The Role of Technology and Digital Techniques in Developing the Professional and Academic Competence of Physical Education Teachers in the Kingdom of Saudi Arabia

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Abstract

A teacher's ongoing education helps them learn current teaching methods, so they can change their practices accordingly. The study tried to understand the way digital technology can help improve the teaching competencies of physical education teachers. For schools to succeed, teachers must go on learning and using new methods and tools that fit the needs of education today. A group of 420 male and female teachers from primary, intermediate, and secondary schools in Al-Ahsa Governorate were selected through a questionnaire and a teacher professional competency scale to review the influence of digital technology on their development. It was found that teachers face major differences in their use of digital tools due to issues with hardware, lack of benefit from available software, and unclear training options. Although hardware, software, and databases seem to help teachers increase their expertise, using them fully is still a challenge. Based on the research, a key issue was exposure to well-focused solutions aimed at helping teachers use technology better in the classroom. Implementing full professional development schemes allows schools to motivate teachers, raise teaching quality, and support the goals of Saudi Vision 2030, all while helping to build a culture of innovation and regular learning in physical education.

Keywords: Technology in Education, Digital Techniques, Academic Competence, Digital Tools, Hardware, Software in Education, Educational Innovation.

Introduction

The quality of education relies largely on Continuing Professional Development (CPD) for teachers, helping them stay ready for the changing demands around them. CPD aims to help teachers gain new teaching and personal skills, so they can respond to changes in educational requirements and updates in policies, plans, and school learning structures (Sari et al., 2023). Combining technology with effective learning environments allows teachers to confidently use new technology and deal with updated curriculum (Miscalencu, 2024). Different models for continuing education are available, and it is important to improve and refine them to meet educators' needs (Vezub, 2013). Educational technology has made it possible for teachers to improve their skills outside of regular class hours and remove most of the barriers associated

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with distance and timing.

Teachers are now able to use technologies and platforms to take charge of their own learning, ensure it lasts and adjusts it exactly to their needs (Albion, P.R., Tondeur, J. 2018). Making this shift allows teachers to handle their tasks better, making their teaching methods more successful for students (Popescu et al., 2022). The use of technology helps teachers reach many resources and team up with other teachers so they can always improve their professional skills (Mishra & Sahoo, 2023). What's more, students can adapt their education with technology which helps them learn to think and solve problems better for the 21st century (Dirane, 2024). Because of Information and Communication Technology (ICT), teachers can use new teaching techniques and become more skilled in their work (Mishra & Sahoo, 2023). So, using technology increases skill development for teachers and also helps students learn better with the audiovisual resources and tools they need. By fully incorporating technology in education, we highlight its ability to promote inclusion and active learning experiences for students as well as teachers.

The use of technology in education is now necessary to strengthen teaching, since it supports both interactive and customized learning. Studies show that technology improves how education is delivered and creates new jobs for teachers where they facilitate learning while students become more in charge of what they learn (Gupta & Goel, 2024). As educators move towards using blended and flipped classrooms, technology is making it possible for students today to learn more easily and find education engaging. Still, some problems exist such as teachers being hesitant to use technology and the regular need to improve their skills using these new tools at school (Misra, 2021). Overall, for technology integration to work well, it is necessary to realize what technology offers, understand the challenges and rely on supportive leadership along with structured plans (Susilo et al., 2023; Gupta & Goel, 2024).

Teachers who take part in intense PD sessions during and outside regular school hours show higher effectiveness and students achieve better results, according to studies. Skillful PD offerings boost teachers' teaching knowledge, organization in the classroom and ability with technology, making student learning and the quality of teaching better (Parkash, 2017; Dewi et al., 2024; Juma, 2024). When teachers work together on lessons such as in lesson study, they learn from each other, perfect their teaching styles, boost student involvement and use the knowledge they gain in practical lessons (Badara et al., 2024). The ongoing process of PD means that educators gain important skills and feel supported to improve both themselves and their careers (Bao D, T. 2015; Antić, 2017; Juma, 2024). As a result, keeping PD programs operating and successful depends on the combined help and teamwork among educational stakeholders (Dewi et al., 2024).

