TEACHERS' PERCEPTIONS OF AI-ASSISTED UNDERGRADUATE STUDENT WRITING IN PAKISTAN

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Abstract:

The increasing use of artificial intelligence (AI) tools in academic writing has reshaped learning and teaching in higher education, particularly in Pakistan, where English is taught as a second language. While these tools offer students immediate feedback and enhanced writing quality, they have also raised concerns of originality, over-reliance and the authenticity of feedback practices. This change raises issues concerning university teachers' understanding of AI-assisted writing and how they adapt their teaching practices accordingly. This research employed a mixed method research approach to critically analyse university teachers' perceptions of providing feedback and their pedagogies in adapting to AI-assisted undergraduate student writing. An explanatory sequential approach is used, starting with quantitative data gathering using a Likert-scale questionnaire of 70 university English language teachers to examine their teaching practices in adapting to AI-assisted writing, followed by qualitative interviews with 20 English language teachers to gain insights into teachers' perspectives. This study was guided by Self-determination theory (SDT) and Technology Acceptance Model (TAM). The findings revealed that teachers recognized both the benefits and the limitations of AI tools. They acknowledged the usefulness of AI tools in improving language accuracy but expressed concerns about students' overdependence on these tools which risked undermining authentic learning and critical thinking and challenges in assessing AI-generated content. Teachers expressed a strong need for institutional guidelines, training and pedagogical strategies that ensure responsible AI use while fostering students' independent writing abilities.

Keywords:

AI-assisted Writing, Teachers' Perceptions, Teaching Practices

Table of Contents

List of Tables

List of Figures

1. Introduction

This chapter provides an overview of the study which explores teachers' perceptions of AI-assisted undergraduate writing in Pakistan. It briefly covers the study's background, problem statement, objectives and research questions. Additionally, it outlines the theoretical framework, significance, delimitations and scope of the study. By examining these elements, the chapter sets the foundation for understanding how AI tools influence teaching practices and feedback methods in higher education, particularly in the context of English as a second language.

1.1 Background of the study

Writing in English continues to be a significant challenge for many language learners, particularly in Pakistan where English is often taught as a second language. One of them is the academic writing complexities that most undergraduate students, especially non-native speakers, encounter (Abbas et al., 2023). L2 learners mainly struggle with grammar, vocabulary, coherence, and writing in overall organizational structure. Writing is a complicated skill that requires frequent practice and feedback in order to be enhanced (Akbar et al., 2018). Many students meet problems in producing well-organized and coherent texts, which affects both their academic achievement and confidence (Khan, et al, 2023).

The rapid development of artificial intelligence (AI) has brought a new dimension to the writing process and AI tools such as paraphrasing tools and grammar checkers have become increasingly popular among students looking to improve their writing skills (Chea & Xiao, 2024). More advanced AI tools, such as ChatGPT are designed to help students overcome some writing barriers by providing immediate feedback and suggestions which are quiet effective to uplift the writing process of the task (Moura & Carvalho, 2024).

The integration of Generative artificial intelligence into education has greatly shifted the paradigm of how students approach writing, and as the development of AI tools progresses rapidly, generating more human-like writing has become increasingly easy for students (Chiu, 2023). This raises concerns about academic integrity and traditional plagiarism detection techniques concentrate on detecting writings that have been directly plagiarized from published sources. However, since AI-generated work is original and does not involve copying from external sources, it is difficult for teachers to identify plagiarism.

The increasing reliance on AI-assisted writing tools has led to a shift in how academic writing is approached in higher education. Traditionally, writing instruction emphasized critical thinking, originality, and drafting, where students were required to revise their work based on feedback from teachers (Jimenez et al., 2023). However, with AI providing instant grammar corrections, paraphrasing suggestions, and even content generation, students may engage less with the writing process itself. This change raises essential questions about whether AI is fostering academic development or diminishing the traditional learning process that helps students refine their writing skills over time.

The use of AI in education also brings complexities for teachers who are tasked with evaluating AI-assisted writing as traditional assessment methods often rely on standardized rubrics and are unable to effectively evaluate the impact of AI on student work (Dincer & Bal, 2024). Teachers struggle with issues of originality in students' AI assisted work while also maintaining academic integrity and ensuring that feedback remains meaningful and constructive. The struggle lies in balancing the benefits of AI assistance with the need for authentic student expression and development (Law, 2024).

One of the most significant concerns surrounding AI-assisted writing is its impact on originality and student authorship. AI-generated content is not plagiarized in the conventional sense, as it does not directly copy from external sources. However, the question remains whether a piece of writing truly reflects a student's capabilities if it is heavily AI-assisted (Miller & Zhao, 2024). This issue is particularly pressing in Pakistan's academic landscape, where originality in student writing is a critical factor in assessments. Since many teachers rely on standard plagiarism detection tools that primarily check for copied text from published sources, AI-generated writing presents new challenges for academic integrity (Gonzalez, 2023). The difficulty of distinguishing AI-generated content from student writing raises questions about whether current assessment models need to be revised to better align with the growing presence of AI in education (Farooq & Ahmed, 2023).

Effective feedback remains essential to promote improvement and growth as it helps students to identify their strengths, improve and enhance their writing

skills (Lee & Song, 2024). However, when students use AI tools extensively, teachers may find it challenging to provide constructive feedback that addresses specific issues within the context of AI-generated content. This concern raises questions about whether traditional feedback practices are sufficient or whether there is need to shift the paradigm in how writing is evaluated in light of these technological advancements (Luo, 2024).

In Pakistan, where English is frequently a second language, the rise of AI in the educational setting is impacting the students' writing practices, as students are using AI not as an assistive tutor but as a shortcut, leading to a tendency to copy and paste information rather than thinking critically about their assignments (Kiran & Bhatti, 2021). Second language learners often turn to AI tools for assistance leading to significant challenges in academic integrity and writing quality (Malik et al., 2022). Such reliance on AI tools raises concerns about the originality of the final work and, in the worst case scenario, replaces the mastery of basic writing skills. AI-content reliance might adversely affect students' chances of acquiring language and analytical skills crucial for their academic success in higher education.

Furthermore, established assessment practices do not seem to respond to the challenges that AI-based writing brings. It is common for teachers to adopt standard assessment methods which may not align very well with the actual capabilities of students who make use of AI tools. This condition is even more challenging for second language learners who already have problems in improving their writing abilities (Ahmed et al., 2024). The dependency on the previous assessment practices may question the authenticity of feedback given to learners and whether such feedback actually addresses their learning requirements (Naved, 2023).

The growing AI-based content further compromises the true assessment of students' writing skills, as teachers providing meaningful feedback on writing is essential not only to promote academic integrity but also to ensure students develop critical thinking and independent writing skills (Slimi, 2023). In the context of Pakistani education, researches draws attention to the fact that effective assessment is vital for providing developmental feedback in student writing, particularly for students learning English as a second language. One common strategy for evaluating student writing involves the use of rubrics that outline specific criteria for grading to ensure a clear and consistent method of assessing the work of students.

Fazal et al. (2024) in their research identified that practices of feedback need to be modified while assessing writing since teachers tend to use rubrics outlining specific criteria to assess. However, the increasing use of AI tools in writing requires a change in how these rubrics are applied. As students increasingly depend on these tools, it is essential that rubrics be adapted to reflect this shift as there is need for caution in applying these rubrics to help control the over reliance on AI tools. Due to over dependence on AI tools, students miss opportunities to engage with their writing tasks and develop their unique voice as writers. This potential drawback emphasizes the importance of creating an educational environment where technology serves as a tool for improvement (Kim & Kim, 2022).

In Pakistan, where English is taught as a second language, students increasing reliance on AI tools raises questions about plagiarism and authorship, as many learners use these tools without fully understanding the implications (Sawahel, 2023). While students acknowledge that using AI tools could be considered plagiarism, they continue to engage in this practice. The over reliance on AI powered writing tools has created significant challenges for teachers as students increasingly present AI-generated content as their own work (Alharbi, 2023).

As students use AI tools to generate grammatically correct and coherent text, it becomes difficult for teachers to assess whether the work truly reflects the students' own abilities (Petraki, 2024). It is critical that both teachers and students adapt their perspectives on what constitutes high quality writing. In an era where AI tools have become embedded in academic environments, teachers need to take a proactive role in providing feedback that helps students distinguish between acceptable usage of AI as a tool and over-reliance that disrupts the goal of independent academic growth. This calls for dynamic interaction between teachers and students about the responsible integration of AI and the pedagogical value of preserving a student's voice in their writing.

Since AI is increasingly redefining how writing is practiced in academia, it is equally important that instructors have discussions with regard to the pedagogical and ethical roles of AI within writing education (Smith et al., 2024). There is a need for teachers to define clear guidelines on how to responsibly use AI without compromising on the development of key writing skills and critical thinking among students. In Pakistan, where AI-assisted writing is in its early stages of adoption, it is important to know how teachers perceive this change in order to formulate effective teaching practices.

Although AI tools offer possibilities for improving writing instruction, their excessive use has the potential to create dependency, particularly among second-language learners (Ghafar et al., 2023). These emerging dynamics highlights the need to explore how teachers perceive AI-assisted writing and how they adapt their teaching practices accordingly. Investigating these perspectives is crucial to understand how AI can be meaningfully integrated into pedagogy while still supporting the development of students' independent writing skills.

1.2 Problem Statement

The trend of students using AI for writing and academic tasks has grown significantly and students particularly L2 learners are increasingly relying on these tools to overcome challenges in producing coherent writing. This shift has created a significant gap in academic practices, as teachers struggle to assess AI-generated content, maintain academic integrity and provide effective feedback highlighting the need to explore teachers' perceptions of providing feedback and adapting teaching to support AI-assisted undergraduate writing.

1.3. Research Objectives

- To explore teachers' perceptions of providing feedback on AI-assisted writing of undergraduate students.
- To examine teaching practices in adapting to AI-assisted writing.

1.4 Research Questions

1. What are the teachers' perceptions of providing feedback on AI-assisted undergraduate student writing?
2. How do teachers adapt their teaching practices to support AI-assisted writing?

1.5 Purpose of the study

The study aims to explore teachers' perceptions and practices in providing feedback on AI-assisted undergraduate student writing in Pakistan.

1.6 Theoretical framework

1. Self Determination theory (SDT): Deci and Rayan (2000)
2. Technology Acceptance Model (TAM): Dishaw and Strong (1999)

1.6.1 Self Determination Theory

This study is informed by Self Determination theory (SDT) by Deci and Rayan (2000). The framework emphasizes the role of intrinsic motivation and fulfilment of three psychological needs: autonomy, competence and relatedness. In the context of this study, SDT helps to explore how university teachers in Pakistan adapt their teaching practices to support AI-assisted writing. This framework is important for this study as it provides insights into how teachers foster students' motivation by examining how their practices support students' autonomy (control over writing process), competence (development of writing skills), and relatedness (connection with students during learning).

1.6.2 Technology Acceptance Model

This study is underpinned by Technology Acceptance Model (TAM) by Dishaw and Strong (1999). The framework focuses on understanding users' acceptance and usage of technology based on constructs, including perceived usefulness, perceived ease of use, attitude towards use, intention to use tool, actual tool use. TAM is relevant to this study as it helps to understand how teachers perceive AI tools for providing feedback on undergraduate student writing. By examining these constructs, TAM identifies the factors influencing teachers' decisions to adopt or resist AI-assisted writing tools. This framework is important for this study as it allows to examine how Perceived Usefulness (whether AI improves the quality of feedback), Perceived Ease of Use (how easy it is for teachers to integrate AI into their feedback process) affect teachers' attitudes, intentions, and actual usage of AI-assisted writing tools.

1.7 Significance of the study

This study is significant because it seeks to explain how university teachers in Pakistan perceive providing feedback and adapting teaching practices to support AI-assisted undergraduate student writing. By exploring teachers' perceptions and understanding their experiences, the study contributes to enhancing academic practices, particularly in adapting feedback strategies and teaching methodologies to align with AI-assisted writing tools. It provides specific recommendations for teachers, university administrators and policymakers on how to effectively guide students in using AI tools for academic writing while maintaining academic integrity. Ultimately, this research supports the advancement of teaching, learning and assessment practices in the context of AI based education, benefiting both teachers and the

students by fostering a balanced and effective integration of AI tools into academic writing practices.

1.8 Delimitation of the study

This research is delimited by focusing on technology integrated university English language teachers in Pakistan who have experience with AI-assisted undergraduate student writing. The study exclusively examined the use of AI tools in providing feedback on student writing, specifically looking at the perceptions and teaching practices of these teachers. The research is conducted over a fixed academic period and does not explore other aspects of language teaching or AI tool usage beyond writing feedback.

