



Teachers' Perceptions of Digital Assessment Tools & Their Impact on Classroom Practices in Private Secondary Schools of Lahore

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ABSTRACT

Digital technologies have highlighted a new paradigm for the way students are assessed in innovative, efficient and interactive ways. A digital assessment system, such as Google Forms, Kahoot, Quizizz, or Learning Management Systems (LMS), offers some interesting properties that all schools are beginning to use for assessment: instant feedback, self-marked assessment, and data-driven insights. The purpose of this study was to assess the perception of the teachers about digital assessment tools and to find out how it impacts their classroom practices that were located in private secondary schools of Lahore. This study used a qualitative research design paradigm of interpretivist. The data for this study was obtained through semi-structured interview which was a purposive sampling of 15 teachers. The data collected was analyzed using Thematic Analysis approach (Braun and Clarke 2006). The results show that the teachers have mainly positive perceptions about the practice of Digital assessment tools and there are some benefits such as "time savings," "students' engagement," "immediate feedback," and "productivity when monitoring student progress. It also revealed that digital assessment systems have impacted the way that assessment is done in the classroom changing from traditional assessment to continuous assessment, and that the data from digital assessment systems have affected the teaching and learning methodology for making effective decisions. But some problems were found such as internet connectivity, no devices, technical problems, and academic integrity concerns. In addition, the study identified the need for professional growth and institutional support to become more successful with the successful implementation of digital assessment practices. The results have implications for teachers, leaders and policy makers, and contribute to the literature on technology-based assessment.

Introduction

Digital technologies are used in education around the world to change how teachers teach, students learn and are assessed. In recent years, the use of digital tools in educational contexts has increased considerably, as institutions are more and more seeking to use them to facilitate production of more effective teaching, promote student motivation and sanction processes. Digital tools have been increasingly used in education in the 21st century by both schools and universities, as a means to improving the effectiveness of the assessment process, gaining students' engagement and achieving more efficient teaching. Teachers have many options today to assess students' learning in a more dynamic and data-driven way with the growing introduction of various digital assessments tools such as the Google Forms, Kahoot, Quizizz, or Learning Management Systems (LMS), digital quizzes, online quizzes, e-portfolios and AI-based applications (Okafor, 2025). The technological

advancements that have occurred over the past five years have now made assessment more flexible, personalized, and continuous, as replaced ideas of traditional, paper-testing-based assessment.

Assessment is essential to the teaching learning process as it makes information about students' progress, learning needs and levels of achievement available. For a long time, assessment has been carried out mostly for the purpose of evaluating students' academic learning through the examination and evaluation at the end of the learning process. But there are opportunities for assessment which have been increased by the use of educational technology, such as the provision of instant feedback, automation of the process of grading, learning analytics, and adaptive assessment system (Sanusi et al., 2025). Digital assessment tools have important implications for teachers to track student progress and to embrace formative assessment practices to ensure the improvement of continuous learning. Thus, digital assessment is an integral part of current educational practices.

A number of studies have shown that digital assessments can provide a number of advantages to both students and teachers. They allow teachers to gather assessment data quickly and effectively, give feedback to their learners on the spot, and make well-informed decisions about how to teach based on the performance of their learners (López & Hsieh, 2025). Likewise, digital assessment tools help to foster an active learning experience and motivate the students. Ningsih and Mulyono (2019) discovered apps like Kahoot! have an impact on students' learning by increasing their engagement. And ZipGrade creates fun learning moments in class, while offering a range of benefits such as speedy grading and instant feedback. Also, by leveraging technology in assessment, teachers can cater for the needs of students from different backgrounds and present an array of assessment methods and opportunities for students to learn differently from others (Okafor, 2025).

Teachers are key to the effective use of digital assessment tools. How they perceive, what attitudes they hold towards, and what experiences they have had, will impact their level of technology integration into school practice (Abel et al., 2022). Research has always demonstrated that teachers are more inclined to utilize educational technologies when they see a value in them, they find them easy to use, and they believe that they are beneficial in the teaching process (Baddar & Khan, 2023). Likewise, Boonmoh et al. (2021) found that teacher perceptions play a role among the most critical factors that impact technology integration in the classroom. The expectations of positively perceived technology foster uptake of the technology, while negative views on technological complexities, lack of training, and lack of sufficient institutional support can constrain effective implementation of the technology.

