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MANAGING DIGITAL LEARNING CULTURES: ORGANIZATIONAL SUPPORT, POLICY, AND MOTIVATION IN ENGLISH LANGUAGE PROGRAMS

***Ahmad Raza**
Ph.D Scholar (English Linguistics), Department of English,
University of Education, Lahore
****Dr. Parveen Akhtar**
Lecturer in Education, University of Education, Lahore
*****Dr. Abdul Rehman**
Lecturer in English, Faculty of Social Sciences, UVAS, Lahore
******Mahnoor Hameed**
Lecturer (English Linguistics) Department of English, University of Okara

Abstract:
Digital transformation has become a structural feature of higher education, especially since the COVID-19 pandemic. In Pakistan, English language programs occupy a strategic position in this transformation because they mediate academic literacy, multilingual communication and the use of learning management systems, video-conferencing tools and AI-mediated writing support. Yet research suggests that sustainable digital learning cultures do not emerge from technology provision alone but depend on institutional support, coherent policy and teachers' motivation. This study investigates how organizational support, institutional digital policy and autonomous motivation interact to shape digital learning cultures in English language programs across universities in Punjab, Pakistan. Guided by a sociocultural–ecological perspective and Self-Determination Theory, an explanatory sequential mixed-methods design was adopted. Survey data from 212 English language teachers in eight universities were analysed using structural equation modelling, followed by semi-structured interviews with 24 teachers and document analysis of institutional digital policies. Results show that perceived organizational support and policy clarity significantly predict digital teaching competence and participation in shared digital practices. Autonomous motivation mediates the relationships between institutional conditions and digital teaching outcomes. Qualitative findings highlight tensions between aspirational policy discourse and infrastructural constraints but also reveal resilient micro-cultures of collaboration within English language units. The article proposes a model of managed digital learning cultures for Pakistani higher education and offers context-sensitive implications for university leadership, policy-makers and language educators.

Keywords: Digital Learning Cultures; Organizational Support; Policy; Teacher Motivation; English Language Teaching; Higher Education; Structural Equation Modelling

List of abbreviations

AI – Artificial intelligence
CFA – Confirmatory factor analysis
EFA – Exploratory factor analysis
ELT – English language teaching
HEC – Higher Education Commission (Pakistan)
LMS – Learning management system
SDT – Self-Determination Theory
SEM – Structural equation modelling
CFI – Comparative Fit Index
TLI –Tucker-Lewis Index
RMSEA – Root Mean Square Error of Approximation
SRMR – Standardized Root Mean Square Residual

1. Background

Digitalisation has shifted from an optional innovation to a defining condition of higher education globally. Researches like (Bond et al., 2021; Chounta et al., 2024; Mulenga & Shilongo, 2024) documents how online, blended and hybrid models are reshaping teaching, assessment and academic management.

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In Pakistan, this transformation accelerated when the Higher Education Commission (HEC) issued online readiness and quality assurance guidelines during COVID-19 and encouraged universities to institutionalise digital systems (Rafique et al., 2021; Zuhairi et al., 2020). Punjab, the most populous province, hosts a dense network of public and private universities that rapidly shifted to LMS-based and video-conferencing platforms. Studies have reported both creative local solutions and deep inequalities in access, infrastructure and staff development (Fatima et al., 2022; Gul et al., 2024; Maan & Malhotra, 2024).

English language programs are especially exposed to these dynamics. They serve large cohorts, function as gateways to disciplinary literacy and frequently pioneer technology use, including corpus tools, online writing platforms and now AI-assisted feedback (Ha, 2024; Kim et al., 2019). However, teachers' experiences of digital change are uneven and often fragile, shaped by workload, institutional support and policy coherence rather than enthusiasm alone (Ashraf, 2025; Usmani et al., 2025).

This article aims by focusing on the human and organizational dimensions of digital technology in higher education, and by analysing how digital learning cultures are managed and experienced in English language programs in universities of Punjab, Pakistan.

The central research question is:

How do organizational support, institutional policy and teacher motivation interact to shape digital learning cultures in Pakistani university English language programs?

Sub-questions are:

1. How do English language teachers in Punjab perceive organizational support and digital policy in their universities?
2. What are the quantitative relations between organizational support, policy clarity, autonomous motivation, digital teaching competence and participation in digital learning culture?
3. How do teachers narrate their experiences of support, constraint and collaboration in building digital learning cultures?

2 Literature review

2.1 Digital learning cultures in higher education

Digital learning culture refers to the shared norms, routines and identities through which students and staff engage with technologies in their everyday academic work (Blayone et al., 2018). It includes availability of tools, but also how departments value digital teaching, how staff collaborate and how assessment is redesigned in digital spaces (Bond et al., 2021; Händel et al., 2020).