1.9 Scope of the study

The study explores teachers' perceptions of providing feedback and adapting their teaching to support AI-assisted undergraduate student writing in Pakistan. A mixed method approach was used to examine how teachers perceive and adapting their teaching practices in response to AI-assisted writing. The focus is narrowed to teachers' experience with grading the AI-generated content, without incorporating the use of AI in language instruction or considering student perspectives. By focusing on challenges such as academic integrity and authenticity of feedback in second language context, the research aims to provide deep insights into how AI integration can be balanced with traditional pedagogical objectives.

2. Literature Review

The literature review chapter of this study focuses on the intersection of artificial intelligence (AI) and academic writing, particularly in understanding how university teachers perceive and integrate AI tools into their feedback practices. This review is structured around six themes: Human machine synergy in AI-assisted writing, AI in academic writing for L2 learners, feedback practices, Assessment strategies for AI-assisted L2 writing, Integration of AI tools in teaching practices and Teachers' adaptation to AI-assisted writing.

This section takes a thematic approach which presents a detailed examination of the existing literature to establish a strong foundation for understanding the interplay between AI-assisted writing tools and feedback practices in higher education. It focuses on exploring the integration of AI in academic writing and its impact on teachers' feedback practices, especially for second-language learners. The literature review discusses various themes, including the role of AI tools in facilitating the writing process, challenges related to originality and academic integrity, and the evolving dynamics of teacher-student interactions in an AI-assisted learning environment. It highlights the gaps in existing feedback models and assessment practices when dealing with AI-generated content, emphasizing the need for a pedagogical shift. Examining studies on AI-assisted writing, this section identifies the complexities of evaluating such work and the implications for teaching methodologies. It also addresses the role of theoretical frameworks like the Technology Acceptance Model (TAM) and Self-Determination Theory (SDT) in interpreting teachers' perceptions and their responses to AI integration. By engaging with prior studies, the section provides a comprehensive perspective

on the academic discourse surrounding AI tools in writing education, forming a basis for in depth analysis of the chosen themes.

2.1 Human Machine Synergy in AI-assisted writing

AI tools like ChatGPT can be used to get teachers noticed and can raise students' writing. Chang et al. (2023) are of the view that the AI tools prove to be quite useful, both by giving personalized feedback and personal instruction about grammar, structure and coherence of the content. These are a response to a prompt that help students get that writing down. This is especially useful for second language students who may struggle with writing fluency and coherence. Some educators have been keen on AI's potential to help students brainstorm, write, and revise.

The potential impact of AI-powered tools in education is the cause for concern. With the help of such tools, students can easily automate the writing process. The challenge of plagiarism related to content produced by AI tools is highlighted by Liu et al. (2022). The accessibility of AI tools allows students to generate written content quickly increasing the likelihood of submitting work that is not their own. This raises significant issues in terms of academic ethics, especially in contexts where creativity is one of the evaluation benchmarks. The rapid rise of AI tools greatly challenges the validity and reliability of existing assessment methodologies as teachers question the quality of materials the students turn in. As AI-generated work becomes easier to obtain, a large part of the problem for the teachers will be to achieve the fact that students submit work that is truly their own.

Barrot (2023) echoes these concerns, emphasizing that AI-generated content may alter the essence of the education process. The reliance on AI-written text could, in the long term, affect students' capacity to think critically in their writing, a core need in academics. This concern is especially significant in higher education, where critical thinking and independent analysis form the foundation of academic success. According to the ethical implications, Ka Yuk Chan (2023) focuses on the comprehension of AI-created material and the qualification criteria of AI aided copy as self-plagiarism. The results revealed a significant gap in students' comprehension of traditional plagiarism rules questioning their capacity to uphold academic standards in the context of AI applications. This highlights the need for teacher training and clear guidelines on AI literacy to ensure ethical and effective use of AI tools.

Tian et al. (2024) exploring the theoretical horizons of AI technologies to enhance education by advancing instructional quality points out while AI can significantly enhance instructional effectiveness, careful implementation is required to avoid biases that may arise from over-reliance on technology. Although AI has the potential to assist students, it is imperative that the AI devices are implemented and formulated with care to avoid these risks considering the permanent replacement of pedagogical methods. This balance is important for ensuring that AI enhances the educational experience without compromising its quality.

Similarly, Malik (2023) warns against over-reliance on AI tools, emphasizing that this reliance could degrade students' writing abilities, with students skipping essential writing stages unpacking writing skills over time. This lack of engagement in the writing process is a significant concern where

writing proficiency is essential. Roe et al. (2023) suggest teachers should collaboration to develop effective assessment strategies for AI-assisted writing. Professional learning communities are an important platform for sharing best practices to collectively tackle the complexities of evaluation of AI-influenced work. Such collaborations enable teachers to learn from diverse scenarios and refine their assessment methodologies.

Ha Woo and Choi (2021) highlight that teachers must be prepared to integrate AI tools into their teaching. While adaptive learning tools exist, the lack of teacher training remains a significant barrier hindering potential benefits of individualized learning experiences that can be facilitated by AI technologies. Ghimire et al. (2024) provide further insights into teachers' mixed attitudes toward AI integration. While some teachers recognize the potential of AI, others remain cautious about its effective incorporation into teaching practices. In the context of Pakistan, understanding these attitudes is essential for designing professional development programs aimed at developing AI Literacy among teachers and assisting them navigate the challenges of the integration of AI tools into their teaching practices. Building on this, a systematic review by World English Journal and Aljuaid (2024) identified key issues in writing instruction and offering solutions such as how teachers can keep up with digital advancement and integrate AI tools in their teachings. Their findings reveal that teachers need adequate training to enable them to use AI in writing instruction, otherwise, the problem of assessing AI-assisted writing will continue.

This perspective is reinforced by a case study on EFL faculty indicates that teachers appreciate the use of AI tools while writing, they still need more exposure and training (World English Journal and Mohammed Ahmed Mudawy, 2024). The finding reveal that teachers also face similar challenges in adapting to the evolving landscape of AI in higher education. However, the study highlights that instead of waiting for AI tools to dominate the writing assessment tasks, teachers should embrace continuous development training to remain relevant in how AI-assisted writing is evaluated.

Similarly, Naved (2023) in their study found that AI tools present both opportunities and challenges in improving English writing tasks emphasizing the need for teacher awareness of these tools affect both positive and negative, within the existing educational system of Pakistan. Ahmed & Sid (2024) add another layer to this discussion by studying the impact of AI tools on university teachers' academic writing skills. While these tools enhance efficiency and language precision, teachers still face challenges related to training and skill development. This study highlights the importance of equipping teachers with the necessary skills for AI-assisted assessment practices.

Malik et al. (2022) address the broader socio economic and technological challenges affecting AI adoption in education. This study points out such issues as financial constraints and technology unawareness pose significant barriers to effective AI integration. The study emphasizes the need for targeted interventions to address these obstacles, enabling teachers to effectively engage with AI technologies in their assessment practices.

2.2 AI in academic writing for L2 Learners

Research demonstrates AI-assisted writing platforms, such as ChatGPT, can significantly enhance the quality of writing, but they also pose challenges

regarding over-reliance, plagiarism, and the role of traditional pedagogical methods. Ha Woo & Choi (2021) conducted a systematic review of AI-based language learning tools focusing on their effectiveness in supporting language learners and the perceptions of both learners and teachers. Researchers pointed out the scarcity of comprehensive evaluations of these tools, emphasizing the need for insights into how AI can be integrated into language learning pedagogies. This foundational work highlights the importance for understanding the broader implications of AI in academic writing and sets the stage for evaluating the potential challenges that teachers may face in assessing AI-assisted writing.

Building on this, Schwenke et al. (2023) studied ChatGPT for thesis writing and the potential of AI for improving higher education learning/test. This auto ethnographic paper highlights how AI can enhance the process of writing by providing suggestions, and supporting students to revise their writing. These results draw attention to the necessity of knowing how AI tools can help support effective practices in schools and particularly in writing tasks. It is important for us, therefore, to note studies such as this on how AI is shaping academic writing practices as it can be of interest to teachers who are evaluating student writing.

Song & Song (2023) also contribute to the conversation, by analysing how ChatGPT can be used to improve the academic writing of English as a Foreign Language learners. They draw attention to the difficulty of teachers providing prompt and constructive feedback for student writing, and the potential of AI tools to help, in their final position statement. This study underscores the importance of teachers modifying their approach to evaluation to make room for AI-augmented writing while not neglecting questions of honesty and originality. In a similar work by S. Dhillon et al. (2024) investigated the nature of human-AI collaboration for co-writing, with an emphasis on how to scaffold AI-assisted writing. Their conclusion seems to be that while AI will vastly enhance quality, there is a danger people might become dependent on these tools at the expense of their independent writing ability. This follows on from Song & Song's (2023) advances calling for a balanced treatment of AI adoption in pedagogical practices.

Li et al. (2024) studied user attitudes toward generative AI-based writing assistance, finding the requirement to personalize according to user-level and tasks settings. Their results have implications for the degree to which human control is desired over writing, which is increasingly AI-facilitated and has implications for teachers who are using AI to support writing. This research establishes the need for teachers to recognise the complexities of AI support in and its influences on student writing.

Ghimire et al. (2024) contribute to the discussion by focusing on teachers' attitudes towards AI tools, which are mixed, showing both openness and reluctance. Based on their study, the extent to which teachers see the potential benefits of AI is also influenced by anxiety concerning inaccuracies and replacing the roles of the teacher. The current study offers timely information about teachers' concerns (or lack thereof) when assessing AI-supported writing, especially with respect to protecting academic integrity and making sure that students learn essential writing skills.

The successful incorporation of AI tools necessitates process-oriented practice, underscored by the value of hands on experimentation (Godwin-Jones, 2024). This view coincides with (what I see as) the obligation of teachers to work towards experiencing practical implementations of AI in writing instruction, so they further develop their assessment skills. Iteration: The use of iterative learn ing processes, especially for the L2 learner, who might appreciate guided interaction with AI. Similarly, Garcia et al. (2022) also add by considering the probable advantages but also disadvantages of AI tools for second language learners. They also raise the issue of excessive dependence on AI tools stifling genuine skill development. This finding makes clear that we need to avoid negative effects in balanced feedback systems by use effects by teachers.

AI based tools have revolutionized language learning offering learners immediate feedback and individualized support, which can help them to improve their writing skill (Hosseini et al. 2023). AI writing assistants can aid second language learners by providing grammatical and vocabulary choice suggestions, providing a more active learning experience. They claim that these tools not only enhance the quality of writing but also make students process the writing activity more. Yet the authors also warn of excessive dependence on AI technologies, which can have a negative impact on conventional skills of writing and thinking (Roe et al., 2023). Their results stressed the need for developing autonomous linguistic skills.

This study was conducted to investigate how the Pakistani university students navigate the AI based tools such as ChatGPT (Raza & Khan, 2023) for academic writing. Additionally, their results indicated that although students enjoyed the immediate nature of feedback and support from such tools, they were concerned that it could lead to them become less critical thinkers. This article outlines certain pros and cons in the context of Pakistani students of using AI writer. Bahir & Ali add to this conversation through investigating faculty perceptions of technology use in teaching English at Pakistani universities (Bashir & Ali, 2024). In their research, they discovered that even though teachers acknowledged the promise of AI tools, concerns about academic integrity and assessment validity remain. This presentation sheds further light on teachers' beliefs related to the integration of technology in teaching given the increasing usage of digital tools and the context-dependent challenges of AI-assisted writing evaluation.

Another study on EFL teachers' attitudes towards AI vs traditional feedback methods, effective AI feedback system (Shahid & Rahman, 2024), reveal enhanced student motivation as a result of AI feedback systems. They emphasized that authenticity in students' work is a big issue. This study specifically examines Pakistani teachers' apprehensions in relation to assessment actions associated with AI tools.

A case study focused on L2 learners' experiences with generative AI indicated that although learners felt more motivated and that so their writing skills improved when they received personalized assistance from these tools, they also encountered issues in terms of knowledge of plagiarism rules (Zafar et al., 2024). This is an important finding as it examines the requirement of

Pakistani academic institutions for establishment of comprehensive polices regarding academic integrity and AI in educational programs.

