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Transforming English Language Teaching and Learning: The Role of Digital Tools in Pedagogy, Assessment and Feedback at the University Level in South Punjab

Muhammad Naveed Iqbal
navidiqbal074@gmail.com
Ph.D. Scholar, department of Education, The Islamia University of Bahawalpur.

Ms. Noor Ul Ain
noorulainy1@gmail.com
Lecturer, department of humanities and social Sciences, Khwaja Fareed University of Engineering and Information Technology Rahim Yar Khan.

Dr. Abdul Khaliq
abdulkhaliq@cuvas.edu.pk
Assistant Professor, department of Social and Allied Sciences, Cholistan University of veterinary and Animal Sciences Bahawalpur
Corresponding Author: * Muhammad Naveed Iqbal navidiqbal074@gmail.com

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ABSTRACT

This study investigates how digital tools are transforming English language teaching and learning at the university level in South Punjab, Pakistan. Employing a quantitative survey-based design, data were collected from 40 teachers and 120 students at four public universities: The Islamia University of Bahawalpur, Khawaja Fareed University of Engineering and Information Technology Rahim Yar Khan, Cholistan University of Veterinary and Animal Sciences, and Government Sadiq College Women University. Bahawalpur. Findings from SPSS. Findings revealed that both teachers and students exhibited highly positive attitudes toward digital pedagogy, assessment, and feedback. Teachers reported frequent integration of multimedia and online tools to enhance interactivity, while students demonstrated strong engagement and motivation in technology-supported environments. However, institutional and infrastructural barriers—such as limited training and unstable internet connectivity—restricted full implementation. The study affirms the applicability of the Technological Pedagogical Content Knowledge (TPACK) and Constructivist Learning frameworks, emphasizing that successful digital transformation in English language education requires institutional investment, teacher training, and sustainable policy support.

Keywords: *Digital Pedagogy, English Language Teaching, Technological Integration, Assessment and Feedback, South Punjab Universities*

INTRODUCTION

In the contemporary era, digital technologies have become an indispensable part of educational systems worldwide. The integration of digital tools has significantly transformed teaching and learning practices, particularly in language education. English Language Teaching (ELT), once restricted to textbooks and chalkboards, has now evolved into an interactive and multimedia-rich experience. The digital revolution has influenced every aspect of the classroom from pedagogy and assessment to feedback and learner engagement (Rahman & Khan, 2022).

In Pakistan, the shift toward technology-enhanced learning has gained momentum, especially after the COVID-19 pandemic. Yet, there exists a regional imbalance in how these technologies are implemented. South Punjab, a region rich in educational institutions but often limited in digital infrastructure, provides a

unique context to explore this transformation. This study investigates how digital tools are reshaping English language teaching and learning in four key universities of South Punjab: The Islamia University of Bahawalpur (IUB), Khawaja Fareed University of Engineering and Information Technology (KFUEIT), Cholistan University of Veterinary and Animal Sciences (CUVAS), and The Government Sadiq College Women University Bahawalpur (GSCWU).Data collected from 40 English language teachers and 120 students using structured questionnaires were analyzed quantitatively through SPSS. The results provide insight into how digital technologies impact pedagogy, assessment, and feedback in university-level English instruction.

Background Of The Study

Digital transformation in education has redefined both teaching methodology and student engagement. Globally, language educators now utilize a range of technological tools Google Classroom, Moodle, Kahoot, Zoom, Grammarly, and Edmodo to deliver interactive lessons (Zhao, 2021). The shift from teacher-centered instruction to learner-centered environments has been driven by the accessibility and interactivity of digital platforms.

In Pakistan, public sector universities have begun to incorporate Learning Management Systems (LMS), online evaluation tools, and AI-based applications. However, regional disparities persist. Urban universities enjoy greater access to technological infrastructure, while institutions in South Punjab still face challenges such as inconsistent internet connectivity, lack of training, and limited institutional support (Shahid & Mahmood, 2020).

Given this gap, there is an urgent need to evaluate how teachers and students perceive and utilize digital tools in the English language classroom. Understanding these patterns can help higher education policymakers foster inclusive and effective digital education.