Recent publications on emergency remote teaching and post-pandemic online education show that institutional culture conditions whether digital practices are sustainable, equitable and pedagogically meaningful (Bond et al., 2021; Chounta et al., 2024). In Pakistan, surveys during COVID-19 reported that students' readiness for online learning was deeply influenced by institutional infrastructure, social support and digital confidence(Gul et al., 2024; Maan & Malhotra, 2024; Rafique et al., 2021).

2.2 Organizational support for digital teaching

Organizational support includes infrastructure, technical help, pedagogically aligned professional development and recognition of digital labour (Hasim et al., 2022; Kim et al., 2019). When teachers perceive high support, they show stronger acceptance and more sophisticated use of digital technologies (Kim et al., 2019; Zhang et al., 2023). In resource-constrained settings such as many Pakistani universities, gaps in connectivity, hardware and staff development can push teachers towards "minimum survival" uses of technology (Fatima et al., 2022; Usmani et al., 2025). For English language teachers, whose work relies on interaction and feedback, these conditions are critical.

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2.3 Policy frameworks and governance

Institutional policies articulate expectations for LMS utilisation, online assessment, data privacy and, increasingly, AI-assisted tools. Recent work calls for data-informed, evidence-based frameworks to assess digital readiness at institutional level (Chounta et al., 2024). National guidelines in Pakistan created an initial framework for online provision, but universities operationalised these guidelines with varying coherence (Ashraf, 2025; Ellahi & Zaka, 2015).

For ELT programs, policy directly shapes practices such as online speaking assessments, handling of AI-generated writing and multilingual resource use. Policies perceived as rigid or disconnected from classroom realities can produce compliance without genuine engagement (Genç & Kesim, 2023; Misirli & Ergulec, 2021), while participatory and transparent policies are more likely to be experienced as enabling (Mankash et al., 2025; Zareef & Jabeen, 2025).

2.4 Teacher motivation and self-determination

Self-Determination Theory (SDT) suggests that human motivation is shaped by the needs for autonomy, competence and relatedness (Deci & Ryan, 2000). Recent researches in online and blended learning environments show that when these needs are supported, students and teachers show more autonomous forms of motivation, which predict deeper engagement and persistence (Jiang et al., 2024; Shank et al., 2025; Yang et al., 2025; Yuerong et al., 2024).

In ELT, SDT is increasingly used to understand teacher and learner motivation in technology-mediated classrooms (Ha, 2024). Studies of AI and learning dashboards in higher education also indicate that perceived usefulness, ease of use and institutional climate jointly affect motivational orientations (Kim et al., 2019; Velli & Zafiropoulos, 2024; Zhang et al., 2023).

2.5 Research gap

Three gaps are particularly relevant for the present study:

i. **Disciplinary specificity:**
There is limited work that focuses on university English language teachers as a distinct professional group within digital transformation in the Global South (Ha, 2024; Maan & Malhotra, 2024)

ii. **Integrated perspective:**
Organizational support, policy and motivation are often treated separately rather than as interconnected elements of digital learning culture (Ashraf, 2025; Chounta et al., 2024).

iii. **Mixed-methods depth in Pakistan:**
Pakistani studies on digital readiness have mainly used cross-sectional surveys with students; there is space for explanatory mixed-methods designs with university teachers, especially in Punjab (Gul et al., 2024; Rafique et al., 2021; Zeb et al., 2024).

This study addresses these gaps by modelling and qualitatively unpacking how organizational support, digital policy and autonomous motivation jointly shape digital learning cultures in English language programs in Punjab.

3 Theoretical framework

3.1 Sociocultural–ecological view

A sociocultural–ecological lens treats digital learning as embedded in layered systems: tools, classroom practices, departmental norms, institutional leadership and national policies (Blayone et al., 2018; Bond et al., 2021). Universities in Punjab navigate HEC directives, infrastructural constraints and internal governance practices, all of which condition digital cultures in ELT units.

3.2 Self-Determination Theory

SDT provides a framework for understanding how institutional conditions influence teachers' motivation for digital teaching (Deci & Ryan, 2000). When teachers experience autonomy (choice in tools and methods), competence (confidence with digital platforms) and relatedness

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(supportive colleagues and leaders), they are more likely to internalise digital practices and sustain them over time (Jiang et al., 2024; Shank et al., 2025; Yang et al., 2025; Yuerong et al., 2024).