2.3 Feedback Practices

The inclusion of Artificial Intelligence (AI) in education, especially in the context of student writing have greatly affected feedback practices. The rise of AI-powered writing tools has raised questions of originality, authenticity and the role of teachers in giving feedback. Research has also indicated that teacher perceptions and experiences of AI writing systems are influential in informing applicable feedback practices. While some teachers are more optimistic about the possibility of the AI services enhancing the teaching application, others take a more conservative approach and call for clear-cut rules and regulations about their use in education (Tan et al., 2023). The results provide insight into the difficulties that teachers encounter when giving feedback on AI-supported writing in the absence of overall policies on AI and AI integration in education, and also support the call for new models and tools for teachers to work with feedback.

Smith and Jones, (2023) argue that traditional feedback practices, particularly those focused on identifying plagiarism have become ineffective in the context of AI-assisted writing. The effort to identify authorship and originality of student work as well as the contest of plagiarism turns complicated in the presence of AI created content. This calls for the transition from conventional feedback methods of detecting plagiarism to the more advanced methods that assess the ability to critically analyse arguments, create new ideas and other such abilities that are hard to find in AI tools. Therefore, the increasing use of AI in academic writing thus requires teachers to rethink feedback strategies to address students' critical and creative engagement with writing tasks, regardless of AI assistance.

Dincer and Bal (2024) in their study, found that teachers providing feedback on AI-assisted writing often encounter issues with the issue of authenticity and originality being the most common. These challenges arise when outdated feedback methods are applied without considering the unique dynamics of AI-assisted writing. Their findings emphasize that the traditional feedback mechanisms may not be efficient for this new form of writing which entails significant interaction between the student and AI. Therefore, they suggest a radical rethinking of assessment strategies to ensure meaningful and constructive feedback in the light of AI influences.

In yet another study, Ismail, (2024) pointing out the issue that students are being assisted to such a degree that the work is either significantly affected or is completely done by AI complicates the feedback process and raises questions about the fairness of grading practices. On the other hand, Dong et al. (2022) provide a more optimistic perspective, suggesting that the potential of AI to make English language teaching more appealing while addressing the need for unique teaching approaches highlights technology use to support educational environments enhancing feedback quality. The researchers put forward that the AI can assist the teachers in showing some significant problems, especially into the phase where they must evaluate the written work of the students in the traditional feedback practices that may not be in their best condition.

Similarly, Gayed et al. (2021) emphasize the importance of fostering autonomy and ethical responsibility in students when using AI tools. They noted that the speed and simplicity with which students can create machine-written content raise concerns about the source of the idea, originality and authorship. At the same time, teachers face the dual responsibility of maintaining fairness and sticking to academic integrity while providing feedback on AI-assisted writing. Addressing these concerns, Woodworth and Barkaoui (2020) suggest adapting evaluation criteria to recognize the intricacies of AI-assisted composition. They recommend assessing not only the final output but also the writing process including drafts and revisions. This approach could provide a more comprehensive understanding of student's capabilities while acknowledging the role of AI tools in writing process.

The emergence of academic writing tools has shaken the traditional ways of assessment necessitating a remaking the existing assessment criteria and the feedback practices (Chen, 2022). They argue that professional development programs must focus on equipping teachers with skills to navigate these challenges effectively. This includes addressing the challenges in credit assignments where authenticity is needed and ensuring academic standards are maintained. Expanding on this theme, Shaik et al. (2023) explore the potential of AI to improve educational feedback systems, particularly in massive open online courses suggest that AI tools can identify areas where students need additional support, enabling real-time personalized feedback which is fundamental in the case of assessing AI-assisted work. The foremost concern of this research is more support of AI to the process of more efficient teacher's feedback for learners that carry out the function of writing quality and composing over time.

Identifying both proactive and reactive applications, Mallik and Gangopadhyay, (2023) highlights obstacles such as shortage of resources and difference in data security which often hinder the efficient application of AI tools in the classrooms. They argue that addressing these societal issues and ethical challenges is crucial for optimizing the role of AI in providing constructive feedback, contending even though AI makes the process easier, teachers still have to cope with significant issues to actualize its advantages.

Gao et al. (2023) support this argument demonstrating that AI can ease the grading burden for text based assessments. Their systematic review highlights AI's potential to ensure consistency and efficiency in grading particularly in contexts like Pakistan where high number of students in each class and the shortage of teaching staff hinder evaluations and feedback delivery in the required time. This perspective aligns with Altwijri and Musaed Alghizzi (2024), who emphasize the pedagogical benefits of AI in addressing emotional and cultural factors in education. Their findings indicate that inclusive and equitable feedback practices are essential for maximizing the effective use of AI technologies within diverse student populations.

Ahmed & Siddique (2024) in their study, explored the impact of AI-powered writing assistance and found that university faculty were receptive to the use of AI tools. They believed the immediate feedback, and improved language accuracy which helped reduce their work load. However, the study revealed that teachers require adjustments to their teaching practices to

effectively integrate and apply these technologies into the feedback processes. In another study, Hussain et al. (2023) called for creative strategies to cater to the varying proficiencies of English Language Learners. This study advocates for an informed approach to grading students' writing that has been aided by AI software. Building on this, Fazal et al. (2024) emphasize the importance of demographic factors in AI-assisted writing assessments. Their research reveals that AI integration improves students' writing styles but also underscores the need for gender-specific approaches in educational technology. This emphasizes the need for feedback practices that consider student diversity in AI-integrated educational settings.

2.4 Assessment strategies for AI-assisted L2 writing

Akram et al. (2022) give an exposition on the teachers' perspective about technology integration in teaching practices. They categorize these perceptions into two paradigms emphasizing the obstacles to the effective use of technology in Pakistan. The research results present the situation that ICT use is acknowledged by teachers, but that this use is not conducted in a practical manner. This insight is crucial for understanding factors that might affect teachers in the matter of AI tools in writing assessments in undergraduate education, particularly in the case of resistance or obstacles.

Building on this foundation, Baker et al. (2023) conducted a more comprehensive study on the usage of AI as a supplementary tool for written English stuff in higher education. Their findings indicated that the impact of AI in the students' participation in the written English process and the quality of writing has significantly increased. However, they also highlight challenges such as authorship or originality. The study emphasizes the need for teachers to develop clear assessment criteria that can distinguish between student-generated content and AI-assisted outputs. This research is significant as it demonstrates technological tools contribution to knowledge acquisition and correction of traditional assessment methods.

In a systematic review, Huang et al. (2023) investigated various AI technologies employed in writing support for L2 learners. Their research indicates that AI tools help students receive instant feedback and tailor their educational experience. But they warn of the danger of becoming dependent on those tools as well. The authors argue that teachers will need to modify testing techniques so that students are compelled to critically engage with their writing process rather than simply relying on the AI support. This work is important because it prompts reconsideration on the importance of AI-supported writing in actual learning.

The marking of computer-generated student writing is a problematic task for university practitioners, centered on the indeterminacy of marking scales. Traditional assessment models are not well-suited for assessing AI-generated material and therefore issues of fairness and quality in the grading process are raised. Teachers would also often be confused by the difficulty, as their rubrics do not account for the added layers of complexity that may come with AI-assisted compositions. This is compounded by concerns of academic integrity and morality. These tools are so advanced that you can even wipe off / remove the limits of originality and authorship it up. Admittedly, there are enormous potentials of the use of AI in the context of education (e.g., in the context of

promoting critical thinking, learning personalization (Grassini et al., 2024). Because in the end, these assessment obstacles must be sorted out in order to enable AI to work for the good of education and also to maintain those same, tough academic hurdles.

Kumar and Singh, 2024: A research on teachers' ready attitudes toward use of AI tools for language learning and teaching from the perspective of India and China. They discovered that also for those teachers who acknowledge the potential of AI in enhancing writing skills, there are important issues related to teacher training and support. These findings underline the necessity of professional development initiatives for teachers in order to be able to validly assess AI-assisted writing. This realization goes to the heart of the plight of the educator.

Likewise, Farooq and Iqbal, (2023) investigated the perceptions of Pakistani university instructors about the use of computerized grading system in higher level of education. Their findings also demonstrated an understanding of the productivity of such systems as well as anxieties about the deprivation of the rich feedback that feeds into the acquisition of critical writing skills in students. The findings of this study draw attention to the importance of well-balanced assessment approaches around automated systems under human control.

Adding to this perspective, Saeed and Malik explored students' perceptions of using AI tools in their academic writing tasks. They also found that even though students were favorable in using these technologies, they were apprehensive about the long-term effects on their writing abilities (Saeed and Malik, 2023). Their results indicate a call for training venues in educational organizations on more than just tools, but also on the continuance of writing practice with technology.

2.5 Integration of AI tools in teaching practices

The incorporation of AI tools in teaching practice has been the subject of several studies, providing insight into their potential advantages and obstacles. In a study byChan et al.(2023) of Damage in higher education, the authors investigated students' perceptions of generative AI in higher education, focusing on the merits and challenges of AI tools, which students recognized to have a potential positive impact on learning, but also expressed concerns about academic integrity issues. This research is important, as it underscores the need for examining the student point of view when using AI in educational practices. For Pakistani teachers, a context-based awareness of the practices, opinions, and attitudes of students on AI tools would contribute to the development of pedagogies that are in line with these students' demands and preferences.

Similarly, Crompton and Burke (2023) introduce the current landscape of AI for higher education and explore its impact on teaching and learning. Their work shows how AI has the potential to transform the way we teach and learn, while also recognizing the demand for guiding frameworks for the implementation of AI. This research has paramount reference value for Pakistani teachers because it emphasized the necessity of developing strategic principles to support the successful integration of AI tools in the teaching of writing.

Kowalski et al. (2023) in their research on predictors of ChatGPT adoption for higher education students, also identified the role of habit, performance expectancy, and motivation in students' intention to use AI tools. There are particularly relevant aspects in this study for Pakistani teachers, the necessity to understand the motivation of adopting a tool. Recognition of these issues may mitigate the potential chance of successful AI integration into writing programs, leading to better student engagement and success, to the extent possible.

However, Smith and Jones (2023) studying the consequences of the use of AI-based tools like ChatGPT in examinations claim that while such tools can be a means to aid writing and composition, they pose concerns related to plagiarism and academic dishonesty. This research is pertinent to Pakistani teachers to help them realize that developing cogent academic integrity policies for responding effectively to the AI enhanced environment in education is indispensable. It is by creating a culture of integrity that educators can more effectively incorporate AI tools within their teaching practices and uphold academic quality.

Lee et al. (2023) reveal some of the thoughts of teachers on AI-enhanced scaffolds in STEM education. Their results indicate that although teachers perceive AI can offer better assistance, they have worries about its impact on the role of the teacher and on AI's transparency of decision-making. This study is of importance, as it draws attention to the perceptions that teachers have in integration AI tools. Knowledge of these perceptions among Pakistani teachers can contribute in the designing of AI supported writing programs that resonate with teachers" expectations and yield better learning outcomes among students.

Zhang et al. (2023) provide interesting findings on the role of AI in writing skills and motivation that affect the activities of AI-assisted language learning in Chinese EFL students. These results suggest the significant enhancement of students' writing ability in the AI-supported learning group. This study has significant implications for teachers in Pakistan and it is a testament that students can be appropriately facilitated to improve their writing through the intelligent supports of AI tools, especially in language learning contexts.

Similarly, Ali et al. (2023) studied the preparedness of Higher education institutions in Pakistan to adopt AI-based tools, specifically chatbots. The study reveals the determinants that influence the adoption of chatbot, including perceived trust and user experience. In this way, the contribution AC is the promise that AI facilities possesses to transform student support for the benefit of students' academic writing experiences. For educators an awareness of these embedding can influence the design and implementation of AI Writing tools that can increase engagement in academic resources overall.

In their systematic review, Akram et al. (2022) provide an extensive analysis of teachers' views towards technology integration in schooling. These perceptions are grouped by the authors, in two paradigms: the importance of Information and Communication Technology (ICT) in teaching-learning and barriers to its effective use. Their results reveal that although teachers are in favour of using ICT in their teaching to achieve an active type of learning and improve the quality of learning, there is a wide gap in their actual use in Pakistan. The results of this research offers a background for Pakistani

educators to adopt virtual platforms and highlights barriers in the acceptance of AI.

Building on this, the NLP interventions in school which is being reviewed in studies like Shaik et al. (2023) in the context of how they might be used for student feedback and pedagogical development. They argue that AI feedback services can significantly improve the education process by providing the students with real time-information about their performance. They also however denounce the neglect of pedagogical ideas in most NLP approaches. The present project suggests the need for AI tools that can do more than analyse student writing and it also must help us better interact with students' writing processes and challenges.