There have been a few studies that have investigated teachers' attitudes towards technology integration and digital assessment. In an article published by (Indayani et al., 2023), it is shown that teachers generally have positive approaches towards online assessment in the sense of supporting the learning outcomes assessment process faster, more accurately and efficiently monitoring learning. Similarly, Akram et al. (2022) found that technology integrated teaching and assessment practices improve the quality of teaching, boost student motivation, and have a positive effect on the teaching and learning procedure. Although these benefits are evident, teachers should still overcome many obstacles, including the poor technical skills of teachers, poor infrastructure, weak internet connection, and the lack of professional training (Akram et al., 2022; Abel et al., 2022). The barriers can have an impact on teachers' willingness and capability to effectively use digital assessment tools in teaching and learning.

In recent years, digital assessment has gained further possibilities thanks to advances in AI. Seamlessly create rubrics, provide automated feedback on student work, and help teachers to evaluate student work efficiently with the help of AI-powered assessment systems. Riahi et al. (2026) concluded that teachers saw AI-generated rubrics as helpful tools to support assessment processes, but noted that there needed to be teacher oversight to assure alignment with the learning objectives and relevance of the context for the assessment. Likewise, Sibug et al. (2024) concluded that the teachers overall had a positive attitude towards emerging technologies and that they need support and training for their use.

Though several studies on technology integration and digital assessment in education have been conducted, few qualitative studies have focused on teachers' perceptions on the digital assessment tools and their impact on their classroom practices in the Pakistani context. Research to date has concentrated on technology adoption, on-line learning or ICT integration per se, and has paid much less attention to teachers' real experiences of implementing digital assessments tools in private secondary schools. Thus, the current study aims to investigate teachers' perceptions about digital assessment tools and the effect of these assessment tools on the teachers' practices in private secondary schools of Lahore. The results should be part of the body of knowledge available and will serve as a source for understanding how to improve assessment practices using effective technology integration for educators, school leaders, and policymakers.

Research Objectives

The study aims to achieve the following objectives:

1. To explore teachers' perceptions regarding the use of digital assessment tools in private secondary schools of Lahore.
2. To examine the impact of digital assessment tools on classroom assessment practices in private secondary schools of Lahore.
3. To identify the challenges and support needs associated with the implementation of digital assessment tools in private secondary schools of Lahore.

Research Questions

This study aims to provide answers to the following study questions:

1. What is teachers' perception about Lahore's use of Digital assessment Tools in Private secondary Schools?
2. What effects do the digital assessment tools have on the assessment practices in private secondary schools of Lahore's educational system?
3. So, what are the challenges and fill needs of teachers in the context of digital assessment in private secondary schools of Lahore?

Significance of the Study

The psychological significance of the present study lies in this: It is a contribution to the increasing amount of literature related to digital assessment and technology-integrated learning. Given the importance of teachers' perceptions, the study of their perceptions by teachers would be essential at this moment, as there is a close relationship between implementing educational technology in instruction and assessment tasks. Teachers' perceptions in educational technology was important because, as the schools begin to use educational technology in their teaching and assessment processes, perception would be essential. Teachers are the direct users of digital assessment tools and their experience, attitudes and beliefs shape the successful usage of such tools in the classroom. This study will offer valuable insights into the impact of digital assessment tools on assessment practice, student engagement, feedback, and instructional decision-making by studying teachers' perceptions of these technologies. In addition, the study will be a useful addition to existing literature because of qualitative data gained from them in their context, i.e., private secondary schools in Lahore, where there are few studies with particular interest on teachers' experience with digital assessment technologies.

This research finding will also benefit the education policy makers, administrator, curriculum planners/draftfodhrers and teachers' trainers. The findings from the study can inform the school leaders' development of better support programs, staff development and technological structures that enable teachers to implement technology effectively and engage the learner in successful technology-based assessments and develop more technology-adapted assessments. In addition, findings can inform policy makers in creating evidence-based policies to facilitate effective use of digital assessment practices in schools. The findings of the study can also lead to professional development programs to improve the digital skills and assessment knowledge of teachers. The aim of all the research is to contribute to the creation of high-quality, engaging and technology-assisted assessment spaces which will enhance teaching quality and student learning results.