3.3 Conceptual model and hypotheses

Drawing on digital readiness, SDT literature like (Chounta et al., 2024; Kim et al., 2019; Zhang et al., 2023), the study proposes a model linking:

- Perceived organizational support
- Perceived policy clarity and fairness
- Autonomous digital motivation
- Digital teaching competence
- Participation in digital learning culture

The hypotheses are:

- H1: Organizational support positively predicts digital teaching competence.
- H2: Organizational support positively predicts policy clarity and fairness.
- H3: Policy clarity positively predicts digital teaching competence.
- H4: Organizational support positively predicts autonomous digital motivation.
- H5: Autonomous motivation positively predicts (a) digital teaching competence and (b) participation in digital learning culture.
- H6: Autonomous motivation mediates the effects of organizational support and policy clarity on digital teaching competence.

4 Methods

4.1 Research design

An explanatory sequential mixed-methods design was adopted. A survey and SEM were used to test the conceptual model, followed by interviews and document analysis to deepen interpretation. Such designs are increasingly used in digital readiness and technology-acceptance studies in higher education (Chounta et al., 2024; Rafique et al., 2021; Shank et al., 2025).

4.2 Context and participants

The study was conducted in eight public and private universities in Punjab, all offering undergraduate and/or postgraduate English language programs.

- **Quantitative phase:** 212 English language teachers completed an online questionnaire (approximate response rate 60%). Participants included lecturers, assistant professors, associate professors and professors, with teaching experience ranging from 1 to 28 years.
- **Qualitative phase:** 24 teachers were purposively selected from survey respondents for maximum variation (institution type, gender, experience, self-reported digital competence).

4.3 Instruments

4.3.1 Survey

The survey used five multi-item scales, rated from 1 (strongly disagree) to 5 (strongly agree). Items were adapted from existing scales and tailored to the Pakistani ELT context.

1. **Organizational digital support** (8 items) – infrastructure, technical assistance, digital leadership and professional development (Hasim et al., 2022; Kim et al., 2019).
2. **Policy clarity and fairness** (7 items) – transparency and perceived justice of digital policies (LMS, online assessment, AI tools).
3. **Autonomous digital motivation** (7 items) – reasons for engaging in digital teaching aligned with interest, values and professional identity (Huang et al., 2024; Shank et al., 2025).
4. **Digital teaching competence** (8 items) – confidence in designing, facilitating and assessing online or blended English courses.
5. **Participation in digital culture** (6 items) – sharing digital resources, mentoring colleagues, participation in communities of practice.

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The instrument was piloted with 15 English language teachers from one university in Punjab; wording was refined for clarity and cultural congruence.

4.3.2 Interview protocol

Semi-structured interviews explored:

- experiences of digital teaching in English language courses;
- perceptions of organizational and leadership support;
- interactions with institutional digital policies;
- sources of motivation and demotivation;
- concrete examples of "digital culture moments" (collaboration, innovation, resistance).

Interviews were conducted via Zoom or WhatsApp video in English, Urdu or a mix, and later transcribed into English.

4.3.3 Document corpus

Relevant documents were gathered from university websites and participants:

- institutional digital or ICT strategies;
- LMS and online assessment guidelines;
- policies on plagiarism, AI and academic integrity;
- staff development and workload norms.

These texts were used to compare formal policy with teacher narratives (Ashraf, 2025; Chounta et al., 2024).

4.4 Procedure

After institutional permissions, programme heads distributed the survey link through official email and departmental WhatsApp groups. Participation was voluntary and anonymous. Teachers who agreed to be interviewed left contact details at the end of the form.

Interviews (40–70 minutes) were recorded with consent. Policy documents were either downloaded from websites or shared by participants.

4.5 Data analysis

4.5.1 Quantitative analysis

Data screening, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM) were conducted using standard procedures. Reliability, convergent validity and discriminant validity were examined through Cronbach's alpha, composite reliability (CR) and average variance extracted (AVE). Model fit was evaluated using CFI, TLI, RMSEA and SRMR (Kim et al., 2019; Zhang et al., 2023).

4.5.2 Qualitative analysis

Interview transcripts were analysed using reflexive thematic analysis. Initial codes focused on support experiences, policy interactions, motivational narratives and collaborative practices. Codes were iteratively grouped into themes, and representative excerpts were selected. Document analysis focused on policy framings, expectations of staff, AI and assessment regulations, and alignment with teacher accounts.

4.6 Ethics

Ethical approval was granted by the research ethics committee of University of Education in Punjab. Informed consent was obtained from all participants. Pseudonyms are used in reporting; institutional names and identifying details were removed to preserve confidentiality.

5 Results

5.1 Descriptive statistics and reliability

Teachers reported moderately positive perceptions of digital teaching and culture (Table 1).