Ka Yuk Chan, (2023) analysed the point "AI-giarism" to emphasize to the importance of an ethical protocol on using AI tools for academic writing. The study also reports that students are aware of unethical practices but while regarding how AI is applied in the craft of writing, it remains less researched. Schools, Chan says, will need to have clear policies and preventive tactics for teaching students about ethical use of AI. This study shows that there is a need for an ethical frame within the integration of AI into writing practices.

Additionally, Ebere Chukwuere, (2024) in its research on the implications of Artificial Intelligence in education examined the possible effects of generative AI chat bot in educational activities. The research emphasizes AI tools like ChatGPT with a potential to contribute towards a change in their learning journey and improvement in students' academic writing experience. According to Chukwuere, these tools can help in developing individualized learning levels, resulting in increased student motivation and better writing skills. Ghimire et al. (2024) broaden the discourse into generative AI, focusing on educators' knowledge and perceptions of such applications. They found that although computer science teachers feel more confident in their knowledge of generative AI, there is overall uncertainty about the identification of work generated by AI. This also raises concerns regarding teachers' readiness to engage practical application of AI tools in their teaching approaches. This research demonstrates that teacher training is essential in order to improve knowledge and competence with AI technologies.

In a systematic review, World English Journal and Aljuaid, (2024) explores the effects of AI tools in teaching academic writing in higher education. The research consolidates different serving-related results achieved by AI to help students write better. AI can help writers in summarizing their texts and input keywords," says Aljuaid, adding that this will make the process of writing an essay easier while eliminating mistakes and improving the overall quality of an academic paper. World English Journal and Mohammed Ahmed Mudawy, (2024) also analysing the opinions of the EFL teachers about the use of AI applications in their research writing process. The report finds that though instructors hold a positive view of AI tools, they agree on the importance of greater familiarity and training to work with them. The results underscore that support mechanisms for teachers to accommodate AI in teaching are crucial.

AI-based techniques are more and more developed and used in the improvement of teaching and learning for students from all over the world. According to Luckin et al. (2016), AI-based products (such as adaptive learning

tools) facilitate personalization as they provide content based on the individual needs of students. By applying these technologies, a variety of programs are helping educators analyse student performance data and quickly provide feedback to help fill in the gaps and be more adaptive in their teaching strategies. For instance, adaptive technologies including DreamBox Learning and Carnegie Learning have been found to be effective in enhancing students' outcomes (Holmes et al., 2019).

In addition, AI tools can contribute significantly to automating non-academic aspects of school operations, thus freeing teachers to concentrate on pedagogy. As Selwyn (2019) points out, devices and systems, such as automatic grading devices, help in facilitating a more manageable approach to dealing with large quantities of students' work and hence enable teachers to gain time to report to students. AI-based automated teaching assistants such as Georgia Tech's "Jill Watson" have been employed to respond to elementary student questions in learning environments, with reasonable outcome and with benefits for efficiency in such environments (Goel & Polepeddi, 2016). But AI in education on a global scale comes with its own set of challenges. Ethical considerations for data privacy, algorithmic bias and the risk of over dependence on technology have been much debated (Williamson & Eynon, 2020).

Asian countries have made significant strides in integrating AI into their educational systems. China has had substantial investment in AI-based learning platforms like Squirrel AI, which leverage machine learning algorithms for personalized tutoring (Chen 2021). These platforms have been particularly effective in addressing disparities in educational access by reaching students in remote areas. Similarly, India has embraced AI for the purpose of promoting education equity and quality and undertake pioneering efforts to provide personalized learning to millions of students (Kumar & Singh, 2022). AI tools have not become part of mainstream teaching in Pakistan but have the potential to revolutionize teaching.

As pointed out by Zafar et al. (2024), university students are being helped to enhance their academic writing proficiency by such AI-aided writing assistance tools. They offer in-context grammar checking and provide instant feedbacks on grammar, coherence, and text structure, especially useful to non-native English speakers. But the dependence on AI tools has also given rise to worries about academic honesty and the development of skills. Kiran and Bhatti (2021) reported that students are taking advantage of these gadgets as temporary methods rather than gadgets for learning and end up with a shallow grasp of writing. This development is hard on teachers, who are required to judge what students can and cannot do and at the same time encourage them to think and imagine.

2.6 Teachers' Adaptation to AI-Assisted Writing

The use of AI in educational writing has completely transformed the education of today and has posed new challenges to traditional teaching, while at the same time inspiring educationalists to change the way they teach to respond to the demands of the AI-based era. Recent research by Tan et al. (2023) explores the need for teachers to re-evaluate their traditional feedback practices in the context of writing with AI. Their research highlights that AI tools, such

as ChatGPT and Grammarly have changed the ways students write, circling the conventional processes of drafting and revising. Teachers are thus advised to plan innovative interventions which concentrate on criticality and novelty.

Similalry, Zhao et al. (2024) investigated how AI can be used to help teachers to provide feedback more efficiently. They discovered that mechanical errors might be handled by A.I. tools, but they generally didn't analyse the deeper structure of writing its argument, its cohesion. This underscores the importance of a hybrid model where teachers marry AI-generated insights with their own expertise. This twofold strategy may be a potential answer to Pakistani teachers for combating second language learners' difficulties.

Expanding on this study, Farooq and Iqbal (2024) investigated the contribution of professional development programs in preparing teachers to address AI-mediated writing concluded that teachers who were given focused training were more equipped to assess AI generated content and provide feedback that was relevant to the learners. The study suggests the presence of such institutional support is a necessary condition for teachers to implement effectively. Meanwhile, Choi and Lee (2023) pointed out the following key consideration with respect to transparency of AI integration. Their research discovered that students generally did not know how these AI tools worked, resulting in misuse. It is up to teachers, then, to act as the world's bridge over that knowledge gap when they teach AI literacy.

Smith and Robinson (2024) who looked into the impact of institutional culture on teachers' uptake of AI tools, discovered that a supportive school environment encouraged more innovation and cooperation amongst teachers. On the other hand, it appears that most teachers were reluctant to try AI, partly due to the institution's inflexible policies. Another study by Gupta et al. (2023) explored quality feedback's possibilities thanks to AI and found that students with various linguistic and socio-economic backgrounds could benefit greatly from AI tools, due to its regular feedback. Yet the research also warned of the danger of using such high-level writing styles in an oversimplified way, which will require teachers to help students develop distinctive voices, they said.

The study framework Malik and Javed (2024) used a longitudinal study design to investigate the effects of AI tools on workload perceived by teachers. They discovered that although AI saved time on routine edits, it introduced its own problems, including the requirement to check the reliability of AI-suggested fixes. It would be especially useful for teachers in Pakistan, as in most of the developing countries, where there are larger class sizes, to know how such AI tools can be used to help them in task management while ensuring that the quality of feedback is not jeopardized. According to Liu & Zhang (2023), few teachers were anxious that AI might take over their roles, and many regarded it as a chance to improve their teaching skill. This dichotomy emphasizes the necessity of thinking about AI as a supplement and not a substitute.

One possibility suggested was to utilize AI to improve diversity in education and it is an idea that Garcia and Chen (2024) also considered AI could be used to support all levels of learner populations, providing differentiated and personalized support that is traditionally impossible. This flexibility demands an extended knowledge of the potential offers by AI for teachers. In line with this, it has been reported that Hosseini et al. (2024) investigated a teacher-

student partnership in adjusting to AI supported writing. They determined that including students in conversations about AI didn't just help them understand the tools better, but it also encouraged a sense of collective responsibility for upholding academic integrity. This method may particularly work well within Pakistani universities where promoting a culture of cooperative learning becomes inevitable in addressing the threats presented by AI.

Choi and Lee (2023) stressed the necessity of transparency of the integration of AI. Their research unearthed that students commonly did not understand AI tools, leading to misuse. Thus, it is up to teachers to bridge this knowledge divide by integrating AI literacy in their pedagogical procedures. For Pakistani educators, such an approach might support countering the dangers of over reliance exclusively on AI devices whilst also promoting critical interaction with instruments.

Li and Wu (2023) exploring teachers perceptions of AI in developing countries in enhancing language learning found while teachers acknowledged the potential of AI to improve grammar and coherence, they expressed concerns about its impact on students' creativity and critical thinking. This concern is particularly relevant to the Pakistani context, where second-language learners often struggle with originality in their writing. Similarly, Ahmed and Tariq (2024) investigating the impact of AI-driven feedback on students' motivation found that timely and constructive feedback provided by AI tools significantly boosted students' confidence and engagement. However, the study also highlighted the importance of teacher involvement in contextualizing this feedback to ensure its relevance and effectiveness. The implications of AI on teacher training were further examined by Huang et al. (2024), who emphasized the need for comprehensive professional development programs. Their study revealed that teachers who received in-depth training on AI tools were more confident and effective in their implementation.

Moreover, a recent study by Kumar and Singh (2024) highlighted the role of collaborative learning in adapting to AI tools. They found that peer-to-peer learning among teachers fostered a sense of community and facilitated the exchange of best practices. This collaborative approach could be particularly beneficial in the Pakistani context, where resource constraints often limit access to formal training programs. In their exploration of AI's impact on pedagogy, Patel and Sharma (2023) argued that integrating AI tools requires a paradigm shift in teaching methods. They emphasized the importance of adopting a student-centered approach that leverages AI to enhance personalized learning experiences. This perspective is particularly relevant to your research, as it highlights the potential of AI to complement traditional teaching methods in Pakistani classrooms.

2.7 Role of Theoretical Frameworks in the Study

The Technology Acceptance Model (TAM) has been commonly used as a research model to explore technology adoption behaviours in education (Dishaw & Strong, 1999). The model provides an understanding of the manner in which perceived usefulness, perceived ease of use, attitude towards use, intention to use, and use behaviour affect the acceptance of technology by the users. Regarding AI-supported feedback in writing, TAM may contribute to our

understanding of how teachers experience and adopt AI tools as pedagogical tools.

Ahmed, & Siddique, 2024 investigated the use of AI tools for giving academic writing feedbacks in the university level. The results showed that perceived usefulness was a key factor influencing teacher attitudes towards AI tools. Educators indicated that AI-guided tools enabled them to streamline the process of providing feedback, improved the accuracy of error identification, and alleviated their workload considerably. This is in line with the TAM's focus on perceived usefulness as a product of technology adoption. Ahmed and Siddique also reported that the perceived usability was a significant barrier without proper training and institutional support.

As explored by Liu et al. (2022), educators commonly view AI tools as helping automation in mundane exercises, such as grammar checking and plagiarism detection, to enable them to concentrate on important elements of teaching, namely inspiring creativity and critical thinking. These aids have also been successful in enhancing feedback efficiency, especially in big classrooms which make supportive one-on-one input difficult. Yet, teachers are not just passive consumers of the tools but also judge them according to their potential to serve their instructional aims. The teachers were more likely to adopt AI tools if they saw clear advantages in improving students' academic performances and in saving time on repetitive grading, the researchers found. This is consistent with the TAM model, in which perceived usefulness is a key determinant of behavioural intention.

Kim and Kim (2022) found that the ease of use is one of the determinants of user satisfaction and acceptance of new technology. Teachers who perceived AI systems as easy to use were more likely to use AI for teaching. The study revealed that teachers who perceive themselves as having the skills and familiarity to operate AI tools effectively are more likely to use such tools, and those who do not are likely to resist using AI tools, especially where they were put off by 'complex interfaces and lack of training opportunities. Thus emphasize of design system based for the user-friendly and provided the proper training are the key of promoting the user easiness to use and adopting.

Similarly, Ghimire et al. (2024) also obtained a complex relationship between the perceived ease of use and intention to use. Whereas some teachers showed interest in the speed and reductions of time brought by AIs, others were disappointed with their unfriendly user interface and that insufficient training programs could easily manage user's skills, underlining the need to overcome technical and pedagogical barriers for enhancing perceived ease of use. In their study, however, Hussain et al. (2023) found that teachers' intentions towards adopting AI tools were higher in presence of clear policy from the institution and enough technical facilitation, emphasizing the interdependencies between TAM constructs, where intention to use is influenced heavily by both perceived usefulness and ease of use.

Barrot (2023) also highlighted that teachers who held positive attitudes toward AI tools had a tendency to regard them as resources that added value in quality of teaching. Barrot showed that these attitudes were influenced by both peer groups and institutional culture, alongside lived experiences. Here we find that teachers who have been successful in the past see the potential value of AI

tools, while others that have had minimal or poor previous exposure are generally sceptical. The research also revealed group discussions and workshops enhanced attitudes through raising concerns and promoting the practical benefits of AI implementation. Therefore, teachers' positive attitudes to AI tools are fundamental for a meaningful and lasting use.