Literature Review

Digital Assessment Tools in Contemporary Education

Digital technologies are rapidly developing and changing the nature of teaching and learning around the world – especially in assessment for learning in the classroom. Digital assessment involves the use of a tool and platform technology (and their associated tasks of designing, monitoring, assessing, and feedback) to assess students' learning outcomes. They encompass online quizzes, Learning Management Systems (LMS) i.e. online learning platforms, e-portfolios, game-based assessment applications, automated grading tools and artificial intelligence (AI) supported assessment systems (Sanusi et al., 2025). Digital technology incorporation in assessment activities has introduced the opportunity for teachers to move away from paper-based assessment to more interactive, efficient and learner-centred assessment.

There has been a shift in educational reform toward a new focus on assessment practices that promote learning, as opposed to just demonstrating achievement. Sanusi et al. (2025) suggest that digital technologies give the chance to track students'

progress in real-time, create feedback and use data to guide instructional decisions. Rural students now have significantly more opportunities to engage with formative assessment as they are able to have the strengths and weaknesses identified by their teacher more quickly. Likewise, Okafor (2025) claimed that digital assessment tools are flexible, efficient and inclusive in the sense that they assist teachers to customize their assessments based on the varying learning needs. The use of digital assessment is thus emerging as an important aspect of contemporary educational systems.

With the increased use of digital technology, new assessment models, including AI tools for assessment, learning analytics, and game-based assessment, have emerged. They help in facilitating learning experiences in a real-world context by fostering active learning, teamwork, and problem-solving abilities of students (Sanusi et al., 2025). Consequently, digital assessment is more and more seen as a good tool to support the improvement of pedagogical quality and learning outcomes of the student.

Teachers' Perceptions of Digital Assessment Tools

It has been well established that teachers' perceptions play an important role in the successful adoption of educational technologies. The primary agents in teaching with digital learning tools are the teachers and their beliefs and attitudes should have a significant impact on their adoption. Research indicates that teachers are more inclined to employ digital technologies if they believe they will be beneficial, user friendly, and effective in boosting their teaching efficiency (Baddar & Khan, 2023).

There are several studies reported that generally showed positive perceptions from teachers about the digital assessment tools. Ningsih and Mulyono (2019) investigated prevailing teachers' experiences in adopting Kahoot! and ZipGrade to introduce classroom assessment and identified three benefits of the tools which made Learning Using Kahoot! and ZipGrade more engaging, made assessment more facilitated, and made assessment more automated and prompt. As for the feedback from participants, digital assessment technology facilitated student participation and burdened less of the time for grading the paper-based summative format.

Likewise, Indayani et al. (2023) examined teachers' perceptions of utilising RLM as a tool for assessment, concluding that teachers were positive on using the technology in this assessment approach. Teachers felt that the assessment via online course allowed for quicker marking, precise assessment of the learning outcomes and better tracking of student progress. The study showed, however, that concerns about technological competence and confidence in the use of information and communication technologies (ICT) were also found.

Additionally, Boonmoh et al. (2021) attributed teachers' attitudes depending on their experiences, skills, and value of the technology in the education system. When the integration of technology is a positive one, it may result in increased acceptance for digital tools for teaching and assessment. The results indicated that it is crucial to comprehend teachers' perceptions for their successful implementation of the digital assessment technologies.

Impact of Digital Assessment Tools on Classroom Practices

The use of digital assessment tools has been shown to have a significant impact on classroom practices by changing how teachers can assess, monitor and support student learning. Digital tools offer a different type of assessment than what has been used in the past, providing for ongoing assessment and personalized, immediate feedback that enables teachers to adjust instruction based on students' learning needs immediately (López & Hsieh, 2025).

Studies have shown how positive, effective outcomes of digital assessment technologies are for teaching and student engagement. Physics teachers and students use technology-enhanced assessment tools to assess students' speaking and writing skills in more efficient ways and give students individualized feedback, as revealed by López and Hsieh (2025). Instructors indicated that this is a helpful resource for teachers implementing authentic assessment approaches where students can share what they know and can perform by creating a presentation that uses technology (such as multimedia) and/or a digital portfolio and/or online questions or problems.