Problem Statement

Despite the proliferation of digital technologies in education, the effective integration of such tools in English language teaching within South Punjab universities remains uneven. Teachers often possess limited training in digital pedagogy, and students face challenges adapting to online and blended learning systems. As a result, traditional teaching methods continue to dominate, leaving the transformative potential of digital tools largely untapped.

This study, therefore, aims to analyze the role of digital tools in transforming pedagogy, assessment, and feedback mechanisms in English language teaching at the university level in South Punjab.

Objectives Of The Study

Following are the main objectives of the study:

1. To explore the extent of digital tool integration in English language pedagogy at the university level in South Punjab.
2. To examine how digital tools are being used for assessment and feedback by English language teachers.
3. To identify the challenges and opportunities associated with digital tool usage in English language teaching and learning.

Research Questions

On the bases of above mentioned research objectives following are the research questions:

1. How are digital tools being integrated into English language pedagogy at universities in South Punjab?
2. What roles do digital tools play in assessment and feedback in university-level English language education?
3. What challenges and opportunities do teachers and students encounter in using digital technologies for language teaching and learning?

Significance Of The Study

This study holds both practical and theoretical significance in the evolving landscape of English language education. It adds to the growing body of research on digital transformation in higher education by examining how technology reshapes pedagogy, assessment, and feedback in the specific context of South Punjab, Pakistan. Unlike generic studies that address technology in education broadly, this research situates digital integration within the field of English language teaching (ELT), where communication, creativity, and learner interaction are central. Thus, it provides localized empirical evidence that can guide institutions in similar developing contexts on how digital tools can enhance language learning effectiveness and inclusivity.

On a **theoretical level**, this study contributes to the validation and contextual adaptation of global frameworks such as the **Technological Pedagogical Content Knowledge (TPACK)** model and the **Constructivist Learning Theory**. By applying these theories within Pakistan's socio-cultural and institutional realities, the research demonstrates how digital pedagogy can bridge the gap between traditional and technology-driven instruction. The findings reinforce that successful technology adoption in ELT depends not only on access to tools but also on pedagogical innovation and teacher competence—thereby extending the theoretical understanding of digital education in multilingual and resource-limited environments. From a **practical standpoint**, the study offers valuable insights for policymakers, curriculum designers, and educators. The results inform the design of teacher training programs, institutional policies, and technological resource allocation strategies. By identifying both the strengths and shortcomings in current digital practices, it guides universities to create supportive digital ecosystems that enhance student engagement, promote autonomous learning, and improve feedback efficiency. These insights can also support the Higher Education Commission (HEC) of Pakistan in monitoring the implementation of digital education standards across universities.

Finally, the study aligns with Pakistan's **national vision for educational digitization** and lifelong learning. It directly supports HEC's initiatives to promote blended learning, e-assessment, and digital literacy at the tertiary level. By focusing on South Punjab an often underrepresented region in educational research this study ensures that the voices of teachers and students from semi-urban and peripheral universities are heard in the broader discourse of digital transformation. Ultimately, it contributes to the equitable advancement of higher education, ensuring that digital innovation leads to empowerment rather than exclusion.

Delimitation Of The Study

The research is delimited to four universities in South Punjab The Islamia University of Bahawalpur (IUB), Khawaja Fareed University of Engineering and Information Technology (KFUEIT), Cholistan University of Veterinary and Animal Sciences (CUVAS), and The Government Sadiq College Women University Bahawalpur (GSCWU).

The sample includes 40 English language teachers and 120 students from these universities. The data were collected via structured questionnaires focusing on the integration of digital tools in teaching, assessment, and feedback.

LITERATURE REVIEW

Scholars worldwide recognize the power of technology in revolutionizing language education. Warschauer and Healey (1998) first conceptualized Computer-Assisted Language Learning (CALL) as a bridge between linguistic theory and digital practice. Beatty (2010) expanded this notion, emphasizing learner autonomy and interactive feedback.

In Pakistan, research on digital pedagogy remains limited. Ahmad and Bashir (2021) found that digital platforms like Google Classroom improved participation but required technical proficiency. Rehman et al. (2023) revealed that university teachers in South Punjab had moderate digital literacy, necessitating continuous professional development.