Participating in CPD can help teachers at different stages of their careers gain important abilities in inclusive education. Educators are able to adjust their teaching to meet different needs, making classrooms easier to manage and technology useful, so students have better outcomes (Cruz et al., 2024) (Saleem, 2016) (Sadiq et al., 2024). Programs for professional development encourage new ways of teaching and help teachers work together which is necessary to successfully introduce new teaching approaches (Dilsora, 2024) (Petar, 2024). It is clear from research that making teachers' training personal and ongoing plays a major role in helping them cope with modern changes in education, stressing the need for them to keep learning and improving them

Bringing digital technology into Teacher Professional Development is essential for improving the skills of teachers and improving student performance. Online courses, webinars, and PLCs give educators a chance to collaborate, reflect, and support each other's growth in education

(Napitupulu et al., 2024; Suardi, 2024). Experts point out that combining online and class learning methods greatly improves teacher empowerment and student growth (Suardi, 2024; Kumar & Pandey, 2024). Technology has become a major aspect of education, so having digital competencies is necessary for teachers (Fatimah et al., 2024).

Such initiatives focus on joining up knowledge about technology with effective teaching methods to make it possible for instructors to properly welcome technology in their classrooms (Okti et al., 2024). Yet, many educators are reluctant to change their teaching approaches and prefer traditional ways which may prevent the introduction of new technology (Okti et al., 2024). To improve digital literacy, professional development should provide engaging and lasting training, add in-time feedback and involve learning with others in various situations (Parker, 2014).

Digital technology's impact on education demands a substantial plan for ongoing teacher professional learning, going beyond just learning about technology. Results suggest that while teachers may be excellent educators, they are often not proficient enough in technology to make learning better for students (Montero-Mesa et al., 2023). This gets worse when TPD overlooks the need for critical thinking and aligning teaching methods and educators begin to depend on technology instead of using it for progressin their classes (Napitupulu et al., 2024; Parigi, 2016). It is therefore vital for effective TPD to build teamwork in learning and offer consistent help which enables teachers to keep up with new challenges as the educational technology keeps advancing (Napitupulu et al., 2024; Parigi, 2016). The focus of this study is on how digital technology can fully benefit education because there is a current gap between teacher education and technology's potential. Though modern digital tools are readily available, many educators cannot use them well because TPD does not give enough importance to detailed thinking about the teaching process and using innovations. Since physical education teachers fall short, they are unable to use technology to innovate in more than simply a technical capacity. Thus, if this issue is not solved, the improvement of student learning outcomes and career advancement through digital tools will probably not grow significantly. Filling this gap is necessary to help teachers acquire the knowledge and creativity needed to make the most of modern technologies in education.

Research Objectives

The aim of the study was to clarify and identify the role of digital technology in enhancing the professional and academic competencies of physical education teachers in Saudi Arabia.

Research Questions

This study was guided by the following research questions:

Q1. How much digital technology is used in teacher professional development currently in Saudi Arabia?

Q2. How well have teachers at schools succeeded in developing their professional competence?

Q3. What role does digital technology play in helping teachers develop their skills at school?

Materials and Methods

Design

An explanatory quantitative approach was used in the research to explore how digital technology

helps improve physical education skills. The sample included 420 teachers, of whom 180 were male and 240 were female, as selected using the Stephen K. Thompson (2012) equation. A five-point questionnaire form was designed, focusing on hardware, software, databases, networks, and human resources. This was followed by an 18-item scale used to rate teachers and their various competencies on a five-point scale. The research was approved by the Ethics Committee at King Faisal University using reference number KFU-REC-2023-Dec-ETHICS544.

Participants

The study includes results from 420 physical education teachers who are male and female, working in the public-school sector of Al-Ahsa Governorate, which lies in the Eastern Province of the Kingdom of Saudi Arabia. They took part in the teaching process during the second semester of 2023-2024 academic year. A random selection of elementary, middle, and secondary schools was made in Al-Ahsa Governorate to include different backgrounds. Examples were chosen according to the Stephen K. Thompson equation (2012) to ensure the study had statistical strength. At the start of the second semester in 2024, we initiated data collection. Before using it with the main group, the questionnaire was tested on a group of 60 teachers to see if it is valid and reliable. In addition, the researchers listed the main types of research community variables in Table 1 and in Figure 1 so that the information is easy to understand.