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Table 1

Descriptive statistics and internal consistency for key constructs (N = 212)

Construct	M	SD	α
Organizational digital support	3.43	0.86	.89
Policy clarity and fairness	3.09	0.79	.85
Autonomous digital motivation	3.61	0.68	.87
Digital teaching competence	3.72	0.64	.90
Participation in digital learning culture	3.58	0.71	.88

Note. M = mean; SD = standard deviation; α = Cronbach's alpha.

Perceived organizational support showed the greatest variability, indicating differences in resourcing and leadership across universities of Punjab.

The descriptive statistics indicate generally positive perceptions across all five constructs measured in the study.

Organizational digital support shows a moderate mean score (M = 3.43, SD = 0.86), suggesting that participants perceive a fair level of institutional assistance for digital practices. Policy clarity and fairness records the lowest mean (M = 3.09, SD = 0.79), implying some ambiguity or perceived inconsistency in digital policy frameworks. In contrast, autonomous digital motivation reflects a comparatively higher endorsement (M = 3.61, SD = 0.68), indicating that respondents feel intrinsically motivated to engage with digital tools.

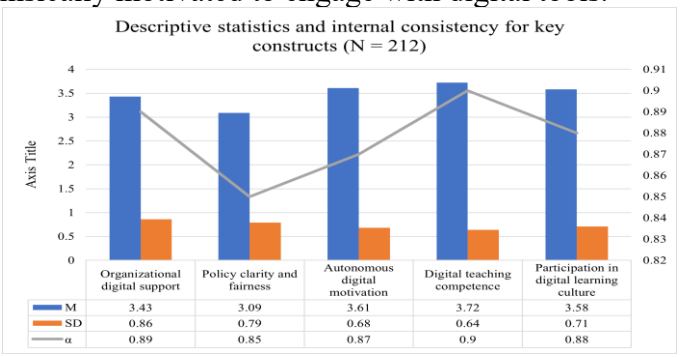

Figure 1: Descriptive statistics and internal consistency

Digital teaching competence yields the highest mean score (M = 3.72, SD = 0.64), demonstrating strong self-reported confidence in pedagogical use of digital technologies. Participation in the broader digital learning culture is also positively rated (M = 3.58, SD = 0.71), showing that respondents actively engage in collaborative and culturally embedded digital learning practices.

All constructs exhibit high internal reliability, with Cronbach's alpha values ranging from .85 to .90, confirming the consistency of the measurement scales.

5.2 Measurement model

CFA supported a five-factor structure with good fit (CFI = .95, TLI = .94, RMSEA = .05, SRMR = .04). All factor loadings were significant and above .60. Composite reliability and AVE values indicated satisfactory reliability and convergent validity (Table 2).

Table 2

Measurement model: Factor loading ranges, composite reliability and AVE

Construct	Loading range	CR	AVE
Organizational digital support	.68 – .87	.91	.63
Policy clarity and fairness	.66 – .84	.88	.59
Autonomous digital motivation	.69 – .89	.90	.61
Digital teaching competence	.71 – .88	.92	.65

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Participation in digital learning culture	.70 – .86	.89	.60

Note. CR = composite reliability; AVE = average variance extracted.

Square roots of AVE values exceeded inter-construct correlations, supporting discriminant validity.

The measurement model demonstrates satisfactory convergent validity and reliability across all five constructs. The factor loadings for each construct fall within acceptable to strong ranges, with values exceeding the recommended threshold of .60.

Organizational digital support shows loadings between .68 and .87, while policy clarity and fairness ranges from .66 to .84, indicating that the items consistently capture their intended dimensions. Similarly, autonomous digital motivation (.69–.89), digital teaching competence (.71–.88), and participation in digital learning culture (.70–.86) all exhibit strong item contributions.

Composite reliability (CR) values further support the internal consistency of the scales. All constructs report CR values between .88 and .92, which surpass the recommended minimum criterion of .70. This indicates stable and dependable measurement of each latent variable.

The average variance extracted (AVE) values, ranging from .59 to .65, also meet the standard threshold of .50, confirming convergent validity. These results suggest that each construct captures a substantial portion of the variance in its items and that the indicators collectively provide a robust representation of the underlying theoretical dimensions.

5.3 Structural model

The proposed structural model showed acceptable fit (CFI = .93, TLI = .92, RMSEA = .06, SRMR = .05). All hypothesised paths were significant in the expected direction (Table 3).