Digital feedback systems have been particularly transformative. Studies (Hattie & Timperley, 2007; Riaz & Zafar, 2021) show that online feedback enhances writing accuracy and motivation. However, Shahid and Mahmood (2020) identified infrastructural barriers such as poor connectivity and inadequate institutional support, especially in smaller cities like Bahawalpur and Rahim Yar Khan.

These findings establish the foundation for the present study, which seeks to analyze how digital tools influence ELT pedagogy, assessment, and feedback comprehensively in South Punjab.

Theoretical Framework

The study is guided by Technological Pedagogical Content Knowledge (TPACK) and Constructivist Learning Theory.

TPACK Framework (Mishra & Koehler, 2006) emphasizes the intersection of technology, pedagogy, and content knowledge. Effective teaching requires balancing all three elements. In ELT, teachers must understand not only the language content but also how technology and pedagogy work synergistically to enhance learning outcomes.

Constructivist Learning Theory (Piaget, 1972; Vygotsky, 1978) posits that learners actively construct knowledge through interaction and collaboration. Digital platforms such as Google Classroom, Edmodo, and Zoom facilitate this process, enabling learner autonomy and peer feedback.

Review Of Already Conducted Studies

A substantial body of research has explored the integration of digital tools in English language education within Pakistan, yet much of it remains fragmented, focusing on individual components such as digital literacy, online feedback, or assessment tools. The following review highlights key studies relevant to this research and situates them within the broader context of technology-enhanced learning in higher education.

Rehman et al. (2023) conducted a comprehensive quantitative study titled *"Digital Literacy of University Teachers in Pakistan: A Quantitative Analysis,"* focusing on teachers' competencies in using technology for instructional purposes. The research, based on survey data from multiple public universities across Pakistan, revealed that most educators possessed **moderate digital literacy**, with notable differences between urban and rural institutions. While teachers demonstrated basic proficiency in tools such as PowerPoint and LMS platforms, they lacked training in interactive and assessment-oriented technologies. The study recommended systematic digital literacy programs and institutional support for

teachers—an aspect particularly relevant to South Punjab, where infrastructural challenges are more pronounced.

Yaseen and Qureshi (2022), in their study *"Online Learning Adoption in South Punjab: Post-Pandemic Perspectives,"* investigated students' and teachers' adaptation to virtual and blended learning environments following the COVID-19 pandemic. Using a mixed-method design, they found that despite the rapid shift to online learning, many universities in South Punjab struggled with poor internet connectivity, limited access to digital devices, and low motivation among learners. The study identified **institutional readiness** and **digital equity** as the most influential factors in shaping attitudes toward online education. These findings underscored the urgent need for infrastructural investment and teacher training issues this present study continues to explore within the domain of English language teaching.

Ali (2022) focused on *"Digital Feedback Tools in Higher Education: Enhancing Engagement through Technology,"* examining how artificial intelligence (AI)-based tools such as **Grammarly**, **Turnitin**, and automated writing evaluators improve student engagement and writing accuracy. The study, conducted across several Pakistani universities, used a quasi-experimental design to measure differences between traditional and AI-assisted feedback. Results indicated that digital feedback not only enhanced writing skills but also increased learners' motivation and autonomy. However, the research emphasized that technology cannot replace human pedagogical judgment; rather, it should supplement it through a balanced, teacher-guided approach. This aligns with the current study's focus on the combined role of teachers and technology in improving assessment and feedback processes.

Mahmood And Saleem (2020) undertook a study titled *"Technology Integration in Higher Education: The Role of Google Classroom in Assessment and Communication."* Their research examined how Google Classroom facilitates teacher-student interaction, assignment submission, and formative assessment. Conducted among English and education faculty members in Punjab, the study reported a significant improvement in **organizational efficiency, feedback timeliness, and student participation**. Nevertheless, it also pointed out disparities in access to technology and digital readiness, particularly among female students from semi-urban areas. The study concluded that without adequate institutional support and continuous teacher training, digital platforms may remain underutilized echoing challenges prevalent in South Punjab universities.

