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Institutional Context Mapping in Needs Analysis for Flipped Genre-Based Writing Pedagogy: A Qualitative Inquiry

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This study examines the institutional context that underpins English for Specific Purposes (ESP) teachers' readiness for implementing flipped, genre-based writing instruction in Pakistani higher education institutions. Grounded in (Dijk, 2005) Four Levels of Digital Divide: motivational, material, skills, and usage, it employs a qualitative exploratory-descriptive study design to map institutional access, infrastructure, and support structures across twelve universities. Data was collected through an open-ended questionnaire from ESP teachers. Deductive and inductive thematic analysis (Braun & Clarke, 2006) was conducted. Seven key dimensions emerged inductively through thematic analysis: technology infrastructure, policy support, professional development, administrative encouragement, curriculum flexibility, peer collaboration, teacher motivation and initiative. Findings reveal varied levels of institutional preparedness, with significant disparities in professional development opportunities, infrastructural support, and policy orientation towards blended or flipped learning. While some universities show promise in fostering teacher motivation and informal peer support, a lack of contextualised training and integrated digital policy limits the effective adoption of flipped genre-based pedagogy. The study highlights the importance of aligning institutional readiness with teachers' pedagogical and digital needs and offers recommendations for targeted teacher training, policy formulation, and resource allocation to bridge the digital divide in ESP writing instruction .

***Keywords*:** context mapping, digital divide, thematic analysis, institutional readiness

The role of digital technologies in English language teaching (ELT) has fueled substantial pedagogical change, especially with English as a Specific Purpose (ESP) program, whereby the need to develop specialised academic and professional writing skills (Din, 2025) and competencies has been increasing. In this changing environment, flipped genre-based pedagogy as a new and plausible teaching model has also provided and linked the multi-faceted interactive and student-centred features inherent in flipped learning (Bahadur & Akhtar, 2021; Bauer-Ramazani et al., 2016; Cummings, 2016; Kostka, 2023; Kostka & Marshall, 2018), with the systematic scaffolding involved in genre-based writing pedagogies in the context of systemic functional linguistics(Adhami & Taghizadeh, 2024; Ghufron & Nurdianingsih, 2021; Hyland, 2007). A hybrid solution allows learners to acquire genre features independently after the classroom and use classroom time to receive instructor feedback and work in groups. A number of studies point to the fact that its integration can lead to positive changes in the academic writing performance of the learners, especially in ESP environments (Teng et al., 2024).

Despite growing global interest, the uptake of flipped genre-based instruction across low- and middle-income countries (LMICs) including Pakistan, has been somewhat patchy and limited by structural inequalities. They are technological infrastructure gaps, scant professional development opportunities, and the lack of policy frameworks (Afridi & Chaudhry, 2019; Saeed & Rasul, 2023). Specifically, public universities

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have frequent structural constraint issues, outdated LMS environments, and heterogeneous institutional support due to the lack of pedagogical consistency, which is also common in private universities, that they are usually more prepared to act digitally. This institutional heterogeneity will have serious implications for how teachers can positively and sustainably embrace and transform digitally mediated pedagogies.

In an attempt to gain a greater insight into the stratified character of these issues, scholars have increasingly turned to the Four Levels of Digital Divide Framework initially proposed by Dijk (2005, 2020), which conceives of digital inequality not as an issue of technological access, but rather as a series of motivational, material, skills-related, and usage-focused inequalities. Motivational access deals with the attitudes and intentions of the teachers to adopt technology; material access deals with the availability of devices, internet, digital tools; skills access mentions competencies required to effectively use digital resources; and usage access mentions the meaningful incorporation of these tools in the real classroom practice (Dijk, 2020; Wei et al., 2011). Such layers of access are strongly interwoven with institutional support systems, such as professional training, peer cooperation, and administrative support, as well as flexibility of curriculum (Ertmer & Ottenbreit-Leftwich, 2010; Howard et al., 2021).

Although flipped learning and genre-based pedagogy are increasingly popular in the academic world, the current body of literature is characterized by an evident lack of scope and analytical depth. Even though systematic reviews have been used to establish the benefits and challenges of flipped classes across different fields (e.g., student engagement, use of tools, and pedagogical activities), little research has been performed that directly addresses how institutional factors influence the ability of teachers to enact flipped pedagogy of writing using genre as a means of teaching writing in ESP. Studies of flipped learning tend to center on the results of the learners or single classroom-based intervention (e.g., reading/writing achievement) (Khosravi et al., 2023) or on the technology tool more generally, ignoring the institutional aspect of flipped learning, through support of leadership, policy frameworks, digital infrastructure and professional development systems that empower or limit teacher action. In addition, although the genre pedagogy has been discussed in the context of classroom instruction and writing assessment literacy, there is little evidence regarding how institutional preparedness leads to the incorporation of genre-based and flipped instructional paradigm by ESP teachers, particularly within several universities.

These constraints inform the necessity of studies that combine institutional and pedagogical approaches to offer more in-depth research on flipped genre-based writing pedagogy. In particular, it is possible to identify a gap in inter-institutional research that tracks the correspondence and/or discrepancy of contextual factors (e.g., digital ecosystem, administrative support, policy clarity, and teacher motivation) across the environment of higher education. Even though reviews of flipped classrooms focus on the use of technology and overall challenges (Baig & Yadegaridehkordi, 2023), and empirical studies on digital pedagogical preparedness focus on general professional developmental additions and systemic constraints (Yulin & Danso, 2025), there is an immediate demand to conduct empirically based and context-specific research that links institutional preparedness to the needs of teachers and the results of instruction in writing in ESP. This would also respond to more recent demands to undertake more subtle research in the flipped classroom in language learning and higher education.

Nevertheless, it is worth noting that, although the international literature acknowledges the importance of flipped instruction teacher readiness and institutional alignment (Al-Samarraie et al., 2020; Graham, 2013), a lack of empirical research studying institutional context mapping in South Asian location contexts has yet to gain additional attention. Where institutional policies are vague or absent, teachers are often left to navigate digital integration independently, leading to inconsistent implementation. Moreover, without targeted professional development on both technological tools and genre-based methods, teachers struggle to bridge theory and practice (Borg, 2015; Hrastinski, 2021). There is a lack of research that investigates systematically the relationships between the digital and pedagogical preparedness of ESP teachers based on their institutional environments such as policy support, leadership, and/or access to peer networks (Baig & Yadegaridehkordi, 2023; Basturkmen, 2014, 2019). Where the constraints of teacher agency in LMICs can be circumscribed by more fundamental structural obstacles, the practical utility of flipped genre-based models is restricted by a lack of contextualised inquiry.