Table 3

Standardised structural path coefficients and hypothesis testing

Hyp.	Path	β	p	Supported
H1	Organizational support → Digital competence	.42	< .001	Yes
H2	Organizational support → Policy clarity	.58	< .001	Yes
H3	Policy clarity → Digital competence	.21	.007	Yes
H4	Organizational support → Autonomous motivation	.47	< .001	Yes
H5a	Autonomous motivation → Digital competence	.35	< .001	Yes
H5b	Autonomous motivation → Participation in culture	.51	< .001	Yes
H6	Indirect effects via motivation (overall)	—	< .01	Yes

Note. β = standardised regression coefficient.

The model explained 64% of the variance in digital teaching competence, 39% in autonomous motivation, 34% in policy clarity and 41% in participation in digital learning culture.

Table 3 presents the standardized structural path coefficients used to evaluate the hypothesised relationships within the proposed model. The results indicate strong support for all hypotheses. Organizational digital support shows a significant positive effect on both digital teaching competence ($\beta = .42$, $p < .001$) and policy clarity and fairness ($\beta = .58$, $p < .001$), suggesting that institutional backing directly strengthens teachers' digital readiness and enhances the transparency of digital policies.

Policy clarity and fairness also contributes positively to digital competence ($\beta = .21$, $p = .007$), although its effect is smaller in magnitude compared to organizational support. Moreover, organizational support demonstrates a substantial influence on autonomous digital motivation

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(β = .47, p < .001), indicating that supportive environments foster intrinsic motivation to use digital tools.

Autonomous motivation, in turn, significantly predicts both digital competence (β = .35, p < .001) and participation in the digital learning culture (β = .51, p < .001). These findings highlight motivation as a central mechanism linking institutional support to digital engagement and capability.

Finally, the indirect effects assessed through autonomous motivation are also statistically significant (p < .01), confirming that motivation serves as a meaningful mediating pathway within the structural model.

5.4 Qualitative themes

Thematic analysis identified three main themes that illuminate the quantitative model (Table 4).

Table 4

Themes from qualitative analysis of interviews (n = 24)

Theme	Brief description	Illustrative focus
Support as safety net	Support understood as infrastructure, guidance and emotional backing	Feeling "protected" when systems fail
Policy as shield and pressure	Policies provide legitimacy but can also feel unrealistic	Using policy to justify digital rules to students
Micro-cultures of situated innovation	Informal communities compensate for limited formal training	WhatsApp groups, peer workshops, shared ELT materials

Table 4 summarises the three major themes that emerged from the qualitative interviews with 24 participants.

5.4.1 Support as safety net

The first theme, *Support as a safety net*, reflects how teachers interpret institutional support not only as technical infrastructure but also as a form of emotional and procedural security. Participants described feeling "protected" when digital systems malfunctioned, suggesting that support mechanisms help reduce anxiety and create a buffer during technological breakdowns. Teachers differentiated between minimal support ("just an LMS login") and richer support that combined infrastructure, timely technical help and emotional reassurance. In relatively well-resourced universities, participants described a sense of safety—if a platform failed, leaders acknowledged systemic issues rather than blaming individuals. In other institutions, teachers narrated solitary late-night troubleshooting to keep classes running, echoing international reports of stress and burnout during emergency remote teaching (Bond et al., 2021; Misirli & Ergulec, 2021).

5.4.2 Policy as both shield and pressure

The second theme, *Policy as shield and pressure*, captures a dual perception of institutional policies. While policies offer legitimacy and provide a formal basis for enforcing digital expectations for instance, when explaining rules to students they are also experienced as demanding or unrealistic. This indicates a tension between policy intent and the everyday realities of digital classroom management.

Digital policies were experienced ambivalently. Clear guidelines on LMS use, attendance, online examination and AI-generated text gave teachers a "shield" when negotiating with students about deadlines, camera use and academic integrity. At the same time, some policies were perceived as imposed from above, without sufficient consultation with ELT practitioners in Punjab, and as insensitive to infrastructural realities such as unstable electricity or

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overloaded home internet. This aligns with global critiques of top-down digital governance (Chounta et al., 2024; Genç & Kesim, 2023).

5.4.3 Micro-cultures of situated innovation

The third theme, *Micro-cultures of situated innovation*, highlights the importance of informal networks in shaping digital teaching practices. Participants pointed to peer-led WhatsApp groups, small-scale workshops, and the circulation of shared ELT materials as practical resources that compensate for limited formal training. These micro-communities serve as agile spaces for experimentation, mutual support, and context-appropriate innovation.