The same, Sanusi et al. (2025) noted that digital technology is transforming the assessment of learning in the classroom with interactive and individualized learning experiences. Digital assessment helps teachers gather immediate data on learning, track students' progress, and gain insight into their learning problems more deeply. These can be used in evidence-based teaching, and for making decisions regarding teaching.

Moreover, Ningsih and Mulyono (2019) noted that in general, using game based assessments can make the students more motivated and involved. Interactive digital assessments activities constructively fill learning spaces with fun to promote interactive learning taking place. Digital assessment thus not only helps to improve assessment but also learning practices.

Challenges in Implementing Digital Assessment Tools

The digital assessment has several benefits, but a few problems remain to be addressed for effective implementation. The derisory technological infrastructure is one of the most reported as a barrier. Studies have shown that the lack of reliable internet access, access to digital devices, and the lack of technological resources can have a negative impact on teacher capacity building when implementing digital assessment tools in their classrooms (Akram et al., 2022).

Another major obstacle is technological skills. Inday ani et al. (2023) discovered that teachers frequently experience online valuation difficulties due to low-level skills in ICT and lack of confidence in its use. Similarly, teacher readiness, self-efficacy & technological capability were found to be significant factors affecting technology adoption by Macwan & Barot (2025). During the course of their regular review, a number of educators expressed nervousness and uncertainty about implementing digital learning technologies, especially when there was limited or no access to them for training.

One of the other areas of concern is the validity and reliability of the valuation. Teachers also voiced general concerns about technical issues, software restrictions, and the quality of assessments due to technology infiltrating the assessment process (López and Hsieh, 2025). Moreover, with the development of AI-transport tools for assessment, a new set of debates about moral issues, contextual relevance & the manner of teacher control on assessment processes have arisen. While teachers themselves found AI-generated rubrics helpful as starting points, Riahi et al. (2026) noted that teachers emphasized that the precise, fair, and goal-setting AI-generated rubrics would require teacher monitoring.

Professional Development and Institutional Support

Digital assessment technologies are successful because of institutional support and professional development. To effectively incorporate digital in assessment practices, teachers require proper training, technical support and organizational support.

Teacher competence is found to be one of the major reasons behind the usage of technology by Baddar and Khan (2023). Self-evaluating the use of digital technology as "competent" is correlated with teachers' readiness to offer more opportunities to use digital technology in classrooms. The study also identified research factors that were critical towards their participation in technology usage, including peer influence and availability of collaboration.

Similarly, Macwan and Barot (2025), concluded that institutional readiness was one of the significant factors impacting the perception of use of digital technologies shared by teachers. They concluded that leadership support, access to technological resources, professional development programs, and ongoing technical support were a key element. Schools with robust systems for supporting technology integration are more successful in doing so.

Furthermore, continued professional development fosters teachers' technology and confidence (Wallek and others, 2012). Educators can overcome these challenges and maximize digital assessment tools by focusing on digital assessment skills training, such as digital skills in pedagogy, assessment literacy, and using digital tools (Akram et al., 2022). Institutional support and staff development is needed, therefore, to maintain effective digital assessment practices.

Research Gap

By analyzing the literature, it is clear that digital assessment tools are becoming even more relevant in the context of modern education, as they contribute to improving assessment processes, promoting the student's participation, and offering instant feedback. Research has been conducted in various countries to discuss teachers' perceptions and benefits, challenges, and factors for technology use in other contexts (Indayani et al, 2023; López & Hsieh, 2025; Macwan & Barot, 2025). Much of the research that is currently available, however, has been quantitative or mixed methods and tended to have a broad-based focus on technology integration leaving little attention to digital assessments in particular.

In addition, very few qualitative studies have been carried out in the context of education in Pakistan especially in private secondary schools. A lack of depth understanding of how teachers think about digital assessment tools; how they believe assessment tools affect their classroom practice. Thus, the current study aims to find the solutions for this concern by examining teachers' perceptions about the use of e-assessment tools and its influence on teaching/learning activities in private secondary schools in Lahore.