To fill these research gaps, this research contributes to the discipline through a multi-institutional contextual mapping of the ESP teacher's preparedness to adopt flipped genre-based writing pedagogy within various higher education institutions in Pakistan. The study has a broad institution-level perspective, in contrast to other studies that emphasize classroom interventions or the impact of such interventions on students, which includes qualitative teacher narratives and quantified readiness profiles on seven dimensions based on the Van Dijk digital divide model. In such a way, it provides the initial systematic cross-university comparison of the interaction of material infrastructure, policy support, curricular flexibility, peer collaboration, and teacher motivation to influence the development of digital pedagogical practices in ESP writing. This allows the expression of specific needs and facilitated by an empirically grounded model, which can be used to inform institutional policy, professional development curriculum, and more extensive digital equity initiatives in language education - an innovation that has remained largely silent in the flipped and genre-based literature to date.

Responding directly to the previous research, this study addressed the guiding question how do ESP teachers' experiences and perceptions across various higher education institutions indicate the interplay between digital divide access levels (motivational, material, skills, usage) and institutional pedagogical support dimensions in the process of implementation of flipped genre-based writing pedagogy? The readiness-oriented analysis of several universities indicates that the willingness and the pedagogical awareness of teachers to implement the adapted forms of flipped genre-based do not mainly restrict the potential of adopting these strategies, but rather, it is the imbalance of institutional environments. The differences in digital infrastructure, clarity of policy, professional growth, administrative leadership, curricular flexibility, and collaboration with peers all mediate the teacher having motivational, material, skills, and usage related access to digital pedagogy. With supportive contextual conditions, teachers felt free to explore and apply flipped strategies and genre-based scaffolding more intentionally and effectively in the institutions where these conditions were created to support them. On the other hand, in low-resource or inadequately managed settings, pedagogical intention of teachers was often limited by structural constraints to which they had no control. This analysis places institutional context, as a core unit of analysis, in the spotlight as flipped learning and genre pedagogy have been previously analyzed through the prism of the classroom or a tool and proposes a multi-institutional mapping of the needs of ESP teachers. Through this, it offers empirical support that the systematic adoption of flipped genre-based writing teaching needs organized institutional investment as opposed to individual action and thus adds a context-specific framework of comprehending the digital pedagogical preparedness in ESP contexts.

Method

Research Design

The present study used a qualitative exploratory-descriptive research design (Merriam & Tisdell, 2016) to examine institutional readiness and contextual barriers that influenced the process of implementing flipped genre-based writing pedagogy in English for Specific Purposes (ESP) courses. This paper aimed at examining the enablers and constraints at the institutional level in particular through the theoretical lens of Four Levels of Digital Divide (motivational, material, skills, usage) proposed by Van Dijk (2020). The study employed a multi-site institutional context mapping to gain insights about differences within the Pakistani universities.

Research Context and Participants

This study stems from a larger survey conducted for doctoral research. Whereas initial responses were received from 28 universities, the current study underscores data in 12 universities through a purposeful maximum variation sampling approach (Patton, 2015). This methodology was carefully selected to ensure balanced representation, as 8 institutions out of a total of 24 in Punjab were chosen purposefully to reflect the province's diverse landscape. Two of the other four institutions were from Sindh, one from Baluchistan and one from Khyber Pakhtunkhwa (KPK). These institutions were all public except one private university with diverse technological, curricular, and administrative settings. The participants were ESP teachers (N=43) on access levels 1, 2, 3, and 4 purposively selected based on their engagement in teaching academic or

professional writing in English and their willingness to adopt technology-enhanced instruction. These 12 universities offered a deep range of cases that contributed to establishing the opposing and complementary trends associated with ESP teachers' preparedness pertaining to genre-based flipped pedagogy. Table 1 identifies the main characteristics of the institutions and the number of participants in the study.

Also, data saturation was already achieved at the point of analysing responses given by these 12 institutions. Common themes were also recurring within this subset, which indicated that an extended set of data, gathered in the other institutions, would probably bring about redundant insights instead of new ones (Guest et al., 2006).

Table 1

Information about Data Collection Institutions and the number of Participant Teachers

Site code	Regional Location	Province	Geographical Location	City/Campus	Participant teachers
NSC1	North/South Central	Federal/Punjab	Urban	Islamabad/Multan	3
SC1	South-Central	Punjab	Rural	Chakwal	4
S1	South	Sindh	Urban but under-resourced area of Karachi	Layari, Karachi	1
N1	North	Federal	Urban	Islamabad	3
N2	North	Federal	Urban	Islamabad	4
N3	North	Punjab	Urban	Rawalpindi	10
NE1	North-East	KPK	Semi-Urban	Risalpur	1
NEC1	North/East Central	Federal/ Punjab	Urban	Islamabad/Faisalabad	9
N4	North	Federal	Urban	Islamabad	4
N5	North	Punjab	Urban	Rawalpindi	2
W1	West	Baluchistan	Urban	Quetta	1
SE1	South-East	Sindh	Rural	Khairpur	1

Data Collection Tool

We assess the institutional context by using open-ended questionnaire (Appendix A) developed on Google Forms, disseminated through various platforms. The instrument was designed around four key dimensions (motivational, material, digital, and usage) of the digital divide proposed by van Dijk (2005). Informed consent was obtained from all participants, and confidentiality and anonymity were assured by all participants. Institutional names are coded to ensure the confidentiality of the institutions. Data collection was preceded by ethical approval (Appendix B) by the concerned Institutional Review Board / Ethics Committee of the host university. No traditional psychometric validation and reliability testing (e.g., Cronbach's alpha) was done because the instrument was oriented to the qualitative exploration and not to the quantitative measurement. Rather, the research adhered to the guidelines of trustworthiness that should be used in qualitative research, such as credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985).

The questionnaire was created based on theory-informed and literature-driven process. Items were aligned with:

(a) Van Dijk four levels of digital divide access (motivational, material, skills, and usage), and

(b) Flipped classroom literature and ESP writing pedagogy.

Three subject specialists validate the questionnaire. Two were Assistant Professors and one was the Ph.D. Scholar. Colleagues, who were experts in their subject, were requested to check the reliability of the questionnaire. It is generally accepted that one of the most widely used approaches to confirming the validity of the content of educational research instruments is expert review (Cohen et al., 2018; Creswell, 2017). After final revisions 23 open-ended questions were added to the questionnaire. According to their feedback, the

redundant items were eliminated, the vague wording was narrowed down, and the coverage of construct was refined. Level 1 had five questions, level 2 four, 3 eight, and level 4 six questions. Analytical reliability was taken care of by systematic development of codebooks, iterative coding cycles, comparison between cases, keeping the record of audit trail of decisions of an analytic nature.

Results

Thematic analysis of the data (Figure 1) was performed with deductive codes referring to the digital divide framework proposed by Van Dijk (2005, 2020) and the institutional dimensions as well as inductive coding to define the emergent themes (Braun & Clarke, 2006).

