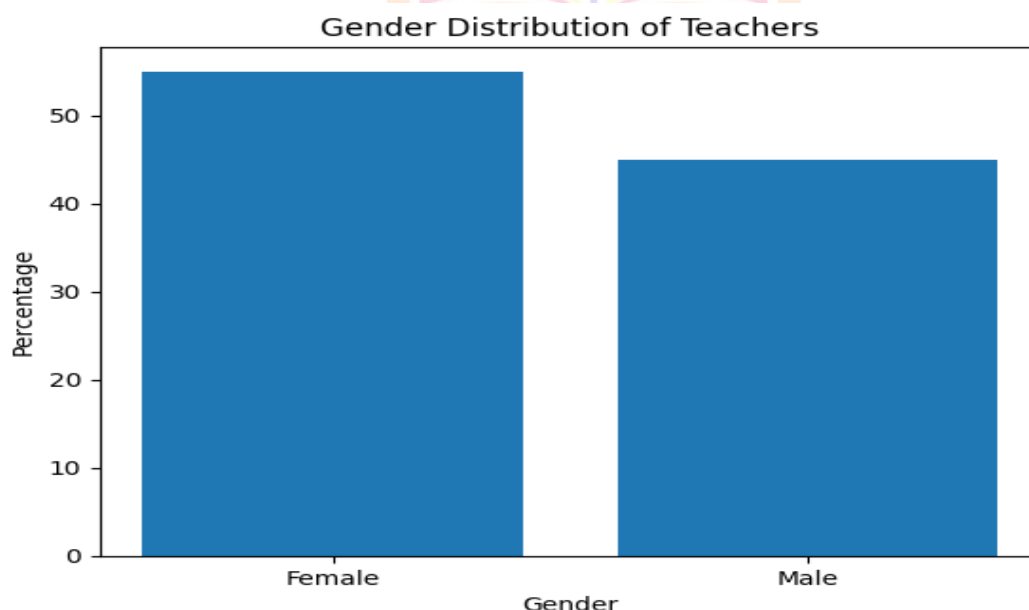
4. RESULTS

4.1. Presentation of findings

Examining the transformative role of technology in teaching and learning and its effects on the retention of teachers in private primary schools in Surat has been done based on a sampling of 200 teachers.

4.2. Demographics:

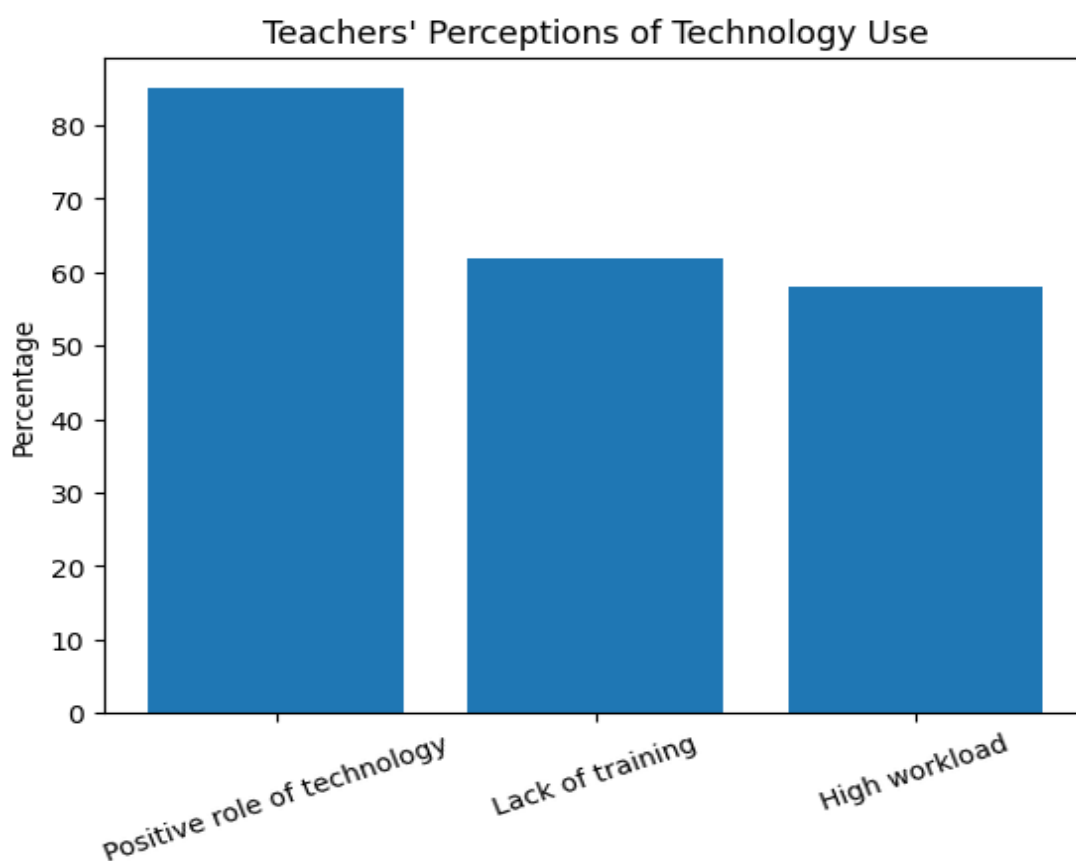
Figure 1. Gender distribution of Teachers