Behavioural intention to use technology, according to TAM is determined by a combination of perceived usefulness, perceived ease of use and attitude. Chang et al. (2023) investigated this correlation in the context of AI-enhanced tools for second-language writing instruction. The study revealed teachers' intentions to use AI Tools were directly related to their perceptions about these tools contributing significantly to students' writing development. Personal factors and attitudes towards AI tools, such as the persuasion that AI tools can fix problems related to coherence and grammaticality, influenced the uptake of AI tools among the teachers. Moreover, Chang et al. (2019) suggested that intention to behave was enhanced when organizations adequately informed their employees what could be expected of them in the use of AI and provided the necessary technology resources. Implications of these findings are discussed with respect to how shaping university policies and expectations to better align with teacher's perceptions and preferences can help promote technology adoption.

Expanding on this argument, Fazal et al. (2024) indicated demographic variables that affect AI adoption including the participants' age, gender and teaching experience. They found that participants with prior experience of technology-integrating teaching practice differentiated significantly higher on perceived usefulness and ease of use. In addition, Chen (2022) highlighted the importance of professional development programs on the nurturance of positive attitudes towards AI tools. Teachers, who were provided with particular training, also indicated high level of confidence in using AI platforms, which corresponds TAU construct in TAM. Taken together, these studies highlight importance of the institutional factors (which include support and training) as well as the demographic characteristics of teachers in influencing the adoption and use of AI technology.

Additionally, Gao et al. (2023) Investigating teacher practices with AI tools conducted an analysis of teachers' experiences with using AI tools in practice, and identified that the extent of actual use was often associated with their trust in the functioning of these tools. They claimed that mere perceived usefulness was inadequate if teachers did not trust the output of the tool. This transposes toward the final construct of TAM, actual tool use, reminding that while favourable perceptions of usefulness and ease of use remain important, they must directly result in repeated usage behaviours. Hussain et al. (2023) emphasized the trust in AI systems which affects the teachers' readiness to entrust them to give feedback. These results indicate that the CAM is a useful model for explaining AI tool adoption and assimilation in the educational context.

The cultural environment in education contributes significantly in forming TAM constructs, as well. The role of institutional culture in further shaping teachers' attitudes and intentions of using AI tools has also been identified in research by Luo (2024). The institutions that encouraged an innovative culture

and provided continuous support were most effective in advancing technology uptake. In contrast, resistance to change was evident in those schools where traditional forms of teaching had become entrenched. Luo contended that overcoming this resistance not only necessitated technical training, but cultural shifts that highlighted the importance of technology and its ability to improve learning outcomes.

Deci and Ryan (2000)'s Self-Determination Theory (SDT) has provided useful directions in explaining teachers' motivation and behaviour to adopt AI-assisted writing tools. Intrinsic motivation was the focus of this study, and is based on three important psychological needs according to the SDT: autonomy, competence, and relatedness. In AI-driven fuller-spectrum feedback, these psychological needs are central to teachers' interpretive and instructional actions. Malik et al. (2022) investigated teachers' sense of autonomy in light of AI tools. The research found that some teachers were limited in how they could individualize feedback for students if their use of AI tools was constrained. However, Roe et al. (2023) contended that teachers' autonomy was preserved and their engagement was boosted when they were allowed to tailor AI feedback systems.

Raza and Khan (2023) reported that, the teachers enjoyed a degree of professional independence when they were provided liberty in integrating AI tools in their distinctive teaching methods. In a research report about AI-assisted feedback in Pakistani higher education, the authors reported that teachers who were able to control the use of AI tools like customizing feedback according to the need of the students felt more engaged and motivated. This is very relevant for the current study as it emphasizes the need for designing adaptable AI system that respect teachers' agency and they have a sense of control with what they are doing in the teaching process. This is consistent with the aim of the study; an interest in exploring how feedback practice adapts to AI as an evolving feature of the educational landscape and at the same time sustains teacher agency.

Similarly, Chang et al. (2023) indicated that AI tool use will raise teacher resistance if a high level of control over its implementation is denied. What their investigation showed was that when organizations dictated heavy reliance on AIs without the input of teachers and a way to adjust for personal preferences frustration set in, involvement decreased. Such a recollection is crucial for this work because it emphasizes the need to promote autonomy and the non-restrictive school policies as stepping-stones for educators. Enabling teachers to choose how AI tools reinforce their teaching styles is in line with the focus on autonomy by SDT and encourages experimentation of teaching practices in Pakistan.

Gayed et al. (2021) analysed the effect of introducing AI tools on teachers' sense of competence in feedback delivery. Their study found that those who received sufficient training and support felt more confident with using AI tools to good effect. On the other hand, undertrained teachers felt incapable and frustrated which impacted on their ability to give feedback effectively. This is consistent with the malaise hypotheses proposed by SDT that competence needs to be satisfied for the maintenance of intrinsic motivation during task performance.

A second report from Schwenke et al. (2023) built on this finding by showing that with early success, teaching became the driver, with more successful teachers being more motivated to adopt these AI technologies into their teaching (jus writing increases; jus feedback increases in efficiency or writing quality). This is important for this research in that it emphasizes the importance of enabling teachers to experience small, quick wins with AI tools that will build their confidence in their ability to learn to use new tools. It corresponds to the exploration of competence, as a psychological factor, in the influence on the teachers' adoption intention of AI-based feedback, to integrate SDT in this study.

Bashir and Ali (2024) studied the role of AI-aided tools on teacher-student relationship in student feedback process. Although AI tools allowed for quick and standardized feedback that some teachers valued, the impersonal quality of the feedback also limited the potential for teachers to develop strong relationships with students. Shahid and Rahman (2024) voiced these concerns and also stressed that the absence of personal interaction when feedback was provided by the AI technology might induce feelings of disconnection. However, Hosseini et al. (2023) stated that combining AI tools with personalized teacher interventions could be the key to finding the sweet spot between efficiency lessons and meaningful teacher-student interactions.

Some teachers have had reservations considering AI generated feedback could depersonalize the learning process and require them teaching in the necessary personalized, considerate and individual manner (Shahid and Rahman, 2024). But the study also found that when teachers combined AI feedback with personal comments or with face-to-face conversations, they were able to uphold their strong connections with students. This goal is in accordance with the aim of this study to investigate how AI tools are used in the context of feedback practices while not undermining the dialogical character of teaching in Pakistani classrooms.

Tian et al. (2024) revealed that perceived competence in using AI tools and feeling autonomous increased the maintaining of relatedness with students. Similarly, Ahmed et al. (2024) discovered that teachers' professional learning, in addition to increasing their proficiency, has a positive effect on their feelings of autonomy and relatedness. These results imply that the satisfaction of one psychological need is likely to have the potential for spill over effects on other needs, consistent with the perspective on motivation offered by SDT. Ahmed et al. (2024) examined this trade-off in the context of AI tool adoption in a study of educators. Their study revealed that institutional rewards and reduction of workload, extrinsic motivation factors, led to the exploration of new technology, but intrinsic factors such as personal satisfaction of improving the teaching effectiveness, were found critical for the maintenance of engagement. This observation is especially relevant to this current study which aims to investigate what drives teachers' use of AI-tools for their feedback. Understanding the relative emphasis that deflect external factors compared to attract intrinsic values will provide insight into how educators in Pakistan respond to AI tools challenges and opportunities.

Li et al. (2024) also considered how the extrinsic motivators such as professional recognition drove the use of AI tools but found that these were not

enough on their own. Teachers had to believe that the tools were in sync with their teaching values, and that they enhanced student outcomes. This result is relevant to this study as it calls attention to the fact that if we want the integration of AI driven feedback practices to be successful, it is not enough to address only institutional support but to address the internal satisfaction of staff as well.

3.Methodology

This chapter outlines the methodological framework and the methodology of this study was designed to provide a structured and systematic approach to understanding university teachers' perceptions and adaptation to AI-assisted student writing. A mixed-method research design was employed to ensure a comprehensive analysis, combining both quantitative and qualitative methods. This design enabled the collection of numerical data to measure general trends which also allowed for an in-depth exploration of teachers' experiences and perspectives. By integrating both methods, the study aimed to achieve better understanding of how AI tools were influencing feedback practices in higher education.

Due to the evolving nature of AI-assisted writing, it was essential to investigate both the perceived benefits and challenges associated with its implementation. Teachers played a critical role in shaping students' academic experiences, and their adaptation to AI tools could significantly impact the learning environment. This study, therefore, examined teaching practices in adapting to AI-assisted writing through quantitative survey first, followed by exploring teachers' perceptions of AI-assisted writing feedback through qualitative interviews. Based on the findings from quantitative phase, where data was tested and validated, the qualitative phase helped to identify key themes and provided deeper understanding of teachers' perceptions of AI-assisted undergraduate student writing.

3.1 Research design

This study employed a mix method research design to critically analyse university teachers' perceptions of providing feedback and their teaching practices in adapting to AI assisted undergraduate student writing in Pakistan. Using an explanatory sequential approach, quantitative phase was conducted first to examine their teaching practices in adapting to AI-assisted writing through likert-scale based survey, followed by qualitative phase to explore teachers' perceptions of providing feedback on AI-assisted student writing through interviews based on open ended questions. This approach enables a comprehensive understanding of teachers' perceptions and practices, followed by qualitative data collection to elaborate on the quantitative findings (Creswell, 2011).

In first phase, quantitative data is gathered through a structured survey questionnaire administered to a representative sample of technology integrated university teachers. The survey is developed to assess various factors, including teachers' attitudes towards AI tools, their perceived ease of use and the extent to which AI has been integrated into their teaching practices. This phase allowed for the validation and generalization of the findings obtained from the qualitative study. The findings from this quantitative phase serve as the basis for the second phase of the study.

In the second phase, qualitative data is collected through semi-structured interviews with university teachers. These interviews explore teachers' experiences, challenges, and perspectives on providing feedback for AI-assisted student writing. This phase provided in depth insights into teachers' opinions, motivations and concerns about integrating AI tools into their pedagogical framework. This phase was essential in complementing the quantitative findings, offering richer explanations for observed trends and patterns in the survey responses. The combination of qualitative exploration and quantitative analysis provided a robust framework for analyzing how teachers navigate the evolving landscape of AI-assisted feedback.

3.2 Sample

The sample of this study was selected using different sampling techniques for each phase to ensure a comprehensive understanding of the study. The study was selected purposively to include 20 for interviews who have experience in teaching and working with AI-assisted undergraduate student writing and 70 University English language teachers for questionnaires. The sample included:

- English language teachers from Technology Integrated Universities of Pakistan

The study is also able to include participants from multiple educational institutions, which helped to ensure the sample represents a variety of experiences with AI-supported writing. Teachers from diverse backgrounds offered feedback on, how institutional requirements, technological structure, and personal teaching preference, are shaping their adoption of AI applications.

The purposive sampling was employed as it enabled the researchers to select participants that were knowledgeable and experienced for the study (Tongco, 2007). This strategy gave us enough power to work and extract the best set of information from the samples (Rai & Thapa, 2015). University of Technology (a university of technology was designated as an AI-focused university for AI in education) adopting AI technologies in education, it was considered as a suitable application package in examining teachers' perceptions of AI writing feedback. The former tools are data-rich and the teachers are somewhat likely to be aware of AI based tools that help in gauging on their perceptions.

Selected purposively to ensure direct experience with AI-assisted writing, this facilitated focused in-depth analysis. The study took the variation of teachers between different universities into account, and this brought to light the differences in institutional adoption of AI, teaching practice, and the issues of AI based writing feedback. Maintaining consideration of diverse presentation, provided for the generalizability of the findings across several academic institutions. A sampling plan is essential for conducting a study that defines the sampling parameters, the participants, as well as the setting (Dornyei, 2011).

Selecting data-rich participants strengthened the study's findings, as those with extensive experience in AI-assisted writing provide more nuanced and practical perspectives. The inclusion of university English language teachers with different years of experience and institutional affiliations further ensured that the study considered a variety of viewpoints, made the findings more applicable across diverse educational settings.

University English Language Teachers

University English language teachers were selected as the data source for this study. These teachers provided firsthand insights into the practical implications of AI-assisted writing in their classrooms. Data collection was conducted through both surveys and semi-structured interviews, which explored how teachers integrate AI tools into their feedback practices, the challenges they face, and the pedagogical strategies they employ to balance AI assistance with teaching methods. The selection of technology integrated university English language teachers as participants ensured that the study remained focused on teachers who directly engage with AI-assisted writing tools.