Across universities, teachers narrated small but significant practices of collaboration: sharing Moodle quizzes, co-creating speaking tasks on WhatsApp, testing AI writing tools together and mentoring junior colleagues. These micro-cultures, often located within English language departments, acted as local engines of innovation, compensating for limited formal training. They resemble grassroots communities of practice reported in other EFL emergency remote teaching contexts (Ha, 2024; Misirli & Ergulec, 2021).

Overall, the themes demonstrate that teachers' digital engagement is shaped by both formal structures and grassroots collaborative practices.

6 Discussion

6.1 Organizational support as backbone of digital learning cultures

The strong effect of organizational support on digital competence, policy clarity and autonomous motivation aligns with research on digital readiness in higher education (Chounta et al., 2024; Hasim et al., 2022; Kim et al., 2019). In the Pakistani context, this finding underscores that English language teachers' digital practices cannot be reduced to individual "innovativeness." Instead, they are structurally shaped by the presence or absence of stable infrastructure, responsive IT support, targeted professional development and symbolic recognition.

The results extend Pakistani work on student readiness (Gul et al., 2024; Maan & Malhotra, 2024; Rafique et al., 2021; Zeb et al., 2024) by showing that teachers' sense of competence and participation in digital learning culture is similarly contingent on institutional support.

6.2 Policy clarity as mediating layer

The positive paths from organizational support to policy clarity and from policy clarity to digital competence suggest that supportive institutions tend to produce clearer and more actionable digital policies. These policies reduce uncertainty for teachers, particularly when managing online assessment, attendance and AI-assisted writing in English courses (Ashraf, 2025).

However, qualitative findings reveal that policy is also a source of pressure when it does not reflect infrastructural realities in Punjab. This tension resonates with broader critiques of emergency remote teaching policies that assume homogeneous access and capacity(Bond et al., 2021; Genç & Kesim, 2023; Misirli & Ergulec, 2021). For ELT in Pakistan, participatory policy processes that explicitly integrate teacher voices from diverse universities appear crucial.

6.3 Autonomous motivation as human hinge

The mediating role of autonomous motivation between institutional conditions and digital competence is consistent with SDT-based studies of online learning (Jiang et al., 2024; Shank et al., 2025; Yang et al., 2025; Yuerong et al., 2024). Teachers felt most motivated when digital tools were aligned with their pedagogical values, supporting interaction, feedback and creativity and when they had real choice in platforms and methods.

Conversely, when infrastructure was fragile and digital work undervalued, teachers described compliance-driven, controlled forms of motivation. The strong path from autonomous motivation to participation in digital learning culture indicates that motivation is not only about

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individual performance; it also shapes the extent to which teachers invest in communities of practice and share digital innovations.

6.4 A model of managed digital learning cultures in Punjab

Overall, the study supports a model in which organizational support influences policy clarity and autonomous motivation, which in turn drive digital competence and participation in digital learning culture. For universities in Punjab, managing digital learning cultures in English language programs requires sustained attention to:

- supportive infrastructures and leadership;
- policy frameworks co-constructed with ELT practitioners; and
- motivational climates that respect teacher autonomy and professionalism.

This emphasis on human-centred perspectives in educational technology and highlights how these principles play out in a low- to middle-income context.

7 Implications for practice

7.1 University leadership

- Position English language programs as strategic partners in digital transformation, given their central role in academic literacy and large student enrolments.
- Provide visible support structures such as instructional design units, language-focused ed-tech mentors and responsive IT helpdesks, and communicate clearly how teachers can access these resources.
- Incorporate digital teaching and innovation into workload models and promotion criteria to recognise the additional labour involved.

7.2 Policy-makers and quality assurance units

- Design and revise digital policies through consultative processes that include English language teachers from diverse universities in Punjab.
- Ensure that regulations on AI-assisted writing, oral assessment and LMS use are explicit but flexible enough to accommodate infrastructural variation.
- Use data-informed cycles of review, where policy changes are based on evidence from usage statistics, satisfaction surveys and equity indicators (Chounta et al., 2024).

7.3 Professional development centres

- Offer discipline-sensitive training that uses ELT examples rather than generic tool demonstrations.
- Support existing communities of practice with micro-grants, recognition and opportunities to showcase departmental innovations.
- Integrate SDT principles into training, helping teachers to experience autonomy, competence and relatedness in digital teaching environments.

7.4 English language teachers

- Participate actively in institutional debates on digital strategy and policy, bringing classroom realities from Punjab into decision-making spaces.
- Document and share low-cost, context-sensitive digital practices that work in large or resource-constrained classes.