The questionnaire was framed based on four levels of digital divide: motivational, material, digital, and usage. Each of these becomes a deductive code. Responses were coded directly into pre-defined categories. Responses were further coded inductively to identify the themes for institutional context mapping.

Process of coding

Familiarization

All the responses were read multiple times to become familiar and gain the overall sense of meaning.

Initial Coding

Codes were assigned to meaningful units for example:

"Google classroom which I have been using is a bit challenging as the students are not trained"- code: Internet dependency

"The only solution is the institution may provide proper training, and this should on continuous base" – code: Lack of training support

Categorisation into themes

Similar codes were grouped. For example:

- Resource and Infrastructure Limitations (RIL), Technical and Infrastructure Issues (TII), Technical and Resource Challenges (TRC), Access and Infrastructure (AI), Use of Personal Devices and Mobile Data (UPD&MD) – **Technology Infrastructure**
  According to van Dijk (2005), infrastructure forms the basis of any digital pedagogy. This theme was identified based on the teacher responses regarding the reliability of the internet, access to devices, power problems, LMS stability, and the physical infrastructure needed to support flipped classroom instruction.

- Lack of Support or Training (LST), Lack of administrative support (LAS), Lack of Institutional Support and Interventions (ISI), Institutional and Curriculum Changes (ICC), Addressing Practical Constraints (APC) **– Policy Support**
  The freedom and framework in tech integration are often defined by institutional policies (Bećirović, 2023; Hrastinski, 2021). The dimension emerged when the teachers mentioned institutional or departmental requirements, the lack of official directions, or encouragement/ discouragement to utilize technology.

- No training (NT), Continuous Learning and Practice (CLP), Challenges with Specific Tools or Platforms (CSTP), Formal Training and Workshops (FTW), Continuous Learning and Practice (CLP) **– Professional Development**
  Skills development is a core layer of digital divide (van Dijk, 2005). There was a mixed response highlighting access and preparedness for training. Some reported no training at all, while others praised workshops on genre or flipped models.

- Adequacy in Meeting Teaching Needs (AMTN), Lack of Sufficient Resources (LSR), Institutional and Personal Challenges (IPC), Lack of Training and Support (LTS), Resource Availability and Support (RAS) – **Administrative Support**
  The leadership support influences pedagogical change adoption (Firmansyah & Juansah, 2025; Khoso et al., 2025). Teachers remarked on the correlation of their management being innovative or simply imposing performance and workload.

- Balancing Technology and Traditional Methods (BTTM), Pre-class Preparation and Material Sharing (PP&MS), Asynchronous and Offline Resources (A&OR), Adaptive Strategies and Workarounds (AS&W), Curriculum-related: Learning Outcomes (CLO) –
- **Curriculum Design**
  It was noted by some teachers that prescriptive syllabus did not give them freedom to implement digital technologies and genre-based approaches, whereas others mentioned that they had freedom to alter content and add technology-enriched activities. This implies different experiences of curriculum framework and flexibility in different institutions. Curriculum design also plays an important role in influencing the extent and way teachers are able to implement flipped genre-based writing pedagogy. Curriculum that is flexible and responds to the context encourages teacher agency and helps to incorporate digital innovations, thereby promoting equal use of technology in the learning process (Corpus et al., 2022; Rodrigues, 2020).

- Collaboration and Community (CC), Positive Outcomes from Collaboration (POC), Few tech-savvy colleagues (FTSC), Lack of sharing (LOS), Motivation from tech-savvy colleagues (MTSC) – **Peer Collaboration**
  Teachers mentioned the presence of tech-savvy peers who shared tools or absence of peer sharing or competition. Skill development is shaped by informal peer learning networks (Dijk, 2005; Warschauer, 2004).

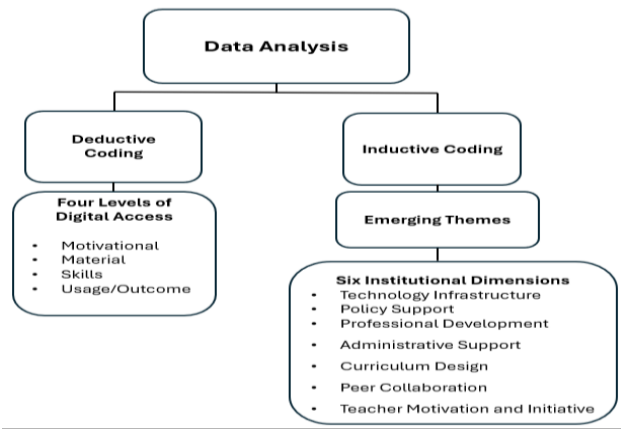
- Challenges and Intimidation (CI), Negative Sentiment (NS), Lack of awareness (LA), Complete Rejection of digital technology (CRDT), Psychological and Motivational Impact (PMI) - **Teacher Motivation and Initiative**
  The motivational aspect came out strongly, particularly where the teachers talked about self-learning, interest, or fear. This aligns with the first level of digital divide: motivational access (Dijk, 2005).

Mapping to Frameworks

The themes were then linked with research focus. At this level, it is found that themes are congruent with institutional context dimensions, which were used to develop contextual mapping model.

Figure 1

Thematic Coding Framework for Data Analysis



Illustrative quotes were selected to support interpretation and saturation toward a thematic end. University-wise institutional preparedness was compared in matrix displays and visualisations (e.g., heatmaps, radar charts). Reliability of coding was assured by inter-coder reliability and peer debriefing (Miles et al., 2020).

Quantification for Visualisation

To support cross-institutional comparison and enable visual clarity, qualitative data were quantified using a 0–10 scale for the heatmap and a 0-5 scale for the radar map and bar chart. This process is commonly known as quantitative content analysis (Indulska et al., 2012). Each institution's response set was assessed for each dimension according to the depth, frequency, clarity, and strength of evidence in the teacher narratives (See Appendix A).

Scoring and Visualization Protocol

A score of 0 meant not mentioned or total absence of the dimension, whereas a score of 5 and 10 meant consistently abundant, explicit evidence across responses. These scores were based on the content analysis of open-ended responses, and their contextual meaning was preserved, providing the possibility of the comparative visualization of the bar charts across institutions. Through this process, it was possible to compare institutional strengths and gaps clearly and, on a data, informed basis. Quantification of the data preserved the richness of the qualitative data and allowed for development of comparative visuals. The readiness matrix was analytically aggregated by taking the teacher-reported scores and qualitative indicators of seven institutional dimensions based on the digital divide framework by Van Dijk. Site-level synthesis of dimension-level ratings was done, and institutions were then categorized into high, mid, or low readiness based on cross-dimensional patterns recurring as opposed to numerical thresholds. This pattern-based classification made the analysis of needs sensitive to the institution and did not involve reductive ranking.