Demographic variables		The sample	The number	Percentage %
Gender	Male	420	180	42.86
	Female		240	57.14
Age	Under 25	420	92	21.90
	26-35		135	32.14
	36-45		121	28.81
	Over 45		72	17.14
Educational Qualification	Bachelor's degree	420	315	75.00
	Master's degree		21	5.00
	PhD		14	3.33
	Other		70	16.67
Teaching Experience	Less than 5 years	420	128	30.48
	5-10 years		127	30.24
	11-15 years		118	28.10
	More than 15 years		47	11.19

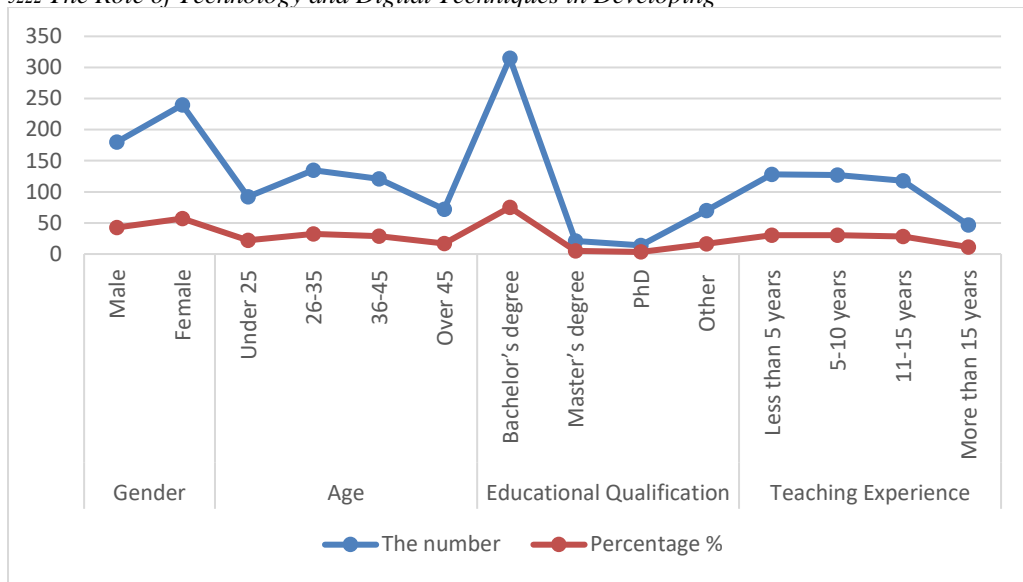Table 1. Provides Information on the Age, Gender, and Education of Those Included in the Study.

Figure 1.

The number of people in each group was shown as a count as well as a share of the total group.

Instrument

The study relied on a research questionnaire to explore how digital technology supports the skills of teachers in schools across the Kingdom of Saudi Arabia (Montero-Mesa et al., 2023). The experts consulted in reviewing the questionnaire confirmed its validity. Its reliability was checked using both Cronbach's alpha and exploratory factor analysis. There were 25 questions in the questionnaire, divided equally into five main areas: hardware, software, databases, networks, and human resources. Researchers developed and used a scale of 18 areas to assess teacher competence. In both instruments, all items were rated using a Likert scale from 1 (strongly do not apply) to 5 (strongly apply). Pearson's correlation coefficient was used to determine how internally consistent the questionnaire is. The values for the correlation coefficients for the five axes were: the first (hardware) from 0.684 to 0.842, the second (software) from 0.832 to 0.891, the third (databases) from 0.772 to 0.874, the fourth (networks) from 0.654 to 0.833 and the fifth (human resources) from 0.662 to 0.801. In addition, the relationship between each axis and the total score of the questionnaire was measured at 0.773, 0.802, 0.783, 0.792, and 0.811. The correlation between ratings on the teacher professional competence scale was 0.842. At the $p < 0.01$ level, statistical analysis found strong links between the sub-scales and main questionnaire factors. As a result, the reliability and validity of the instruments are confirmed, which supports their use to measure the desired areas.

In table 2. validates that the questionnaire used in the research is stable, as shown by Cronbach's alpha coefficients (see Table 2). The Coefficient of Stability for these questionnaires was high, ranging from 0.772 to 0.893. Table 2 demonstrates the consistency of the questionnaires.