8 Limitations and future research

This study has several limitations. First, the quantitative data rely on self-report measures; future work might triangulate with classroom observations, usage analytics or student perspectives. Second, the focus on universities in Punjab limits generalisability; comparative research with institutions in other provinces and countries would clarify which aspects of the model are context-specific. Third, the cross-sectional design captures a snapshot rather than the evolution of digital learning cultures; longitudinal or participatory action research could trace how cultures shift in response to policy changes, infrastructural investments or AI adoption.

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Future research could also examine:

- how students experience digital learning cultures in ELT courses and how their perspectives align with teachers';
- the impact of generative AI on teachers' identities, workload and assessment practices in Pakistan; and
- how decolonial and linguistic justice perspectives might reframe digitalisation in multilingual higher education systems such as Pakistan's.

9 Conclusion

Digital learning cultures in Pakistani university English language programs arise from the interaction of organizational support, policy clarity and autonomous motivation, rather than from technology alone. Using an explanatory sequential mixed-methods design with teachers from universities of Punjab, this study shows that supportive institutions with coherent policies foster higher digital competence and stronger participation in shared digital practices, largely by nurturing autonomous forms of motivation.

By situating these findings in the sociocultural and infrastructural realities of Pakistan, the study contributes to advance human-centred understandings of educational technology in higher education. For university leaders, policy-makers and ELT practitioners, the challenge is to move from emergency or ad-hoc arrangements towards managed digital learning cultures that are sustainable, equitable and grounded in the professional wisdom of teachers.

Declarations

Availability of data and materials

The datasets generated and analysed during the current study are not publicly available due to institutional confidentiality agreements but are available from the corresponding author on reasonable request.

Competing interests

The author declares no competing interests.

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References

Ashraf, A. (2025). Digital Technologies and Pakistani Universities in the Backdrop of COVID-19: Looking Back to Look Forward. *Journal of Educational Technology Systems*, *54*(1), 202-228. https://doi.org/10.1177/00472395251339579

Blayone, T. J. B., Mykhailenko, O., Kavtaradze, M., Kokhan, M., vanOostveen, R., & Barber, W. (2018). Profiling the digital readiness of higher education students for transformative online learning in the post-soviet nations of Georgia and Ukraine. *International Journal of Educational Technology in Higher Education*, *15*(1), 37. https://doi.org/10.1186/s41239-018-0119-9

Bond, M., Bedenlier, S., Marín, V. I., & Händel, M. (2021). Emergency remote teaching in higher education: mapping the first global online semester. *International Journal of Educational Technology in Higher Education*, *18*(1), 50. https://doi.org/10.1186/s41239-021-00282-x

Chounta, I.-A., Ortega-Arranz, A., Daskalaki, S., Dimitriadis, Y., & Avouris, N. (2024). Toward a data-informed framework for the assessment of digital readiness of higher education institutions. *International Journal of Educational Technology in Higher Education*, *21*(1), 59. https://doi.org/10.1186/s41239-024-00491-0

Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry*, *11*(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01

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JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

Ellahi, A., & Zaka, B. (2015). Analysis of Higher Education Policy Frameworks for Open and Distance Education in Pakistan. *Evaluation Review*, *39*(2), 255-277. https://doi.org/10.1177/0193841x15570046

Fatima, Q., Mahmood, S., & Lodhi, H. (2022). Online Transformation of Learning during Covid-19 at Higher Education Institutions. *Journal of Development and Social Sciences*, *3*(2), 964-971.

Genç, H., & Kesim, M. (2023). Weaknesses in Emergency Remote Teaching in Higher Education Within the Context of the ODL Learning Component in Turkey. *The International Review of Research in Open and Distributed Learning*, *24*(4), 252-269.

Gul, S., Mohyuddin, R., & Ansari, M. (2024). Readiness Assessment for Online Learning among Students in Public Sector Universities. *Global Social Sciences Review*, *9*(3), 8-20.

Ha, T. B. L. (2024). Exploring Self-Determination Theory in ELT: A Content Analysis of Research Trends between 2020 and 2024. ICTE Conference Proceedings,

Händel, M., Stephan, M., Gläser-Zikuda, M., Kopp, B., Bedenlier, S., & Ziegler, A. (2020). Digital readiness and its effects on higher education students' socio-emotional perceptions in the context of the COVID-19 pandemic. *Journal of Research on Technology in Education*, *54*(2), 267-280. https://doi.org/10.1080/15391523.2020.1846147

Hasim, M. A., Jabar, J., Sufian, A., & Ibrahim, N. F. (2022). Validating the component of E-learning antecedents, digital readiness and usage behavior towards E-learning performance: A pilot study. *International Journal of Learning, Teaching and Educational Research*, *21*(10), 178-194.