The sample size in this research includes 55% female teachers and 45% male teachers, 50% of whom were between 31 and 40 years old.

4.3. Integrating technology:

Figure 2. Teacher



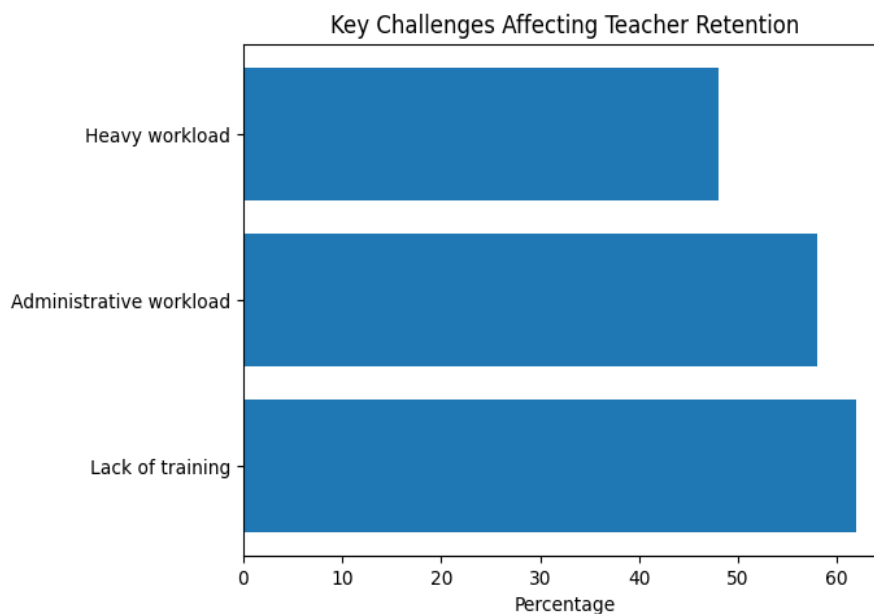
Based on statistical data analysis, a high percentage of respondents, comprising 85% of the total sample, have voted for the positive role of technology. However, as a result of the survey, 65% of the challenges are a lack of technical knowledge and training.

4.4. Job satisfaction: The findings of the analysis show that more than 72% of teachers are satisfied

with the use of technology in their work environment. Despite that, 28% of them were dissatisfied with the huge amount of work.

4.5. Retention challenges:

Figure 3. Key Challenges Affecting Teacher Retention



The main reasons for job burnout and failure to retain them in their position are a lack of sufficient training for 62%, huge administrative tasks for 58%, and finally, the massive amount of work for 48%.