Findings

The use of flipped genre-based writing pedagogy in ESP classes is guided by aspects specific to the institution. This section presents the findings and discussion comparing how different institutions stand on access levels, teachers' perspectives against four levels of digital divide across six pedagogical dimensions, and high and low readiness of the institutions.

Positioning of institutions on Access Levels

Motivational Access (Interest, Willingness, Attitudes)

Results showed (Figure 2) considerable inconsistency in teachers' intrinsic motivation to use digital tools to support writing instruction. On motivational access, institutions in the Northern regions like N5 (score 5), N3 (score 4) and NEC1 (score 3), federally administered universities, despite one of its branches which participated in this study located in Multan (East central region), had high motivational access where faculty were always enthusiastic, highly motivated, and proactive towards technological innovation. *"It is exciting and enriching…"* a teacher at N5 said. Another from N3 commented, *"Yes, I find it extremely exciting to use digital technology… engages the audience well."* These are positive attitudes, and they signal pedagogical inclinations moving towards flipped genre-based models. The flipped model demands that teachers take proactive activities to curate and deliver instructional materials in digital formats before a lesson, and it has been suggested that a high level of enthusiasm toward technology reflects precursor preparedness toward these models. These motivation markers align well with the model proposed by Rose and Martin (2012), according to which a genre-based writing should be well introduced in scaffolded nature, student-focused, and digitally enhanced teaching/learning environment.

On the other hand, access with low motivational relevance was noticed in the case of SE1 (score 2), SC1 (score 3) and W1 (score 2) (see heatmap, same column). In this instance, teachers voiced scepticism, disinterest, or wariness about the overuse of technology. For example, as one faculty member from SE1 said *"It is exciting but boring at the same time if used so frequently,"* and another faculty member from SC1 said frankly, *"I don't find it very useful. I prefer teaching through discussion."* These attitudes represent apprehensions that underline the way in which pedagogical innovation may be impeded. This reluctance

challenges the paradigm of the flipped classroom where pre-class digital interactions are key, and undermines the success of genre-based instruction, which makes use of repeated cycles of guided writing using a variety of genres, many of which are more effectively covered online (Hyland, 2007). The pedagogical power of genre-based instruction in flipped formats will not be achieved without motivational buy-in.

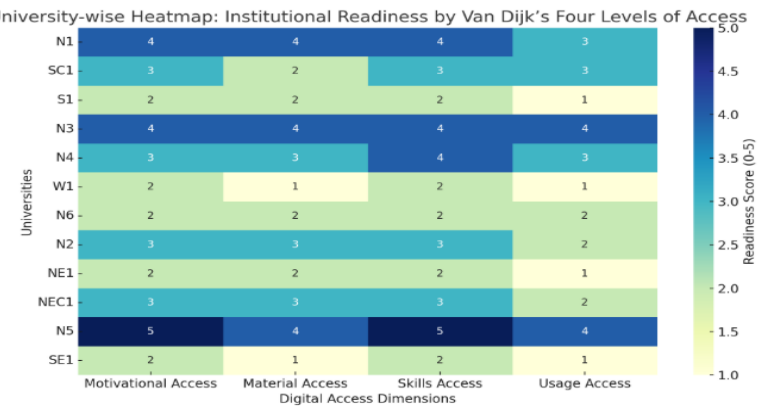
Material Access (Infrastructure, Devices, Internet, LMS)

Another major area of divergence was material access, that is, LMS platforms, devices and stable internet. A relatively higher level of infrastructural support was reported by teachers of institutions like N2 (score 2), N5 (score 4), and N6 (score 2). According to a respondent from N5, *"We use LMS, Google Forms, QR codes quite frequently",* which tends to be conducive to blended and flipped teaching models. Such an infrastructure will straightforwardly facilitate the flipped classroom environment where the learners are supposed to access the materials asynchronously before the class through LMS or any other software. In addition to this, these tools enable their explicit genre-based writing instruction, as it is possible to perform scaffolded genre modelling, process-based writing cycles as well as work with multimodal texts. When institutional infrastructure assists such tools, the teachers can be better placed to design and make implementations of lessons that align with the Teaching and Learning Cycle (TLC) that is central to genre-based pedagogy (Martin & Rose, 2012). The Deconstruction, Joint Construction steps of the TLC can be provided in the flipped environments with the help of videos, model texts and collaborative writing activities provided in the LMS. Such a combination of the flipped and genre-a timed instruction is premised on sustained access to materials, enabling the learner to revise content, explore genre characteristics at a time pace, and get personalised feedback, which are the central principles of exemplary genre teaching (Hyland, 2007).

On the contrary, educators from W1 (score 1), SE1 (score 1), and SC1 (score 2) expressed substantial material access barriers. It was very common to hear reports of poor connectivity, and very little institutional support. W1 participant lamented: *"The university does not support digital tools, and the internet doesn't work properly,"*. What this highlights is the infrastructural inequality that many such peripheral institutions cope with. These lapses subvert the very feasibility of flipped delivery, in which pre-class learning relies on uninhibited access to digital content. Regarding genre-based writing instruction, the absence of access to projectors, smart boards and digital writing tools will highly limit the possibilities of collaborative genre analyses, modelling and in digital drafting, hence, undermining the pedagogical robustness of the approach.

Figure 2

University-Wise Institutional Readiness Scores Across Van Dijk's Four Levels of Digital Access



Note: Readiness scores (1 = very low, 5 = very high) provided by ESP teachers in 11 institutions across Pakistan are reported through this heatmap. Scores represent the institutional status on four digital access dimensions, Motivational, Material, Skill, and Usage Access (from Van Dijk, 2005 the model of the digital divide).

Skills Access (Operational, Formal, and Strategic Skills)

Prominently, variability in operational, formal and strategic digital skills surfaced. In the case of NEC1 (score 3), N4 (score 4), and N5 (score 5), teachers showed a high level of digital proficiency and were ready

to undertake self-directed learning. A teacher at N4 said, *"I normally consult YouTube videos for learning and troubleshooting"*. N5 shared, *"I've received training to use LMS for creating interactive content."* These responses are not only about operational competence, but also an initial strategic engagement in digital pedagogy. These skills form the basis when applying the concept of flipped instruction, in which teachers have to prepare, select and distribute learning materials asynchronously with multiple digital resources. Additionally, genre-based pedagogy, grounded in modelling and scaffolding genres' attributes at various writing phases is dependent on digital presentation tools, collaborative writing programs, and feedback processes, which implies some wealth of formal and strategic digital literacy.