Section	Alpha coefficient (α)
first axis	0.772
second axis	0.832
Third axis	0.893
forth axis	0.822
fifth axis	0.883
Total	0.844

Survey Distribution

The scientists carried out the electronic surveys by designing and implementing them with Google Drive apps. Together with the Al-Ahsa Education Department, methods for reaching the audience were chosen to guarantee effective outreach. Right before distributing the survey, the researchers documented the purpose of each survey item for formal approval. With accord, the Education Department oversaw the sharing process, giving instructions and setting a timeline meant to ensure most teachers would take part. Links to electronic surveys were provided by schools in the Al-Ahsa Education Department through its official channels. Every teacher, regardless of where they worked, was able to get the survey with this strategy. By starting the distribution in the second semester of 2023-2024, teachers were able to finish the survey before they became too busy with their other tasks. To boost involvement, it was pointed out that understanding the results could help enhance guidelines for teacher training and benefit students in their learning process. Responses to the survey could be made on Google Drive, and all information was automatically entered into an electronic spreadsheet for analysis (see Appendix A, B). From January 22 to February 29 in 2024, the data was collected for the survey. Using this approach, many volunteers could join and rely on the data from the survey.

Ethical Considerations

The ethical standards were achieved as the study was approved by Al-Ahsa Educational District. The school principal then allowed the researchers to work on their study in the schools. Before starting the study, all participants were given a complete description of their role and told that ethical principles had to be upheld. In addition, the research was supported by the University's Ethics Committee which assigned it reference number KFU-REC-2023-Dec-ETHICS2456, proving that ethical rules were followed.

Statistical Analysis

SPSS Statistics (version 26) was the primary tool researchers used for their analysis. This time, standard means, standard deviations, percentages, Pearson's, Cronbach's alpha, and chi-square were applied in the analysis. The techniques allowed the researchers to gather detailed information, examine how the variables relate, and determine the reliability of their measuring equipment. SPSS 26 helped make data analysis accurate and neat. With modern computer systems, the findings were clear and could be repeated, making them even more reliable. Only results where p-values were less than 0.05 were deemed statistically significant. Because of this, we avoid thinking that data patterns are mere chance. The study met its major aims of reliability and validity by following thorough statistical procedures and achieving typical levels of significance. Because of these methods, other researchers were able to rely on the study's outcomes. When investigations are done with such precision, the findings are thought to be dependable and valuable by experts.

Results

Results from the quantitative data are explored and explained on the research questions.

Research Question 1. *How much digital technology is used in teacher professional development currently in Saudi Arabia?*

Phrase	Mean	Std. Deviation	Response percentage %	Chi-Square	Sig.
Axis One: Hardware	2.1	0.9	41.67	450.8	0.00
1.	2.3	1.0	45.87	330.6	0.00
2.	2.6	1.0	51.20	110.5	0.00
3.	2.5	1.0	49.80	145.5	0.00
4.	2.8	1.0	55.20	120.4	0.00
5.	2.4	0.8	47.63	250.3	0.00
Total Axis	2.2	0.8	43.53	150.5	0.00
Axis Two: Software	2.0	0.8	39.20	320.7	0.00
6.	2.6	1.0	51.60	160.3	0.00
7.	2.0	0.7	39.53	245.8	0.00
8.	2.5	0.9	49.87	220.3	0.00
9.	2.1	0.7	41.43	180.5	0.00
10.	1.8	0.8	35.93	115.8	0.00
Total Axis	2.3	0.9	45.00	7.2	0.03
Axis Three: Databases	2.1	0.8	41.40	170.9	0.00
11.	2.3	0.9	45.60	140.8	0.00
12.	1.8	0.8	35.53	320.2	0.00
13.	2.1	0.8	41.49	480.2	0.00
14.	2.5	1.2	49.40	190.4	0.00
15.	1.7	0.7	33.53	360.4	0.00
Total Axis	2.2	0.9	43.73	10.7	0.01
Axis Four: Networks	2.4	1.1	47.80	160.2	0.00
16.	2.2	0.8	43.00	3.2	0.20
17.	2.2	0.9	43.09	440.6	0.00
18.	1.9	0.8	37.53	160.1	0.00
19.	1.8	0.8	35.87	170.6	0.00
20.	2.2	0.8	44.87	1.8	0.40
Total Axis	2.3	0.9	45.80	85.9	0.00
Axis Five: Human Resources	2.3	0.9	45.61	15.6	0.00
21.	2.1	0.7	41.73	260.1	0.00
22.	2.1	0.7	42.47	140.8	0.00
23.	1.9	1.1	37.67	450.8	0.00
24.	2.0	1.1	39.33	330.6	0.00
25.	2.6	1.1	51.13	110.5	0.00
Total Axis	2.4	1.0	47.80	150.5	0.00
Total questionnaire	2.8	1.0	55.20	125.4	0.00