Theoretical Framework

The study is guided by adapting Davis' (1989) Technology Acceptance Model (TAM). One of the most popular models that has emerged from previous studies into individuals' acceptance and usage of technology is the Technology Acceptance Model. The attitude and the intention of the users to use technology is influenced mainly with two major factors according to the proposed model: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived usefulness is defined as the

individual's attitude that the use of the specific technology will improve his or her work performance and perceived ease of use is defined as the attitude that the specific technology will possess easy-to-learn and easy-to-use attributes. Applications for TAM in the educational context have been widely used in the past to account for teachers' acceptance of digital technologies, and the extent to which teachers are willing to use technological tools within teaching and assessment.

The significance of TAM in relation to the present study is that it is able to explain the development of teachers' perceptions of digital assessment tools. Increased teachers' expectations of the tools being useful for assessment efficiency, timely feedback, progress monitoring and increasing student engagement are associated with greater use and integration of digital assessment technologies. Similarly, if teachers can easily use digital assessment tools that align with their instruction, they will adapt these tools to include digital items in their assessment practices. Several studies have cited that perceived usefulness, perceived ease of use, teacher competence and technological confidence are significant factors that affect teachers' adoption of assistive educational technologies (Baddar & Khan, 2023; Macwan & Barot, 2025). Hence, TAM is a suitable theory to analyse teachers' perception of digital assessments and explain perceptions that influence classroom assessment practices.

For the purposes of this research, digital tools of assessment which include Google Forms, Kahoot, Quizizz, other online assessment systems, and Learning Management Systems (LMS) are under consideration as technological innovations. Teachers' perceptions of the usefulness of and ease with using these tools should be correlated with their classroom assessment practices, such as assessment design, provision of feedback, students' involvement, monitoring, and teaching decisions. Thus, the relationship between private Lahore Secondary School teachers' perception and the influence of teachers' perception of digital assessment on their classroom practices could be adequately examined through the framework of Technology Acceptance Model (TAM).

Research Methodology

Research Design

This study included qualitative research for making an investigation about the perception of teachers about digital assessment tools and their effects in the assessment practices of private secondary schools of Lahore. Qualitative research is useful in a situation where the aim is to understand the experience, beliefs, perceptions and interpretations of participants related to a phenomenon. Given the aim of the present study is to grasp the way teachers perceive and experience digital assessment, a qualitative approach could be used to gain rich and detailed information about their perspectives.

Specifically, the study utilized a basic qualitative research design where the aim is to comprehend how people make meaning of what they experience. This design allowed the researcher to gain insight into the perceptions of the positive and the negative effects that digital assessment tools have on assessment practice, as well as the perceived level of impact.

Research Paradigm

The types of teaching, which were used in the study, were guided by the Interpretivism Paradigm. Interpretivism posits that reality is social and that individuals can construct meaning as a result of their own experiences and interaction in the context in which they learn and live. The emphasis in the paradigm is the subjective interpretations of the participants, not the objective realities.

The paradigm of this study was 'Interpretivism', as it addressed a problem involving the study of teachers' personal perception and their experience in using the digital assessment tools. The researcher intended to find out teachers' understanding of the usefulness, effectiveness and difficulties of digital assessment technologies, and how their understanding impacts classroom practices.

Population and Sample

The target population of the study was teachers of private secondary schools of Lahore, Pakistan. Selection of these teachers is based on their active participation in classroom teaching and assessment and they are more likely to incorporate digital assessments in their teaching.

The sample consisted of 12–15 secondary school teachers who were experienced with the use of an electronic assessment tool like Google Forms, Kahoot, Quizizz, Learning Management System (LMS), Microsoft form or other online assessment system. This size of a sample was found to be adequate in present study where qualitative data was desired as it enabled getting detailed information with also the data being saturated.

Sampling Technique

Purposive Sampling, a type of non-probability sampling, was used in the study of qualitative research approaches. A purposive sample can be done by choosing participants who have special knowledge, experiences or characteristics of interest to the research.

The researcher had chosen teachers who were using digital assessment technologies in the classrooms because they were supposed to give rich and meaningful information about the phenomenon under study. This particular method of sampling was appropriate for this study because it additionally allowed for detailed insights into the data as opposed to being generalized to a larger population.