Rahman And Khan (2022) expanded on this theme in their work *"Digitalization in Higher Education of Pakistan: Trends and Challenges,"* exploring nationwide digital transformation efforts across universities. Their findings revealed that although digital tools were increasingly adopted, **policy implementation and**

teacher preparedness remained inconsistent. The study highlighted the need for curriculum redesign and digital literacy initiatives to ensure effective and sustainable integration of technology into higher education. The present study builds on this by focusing specifically on English language education and empirically examining how digital tools shape pedagogy, assessment, and feedback within this discipline.

Shahid and Mahmood (2020) in their paper *"Barriers to Digital Integration in Public Universities of Pakistan"* conducted a descriptive survey among faculty members of southern and central Punjab. They identified **key barriers** including insufficient funding, lack of institutional planning, and limited access to high-speed internet. Their results confirmed that while teachers were motivated to use technology, systemic constraints often limited their ability to innovate. These insights underscore the broader institutional issues that also influence digital transformation in South Punjab's English departments.

Together, these studies establish that digital education in Pakistan has progressed considerably, yet significant gaps persist in **infrastructure, pedagogical innovation, and systematic policy implementation**. Most prior research isolates specific aspects such as digital literacy, feedback mechanisms, or assessment platforms—without presenting a holistic framework that interlinks pedagogy,

assessment, and feedback. Moreover, limited attention has been paid to **contextual disparities within regions like South Punjab**, where technological access and teacher readiness vary substantially.

Research Gap

While existing research highlights partial aspects of digital education in Pakistan, comprehensive investigations into how digital tools collectively influence pedagogy, assessment, and feedback in South Punjab universities are scarce. This study fills that gap by combining teacher and student perspectives to offer a regional overview of digital transformation in ELT.

METHODOLOGY

Research Design

The present study adopted a **quantitative, survey-based research design** to examine the perceptions and practices of English language teachers and students regarding the use of digital tools in pedagogy, assessment, and feedback at the university level in South Punjab. A quantitative approach was chosen because it enables researchers to gather measurable, generalizable, and statistically analyzable data from a relatively large population (Creswell & Creswell, 2018). Surveys are particularly effective for studying attitudes, behaviors, and opinions of respondents in educational contexts (Cohen, Manion, & Morrison, 2018).

The survey method was deemed appropriate as it allows systematic investigation of the relationships among variables such as digital readiness, technology usage, and perceptions of pedagogical effectiveness. Moreover, a quantitative design enhances objectivity and reliability through the use of structured questionnaires and standardized response categories (Fraenkel, Wallen, & Hyun, 2019). Since the purpose of this study was to identify trends and patterns in technology integration rather than to explore subjective experiences in depth, quantitative methodology provided the most suitable framework for data collection and analysis.

Population And Sampling

The **target population** for this study consisted of English language teachers and undergraduate students enrolled in **BS English or related programs** at four public-sector universities in South Punjab, Pakistan. These universities included:The Islamia University of Bahawalpur (IUB),Khawaja Fareed University of

Engineering and Information Technology (KFUEIT), Rahim Yar Khan, Cholistan University of Veterinary and Animal Sciences (CUVAS), Bahawalpur and The Government Sadiq College Women University (GSCWU), Bahawalpur.These institutions were selected because they represent a diverse yet regionally coherent sample of higher education institutions with varying levels of digital infrastructure and access. Selecting multiple universities allowed for a more comprehensive understanding of digital practices within South Punjab's educational landscape (Etikan & Bala, 2017).

A **stratified random sampling technique** was employed to ensure representation across both teachers and students. The total sample included **40 English language teachers** and **120 undergraduate students**. Stratification was based on institutional affiliation and role (teacher/student) to minimize sampling bias and achieve representativeness (Gay, Mills, & Airasian, 2016). This sampling design ensured proportional representation while maintaining diversity in gender, experience, and exposure to digital tools. The sample size was determined considering feasibility, statistical reliability, and alignment with similar educational studies conducted in Pakistani contexts (Rehman et al., 2023; Yaseen & Qureshi, 2022).