Table 3. Mean, Standard Deviation, Response Percentage, and Chi-Square of Participants' Responses on the Reality of Digital Technology in Schools

The KMO statistic was computed for the digital technology questionnaire which covers five critical aspects (Hardware, Software, Databases, Networks and Human Resources) and this statistic proved adequate to high sampling adequacy. Hardware received a KMO value of 0.665, while Software was 0.774, Databases 0.793, Networks 0.854 and Human Resources measured 0.775. A KMO value of 0.936 was found for the whole questionnaire which shows that the data meets the requirements for good sampling. Data indicate that the responses exhibited meaningful relationships that were statistically significant ($p = 0.001$) based on Bartlett's test of sphericity.

Research Question 2.. *How well have teachers at schools succeeded in developing their professional competence?*

phrase	Mean	Std. Deviation	Response percentage %	Chi-Square	Sig.
1.	2.10	1.05	42	230.20	0.00
2.	2.08	1.00	42	228.77	0.00
3.	2.55	1.00	51	145.83	0.00
4.	2.45	0.95	49	205.17	0.00
5.	2.85	0.90	57	195.00	0.00
6.	1.95	0.80	39	140.99	0.00
7.	2.00	0.90	40	215.64	0.00
8.	2.50	0.95	50	160.27	0.00
9.	1.75	0.65	35	250.79	0.00
10.	2.40	0.85	48	225.37	0.00
11.	1.70	0.80	34	198.87	0.00
12.	2.10	0.80	42	1.08	0.96
13.	1.90	0.80	38	135.29	0.00
14.	2.05	0.85	41	115.15	0.00
15.	1.30	0.55	26	440.38	0.00
16.	1.28	0.50	26	435.58	0.00
17.	1.75	0.75	35	75.46	0.00
18.	1.80	0.80	36	115.02	0.00
Total questionnaire	2.15	0.55	43	100.53	0.00

Table 4. Mean, Standard Deviation, Response Percentage, and Chi-Square of Participants' Responses on Teachers' Professional Competence in Schools

The Teachers' Professional Competence questionnaire was deemed suitable for analysis using a sample size because its KMO measure was 0.831. The significance obtained from Bartlett test of sphericity was $p = 0.001$, which means the responses were not random and were correlated enough for the analysis.

Research Question 3. *What role does digital technology play in helping teachers develop their skills at school?*

The points in Figure 2 are close to a straight line, indicating that the residuals fit a normal

distribution tendency. Altogether, the results confirm that the analysis is accurate and stable.
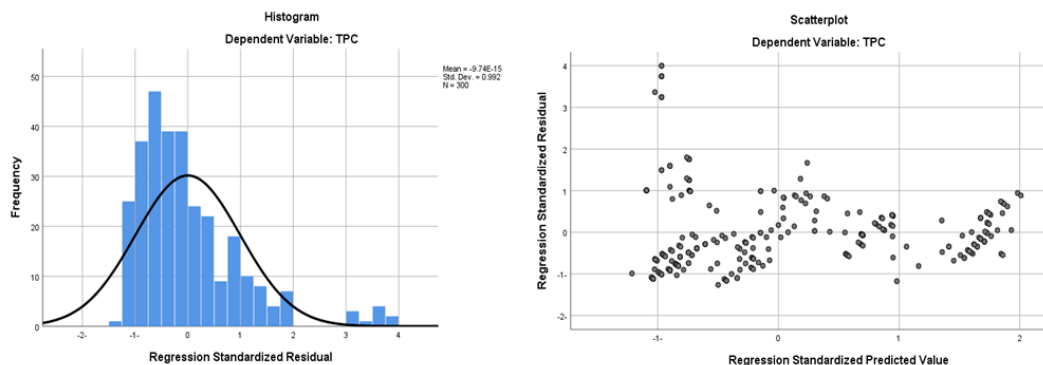
Figure 2. Multiple Regression