However, digital literacy was low at SE1 (score 2), SC1 (score 3) and W1 (score 2). Others insisted on traditional methods and refused to dive into digital platforms. For example, one of the SE1 teachers told us that "*I rarely use educational apps; they just waste time",* and the SC1 teacher said, *"I don't know how to use many tools. I rely on basic methods."* These responses indicate a great urgency in the need to build targeted capacity with digital pedagogical skills. In the flipped classroom, the inability to work and plan the effective use of digital tools restrains the ability of teachers to take the direct instruction out of the classroom. Likewise, confidence in multimodal delivery and digital scaffolding is needed to teach discourse structures, provide examples, and stages of learning in a genre-based instruction.

Usage/Outcome Access (Effective Integration, Pedagogical Outcomes)

Lastly, there was a wide variation in the extent to which digital tools are successfully integrated into classroom practice (usage access). Results from institutions such as N3 (score 4), NEC1(score 3) and N5 (score 4) revealed mixed outcomes, promising results in terms of teacher reports about students' engagement in learning and quality instruction. 'A N5 teacher said, *"Students get very excited whenever I incorporate technology into lectures,"* and 'A N3 teacher said, *"Technology enhances both student learning and teacher performance."* These insights again validate that outcome-level benefits begin to materialise when other access levels are achieved. They also demonstrate the fundamental rule of flipped learning interaction with higher-order activity in the classroom higher because of pre-class exposure to content, which enhances participation and performance. Likewise, genre-based teaching may profitably employ classroom time by enabling joint and independent construction activity, and delivering foundational input (e.g., genre model, structure analysis) out of the classroom by digital means.

However, we find weak or inconsistent use of technology in actual teaching practice by various institutions including W1 (score 1), SE1 (score 1), and S1 (score 1). Moreover, there was poor student receptivity along with minimal pedagogical gains reported by the teachers. For instance, W1 teacher described, *"Students don't take it seriously when I use digital tools,"* and S1 teacher commented, *"Not much use. Sometimes I try, but students get distracted."* Thus, these outcomes imply that motivational and infrastructural gaps may also translate into concomitant limited pedagogical impact. This can be highly counterproductive to flipped genre-based pedagogy, where there is a great need to maintain instructional coherence and student responsibility. Genre modelling, scaffolding, and subsequent writing performance are greatly diminished without a pre-class preparation structure and follow-up tasks.

Teachers could experiment with flipped approaches in institutions such as NEC1 and N3, which offered curricular autonomy and digital policies that were integrated. *"Our assessments and resource uploading are integrated across platforms, making it easy to plan flipped tasks."*

Tondeur et al., (2017) model that ties together institutional vision, leadership and curricular frameworks with digital pedagogy reform sustainability is supported by this dichotomy. When there is alignment in policy, structural provision, and autonomy by the institutions, pedagogical initiatives like flipped genre-based writing instruction are a possibility. In situations where these do not align, even a motivated teacher has systemic constraints to give significant achievements.

Institutional Readiness across Seven Core Dimensions

Institutional contextual factors analysis across diverse Pakistani universities indicated stark differences between ESP teachers' readiness to implement flipped genre-based writing pedagogy. The

difference among these groups was mapped along seven core dimensions, which were aligned with Van Dijk's digital divide framework.

Table 2 is a cross-institutional readiness matrix that overlaid twelve higher education sites on seven institutional dimensions applicable to the implementation of flipped genre-based writing pedagogy (ESP-FGBP). The high-readiness (NSC1, N1, N2, N4, NEC1) institutions had good technological infrastructure, administrative support and teacher motivation, but formal policy support and long-term professional growth were only average. The institutions with mid-readiness (N3, N5, SC1, NE1) showed an uneven readiness pattern, which was characterized by moderate infrastructure and motivation due to the poor policy framework, training opportunities, and peer collaboration. Conversely, low-ready institutions (S1, W1, SE1) recorded systematic shortages in all seven dimensions, which means that structural and contextual constraints significantly restrict the ability of ESP teachers to introduce flipped genre-based writing pedagogy.

Table 2

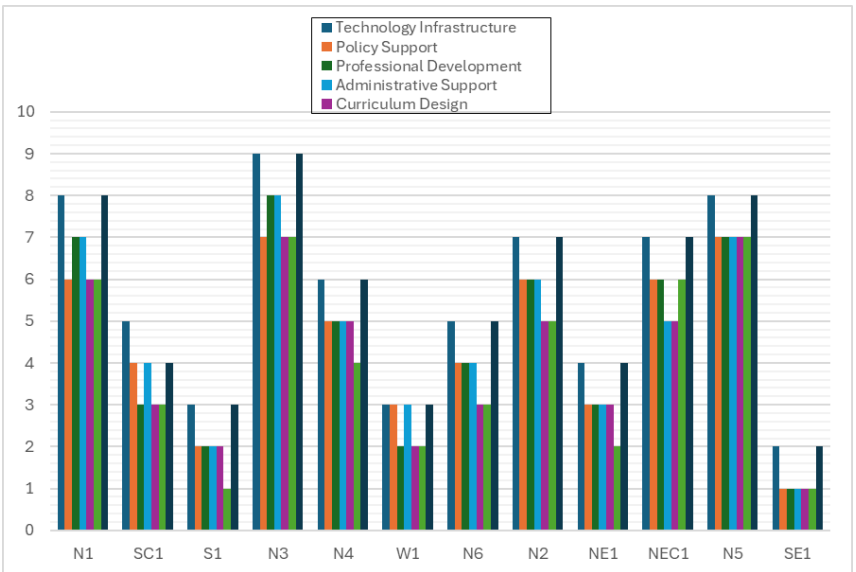
Institutional Context Mapping across Seven Dimensions

Readiness Group	Institution Codes	Tech Infrastructure	Policy Support	Professional Development	Administrative Support	Curriculum Flexibility	Peer Collaboration	Teacher Motivation
High Readiness	NSC1, N1, N2, N4, NEC1	High	Medium	Medium	High	Medium	Medium	High
Mid Readiness	N3, N5, SC1, NE1	Medium	Low	Low	Medium	Low	Low	Medium
Low Readiness	S1, W1, SE1	Low	Low	Low	Low	Low	Low	Low

Figure 3 (Bar Graph of Institutional Readiness Scores) quantitatively illustrates the patterns of these narratives, with qualitative evidence below:

Figure 3

Supportive Institutional Dimensions for Flipped Genre-Based Writing Pedagogy Implementation Across Universities



Note: Institutional support levels reported by ESP teachers across five dimensions (Technology Infrastructure, Policy Support, Professional Development, Administrative Support, and Curriculum Design) are all shown in a bar graph. During the pre-training needs analysis phase data were collected from 11 universities in Pakistan. The scores range from 1 to 10 (very low to very high).