Data Collection Tools

Data were collected using **two structured questionnaires**, one for teachers and one for students. Each instrument comprised 16 **closed-ended items** measured on a **5-point Likert Scale**, ranging from *Strongly Agree (5)* to *Strongly Disagree (1)*. The Likert scale was selected for its capacity to capture degrees of perception and attitude, enabling quantitative analysis of respondents' views toward digital tools in ELT (Joshi, Kale, Chandel, & Pal, 2015).

The questionnaires were developed after an extensive review of existing literature on technology integration in English language teaching (Ali, 2022; Ahmad & Bashir, 2021; Beatty, 2010). To ensure **content validity**, the instruments were reviewed by three experts in educational technology and English language pedagogy. Modifications were made based on expert feedback to improve clarity, language appropriateness, and alignment with research objectives. The questionnaires included items categorized under **four thematic dimensions**—pedagogy, assessment, feedback, and challenges/support—reflecting the theoretical foundations of digital transformation in education.

Data Analysis And Results

The collected data were analyzed using the **Statistical Package for the Social Sciences (SPSS) Version 26**. Descriptive statistical procedures—**mean scores, standard deviations, and frequency distributions** were applied to summarize responses and identify overall trends. The data were then grouped under the four pre-defined factors (pedagogy, assessment, feedback, and challenges/support) for both teacher and student questionnaires. This allowed comparison of perceptions across constructs and respondent groups.

Descriptive analysis was supplemented by factor-based comparisons to interpret how teachers and students perceived the role of digital tools differently. The use of descriptive statistics is particularly effective for identifying patterns in survey research and has been widely employed in similar studies on digital learning (Nawaz & Qureshi, 2022; Rehman et al., 2023). Mean values above 3.50 were interpreted as positive

perceptions, values between 2.50 and 3.49 as moderate, and those below 2.49 as negative attitudes (Creswell, 2014).

To ensure accuracy, the data were screened for missing values and outliers prior to analysis. All quantitative results were presented in tabular form with corresponding interpretations, highlighting major findings and

trends. These statistical outputs formed the basis for subsequent discussion and comparison with previous literature, ensuring a systematic and evidence-based approach to understanding the role of digital tools in English language teaching and learning in South Punjab.

The teachers' questionnaire was divided into **four major factors** based on the thematic grouping of items. Each factor was analyzed through SPSS to determine the *Mean* and *Standard Deviation (SD)* for 40 teachers across four universities in South Punjab. The results are presented below.

Table 1: Digital Pedagogical Practices (Teachers)

Item Nos.	Description	Mean	SD
1	I use digital tools regularly for teaching English.	4.18	0.77
2	Digital platforms enhance student motivation.	4.22	0.69
3	I integrate online quizzes and multimedia in lessons.	4.05	0.81
4	Students respond positively to digital activities.	4.12	0.74

Table 1 reveals a **high level of digital pedagogical integration** among teachers, reflecting a positive orientation toward technology-supported instruction. The consistently high mean values (M = 4.14) indicate that teachers are actively incorporating multimedia tools, online quizzes, and interactive applications into English language teaching. These results suggest growing pedagogical innovation, where digital technologies foster engagement and participation. The findings resonate with Beatty (2010) and Ali (2022), who assert that digital pedagogy enriches communicative competence and learner motivation. This pattern confirms that teachers in South Punjab are increasingly confident in integrating technology into traditional classroom settings, signaling a transition toward blended instruction.

Table 2: Digital Assessment Practices (Teachers)

Item Nos.	Description	Mean	SD
5	I use online platforms for student assessment.	3.92	0.84
6	I find digital assessments time-saving and efficient.	4.01	0.79
7	Assessment tools provide better analytical data.	3.87	0.81
8	I prefer digital assessment over traditional exams.	3.65	0.92

The results in Table 2 demonstrate **moderately high adoption of digital assessment tools**. Teachers perceive online platforms such as Google Forms, Moodle, and Microsoft Teams as efficient means of grading and providing analytical insights. However, lower preference scores for fully digital examinations (M = 3.65) indicate hesitancy toward complete transition from traditional assessment methods. This trend mirrors Mahmood and Saleem's (2020) findings, which showed that teachers value efficiency but remain cautious about reliability and technical disruptions. Hence, while assessment tools are gaining acceptance, institutional training and infrastructure remain essential to maximize their effectiveness (Rehman et al., 2023).