R Square	0.854
F value	312.452
Significance	0.000
Beta of Hardware	0.162
Beta of Software	0.198
Beta of Databases	0.473
Beta of Networks	9.125
Beta of Human Resources	0.025

Table 7. Regression Results

The investigation studies how teachers' competence relates to utilizing hardware, software, databases, networks, and human resources. A multiple linear regression model was used to research the effects of different digital technology variables on teachers' job skills (Table 5). Results from statistical analysis confirmed that the regression model is significant (F = 312.452, p = 0.000) and explain the link between digital technology implementation and developing teachers' professional skills. The analysis reveals that 85.4% of what affects teachers' professional competence can be explained by the explanatory variables. It proves that having professional ability now includes strong digital skills. Those components, including hardware, software, and databases, shared strong connections with teachers' professional competence (all p values were less than 0.003). Even so, neither networks nor human resources had statistically significant relationships because their p-values were over 0.05. The following is the regression equation that comes from the analysis: Teachers' Professional Competence = 0.20 + (0.162 × Hardware) + (0.198 × Software) + (0.473 × Databases) + (9.125 × Networks) + (0.025 × Human Resources) + Error Term.

Discussion

The purpose of the study was to understand and outline the effects of digital technology on the teaching and professional knowledge of physical education teachers in Saudi Arabia and to pay attention to how teachers pioneer and adapt to modern technological changes in their classrooms. It is clear from the study that Saudi Arabia has taken important steps toward adding digital technology to teacher training, but some main challenges still exist. Among these challenges, we

see hardware not keeping up, software being used inefficiently, little attention to databases, poor network dependability, and missing human resource assistance. Applying helpful interventions will help teachers improve their digital expertise and support the country's goals as part of the Vision 2030 plan. Technology is struggling to be part of Saudi schools since there are not enough tools, the equipment is not easy to maintain, and teaching staff have little training. These challenges prevent effective digital tool use, which stops teachers from enjoying the benefits of using technology in their lessons. Spending on Information and Communication Technology (ICT) has failed to produce expected results because most schools lack modern gadgets, technical assistance, and proper training. Al-Harbi et al. (2020) report that Saudi schools do not have enough essential tools, such as interactive whiteboards, tablets, and laptops, to use digital teaching resources in the classroom. Access to devices alone does not guarantee support, as the currently available resources often become damaged and are not used (Al-Anzi, 2019).

Integrating technology in Saudi Arabia's schools is difficult mainly because of weak training for teachers and poor infrastructure. This supports research from Putranti et al. showing that programs for educators bring about strong improvements in using technology in the classroom, although issues like scarcity of equipment and discontinued training are still present (Putranti et al., 2024). Similarly, both Raza and Akhter suggest the transformational role of ICT for teacher development but point out that poor infrastructure and weak training programs are what keep it from real progress (Raza and Akhter, 2024). According to Oktaviani and Utami (2024), even with issues of infrastructure and access, using TPACK training can successfully boost the digital skills of teachers. Moreover, Jiang points out that connecting technology to education aims and paying attention to training the teachers for effective use of technology (Jiang, 2023). They underscore how different developed and developing countries are in using educational technology and note that well-trained teachers with advanced technology skills are necessary to help schools meet recent educational requirements (Mohamed & Hassanein, 2012). Solving these problems with strategic investments, rigorous training, and inclusive policies will allow technology to play a major role in Saudi Arabia's educational system.

According to these findings, there are areas where teachers might not have strong enough skills or confidence. Creating a safe space is something teachers agree on, since classroom safety is a main concern of their teaching. As a result, strong professional development programs covering all areas of teaching are necessary to improve teacher skills. Many teachers consider professional development sessions to be without focus and have reported a lack of time given to practicing new skills (Sanchez et al., 2018). In addition, Suryandari et al. (2024) suggest that there are not enough high-quality supports and resources needed to support effective teaching and learning. According to Milenković et al. (2024), teachers are sharing that they need further help to, enhance inclusive education and are doubting if their current seminars are effective. Still, despite all challenges, the top concern for teachers is ensuring safety and giving support, as it means the greatest results in education (Channa et al., 2024). This area of research supports the wider aim of helping students engage in class and improve their results (as Nasution et al. confirm in 2024), by showing how important these factors are for teachers and students.