Research Instrument

The primary data collection instrument was a Semi-Structured Interview Protocol. Semi-structured interviews provide flexibility for participants to express their views freely while allowing the researcher to explore key topics related to the study objectives.

Data Collection Procedure

For this study, the data were collected in the form of semi structured interviews from Lahore in the private secondary schools. Before the data collection process, the school administration was requested to give room for the study, and participants explained the purpose and objectives of the study. The researcher made it completely voluntary for the participants to participate and they fulfilled the option to withdraw participants throughout the process. Prior informed consent was obtained for conducting the interviews.

Participants were chosen using purposive sampling because they have previous experience using digital assessment. Interviews were undertaken in accordance with availability of participants. These interviews were about 30-45 minutes long. The interviews involved participants discussing their experiences with digital assessment tools, their impressions of the tools, and challenges they faced when using them. The interviews were audio-recorded, with the permission of the people involved, and subsequently transcribed for analysis.

Data Analysis Procedure

The inductive data analysis methodology of themed analysis approach from Braun and Clarke (2006) was used in the analysis of collected data. It is a technique often employed in qualitative research to uncover, both within and across data, themes and patterns. Thematic analysis was used to systematically categorize the responses of the participants into themes that had meaning.

The analysis was done in six steps as follows: The study involved familiarization with data, which included re-reading the transcripts of interviews to become familiar with the data. Second, initial codes were derived by looking for ideas of importance and patterns that were repeated. Third, codes were organized into groups that are similar to identify possible themes. Themes were reviewed and refined to ensure consistency with the data (4th). Fifth, the themes were well delimited and called. Lastly, the findings were summarized in an audible way using participant's quotes to support the result obtained assessing the validity of the result.

Ethical Considerations

Research was conducted in accordance with the ethical guidelines. The participants were given information regarding the purpose of the study and their consent for the same. Prior to data collection, informed consent was obtained. Participants were given pseudonyms (P1-P15) to ensure confidentiality and anonymity of participants. Additionally, participants were told that what they were answering would only be used in an academic context. In addition, they were allowed to drop out of the study at any time without any penalties.

Table 1: Initial Codes

Participant Responses	Initial Codes
Digital tools save time in grading	Time-saving
Instant feedback helps students learn	Immediate feedback
Easy to keep records	Record management
Students enjoy Kahoot and Quizizz	Student engagement
Assessments are now more continuous	Continuous assessment

Reports help identify weak students	Learning gap identification
Data helps modify lesson plans	Data-driven instruction
Students participate more actively	Increased participation
Internet issues create problems	Internet connectivity issues
Limited devices are a challenge	Lack of devices
Technical glitches disturb the process	Technical barriers
Need more training	Professional development needs
School workshops helped me	Institutional support
Online cheating is difficult to control	Academic integrity issues
Students get motivated through gamification	Motivation enhancement
Less paperwork	Reduced administrative workload
Teachers need practical training	Hands-on training requirement
Progress reports help in monitoring	Learning progress monitoring

Table 2: Theme Development

Codes	Categories	Themes
Time-saving, Record management, Reduced paperwork	Efficiency	Teachers' Perceptions of Digital Assessment Tools
Immediate feedback, Motivation enhancement, Student engagement	Learning Benefits	Teachers' Perceptions of Digital Assessment Tools
Continuous assessment, Learning gap identification, Progress monitoring	Assessment Improvement	Impact on Classroom Practices
Data-driven instruction, Increased participation	Teaching Improvement	Impact on Classroom Practices
Internet connectivity issues, Lack of devices, Technical barriers	Technological Challenges	Challenges in Implementation
Academic integrity issues	Assessment Challenges	Challenges in Implementation
Professional development needs, Hands-on training requirement, Institutional support	Support Mechanisms	Professional Development and Support Needs

Analysis

The thematic analysis of the interview data revealed four major themes:

1. Teachers' Perceptions of Digital Assessment Tools
2. Impact on Classroom Practices
3. Challenges in Implementation
4. Professional Development and Support Needs.