4.6. Data analysis and interpretation

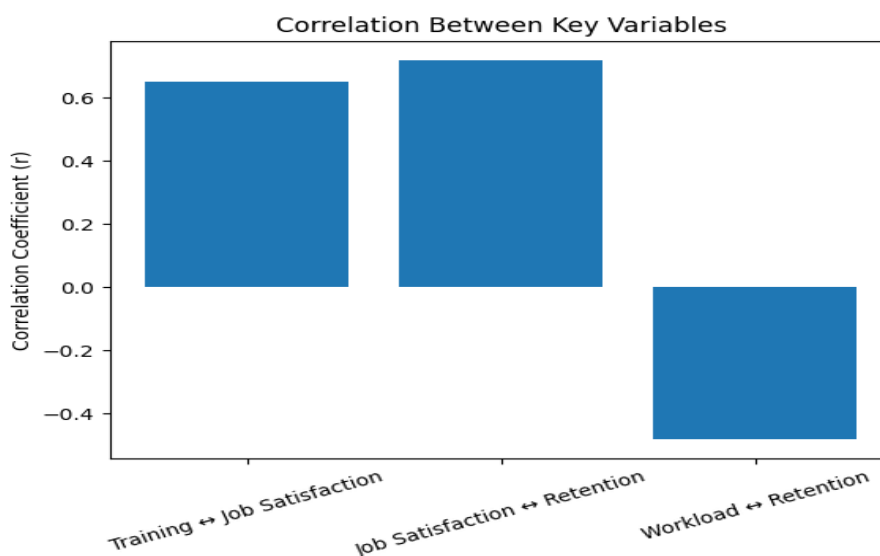
4.6.1. Descriptive analysis: The majority of teachers in private primary schools in Surat have spoken about the positive role of technology in the development and support of teaching methods. Despite that, adequate training in the use of technology is seen as a dire need.

Table 1. Table of Descriptions on Variables: Technology Accessing Tools, Training Level, Job Satisfaction, Teacher Workload, and Retention Intention.

N	Variables	Mean	Standard Deviation	Minimum	Maximum
1	Technology Accessing Tools	4.2	0.75	2	5
2	Training Level	3.8	0.9	2	5
3	Job Satisfaction	4.0	0.85	2	5
4	Teacher Workload	3.9	0.88	1	5
5	Retention Intention	4.1	0.8	2	5

4.6.2. Correlation analysis:

Figure 4. Correlation Between Key Variables



The findings based on ($r=0.65$) show a positive and strong correlation between job satisfaction and professional growth. Based on ($r=-0.48$), there is a moderate negative correlation between workload and retention of teachers. As a result, the amount of work has an indirect relationship, in that a large amount of work reduces the retention of teachers in their work position.

Table 2. Table of Correlation between variable I and II.

N	Variable I	Variable II	Correlation Coefficient (r)	Significance (p-value)
1	Training level	Job Satisfaction	0.65	<0.01
2	Technology Accessing	Retention Intention	0.58	<0.05
3	Job Satisfaction	Retention Intention	0.72	<0.01
4	Workload Effect	Job Satisfaction	-0.48	<0.05

4.6.3. ANOVA: According to the survey, teachers with more than 10 years of experience were more compatible with technology, but this was the opposite of teachers with less than 5 years of experience. As a result, the level of adaptation to technology has a direct relationship with teachers' experience. Hence, greater adaptability and awareness lead to greater use of technology.

Table 3. Table of ANOVA for differences among all groups

N	Group Variable	F-Value	P- Value
1	Gender (M vs F)	2.78	0.09
2	Ages (20-30, 31-40, >40)	4.32	<0.05
3	Year of Experience	5.14	<0.01

4.7. Supporting the research question or hypothesis

The coordination of technology with professional development and support organisations, which leads to an increase in the level of job satisfaction and a reduction in teacher burnout, fully supports the hypothesis of this research. The findings in the research show that professional teachers were more satisfied in their jobs than teachers with insufficient training. Surveys show that the use of technology, despite its transformational benefits, insufficient training, and workload, is one of the main obstacles to job satisfaction and attrition of teachers. Therefore, researching educational gaps, reducing workload, and creating a supportive environment have significantly enhanced teacher retention in private primary schools in Surat.