Table 3: Feedback And Communication Tools (Teachers)

Item Nos.	Description	Mean	SD
9	I use applications like Grammarly for writing feedback.	3.88	0.91
10	Feedback through digital tools is more effective.	4.10	0.73
11	Students prefer receiving online feedback.	4.02	0.75
12	I use Google Classroom or Moodle for assignments.	4.20	0.70

Teachers exhibited **strongly positive perceptions of digital feedback systems**, with the highest mean values across all teacher-related factors. The use of online platforms enables timely communication, transparency, and individualized feedback. This aligns with Hattie and Timperley's (2007) framework, which emphasizes that feedback is most effective when it is immediate and specific. The integration of digital feedback tools in English writing tasks has proven to improve metacognitive engagement and student performance (Ali, 2022). Thus, the data affirm that teachers in South Punjab perceive technology as a crucial element for improving feedback quality and learner autonomy.

Table 4: Institutional And Technical Support (Teachers)

Item Nos.	Description	Mean	SD
13	The university provides training for digital pedagogy.	3.35	0.98
14	Internet connectivity supports digital teaching.	3.42	0.91

Item Nos.	Description	Mean	SD
15	Technical issues disrupt lessons frequently.	2.95	1.04
16	Institutional support improves my digital teaching.	3.48	0.88

Institutional and technical support received **the lowest composite mean** among all teacher factors, indicating systemic constraints that hinder effective digital adoption. Respondents cited inconsistent internet connectivity, lack of training, and limited administrative backing as barriers. These findings echo Shahid and Mahmood (2020), who found that infrastructural inadequacies impede pedagogical innovation in public universities. Therefore, while teacher readiness is strong, sustainable digital transformation requires institutional investment in resources and professional development initiatives.

Table 5: Digital Learning Engagement (Students)

Item Nos.	Description	Mean	SD
1	My teachers use digital tools during English classes.	4.25	0.68
2	I enjoy learning English through multimedia resources.	4.32	0.64
3	Online quizzes make learning interesting.	4.18	0.70
4	Digital tools make English learning interactive.	4.20	0.72

Table 5 shows that Students demonstrated **high engagement and enthusiasm** toward digital learning activities. The high composite mean (M = 4.24) suggests that multimedia and interactive quizzes effectively sustain learner motivation and participation. This aligns with Vygotsky's (1978) **Constructivist Learning Theory**, which emphasizes active engagement and social interaction in the learning process. Studies by Riaz and Zafar (2021) also support that multimedia integration enhances comprehension and language fluency. Hence, students in South Punjab perceive digital learning as an enriching and interactive experience that makes English more approachable and enjoyable.

Table 6: Assessment And Learning Performance (Students)

Item Nos.	Description	Mean	SD
5	I submit assignments through online platforms.	4.08	0.77
6	Online feedback helps me improve writing skills.	4.15	0.73
7	I can track my learning progress using digital platforms.	3.95	0.79
8	I prefer online assessments to paper-based ones.	3.82	0.86

In the above table, Students' responses indicate a **strongly positive perception of digital assessment practices**, particularly regarding feedback and progress tracking. The ability to view comments, revise submissions, and resubmit work enhances writing development and learner autonomy (Evans, 2013). However, slight reservations about replacing traditional assessments reflect concerns about technical reliability and internet stability—issues also noted by Nawaz and Qureshi (2022). The data highlight that digital assessment fosters transparency and performance awareness when supported by adequate infrastructure and guidance.

Table 7: Digital Feedback And Collaboration (Students)

Item Nos.	Description	Mean	SD
9	Teachers provide feedback through online tools.	4.12	0.74

Item Nos.	Description	Mean	SD
10	Digital feedback is timely and detailed.	4.05	0.79
11	Online learning encourages collaboration with peers.	4.02	0.71
12	I feel motivated by interactive online discussions.	4.18	0.65

In the above table. the findings show **consistently high student satisfaction** with digital feedback and collaboration opportunities. Digital communication tools such as Google Classroom, WhatsApp groups, and discussion forums create a sense of academic community, facilitating peer support and shared learning. This supports Ali's (2022) observation that AI-assisted and LMS-based feedback enhances learner motivation and self-efficacy. The results also reflect Hattie and Timperley's (2007) model of effective feedback, emphasizing clarity, immediacy, and dialogue between teacher and student.