By including participants from various educational institutions, the study ensure that the sample reflected diverse experiences with AI-assisted writing. Teachers from different backgrounds provided insights into how institutional policies, technological infrastructure, and individual teaching styles influence their adoption of AI tools. The purposive selection of teachers from Technology Integrated University ensure generalizable quantitative findings and data-rich qualitative phase.

The study also considered variations in teachers' experiences based on years of teaching experience, and familiarity with AI-based tools. By focusing on English language teachers, the study aimed to develop a specialized and detailed analysis of AI-assisted writing feedback within higher education. This targeted approach provides a deeper understanding of the professional insights, teaching adaptations surrounding AI use in academic writing instruction.

3.3 Theoretical Framework

Two theoretical frameworks help to understand the perceptions of teachers of providing feedback and their teaching practices for AI-assisted student writing. The study will be informed by:

1. Self Determination theory (SDT): Deci and Rayan (2000)
2. Technology Acceptance Model (TAM): Dishaw and Strong (1999)

3.3.1 Self Determination theory

The Self-Determination Theory (Deci & Ryan, 2000) is a motivational theory that emphasizes the importance of three universal psychological needs: autonomy, competence, and relatedness. These influences led to investigating teachers' pedagogical practice in responding to AI-supported writing. This emphasized the influence of intrinsic motivation on professional behaviour. When instructors have perceived control over their methods of instruction, self-efficacy in tasks, and develop a positive relationship and a supportive connectedness with students, they are more likely to adopt new technologies. By examining how these psychological needs were fulfilled or inhibited in the AI-supported writing context, a more holistic understanding of teachers' acceptance and adoption of AI tools was realized.

3.3.1.1 Components of SDT Theory

1. **Autonomy**

One of the primary components of intrinsic motivation is autonomy, which is an individual's sense of self-direction or control over their behaviour. Conceptually in the present study, it is associated with teachers' sense of control

over their feedback and appraisal process. It looks at the ways in which teachers feel enabled and disenchanted by applications of AI in the assessment of student writing. If teachers perceive that their autonomy is threatened by AI, it could inhibit their affective and uptake for AI results.

The research also examined how institutional policies affected teachers' autonomy in using AI tools. If AI feedback were enforced by universities without sufficient teacher input in both strategic and operational decision-making, teachers would lose motivation and ownership of the teaching activity. Conversely, organizations that had adaptive norms to AI adoption that still left it open to teacher's professional judgment built more positive teachers' attitudes towards AI adoption.

2. Competence

Competence concerns individuals' beliefs in their ability to perform tasks effectively. In this study, it will reflect teachers' belief in their ability to evaluate AI-assisted writing effectively. By analysing competence, this explores whether teachers feel confident in their ability to identify AI-generated content, assess its quality, and provide meaningful feedback. The study assesses how teachers' competence influences their willingness to incorporate AI tools into their teaching practices. This examined whether teachers received adequate training and institutional support to develop their competence in using AI tools and whether they see AI as a tool that complemented their expertise or as a system that undermined their professional role by automating aspects of feedback traditionally performed by teachers.

Competence is also assessed in terms of teachers' ability to differentiate between AI-generated errors and student mistakes. If teachers felt confident in their ability to verify and modify AI-generated suggestions, they were more likely to integrate these tools into their workflow. However, concerns about AI's reliability and the potential for misleading feedback may have influenced teachers' willingness to rely on AI-generated evaluations.

3. Relatedness

Relatedness reflects the degree to which individuals feel connected to others. By analysing relatedness, the study represents teachers' sense of connection with their students. In the context of this study, it explored how teachers' relationships with students affect their perceptions of AI-assisted writing. The study investigated how AI impacts teachers' ability to maintain a personal connection with students while providing effective feedback and guidance. One key concern was whether AI tools depersonalized feedback, making the learning experience feel less interactive and engaging for students. Teachers often personalize their feedback based on individual student needs, incorporating encouragement, tailored suggestions, and explanations that go beyond simple grammar and structure corrections.

The study explored whether AI-assisted writing allowed teachers to spend more time engaging with students on higher-order writing skills, such as argument development and critical thinking, rather than focusing on surface-level corrections. If AI reduced the burden of repetitive error identification, it could enhance teacher-student interactions by enabling more in-depth discussions on writing quality.

Figure 1
Self-Determination Theory (Deci and Rayan, 2000)
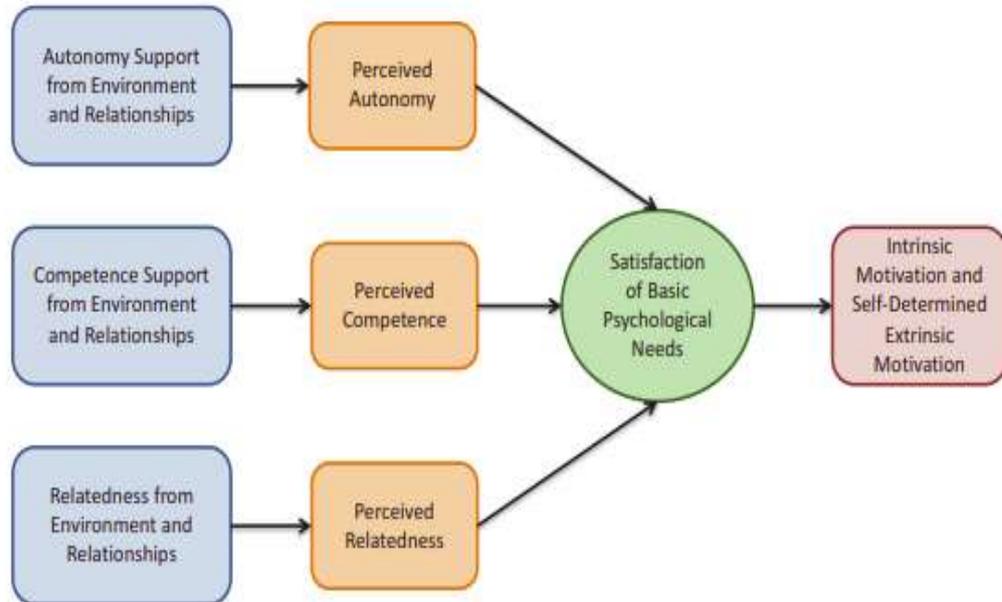
Figure 1. *Self-Determination Theory (Deci and Rayan, 2000, p. 07)*

Using Self-Determination Theory (SDT) as a framework, this study aimed to provide insights into how teachers' psychological needs for autonomy, competence, and relatedness influence their teaching practices of evaluating AI-assisted student writing. It contributed to understanding how these factors shape teachers' acceptance and adaptation of AI tools in the classroom. This study offered valuable recommendations for enhancing teaching practices. The study explored teachers' motivations, challenges, and strategies for integrating AI into feedback and writing evaluation effectively.

3.3.2 Technology Acceptance Model

TAM by Dishaw and Strong (1999) is a framework that helped to understand how users come to accept and use technology. This study used TAM model to analyse how university teachers perceive the adoption and use of AI tools for providing feedback on undergraduate student writing. TAM focused on constructs like Perceived Usefulness, Perceived Ease of Use, Attitude towards Use, Intention to Use, and Actual Tool Use.

3.3.2.1 Constructs of TAM Framework

1. Perceived Usefulness

This refers to the degree to which a person believes that using a particular technology enhances their performance. In the context of this study, perceived usefulness assesses whether AI-assisted writing tools help improve the quality of feedback, streamline evaluations, and support students in refining their writing skills. It identified whether teachers believe that AI tools improve the quality and efficiency of their feedback. This construct explored whether AI helps reduce teachers' workload by automating repetitive tasks such as identifying grammar and structural errors, allowing teachers to focus on higher-order writing skills. The study investigated whether teachers believe AI tools

can personalize feedback, helping students with diverse learning needs by providing suggestions and corrections. This construct determined whether teachers view AI as a valuable support system that complements their feedback efforts rather than replacing their professional judgment.

2.Perceived Ease of Use

This construct represents the degree to which an individual considers the use of a system to be free of effort. This is important as it is important to understand the teachers' perceptions toward how easy AI tools are to use, with respect to providing feedback. It looked at the extent to which teachers are comfortable integrating AI into their teaching and how much training the tools need. If teachers find AI tools to be easy to use, they will more easily incorporate them in their instructional practices. The research also probes at the usability and efficiency of AI-assisted writing tools for teachers and students, it could lower barriers to adoption and result in smooth integration in feedback delivery.

3.Attitude towards Use

This factor reflects the users' general affective response towards use of the technology. This research provided an investigation into teachers' attitudes towards AI-supported writing tools, and whether they perceived them positively or negatively. The model studies the impacts of teaching on the attitudes to integrate AI. We asked whether teachers see AI as a facilitator for richer and more structured feedback, or as a platform that has the potential to undercut traditional teaching methods. The attitude of teachers is also influenced by the alignment with institutional policies and expectation of AI tools that further influences their potential accepting behavior toward AI tools.

4.Intention to Use Tool

This refers to the likelihood that a person uses the technology in the future. For this study, it is relevant because it measures teachers' intentions to use AI tools for providing feedback and this provides insights into the likelihood of AI integration into their practices. Teachers' intention to use AI is influenced by their experiences with its effectiveness, institutional encouragement, and perceived reliability. Understanding teachers' intentions provides insights into the long-term sustainability of AI integration in higher education. The study explored whether teachers believe that AI should be used selectively for certain aspects of feedback while maintaining human intervention for more complex writing development.

5.Actual Tool Use

This construct assesses the real usage of the technology by individuals. This is relevant to the study because it explores whether teachers are actually incorporating AI tools into their teaching practices and providing feedback through these platforms. By measuring actual tool use, the study determined the extent of AI adoption in higher education. This construct provided insights into whether teachers are developing new pedagogical strategies to effectively incorporate AI-assisted feedback while maintaining a balance between automated and human-generated evaluations.

Figure 1
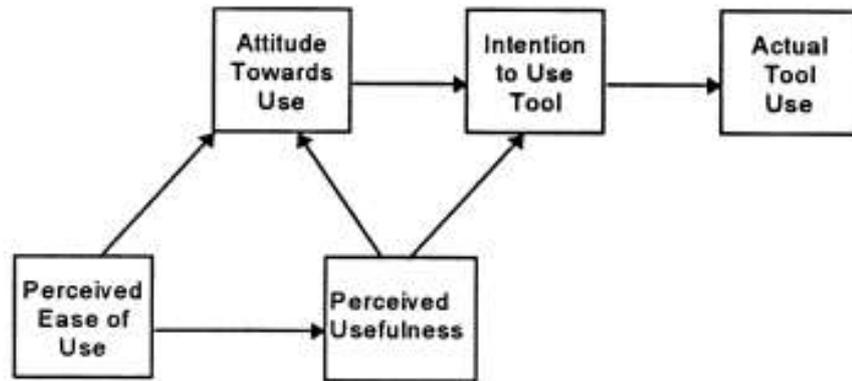*Technology acceptance model (Dishaw and Strong, 1999)*

Figure. 2. *Technology acceptance model (Dishaw and Strong, 1999, p. 02)*

Using Technology Acceptance Model (TAM) as a framework, this study aimed to provide insights into how university teachers perceive and adopt AI tools for providing feedback on undergraduate student writing. By examining constructs such as Perceived Usefulness, Perceived Ease of Use, Attitude towards Use, Intention to Use, and Actual Tool Use, the study identify factors that influence teachers' decisions to incorporate AI tools into their teaching practices. It contributed to understanding the barriers and motivations related to AI adoption in educational settings. The study explored teachers' perceptions, willingness to use AI tools, and the actual implementation of these tools in feedback provision. TAM served as a useful tool in identifying specific challenges that might hinder AI adoption, such as resistance to change, concerns over AI replacing human judgment in feedback, or the lack of alignment between AI-generated feedback and existing pedagogical approaches. These insights were essential for designing effective AI literacy programs for teachers, ensuring they develop the necessary skills to maximize the benefits of AI-assisted writing tools. By exploring these constructs in the context of higher education, this study contributed to the ongoing discourse on the future of technology-enhanced learning. It provided empirical data that can be used to refine AI applications in educational settings, ensuring they remain teacher-friendly while supporting student learning outcomes.