Using technology in schools is often held back by the fact that teachers' knowledge and confidence with digital tools are not always the same. Evidence shows that a lack of training and experience among teachers is preventing many from properly using technology in their classes (Shakhrizoda, 2023; Baharudin et al., 2024). Also, if pupils do not have the equipment and good internet they require, it makes it more challenging for them, especially in areas with little access to resources (Buda, 2020) (Alenezi, 2017). Cognitive obstacles, including questions about

paying attention and the involvement of students, tend to discourage teachers from using technology in their lessons (Buda, 2020). Because teachers have different learning opportunities, schools often address these challenges inconsistently, suggesting that comprehensive help is required to support using technology in the classroom (Baharudin et al., 2024).

According to the results of our multiple regression analysis, teacher professional competence is strongly linked to digital technology components such as hardware, software, and databases. The results suggest that every digital technology area plays a separate role in shaping teachers' skills. This indicates that improving both hardware and software, as well as managing the database system better, can increase teacher professional competency standards. All in all, the findings support the idea that digital technology parts and teaching skills are connected and that they boost teachers' capabilities. According to Fatimah et al. (2024), educators require modern hardware and software tools to effectively integrate technology into their instructional practices, thereby strengthening their subject-specific competencies. Continuous professional development, with a focus on building digital skills, is essential for equipping teachers to adapt to the rapidly evolving landscape of educational technology, allowing them to gradually refine their teaching practices (Camarillo, 2024). The incorporation of digital didactics, such as gamification and cloud-based technologies, has proven effective in creating interactive learning interfaces that engage students and sustain their interest in the educational process. Such innovative approaches not only support student engagement but also help teachers maintain the professional competencies required for both current and future teaching demands (Raimkulova & Sarybaeva, 2024). Furthermore, digital learning environments that incorporate motivational principles and adaptability mechanisms encourage teachers to embrace new technologies, fostering a culture of continuous learning and professional growth (Zaripov et al., 2024). These findings underscore the transformative potential of digital tools in enhancing teacher effectiveness and promoting ongoing professional development.

Conclusions

The study aimed to make it clear and identify how digital tech helps teachers of physical education in Saudi Arabia. The results indicate that digital technology elements such as hardware, software, and databases strongly influence teachers' skills, with every element having a separate influence. Saudi Arabia has progressed a lot in equipping their teacher training with digital technology, though problems remain, such as hardware issues, low software usage, and a lack of technical support. Such problems make it harder to use technology in teaching, so targeted efforts and extra training are necessary. Moreover, the study suggests that modern technologies, like interactive software, can help build learning environments and better subject skills in physical education teachers. Saudi Arabia can reach Vision 2030 goals related to education by filling these gaps and investing in broad training programs for educators that improve their teaching knowledge and skills all the time.

Limitations and Future Research

This research, even though it gives important ideas about digital technology and the skills of Saudi physical education teachers, has a few limitations. Many aspects of the research relied on participants describing themselves, so bias may arise from their views or feelings. The study's findings are not likely to be generalized to other places or settings because the sample came from a limited area. Because of the cross-sectional design, there is no way to establish connections between digital technology use and teacher skills over a period. Studies should use methods that follow teachers and students over a period to measure how the ongoing use of technology affects

their growth. Moreover, looking at digital tools in education among various populations and in various places and using an approach that involves watching and listening could teach us more about both the challenges and benefits of using such tools. It is important that future research also investigates new technologies, like artificial intelligence and virtual reality, and how they should be applied in physical education.

Institutional Review Board Statement: Ethical approval for this study was received from the Ethics Committee of King Faisal University, Saudi Arabia, under reference number (KFU-REC-2023-Dec-ETHICS2456).

Transparency: The authors declare that every report in the manuscript is truthful, exact, and clear. No information was provided on where it was missing, and any deviations from the study plan were explained. This research is written following all ethical academic guidelines.

Data Availability Statement: All important materials are attached to the article or can be found in the list of references.

Competing Interests: All authors declare that there are no competing interests involved.

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