Table 8: Challenges In Digital Learning Environment (Students)

Item Nos.	Description	Mean	SD
13	I face technical problems during online sessions.	3.48	0.96
14	Internet connectivity affects my performance.	3.55	0.90
15	I need more training to use digital tools effectively.	3.60	0.88
16	I prefer a mix of face-to-face and digital learning.	4.10	0.66

Although students favor digital learning, **technical and infrastructural challenges persist**. Connectivity issues, lack of training, and unequal device access remain significant barriers (Yaseen & Qureshi, 2022). Interestingly, the high score for blended learning preference (M = 4.10) suggests that students desire a hybrid model combining traditional and digital instruction. This supports Dhawan's (2020) argument that blended learning provides flexibility and sustainability in resource-limited contexts.

Table 9: Overall Group Comparison

Group	Mean	SD	Interpretation
Teachers (n = 40)	3.84	0.83	Moderate to high integration of digital tools
Students (n = 120)	4.00	0.76	Strongly positive perception toward digital learning

Both groups demonstrated **positive attitudes toward the use of digital tools** in English language education. Teachers are increasingly adopting technology for instructional delivery, assessment, and feedback, while students display strong enthusiasm for interactive and autonomous learning experiences. However, persistent infrastructural limitations and lack of systematic training constrain the full realization of digital pedagogy's potential. These findings validate the **Technological Pedagogical Content Knowledge (TPACK)** and **Constructivist Learning Theories**, highlighting that successful digital transformation in education requires alignment among technology, pedagogy, and institutional support (Mishra & Koehler, 2006).

DISCUSSION

The purpose of this study was to investigate the transformative role of digital tools in English language teaching and learning at the university level in South Punjab, focusing on pedagogy, assessment, and feedback. The results from 40 teachers and 120 students across four universities provide strong evidence that digital technology has become an integral component of higher education pedagogy. The discussion below interprets these findings in the light of relevant theories and prior research.Findings from Table 1 demonstrated that English teachers in South Punjab have integrated digital tools effectively into

classroom practices, achieving a high composite mean (M = 4.14). Teachers reported frequent use of online quizzes, multimedia, and presentation tools to enhance engagement and motivation. This aligns with Beatty (2010) and Ali (2022), who emphasized that digital pedagogy encourages active learning, contextual understanding, and language skill development.
The results suggest that teachers are moving from passive use of technology (e.g., displaying slides) to **constructive engagement**, where digital tools serve as enablers of interactive learning. The findings are consistent with the **TPACK framework (Mishra & Koehler, 2006)**, which asserts that technology integration is effective when teachers harmonize pedagogical, content, and technological knowledge. Teachers who understood how to align digital tools with language outcomes achieved better student participation and motivation, reflecting maturity in digital instructional design.

The study revealed that teachers value digital assessment tools for efficiency, data accuracy, and learner analytics (M = 3.86). Students likewise demonstrated positive responses (M = 4.00), recognizing online submission platforms and automated evaluation systems as transparent and accessible.These findings resonate with *Mahmood and Saleem (2020)* and *Evans (2013)*, who argue that digital assessment provides formative feedback loops that improve students' metacognitive skills. However, both groups indicated partial hesitation toward fully digital exams, citing connectivity issues and technical inconsistencies.The results underscore that **effective digital assessment** requires not only technological readiness but also clear institutional frameworks to ensure academic integrity, data security, and standardization. This supports *Boud and Molloy's (2015)* emphasis on feedback-rich environments, where digital tools complement teacher judgment rather than replace it.