3.4. Data Collection Tools

The data for this study was collected from;

1. Survey (Questionnaire)
2. Interviews

Using an explanatory sequential design, the study began with quantitative phase, in which a survey was developed with close ended questions based on SDT Framework conducted with English Language teachers in order to examine how teachers adapt their teaching practices to support AI-assisted writing of undergraduate students. The questionnaire included Likert-scale items designed based on SDT framework focusing on the components of autonomy, competence and relatedness. The quantitative data collected from the survey

provided in depth insights into the teachers' teaching practices in adapting to AI-assisted student writing.

Following the survey, the qualitative phase involved semi structured interviews which were based on open ended questions, conducted with English language teachers to explore teachers' perceptions of providing feedback on AI-assisted student writing. On the basis of research objective, an interview protocol was developed. The protocol was based on the constructs of TAM framework: Perceived Usefulness, Perceived Ease of Use, Attitude towards Use, Intention to use tool, actual tool use. The qualitative data collected from these interviews provided in depth insights into the teachers' perceptions regarding feedback of AI-assisted student writing.

3.4.1. Survey

The quantitative phase of this research was carried out through a survey among English Language teachers from technology integrated universities. The survey questions were formulated to investigate teachers' adjustment of how they teach to facilitate AI-supported writing, with respect to the Self-Determination Theory (SDT) perspective, covering three psychological dimensions: autonomy, competence, and relatedness. These elements contributed to examination of the impact of AI on teachers' pedagogical reasoning, interrelations with students, and professionalism in academic writing assessment. The questionnaire was composed of statements along a Likert scale that elicit standardized and quantified responses. Clarity, consistency and comparability in responses are made possible by the survey, and statistical analysis through SPSS could be achieved. Basing the survey on SDT would help it to entirely cover some key elements determining teachers' acceptance and adoption of AI-based feedback tools.

The construction of this survey was designed to meet the research purpose of the study to validly measure teachers' experiences with AI in writing. The questionnaire consisted of closed-end questions that aimed to obtain detailed perspectives from English language educators about their perceptions of AI-assisted writing. Questions were designed so that participants could think about their own autonomy in feedback practices they would engage (not engage in) with AI, their competence to make judgments on AI-produced content, and how AI would impact their student relationships.

The autonomy dimension of SDT considers the degree to which teachers feel that they have autonomy over their feedback-making practices when using AI-feedback-assisted tools. This sub-section presents an overview of the ways in which AI may limit teachers to customize feedback based on student need, or may support teachers to provide more targeted and structured feedback. This sought to investigate if AI constrained or expanded teachers' autonomy in writing pedagogy. The competency factor in SDT was directly concerned with teachers' perceived ability to judge AI-assisted student writing. This section examines whether teachers feel prepared to critically evaluate AI-generated content and if they trust AI to enhance student writing abilities. This served to quantify the extent to which teachers think of AI as an assisting or challenging component in writing assessment. The relatedness factor of the SDT was a variety of lines of enquiry related to the manner in which AI impacts on the teacher-student relationship in the teaching of writing. As effective teaching is

premised on meaningful teacher-student interaction, we investigated whether interactions are enhanced or jeopardized through AI tools. This would uncover whether AI supports or impedes the relationship element of writing teaching.

Utilizing the constructs of SDT theory, the survey laid out an outlined structure for examining the adoption and use of AI in educational testing. The structure of the closed format provides for a consistent manner of data recording, which in turn makes statistical analysis of teachers teaching practices more easily possible with the data, to identify relationships and trends. This approach facilitated a nuanced examination of the drivers around the adoption of AI within teaching practices. Finally, using and developing the questionnaire guarantees the validity and reliability thereof. The instrument was built based on a validity process and reliability. The data collection process in both phases is designed to generate rich compelling data about teachers' lived experience with AI tools.

In examining autonomy, competence, and relatedness, the research revealed profound implications for the emerging role of AI in higher education writing instruction. This structured strategy increases methodological rigor of the study and guarantee that the qualitative results inform the quantitative survey results in a meaningful way. Aligned with SDT elements, the questionnaire probed into how teachers negotiate AI feedback, adjust their instructional practices, and ensure meaningful student engagement in a digitalised learning space.

3.4.2. Interview Protocol

This study's qualitative component involved semi-structured interviews to investigate teachers' views towards giving feedback on AI-assisted undergraduate student writing. The interviews followed a cardinal model approach in qualitative research and were developed on the basis of the TAM framework (Perceived Usefulness, Perceived Ease of us, Attitude towards use, and Intention to use) as well as actual tool use. With TAM as a base, the interview questions successfully included the key factors determining teachers' adoption and use of AI-mediated feedback tools. The interview guide was developed in a rigorous methodology and is linked to the research goals of the study. It also made certain that open-ended questions led to provide in-depth information for English language teachers' experiences of using AI-assisted writing. There were also supplementary probing sub-questions to encourage more detailed answers, which made the interviews anticipatory and correspondent.

The perceived usefulness section was an exploration of whether the use of AI-based tools increases the efficiency and quality of feedback. This investigated whether AI tools are faster at analysing student errors than traditional methods, whether students' writing skills can be improved through automated suggestions, and whether teachers can offer more focused feedback. Given that perceived usefulness is a significant factor in technology adoption, this section was instrumental in appraising AI's influence on teaching practices. Perceived Ease of Use domain checked to see if AI tools are easy to use, easy to access and don't require much effort for teachers to implement it in to their practice. It also looked at whether AI feedback tools make grading and evaluation easier, lightening the load for teachers. If a teacher finds an AI tool

too difficult or complex to use, they are less likely to adopt it; underscoring the significance of tools' user-friendliness in AI adoption.

This section measures the general impression of the teachers towards the AI (positive/negative) and the compatibility of the AI with the teaching philosophy of teachers. Based on research in this area, it was also investigated whether AI grants consistency of grading and reduces bias in feedback. Attitude is a main determinant of Technology acceptance. Hence, this section gives an indication of how ready teachers are to include AI as an aspect of academic feedback. The Use Intention part committed to explore the teachers' future intention of AI tool use. This study explored the possibility that teachers will use the AI for feedback in the future, recommend it to other colleagues, and experiment with different AI feedback methods. Furthermore, this factor assesses whether teachers would be ready to take part to professional development activities to leverage on their AI-supported feedback competence. Analysis of the readiness of teachers to use AI tools was important in predicting future trends for integrating AI in education. The Diegetic Tool Use subscale of the instrument assessed how frequently teachers use AI tools in their teaching. It analyses if teachers use AI for grading and feedback, if they try out several AI feedback tools, and if AI help to save efforts and time. This sub-section offered a direct assessment of a mismatch between the perceived usefulness and the actual use of AI-supported feedback.

Developed based on TAM items, the questionnaire established a theoretical structure for the acceptance and use of AI in educational assessment. The open-ended nature of the item allows for recording of structured data to support a thematic analysis of the correlation and trends in teachers perceptions. This had the advantage of being able to systematically investigate determinants of AI implementation in feedback processes.

The process for qualitative data collection was designed to gather sufficient data as to gain an in-depth understanding about how AI tools were experienced by teachers. All the interviews are in casual style and actually some of the participants talked freely. Interviews were audio-taped and transcribed and then thematically analysed with the use of the Looppannel software. Patterns were discerned to address teachers' concern, teaching adjustment and overall impact of AI on writing instruction by thematic analysis. The interview protocol, above all, served as an instrumental mechanism of inquiry for investigating the amount of promise and problems AI poses in writing pedagogy. By aligning with the TAM constructs, interview questions are developed in a combinatorial manner to explore how teachers deal with AI-embedded feedback, how they change their behaviour of teaching, and how to keep students' engagement during the process of digitalization. The incorporation of both quantitative and qualitative data also reinforced the results of the study and supported a comprehensive examination of AI in university writing instruction. This structured approach served both to guarantee that the insights are measurable and in line with the wider purpose of the research to examine how university teachers experience AI-supported writing in higher education.

3.4.3. Pilot study

A pilot test was carried out to assess the reliability, validity and clarity of the survey instrument designed for this study. The purpose of pilot study was to identify any ambiguities, evaluate the overall structure and coherence of the questionnaire, and to make sure that statements clearly represent teachers' perceptions of AI-assisted undergraduate student writing in Pakistan. Using a short pre-testing procedure, the pilot study helped in checking and modifying reliability and validity of the questionnaire (Taherdoost, 2016). This gives us an assurance that the final survey is going to be well designed and useful for generating high quality data.

A pilot study was carried out with 10 English language university instructors from different universities of Pakistan. Subjects were selected to match the diversity of the population of interest across age and teaching experience brackets. These teachers were requested to complete the questionnaire and to comment on the phrasing of the items and the clarity, relevance and comprehensiveness of the statements.

The pilot questionnaire included three sections according to the constructs of self-determination theory: Autonomy, Competence, and Relatedness. Respondents were required to respond to 15 Likert-scale items ranging from strongly disagree to strongly agree. Demographic data of age and years of teaching experience was also collected. Feedback from pilot respondents led to slight modifications in the wording of certain items to enhance their clarity and interpretability. For example, some participants proposed to make the phrasing of the statements about AI playing a role in feedback strategies more concrete. These recommendations were adopted in order to improve the accuracy and clarity of the questionnaire issues.

3.4.4 Reliability

The internal consistency reliability of the instrument was preliminarily assessed using Cronbach's alpha, with all three subscales (Autonomy, Competence, and Relatedness) yielding acceptable reliability scores above 0.70. Cronbach's alpha was calculated for the reliability assessment using SPSS statistics applying the reliability analysis process. Cronbach's alpha is a measure of internal consistency, which is commonly used to assess the reliability of a set of items (such as questions or test items) in a survey or test that are intended to measure the same underlying construct.

These results indicated that the instrument was suitable for further use in the main study. Based on the feedback and results of the pilot, the final version of the survey was deemed valid and appropriate for use in the primary data collection phase.

Table 1

Reliability Statistics

Cronbach's Alpha	No. of Items
0.70	15

The reliability statistics in the table 1 indicate that the alpha coefficient for the 15 items suggests a strong level of internal consistency among the survey items.

3.5 Data Analysis

For the Quantitative analysis of the study, SPSS (Statistical Analysis of Social Sciences) software was used to analyze the data. The results of the Likert scale survey were analyzed to quantify teachers' responses and to identify statistical patterns related to their teaching practices in adapting to AI-assisted writing. The SDT framework by Deci and Rayan (2000) was used to create the questionnaire. Each SDT component consisted of five Likert-scale statements that were designed to measure the levels of teacher agreement or disagreement. The responses were analyzed through descriptive and inferential statistical procedures to observe trends, correlations, and any differences in responses from teachers of technology-integrated universities. This quantitative analysis helped to validate and generalize the themes identified in qualitative phase. This quantitative analysis provided a foundational understanding of how teachers perceive and adapt their teaching practices in response to AI-assisted writing, and it also helped guide the development of the interview questions that followed.

For qualitative study, thematic analysis was employed to analyze data to identify common themes and patterns in the responses of English language teachers. Interviews were transcribed and coded with Looppanel to categorize themes related to teachers' perceptions of AI-assisted writing feedback. Thematic analysis allowed for an in depth exploration of teachers' responses and identify patterns concerning the feedback of AI-assisted student writing as proposed in TAM framework by Dishaw and Strong (1999). The qualitative data was structured according to the Technology Acceptance Model (TAM) framework, focusing on Perceived Usefulness, Perceived Ease of Use, Attitude towards Use, Intention to Use, and Actual Tool Use. Each construct was analyzed to understand how teachers perceive AI-assisted feedback and how these perceptions influence their teaching practices. The explanatory sequential approach ensured that qualitative findings meaningfully complement the statistical results, enabled better interpretation of how AI was shaping writing instruction in higher education.

3.6. Ethical Considerations

Ethical concerns were carefully considered while collecting data from university English language teachers. Ethical issues form an important component of research on human subjects. Important ethical considerations derived by Bell and Bryman (2007) followed in the present research were:

- Respect for the dignity of all research participants was preserved throughout the process of the study.
- All the participants provided their informed consent before surveys or interviews were carried out.
- The participants were not hurt physically, emotionally, or psychologically.
- The identity and privacy of all respondents were strictly maintained.

All data collected during the study were handled with confidentiality and used only for scholarly and research purposes. Interaction with respondents was open to provide clarity and mitigate any concerns. There were no intrusive or personal questions asked in the interview schedule. All responses were treated respectfully, and interview respondents were given a chance to read through their transcripts to ensure accuracy and understand the context of their answers.

The researcher took complete responsibility to ensure that ethical guidelines were followed and protected the rights of the participants and their data during the study. Priority was given to getting real, unbiased, and factual responses with professional integrity and academic honesty.