Each theme reflects the experiences, perceptions, and practices of teachers regarding digital assessment tools in private secondary schools of Lahore.

Theme 1: Teachers' Perceptions of Digital Assessment Tools

The findings indicated mostly positive attitudes of the teachers on the use of DAS in teaching. Most of the participants believed that these would be effective, efficient and useful tools to improve the assessment processes. The advantages of using digital tools such as time savings, workload decrease and assessment organization were all shared protocols among the teachers.

Many participants cited digital tools that they find beneficial for assessment development, gathering responses and monitoring student work, such as Google Forms, Kahoot, Quizizz and Learning Management Systems (LMS). Participant 1 explained:

"These tools are helping to change the assessment process - it's more efficient, detailed, and interactive and aids in managing the process."

Similarly, Participant 5 stated:

“Immediate feedback, automatic grading and improved record keeping, and enhanced student engagement” are the key benefits.

Teachers appear to consider digital assessment to be a viable and efficient compromise to paper assessment. Access and storage of student records also were given a positive evaluation.

Furthermore, it was pointed out how enjoyable and motivating it is to learn with digital instruments. Participant 7 stated:

“Key strengths: Quick feedback, increased learning time and engagement.”

Likewise, Participant 15 shared:

There are three key benefits: engagement, feedback and data collection.”

The figure suggests that the motivational aspects of digital assessments, particularly those that are interactive and gamified, are recognized by teachers.

The positivity towards the perception was present, but there was a need for familiarity and training for effective use especially noted by some of the participants. Participant 10 stated:

“Simple tools are basic, complex tools require additional training.”

This showcases how, once again like technology, ease of use of digital assessment is dependent on teachers' knowledge and experience.

In general, the results indicate that for teachers digital assessment instruments have a positive attitude due to its usefulness, efficiency and engagement.

Theme 2: Impact on Classroom Practices

The second theme centered on the impact digital assessment tools have on classroom practices. The tools have been found to markedly impact how teachers evaluate student learning, moving away from the summative and traditional assessment practices to more formative and continuous assessment practices.

Digital assessment tools allowed participants to take a quick quiz, exit ticket and low stakes assessment during lessons, they explained. Participant 2 mentioned:

“They changed my grading from end-of-chapter tests to more frequent low-stakes tests.

Similarly, Participant 8 stated:

Rather than just doing mainly summative assessments I now do more formative assessments.”

The following responses illustrate the growth of more frequent and continuous assessment.

Teachers also highlighted how assessment information is used to inform teaching and learning decisions. Participant 10 explained:

I use results to inform my decisions about teaching.

Participant 14 stated:

“Results enable me to adjust teaching plans.”

The responses suggest that digital assessment tools can facilitate data driven teaching to enable teachers to immediately uncover students' strengths and weaknesses.

Another key insight was that student engagement and participation has improved. Students' enthusiasm was reported as higher when using interactive digital tools by most teachers. Participant 3 explained:

“It helps my students to be active, my students are scoring more than paper-pencil tests.”

Participant 15 added:

Student involvement has certainly increased.”

This means that there is a greater potential for active learning and fun discussions among the learner and the “assessment” in the digital evaluation process.

Further, teachers noted that the media are used to provide instant instruction. Participant 12 stated:

Giving timely feedback enhances student learning.

They recognized the ability to provide rapid feedback as a key element to improve pupils' learning journey and understanding.

Overall, the results indicate that digital assessment has influenced the landscape of assessment in the classroom, seeking to reshape this assessment to make it more continuous, interactive and responsive to the needs of learners.

Theme 3: Challenges in Implementation

Teachers indicated that there were several reasons why electronic assessments were not used. The issue that most frequently was reported prevented work on the use of the internet for effective implementation of the use of online assessments.

Participant 9 stated:

Internet problems and lack of devices are significant problem areas.

Similarly, Participant 3 highlighted:

Access to stable Internet and electricity are some of the problems being faced.

In total, the responses demonstrate that there remain a number of barriers to effective use of digital assessment technology, with a close connection to the infrastructure.

One of the hurdles that was found is that digital devices are not readily available. Limited access to smart phones, tablets and laptops for some pupils impacted their participation, some said.

Participant 14 mentioned:

Technology, because of limited access, is a challenge.