Technology Infrastructure

Variation of infrastructure readiness for the sampled institutions was wide and correlated with the geographical locations and institutional funding. Among the better equipped campuses and strong digital infrastructure, urban universities including the N3, N1, and N5 were the most well equipped. In saying this, one of the teachers at N3 added, *"We have LMS which is quite modern, and… we have support for the digital integration."* N1 and N5 claimed that they made frequent use of learning management systems (LMS), Google Forms, and QR codes, for the purpose of instruction. Nonetheless, at N5, a teacher said that *"LMS at our institution is really clunky and hard to access…"*

On the other hand, staff of S1 and W1 complained of severe infrastructural deprivation as labs were nonfunctional, and internet connectivity was unavailable. However, for less resourced institutions or in rural, peripheral settings like SE1, the focus of concerns went beyond access and extended to the ethical risks of open platforms, particularly one teacher's worries, *"I feel that somebody may not post anything obscene on the screen."*

Policy Support

Principles of policy are important to the institutionalisation of the flipped models of learning which relies on the flexibility of delivery and assessment. Furthermore, the writing pedagogy relied on genres must have curricular accommodation and institutional sanction to integrate scaffolded writing cycles and genre models into institutional teaching. Across the dataset institutional policies to support digital pedagogy were generally absent or vague. Institutions such as N5 and N1 were seen to have exhibited some informal encouragement towards the technology integration; however, none of the respondents cited very robust or formal policy frameworks to incentivise or encourage institutions towards this practice. However, regarding N2, N4, and N6, teachers completely lack a structured policy and training as well as digital adoption taking place on an ad hoc basis. The lack of awareness was especially stark for more marginalised institutions such as S1 and SE1, where, when they inquired about the existence of institutional policies, they answered with a *'I don't know!*'.

Professional Development

Flipped genre-based pedagogy requires ongoing practical professional development that can teach teachers the skills of interactive content creation, active learning facilitation, and genre-specific approaches such as TLC and scaffolding skills that are not taught in typical tech trainings. Overall, most of the teacher training and PD opportunities were focused on tool-specific sessions—most often around LMS platforms—rather than pedagogical integration. *"We received LMS training, but only after we insisted on hands-on application."* N5 respondent said. According to teachers from N1, NEC1, and N4, they only recalled attending isolated webinars and there were no continued efforts aimed at PD on flipped instruction or genre pedagogy. Teachers at W1 and SE1 based on self-initiated learning from the platforms like YouTube, *"No training received… only self-learning from YouTube."*

Administrative Support

The administration plays a pivotal role in the implementation of the flipped genre-based pedagogy through providing the structure such as flexibility in the scheduling and the use of the LMS, and the willingness of their leadership to include the genre-related objectives in the curriculum and assessment. Instead of being strategic or proactive, most administrative support was reactive. However, to N3, teachers noted its uniqueness in terms of being supportive and encouraging the culture of innovation, while teachers from NEC1 and N2 reported poor engagement, confined only to status quo monitoring. One of the extreme comments about institutional neglect that were expressed by many of the participants in N6 and SE1 includes: *"We are left to figure out things ourselves."* Secondly, there was a lack of consistent leadership, which worsened the situation of teachers feeling isolated and retarded the process of embracing digital teaching methods.

Curriculum Design

Both flipped and genre pedagogies benefit from a fully flexible curriculum to facilitate preliminary out-of-class involvement, engaged in-class training, and recurring writing cycles that are responsive to the interests of the students within their field of study. A second barrier to flipped genre-based pedagogy was rigid, and outdated curricular structures. Institutions such as the N5, N4 and N6, teachers voiced their dissatisfaction with the inflexible syllabi, which emphasise contact hours and performance metrics to the detriment of innovation. According to N5, one respondent argued that while *"Traditional and neo-liberalist learning environments… prioritize performativity over innovation.",* they are *'inherently exclusive, hierarchical and tumbled',* but are nonetheless *'inclusive, adaptive, and interactive"* that reproduce themselves. Also, a teacher from SE1 responded that they rarely used apps, *"as student -teacher interaction gets minimised".*

Peer Support and Collaboration

Another significant finding was the lack of peer collaboration in adopting tech-integrated pedagogies. In both flipped instruction and genre-based pedagogy, peer interaction is the driving force of success strategies (Tenenbaum et al., 2020), co-created teaching materials, and reflective learning leading to greater digitisation and scaffold of student writing. The work cultures in most institutions were characterized by strong individualistic stances, with teachers rarely communicating digital practices, or collaborating to learn new tools. In relatively advanced settings, like in N5 and N3, peer support was described as unpredictable and dependent on personal initiative. Collaboration was virtually absent in institutions like S1, W1 and SE1, and therein *"No. My personal disinterest."* was the common refrain. The result agrees with Ertmer & Ottenbreit-Leftwich (2010), suggesting that supportive networks and incentives from institutions help bring about learning changes.

Teacher Motivation and Initiative

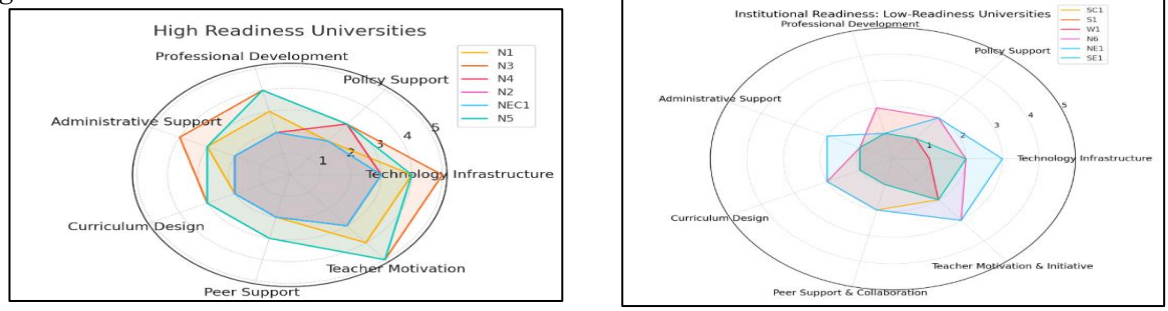
Both flipped learning and genre-based writing rely on intrinsic teacher motivation to promote innovation, self-generated content, and self-initiated student-centred, scaffolded teaching delivery methods (Challob, 2021; Hamman-Ortiz et al., 2023). While structural barriers often proved to confound and impede the successful integration of computers at the school level, it was individual teacher motivation that had potential as a key enabler, especially in the case of institutions with some aspects of digital readiness in place. Those teachers at N3, N1 and N5 exhibited their willingness to explore digital tools; *"I'm a good learner and keen to use innovations."* It was noted that teachers from N4 and N2 had moderate levels of motivation although oftentimes inhibited by insufficient institutional support. Teachers from S1, W1, and SE1, particularly from under-resourced campuses, reported low levels of confidence coextensively with limited exposure to professional spaces and opportunities, citing both feelings of anxiety and disconnect (disengagement), *"Sometimes … but mostly indifferent."*

The following radar charts (Figure 4) display the high and low digital readiness of universities implementing flipped genre-based writing pedagogy. Radar charts were used to represent the multidimensional institutional readiness profiles in the seven contextual dimensions. The readiness scores of each dimension were plotted as the means to represent the relative strengths and weaknesses across and within the institutions. The charts are not a statistical comparison but rather an interpretive synthesis of qualitative patterns, allowing the readers to visually compare the profile of institutions as a whole.