Huang, Z.-N., Chen, H.-W., & Lai, C.-L. (2024). Analyzing Children's Viewing Behaviors in Science Demonstrations with and Without Interactive E-Book Support. *Journal of Science Education and Technology*, *33*(5), 779-795. https://doi.org/10.1007/s10956-024-10120-0

Jiang, R., Zhu, Y., & Lin, X. (2024). The dynamics of servant leadership: manager sleep, daily servant leadership and employee work engagement. *Current Psychology*, *43*(32), 26415-26426. https://doi.org/10.1007/s12144-024-06304-x

Kim, H. J., Hong, A. J., & Song, H.-D. (2019). The roles of academic engagement and digital readiness in students' achievements in university e-learning environments. *International Journal of Educational Technology in Higher Education*, *16*(1), 21. https://doi.org/10.1186/s41239-019-0152-3

Maan, A., & Malhotra, K. (2024). Mapping Students' Readiness for E-Learning in Higher Education: A Bibliometric Analysis. *Journal of Learning for Development*, *11*(1), 27-51.

Mankash, M. A., Ahmed, S. T., Shabbir, N., & Imran, M. (2025). Second language learning in the digital age: How technology shapes language acquisition at universities in Karachi, Pakistan. *Liberal Journal of Language & Literature Review*, *3*(1), 182-199.

Misirli, O., & Ergulec, F. (2021). Emergency remote teaching during the COVID-19 pandemic: Parents experiences and perspectives. *Education and Information Technologies*, *26*(6), 6699-6718. https://doi.org/10.1007/s10639-021-10520-4

Mulenga, R., & Shilongo, H. (2024). Hybrid and Blended Learning Models: Innovations, Challenges, and Future Directions in Education. *Acta Pedagogia Asiana*, *4*(1), 1-13. https://doi.org/10.53623/apga.v4i1.495

Rafique, G. M., Mahmood, K., Warraich, N. F., & Rehman, S. U. (2021). Readiness for Online Learning during COVID-19 pandemic: A survey of Pakistani LIS students. *The Journal of Academic Librarianship*, *47*(3), 102346. https://doi.org/https://doi.org/10.1016/j.acalib.2021.102346

Shank, E., Tang, H., & Morris, W. (2025). Motivation in online course design using self-determination theory: an action research study in a secondary mathematics course. *Educational technology research and development*, *73*(1), 415-441. https://doi.org/10.1007/s11423-024-10410-9

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

Usmani, A., Akhtar, S., & Zahra, F. (2025). From the Brick-and-Mortar Campuses to the Screen: Teachers' Readiness for Online Teaching in Higher Education Institutions. *Review of Education, Administration & Law*, *8*(1), 99-113.

Velli, K., & Zafiropoulos, K. (2024). Factors That Affect the Acceptance of Educational AI Tools by Greek Teachers—A Structural Equation Modelling Study. *European Journal of Investigation in Health, Psychology and Education*, *14*(9), 2560-2579. https://www.mdpi.com/2254-9625/14/9/169

Yang, Y., Chen, J., & Zhuang, X. (2025). Self-determination theory and the influence of social support, self-regulated learning, and flow experience on student learning engagement in self-directed e-learning [Hypothesis and Theory]. *Frontiers in Psychology*, *Volume 16 - 2025*. https://doi.org/10.3389/fpsyg.2025.1545980

Yuerong, L., Na, M., Xiaolu, Y., & Alam, S. S. (2024). Self-determination and perceived learning in online learning communities. *Scientific Reports*, *14*(1), 24538. https://doi.org/10.1038/s41598-024-74878-4

Zareef, M., & Jabeen, M. (2025). Awareness of digital curation policy and legal framework among university librarians of Pakistan. *Journal of Librarianship and Information Science*, *0*(0), 09610006251318358. https://doi.org/10.1177/09610006251318358

Zeb, J., Ahmad, I., & Deeba, F. (2024). Effect of Digital Stress on Students' Online Learning Readiness: University Students' Standpoint. *Pakistan Languages and Humanities Review*, *8*(1), 60-72.

Zhang, C., Schießl, J., Plößl, L., Hofmann, F., & Gläser-Zikuda, M. (2023). Acceptance of artificial intelligence among pre-service teachers: a multigroup analysis. *International Journal of Educational Technology in Higher Education*, *20*(1), 49. https://doi.org/10.1186/s41239-023-00420-7

Zuhairi, A., Raymundo, M. R. D. R., & Mir, K. (2020). Implementing quality assurance system for open and distance learning in three Asian open universities: Philippines, Indonesia and Pakistan. *Asian Association of Open Universities Journal*, *15*(3), 297-320. https://doi.org/10.1108/aaouj-05-2020-0034