This is an indicator of digital inequities among students.

Also, technical problems and software issues were concerns raised by teachers. Participant 8 stated:

Not having devices and having poor internet connection can become a problem to a certain extent.”

In addition, problems of honesty in academic work arose. Participant 13 explained:

“Cheating during an online exam is difficult.”

Online Proctoring was another popular concern of Participant 3.

According to the results, positive effects can be seen from digital assessment tools, however it is still the development of technological and ethical issues which hinder the effectiveness of digital tools.

Theme 4: Professional Development and Support Needs

The final theme focused on the need for further professional development and institutional support to ensure that digital assessment tools are used appropriately. Most of the respondents indicated that they had received some training, in the form of workshops, webinars or online tutorials.

Participant 6 stated:

“I was at some of the online sessions and held workshops at the school.”

Participant 11 noted:

I played a role, “school workshops played a role.”

Through these training sessions, many in the group felt that they should have received more; although teachers liked that it provided the time. They emphasized training needs that need to be hands-on and practical respects to the tools applied and the assessment design.

Participant 12 stated:

There is a need for the adoption of more gadgets and improved connectivity.”

Participant 15 recommended:

Schools should spend money on means and training of teachers.

It also emphasized the importance of the need for technical assistance, improving the infrastructure as well. Different voices sounded that the schools ought to have a particular member of staff to assist with technical problems that might arise when exams are taken.

In terms of success in the implementation of digital assessment tools, it is found that teacher competence, support from the institution, and technological support are very close to the use of tools.

Overall, this theme involves questions about the potential harms of digitized assessment technologies that can occur if / when they are not suitably appreciated and employed appropriately by teachers in their teaching and learning.

Discussion

The findings of this study, generally the teachers' perception on digital assessment tools is positive, corresponds with the result of Ningsih (2019) who stated that the teachers appreciated digital assessment tools for their efficiency, engaging and instant feedback. The current outcomes agree with the commonly adopted "Technology Acceptance Model (TAM)" in which the perspective of usefulness and ease of use was shown to impact teachers' willingness to accept such tools.

The study further showed that digital assessment tools have a significant influence on classroom practices, such as ongoing assessment, feedback on formative assessment and using data for informed teaching. The results are similar to those found by López and Hsieh (2025), who found that technology enhanced assessment increases the effectiveness of monitoring and implementation of instructional adjustments. In this study teachers reviewed the assessment outcome and determined what aspects of this learning were not addressed, and modified their teaching practice as a result, demonstrating the usefulness of the digital assessment.

However, challenges such as connectivity, the absence of devices, technical difficulties and cheating online were also evident. The findings are consistent with those of Akram et al (2022) who reported that technological and other infrastructure issues were important factors that influenced the use of technological tools in education. Similarly, Riahi et al. (2026) indicated reliability and control problems with Digital Assessment systems.

Finally, professional development and support for the organization were identified as a priority. Workshops and training was reported to enhance confidence, however, there was a need for more on-the-ground and ongoing support. This is consistent with the findings of Baddar and Khan (2023) which showed that teachers' competencies is a good predictor of technology application.

Conclusion

The study aimed to study the perception of teachers and the effect of DIT tools on teachers' practices in private secondary schools of Lahore. The results indicated that teachers have overall positive perceptions of digital assessment technologies, as they are efficient, easy use and offer immediate feedback. The use of digital assessment tools has revolutionized the way assessment is done in classrooms by creating more continuous, interactive, and data-driven assessment processes.

However, teachers encounter several obstacles like technical limitations, internet connectivity problems, devices not being readily available and privacy issues when it comes to academic integrity. The results also evidence the need for the teachers to carry out continuous professional development and institutional support to improve the digital skills of the teachers and assessments practices.

Recommendations

1. Regular professional development time and workshops should be offered for digital assessment practices.

2. Improve technological infrastructure in educational institutions, reliable Internet and availability of devices.
3. The technical support for digital assessments must be provided to help teachers overcome the issues faced in its implementation.
4. Schools shall put in place measures to guarantee academic integrity when using online assessments.
5. deliver consistent guidance for digital assessment tools used in teaching for the policy makers.

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