Feedback emerged as one of the strongest areas of digital impact. Teachers reported high levels of satisfaction with online feedback mechanisms (M = 4.05), while students expressed parallel appreciation (M = 4.09). Digital platforms such as Google Classroom, Moodle, and Grammarly facilitate **timely, detailed, and personalized feedback**, which is central to language learning.
This finding supports *Hattie and Timperley's (2007)* model of effective feedback, which emphasizes clarity, direction, and immediacy. The results also align with *Ali (2022)*, who found that AI-driven feedback fosters learner independence and confidence. The strong teacher-student alignment in feedback perceptions reflects **constructivist principles (Vygotsky, 1978)**, where learners construct meaning through interactive and iterative communication. The availability of digital feedback tools thus enhances both formative assessment

and reflective learning practices in ELT contexts.Despite positive pedagogical outcomes, institutional and technical challenges remain substantial. Teachers reported the lowest mean score (M = 3.30) for infrastructure and support, indicating insufficient internet access, inconsistent training opportunities, and limited institutional commitment. Similar concerns were echoed by students in Table 8 (M = 3.68), who highlighted connectivity problems and a need for structured digital training. These results corroborate the findings of *Shahid and Mahmood (2020)* and *Yaseen and Qureshi (2022)*, who identified infrastructural inequalities as key obstacles in Pakistan's digital education landscape. The findings confirm that **technological readiness alone does not guarantee success**; it must be supported by continuous institutional investment, policy guidance, and teacher development. Without systemic backing, even the most digitally literate educators struggle to sustain innovation.

The challenges observed also indicate regional disparities within Pakistan's higher education system. While urban universities may benefit from robust digital infrastructure, peripheral institutions in South Punjab face resource limitations. The present study therefore contributes region-specific insights that have often been overlooked in national-level research on educational technology.

Comparative analysis (Table 9) revealed that while teachers' mean score (M = 3.84) suggested moderate to high integration of digital tools, students demonstrated an even higher level of acceptance (M = 4.00),

reflecting stronger enthusiasm toward technology-mediated learning. This contrast indicates a **pedagogical generation gap** students, being digital natives, display greater comfort with online platforms, whereas teachers' engagement is more structured and goal-oriented. Similar observations were made by *Rahman and Khan (2022)*, who noted that student adaptability outpaces institutional readiness. Nevertheless, the overall consistency between teacher and student perceptions confirms a shared belief in the transformative role of digital tools. This convergence is essential for sustainable digital pedagogy, as both instructional delivery and learner engagement rely on mutual acceptance and digital competence.

The findings strongly validate the **Technological Pedagogical Content Knowledge (TPACK)** and **Constructivist Learning Theories** as theoretical underpinnings of digital language education. Teachers effectively integrated technology with content and pedagogy, confirming TPACK's assertion that meaningful technology use emerges from balanced intersectional knowledge (Mishra & Koehler, 2006). Simultaneously, students' positive engagement and preference for interactive learning validate the constructivist principle that learners construct knowledge through active participation (Vygotsky, 1978). The consistent alignment of results with these frameworks underscores the potential of theory-driven digital transformation in Pakistani higher education.

CONCLUSION

This study explored how digital tools are reshaping English language teaching and learning at the university level in South Punjab. The quantitative analysis provided compelling evidence that both teachers and students hold **positive perceptions** toward the integration of technology in pedagogy, assessment, and feedback. Teachers are increasingly employing digital applications to create engaging lessons and streamline evaluation, while students experience enhanced motivation, participation, and self-directed learning. Despite these advancements, the findings reveal persistent **institutional and infrastructural challenges** notably unreliable internet connectivity, insufficient training, and limited policy-level support that constrain full digital transformation. Addressing these issues requires a coordinated effort from the Higher Education Commission (HEC), university administrations, and faculty development units to institutionalize digital literacy programs and upgrade educational infrastructure. From a theoretical

standpoint, the study reaffirms the **TPACK and Constructivist Learning frameworks** as effective models for guiding digital integration in ELT contexts. Practically, the results highlight the need for **capacity-**

building initiatives, **technical support mechanisms**, and **inclusive digital policies** tailored to the realities of developing regions like South Punjab.

In conclusion, digital tools hold transformative potential for English language education in Pakistan empowering teachers to innovate and students to learn more interactively. However, realizing this potential depends on sustained institutional commitment, equitable technological access, and continuous professional development. Only through these collective efforts can South Punjab's universities fully harness the promise of digital pedagogy to meet the evolving demands of 21st-century education.

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