The results found in this study underscore the need for substantial capacity-building at both macro and micro institutional levels in to realise pedagogical change in low readiness contexts (Dijk, 2005; González-Lloret & Ortega, 2014).

Figure 4

High and low readiness universities



Note: The *left* and right radar charts highlight the high and low readiness respectively (ranging between 1-5) across seven dimensions

Discussion

The current study indicates that institutional contextual factors are decisive in defining the needs of ESP teachers in adopting a flipped genre-based writing pedagogy. In particular, inequality in digitization, policy clarity, professional growth and further development, administrative support, curricular flexibility, peer collaboration and teacher motivation leads to unequal readiness levels across institutions. The pedagogical needs of teachers are not therefore individual-based but produced structurally and need differentiated institutional responses as opposed to standardized training interventions. The study confirms the central role of institutional contextual factors, especially infrastructure, leadership, curriculum flexibility, and policy support as strong determinants of the ESP teacher preparedness and changing needs towards applying a flipped genre-based writing pedagogy.

Flip depends closely on easy access to online platforms and tools that facilitate out-of-class activities and delivery of course material (Bergmann & Sams, 2012). Arguably, genre-based pedagogy in digital environments needs consistency and an effective technology framework that supports students to engage with model texts, scaffolded work, and multi-modal input (Batool et al., 2025; Hyland, 2007)). The infrastructural inequalities are indicative of the notion of material access put forward by van Dijk (2020) to exemplify how educational possibilities are systematically determined by unequal technological statuses. The same results can be found in other multi-institutional studies of digital readiness in higher education (Lai & Bower, 2020; Tondeur et al., 2017), where access disparities were reflected in limited instructional innovation.

There are better performing institutions like N5, N3 and N4 where the favorability of access to technology, organised professional development, and underpinning cultures of collaboration with peers made it possible to correctly incorporate the pre-class digital materials and internalisation genre supports. These environments facilitated digital and pedagogical competence of the teachers, which is in accordance with the needs of flipped and genre-based models that presuppose flexibility of schedule, use of LMS, and genre-sensitive instructional design (Hsiao et al., 2023; Hyland, 2007). There were not only such institutional ecosystems that promoted digital experimentation but also promoted active student engagement and writing development, which confirms the importance of contextual readiness in the innovation of ESP.

In contrast, low-readiness institutions such as SE1, S1, and W1 demonstrated an ongoing barrier in every dimension of the digital divide described by Van Dijk (2020), consisting of low motivation, insufficient infrastructure, and the absence of professional and administrative support. In the above settings, teachers had an organisational limitation that compromised the use of digital tools, as well as the need to teach a genre approach to teaching, regardless of the individual desire or effort. These constraints were further exacerbated by the lack of curriculum flexibility, peer-to-peer collaboration, and specific training, which was characteristic of the necessity to reform institutions and develop local capacity (Ertmer & Ottenbreit-Leftwich, 2010; Hrastinski, 2021).

Overall, the study demonstrates that the institutional ecosystems of ESP teachers profoundly shape their needs for flipped genre-based instructions. The capacity of a teacher to practice flipped genre-based

pedagogy is not determined only by personal motivation, but is ingrained in institutional organisations, professional cultures, and digital environments (Arshad et al., 2025). As represented by the seven dimensions in this study, institutional readiness acts both as a facilitator and inhibitor of the capacity that a teacher has towards reconciliation of theory and practice in ESP writing pedagogies. Addressing these gaps with targeted policy transformation, investments in digital infrastructure, and genre-sensitive pedagogical professional development is essential for scaling the innovation of instructional models in under-resourced classrooms.

Conclusion

This research aimed to investigate the influence of institutional contextual issues in defining the needs of ESP teachers in adopting flipped genre-based writing pedagogy. The results indicate that the willingness of teachers is not a personal factor but a product of the structure that is formed through the institutional infrastructure, the policy orientation, the leadership practices, the structure of the curriculum, the culture of peers, and the opportunities of professional development. The mapping of these factors in several higher education institutions, the study shows that there are deep rooted inequalities which have a direct impact in the ability of teachers to embrace innovative pedagogies.

The most important implication of this study is the development of institutional context mapping as new needs analysis model of ESP-FGBP. This model preempts institutional preparedness as the key unit of analysis, unlike the traditional needs analysis that evaluates the skills of teachers or the shortcomings of learners. The study operationalizes Van Dijk digital divide framework in seven pedagogical dimensions to apply the digital divide theory to ESP writing pedagogy, and how motivational, material, skills, and usage access interacts within institutional ecosystems. This reimbursement provides a more holistic and ethically based method of understanding pedagogical adoption in unequal higher education conditions.

Actionable Recommendations

According to the results, the following recommendations are provided in the study:

Policy and Leadership: University administrations ought to establish institutional policies, which justify flipped and gender-based pedagogy, backed by leadership-driven implementation models, instead of haphazard digital projects.

Targeted Professional Development: The teacher training programs must not be based on tool-based training but offer long-lasting and practical training on how to combine genre pedagogy with flipped instructional design.

Curriculum Reform: ESP curriculum needs to be brought to be more flexible as it will enable teachers to restructure learning sequences and not be bound by a strict credit-hour or assessment-based system.
Institutional Support Systems: Universities need to create special digital-pedagogy support units offering continuous technical and pedagogical support, which does not depend on the resilience of individual teachers.

Implications for Practice, Policy, and Research

To practitioners, the results indicate that pedagogical innovation must be aligned with the institutional realities as opposed to individual experimentation. To policymakers, the research highlights the importance of institutional inequities as a requirement to achieve any significant digital transformation. To researchers, the suggested institutional mapping model provides a generalizable analytical framework in which to explore pedagogical preparedness in other ESP, EAP, or discipline-specific settings.

Future Research Directions

Future studies must consider longitudinal designs to study the institutional readiness changes following specific interventions. It would also be useful to conduct mixed-method research to connect institutional readiness profiles with student writing performance to provide more explanatory power to the model. An experimental or design-based study that involves the deployment of flipped genre-based training programs in diverse institutional settings would also be of use on sustainability and scalability.