5. DISCUSSION

Interpretation of results: the results of analysis and surveys consider the role of technology in increasing job satisfaction, teacher retention, teaching development, and student participation in Surat private primary schools as important and emphasise its optimal use. A survey of teachers showed that the systematic integration of technology with education leads to more effective and surprising teaching in education. Despite the advantages of technology, lack of sufficient training and work pressure are still the main challenges in the productivity of the coordination of technology in the workplace. However, the analysis results ($r=0.65$) show a strong and positive connection between professional development and the level of job satisfaction. In this way, better education enables the optimal use of technology among teachers and ultimately helps to improve teachers' job satisfaction. Based on ($r=-0.48$), there was a negative relationship between workload and teachers' retention goals. Hence, high workloads using technology lead to teacher burnout. The results of the analysis in this research were in line with the reviewed literature, because in both the analysis of data and the

comprehensive literature, the lack of sufficient training and the large amount of work are mentioned as the main factors of teachers' concerns and erosion in their position.

Comparison with existing literature: The part we mentioned above, the results of the review of the collected data and the literature related to the study were consistent. Hence, both emphasise the necessity of professional development for the purpose of technological harmony. Therefore, most of the reviewed literature recommends an adequate increase in training and a reduction in workload. But when the support networks are not able to reduce the workload, it creates a vacuum and helps reduce teacher satisfaction and burnout.

Implications and limitations of the study: The results of this research show many practical effects on the environment of Surat private primary schools and other educational and teaching places. This article emphasises the priority of professional development plans that focus on the development of technological ability and teaching approaches. At the same time, teachers' regular approaches are able to provide lasting support to teachers, which helps them overcome challenges related to technology coordination. The solution to the challenging workload is that schools consider optimisation plans and set specific times for teachers' participation in the administrative and work environment, which can reduce the level of stress in teachers. In this article, an effort has been made to highlight practical and important methods that teachers can use to overcome challenges related to technology based on their experiences. In addition, schools may solve the problems of technology on teacher retention and dissatisfaction through the discovery of information that leads to the knowledge of different aspects of teachers.

Limitations: Despite providing effective insights, one of the prominent limitations in this research is the focus on a single geographical area, which covers private primary school teachers in Surat city. Therefore, the findings may not apply to other fields and public and secondary schools. In addition, in this research, which relies on self-analysis based on the collected data, it may face bias. Therefore, this article recommends long-term studies that have different environments that are compatible. Finally, the study conducted based on a detailed understanding of how technology affects the retention of teachers can help schools and teachers by providing strategies and solutions to reduce challenges. In order to achieve a comprehensive and regular education in which technological tools can increase the satisfaction of teachers and improve teaching, there is a strong need for investment. Therefore, this research emphasises the implementation of support organisations.

6. CONCLUSION

Summary of key findings: In this research, the effects and performance of technology in education and how it affects the retention of teachers in private primary schools in Surat city have been evaluated. The conclusions, in summary, show that, despite the fact that technology has many advantages in the development of education and participation of students. However, major obstacles such as a lack of sufficient training, an increase in workload, and a lack of a supporting office prevent the optimal use of technology. Accordingly, those teachers who had sufficient teacher training showed high job satisfaction. And they were interested in staying in their duty positions. On the other hand, an excessive workload has reduced the retention of teachers, which requires strong organisational support and effective leadership. Help in this field: The specific focus of this research on aligning technology and teacher retention can support the education sector. The findings in this research highlight the dual role of technology, which includes benefits and concerns. The results of the literature review mostly focused on secondary and public-school education. Therefore, this article fills the gap in the literature. This article opens the way for strategy plans by providing practical solutions. Therefore, school administrators, support organisations, and technology developers should benefit from this study in their strategic plans and examine the challenges faced by teachers in coordinating technology with education.

RECOMMENDATIONS FOR FUTURE RESEARCH:

The following can lead to future comprehensive research on the topic of this study.

- 1) Examining the role of technology in the retention of teachers at different government and secondary levels.
- 2) The study of the aforementioned topic should be done in a larger geographical area.
- 3) Conduct long-term research to investigate the lasting effects of technology on education, especially on teacher retention.
- 4) Examining and being in step with innovative and creative skills, for example, artificial intelligence and virtual tools in the learning of education, which causes job satisfaction and reduces the workload of teachers.
- 5) Comparative studies to identify differences, especially in teacher retention in schools that have access to technology and professional development and schools that are denied access to it.

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- 6) Investigating the supportive role of leadership and politics in integrating technology with education.

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