To sum up, this paper redefines the development of ESP teachers as an organizational but not an individual issue. Making institutional context mapping a formidable needs analysis model, it provides a theoretical development and a roadmap to facilitate equitable, sustainable application of flipped genre-based writing pedagogy in higher education.

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Appendix A

Pre-training Questionnaire

The questionnaire was designed as one but due to its length, it was administered in four different steps**.**

1st L	**Motivational/Mental/Psychological Access**	**Lack of digital experience caused by psychological barriers, lack of interest and willingness to use technology**
i.	Can you describe your personal attitude towards using digital technology for teaching purposes? Do you find it exciting, intimidating, or something else?	
ii.	Have you ever encountered any fears or concerns related to using computers or digital devices for teaching? If yes, could you elaborate on what aspects make you apprehensive?	
iii.	Have you received any support or training to overcome any anxieties related to using technology? If yes, please share your experience and the impact it had on your perception of digital tools.	
iv.	How do you perceive the overall attractiveness of new digital technology in the context of English language teaching? Are there any particular aspects that discourage your engagement with it?	
v.	Are there any particular resources, training programs, or strategies that you believe could help alleviate your concerns and make digital technology more appealing for your teaching?	
2nd L	**Material/ Physical Access**	**Lack of possession of devices, network connections and software**
i.	Please share your access to personal computers or digital devices that you can use for teaching purposes. If you do not have access, what challenges do you face in this regard?	
ii.	Are there any institutional resources, support, interventions available for you to access computers or digital devices? If yes, how accessible are these resources and do they meet your teaching needs adequately?	
iii.	Could you describe your access to a stable and reliable network connection for using digital tools and resources in your teaching? How does the availability or lack of network connectivity affect your instructional activities?	
iv.	Have you explored any alternatives or strategies to cope with the lack of personal devices or network connections for teaching? If yes, what are these strategies and how effective have they been in maintaining instructional continuity?	
3rd L	**Digital Skills Access**	**Lack of digital skills caused by insufficient user-friendliness and inadequate education or social support**
i.	How confident do you feel in using digital tools and technologies for teaching purposes? Are there specific tools or platforms that you find challenging to navigate? Please explain.	
ii.	Have you received any training or professional development related to integrating technology into your English language teaching? If yes, how effective was this training in enhancing your digital skills? If not, do you think such training would be benefic	
iii.	Are there any specific areas of technology use that you feel less comfortable with, such as creating online materials, using educational apps, or facilitating online discussions? Could you provide examples of these challenges?	
iv.	How do you usually seek support or guidance when you encounter difficulties while using digital tools for teaching? Do you have access to sufficient resources or colleagues who can assist you in overcoming these challenges?	

v.	Do you think the level of user-friendliness of digital tools affects your willingness to integrate them into your teaching? Could you provide examples of tools that you consider user-friendly or not, and explain how this impacts your teaching practices?	
vi.	In your opinion, how can educational institutions or professional development programs better support you in improving your digital skills? Are there specific types of training or resources that you believe would be effective in addressing these challenge	
vii.	Have you observed any colleagues who excel in using digital tools for teaching? If so, what strategies do they employ to enhance their digital skills? Are there any lessons you can learn from their experiences?	
viii.	How do you perceive the role of social support, such as collaboration with colleagues or online communities, in overcoming challenges related to digital skills? Have you experienced any positive outcomes from seeking help or sharing experiences with other	
4th L	**Usage/Outcome Access**	**Lack of significant usage opportunities**
i.	How frequently do you have the chance to use digital tools or technology in your English language teaching?	
ii.	Are there any institutional/other barriers or constraints that hinder your ability to incorporate digital tools into your lessons?	
iii.	In what ways do you perceive a shortage of opportunities for digital usage affecting your students' learning experiences? Have you observed any differences in engagement or outcomes when you have been able to use digital tools effectively?	
iv.	Are there any successful instances where you were able to overcome challenges related to usage opportunities and effectively integrate technology into your teaching? What strategies did you employ to create these opportunities?	
v.	How do you envision the ideal learning environment in terms of digital usage opportunities? What changes or improvements would you like to see within your institution to facilitate greater integration of technology into your teaching practices?	
vi.	Do you believe that creating more opportunities for technology usage could lead to enhanced student engagement and learning outcomes?	

Appendix B

Approval of Ethics Committee

AU Human Research Ethics Committee

The AU Human Research Ethics Committee of Air University Islamabad Campus examined the Research Proposal submitted by:

Details of Researcher(s)

S.No.	Name(s) of Researcher(s)	Designation at AU
1.	Sadia Arshad	PhD Scholar
2.		

Title of Research: ***Exploring Digitally Inclusive Genre-based Instruction in English Language Obuchenie: Learning beyond access*** May 2022/Jul 2024

Dates of Research (Beginning/Ending):

I/we, as Researchers named above, hereby undertake to abide by the Term of this Certificate.

Sadia Arshad

Signature 1 Signature 2

It is certified that the Researchers named above, undertake to ensure that the proposed research is in harmony with the broad guidelines stated in the Air University Policy on Ethical Principles for Medical Research.

It is further certified that Researchers will ensure adherence with the World Medical Association Declaration of Helsinki cited above and will ensure that Participant's consent is obtained in writing.

The Committee hereby specifies the following mechanism for regular monitoring of the Research Project:

Research is being carried out under the supervision of Dr Sadia Irshad, Assistant Professor, Department of English, Faculty of Social Sciences, Air University.

The Researchers will apply for grant of approval for any publication arising out of the research carried out for which a Final Report must be submitted by the researchers, and subsequently publicized through viable media.

Dated: 21st December 2023 Air University, E-9, Islamabad 44000, Pakistan.www.au.edu.pk

Zafar ullah

Prof. Dr. Zafar Ullah Koreshi
Dean Faculty of Graduate Studies
Air University, Islamabad

Signed: Prof. Dr Zafar ullah Koreshi, Dean Graduate Studies, Air University, zafar@mail.au.edu.pk Tel: direct +9251 9153407, cell: +923455115936

Appendix C

Quantification for Visualization

Heat Map		Bar chart & Radar map	
Scale	**Interpretation**	**Scale**	**Interpretation**
0	Theme is not mentioned	**0**	Access, support, motivation, or skills are not indicated
1–3	References are vague, minimal, unclear or anecdotal	**1**	Mentions are minimal, isolated without depth or consistency
4–6	Evidence is moderate, some instances or examples are clear	**2**	Evidence of some support or usage without any depth, training, or institutional integration
7–9	Mentions are strong and recurring with detail and contextual relevance	**3**	Evidence of regular use, with some technical and administration etc. challenges
10	Clear and extensive evidence across multiple responses within institution	**4**	Evidence of integration is clear, with positive perception, and active usage
		5	Systemic support, proactive engagement, teacher initiative, and sustainability