4. Data Analysis
4.1 Survey Analysis
4.1.1. Survey Analysis Procedure

The analysis of the survey in this research was performed to numerically examine university English language teachers' pedagogies in accommodating AI-assisted undergraduate writing. The aim of this stage was to detect general patterns, relationships between variables connected with the integration of AI into teaching and perceived ease of use, and feedback practices. This phase grounded the empirical foundation for the further qualitative phase, as it provided measurable insights into present state of the AI-assisted pedagogy situation in technology-integrated universities in Pakistan.

The survey included Likert-Scale questions that are aimed to determine the key constructs, such as the teachers' attitudes to AI tools and their frequency of usage, perceived usefulness and the degree of integration in teaching and feedback practices. The framework applied within the study was Self Determination theory (SDT) offered by Deci and Rayan (2000). Responses were received and sent to SPSS (Statistical Package for the Social Sciences) for analysis through Google Forms. Before analysis, the data were prepared in that incomplete responses were deleted, and inconsistencies or outliers were identified. Likert scale items were coded in (1 – Strongly disagree; 5- Strongly agree), negative items and reverse-coded for consistency of directionality.

Descriptive statistics were used as the first step to summarize the responses and understand the general trends. Measures such as frequency, and percentage were calculated for each item. This provided an overview of teachers' self-reported engagement with AI tools and their perceptions of how AI affected their teaching and feedback practices. These descriptive findings offered insights into the extent of AI usage, teachers' technological comfort levels, and their general perceptions of AI-assisted writing within their institutional settings.

After this all the surveys' responses were imported in an excel file and after careful observation, these responses were arranged into tables and graphs. The tables showed all questions of each category and the percentage of the responses was written before each question. The information in the table was used to graphically represent the bar graphs with prominent features. After each table, a detailed textual description of the responses was presented.

4.1.2 Survey Analysis

The first part of the survey included five questions related to the autonomy variable of the Self-Determination Theory (SDT). This variable is based on the

need of teachers in technology-integrated universities to feel autonomous psychologically when teaching English language. The first question was about the control in assessing AI-assisted writing by the students and the second question was related to the flexibility that AI tools allow in designing various teaching activities or delivering English language lectures. The next question was regarding the teachers' dependence on AI when giving feedback to the students. The fourth question probed into the decision of integrating AI tools in the classroom by the teacher, while the last one was pertinent to replacement of teachers with AI tools with regard to evaluating students' writing tasks. The results of the survey indicated that the great majority of participants perceive a high level of autonomy in using the AI-assisted writing tools.

4.1.2.1 Autonomy in SDT Theory

Table 2

Autonomy

Questions	Agree %	Neutral %	Strongly Agree %	Disagree %	Strongly Disagree %
I control how I assess AI-assisted student writing	49	26	20	9	0
AI allows flexibility in teaching strategies	60	16	24	1	1
My feedback is not dependent on AI	37	23	33	9	1
I decide when to integrate AI in writing assessment	51	24	23	4	0
AI does not replace my role in evaluating student writing	40	14	37	11	0

Figure 2
Autonomy
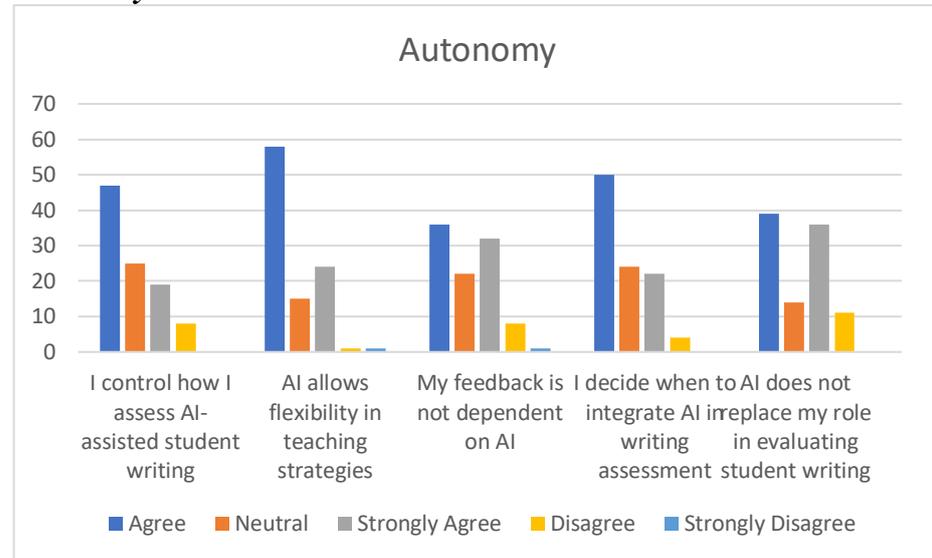
Building on the data analysis through the Self-Determination Theory (SDT), it can be seen that a substantive majority of teachers view themselves to continually have autonomy in their instruction and evaluation methods even with the use of AI tools. Table 1 shows that 66% of the respondents agreed or strongly agreed that they still maintain control over how they evaluate AI-assisted student writing; an even larger percentage (72%) agreed that they still possess control over when they can use AI in their assessments. These numbers are very strong indicators that teachers still think they are self-directed, and free of other people's expectations, which is a critical element of SDT, which holds that one's intrinsic motivation is developed if one feels in control of his/her decisions and actions.

This feeling of the control is an important element in building favourable relations with the educational technologies. As SDT suggests, autonomy is not just a preference but is a psychological requirement that allows people to take up and internalize new practices voluntarily. When teachers feel that their professional judgment continues to dominate pedagogical decision making, they are more likely to search, adjust, and translate AI tools to their teaching practices. What's more, the result of 68% of teachers feeling that their feedback is independent of AI also supports this idea. It brings into focus a detailed awareness among educators that AI is a supportive aid instead of replacing professional expertise, thus retaining their agency for context-sensitive, individualized feedback- which AI cannot yet match completely.

But the numbers also show a significant share of neutral and disagreeing answers, in particular in reference to assessment control and AI integration. That implies that although many teachers feel empowered, the others may have feelings of uncertainty or reduced autonomy that may result from the institutional requirements, unclear policy or lack of involvement in decision-making processes. Such external constraints can work against intrinsic motivation by providing an impression of forced change as opposed to co-innovating. Teachers who feel like they are bound to follow top-down directives without proper consultation and professional input can find it hard to fully adopt

AI tools, not because they are resistant to the technology itself but because they feel like they are being encroached on as far as their pedagogical freedom is concerned.

The interaction of autonomy and institutional support becomes one of the main issues raised. According to SDT, environments that are not controlling, but are instead autonomy supportive, motivate the internalization of new practices. In this regard, if educational institutions offer flexible guidelines, regard teachers' input, and follow pedagogical judgment, then they will develop a culture that can accommodate autonomy and innovation. Teachers are then likely to explore the use of AI tools in contexts that are pedagogically informed and given to the needs of students.

To conclude the discussion regarding the theme of autonomy, the analysis confirms that autonomy is a very firm pillar in the educators' encounters with the AI-supported writing instruments. With the professional discretion being valued and institutional policies prioritizing teacher agency, the probability of sustainable and effective AI integration goes up, as the teachers undertake this for intrinsic motivation purposes rather than doing so due to compliance. It is, therefore, important to encourage such environments to promote teachers to feel self empowered and supported, that will achieve the optimal pedagogical potential of AI in the process of education.

4.1.2.2 Competence in SDT Theory

Table 3

Competence

Questions	Agree%	Neutral%	Strongly Agree %	Disagree%	Strongly Disagree %
I can effectively evaluate AI-assisted student writing	46	19	21	16	1
AI changes how I provide feedback	43	24	7	14	14
I can identify AI content in student writing	46	16	34	6	1
I can evaluate AI-generated feedback	54	21	24	3	0

AI affects how I assess student writing quality	47	23	14	10	9

Figure 3
Competence
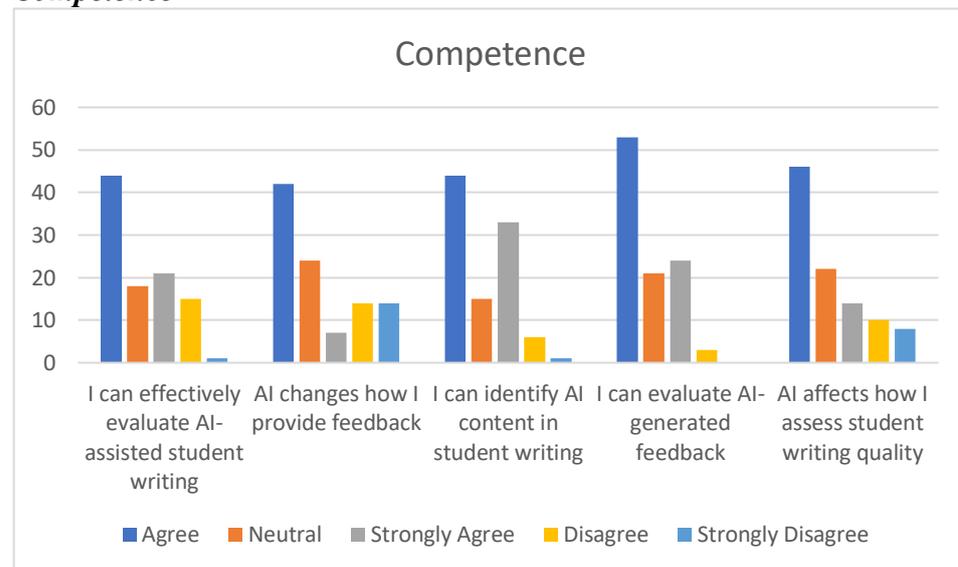
Building on the Self-Determination Theory (SDT) framework, especially on its focus on competence, the table 2 helps to uncover important insights into how teachers perceive their capacity to perform AI-assisted writing in academic settings. Competence refers to the degree to which people feel effective or capable in their doings in SDT. This is a confidence for teachers to be able to identify, appraise, and incorporate AI-generated content into their assessment practice without undermining their pedagogical decision-making.

The data indicates tendency towards positive but complex perception of competence. For example, a significant majority of the teachers (74% of them altogether) agree or strongly agree with the fact that they have been able to assess writing by AI-aided students. This implies that the large numbers of teachers think they have the evaluative skills to employ the new technological dimension, which is an important measure of self-efficacy – a key cornerstone for the maintenance of intrinsic motivation. Nevertheless, 15% "disagree" responses and 1% "strongly disagree" response indicate that not all teachers feel this readiness, and differences in confidence would appear to be driven by differences in experience, training availability or support from their institutions.

The item "I can evaluate AI-generated feedback" shows even better results with 98% people agreeing or strongly agreeing and 3% people disagree. This could perhaps showcase the impression that the assessment of the quality of AI's suggestions belongs to the expertise of the teacher, and not contradicting his

professional power but strengthening it. Such a perception is important in creating a feeling of competency that will help in the process of embracing AI in education. It also indicates that a lot of teachers might not view AI as a replacement of their assessment skills but rather complementary technology capable of supplementing their assessment power.

As opposed to this, "AI changes how I provide feedback" shows a significant divide with 42% agreeing as compared to 28% disagreeing. The 14% respondents who strongly disagree, in particular, might feel that AI compromises with their role as traditionally giving feedback, for example by standardizing or depersonalizing the latter in pedagogically restrictive ways. Such difference indicates the potential for misunderstood challenges to professional autonomy to be construed as challenges to competence – this is an important factor when developing professional development. It is possible that teachers are not reluctant to integrate AI due to their inability to do this; rather, they are afraid that the integration of AI destroys the intricate, human dimensions of effective feedback.

"AI shapes how I determine the quality of student writing" statement supports this complexity. 60% teachers agree/strongly agree but disagree and strongly disagree (18% and 8% respectively) indicate that there is a greater variety of opinion on the influence of AI for qualitative assessment. These findings are a reflection of continued confusion regarding the way AI fits with subjective and nuanced assessment criteria. Teachers who believe in the ability to use AI in conducting surface-level corrections (grammar, structure, formatting) can still wonder about the role of AI in evaluating higher-level thinking such as argument strength, creativity, or coherence – where human judgment is still critical.

Finally, the responses to "I can identify AI content in student writing" also reveal a lot in that regard. With 77% teachers agreeing or strongly agreeing, 6% disagreeing, this implies an increasing awareness and vigilance of the use of AI by the students. Nevertheless, 15% neutral responses indicate that some teachers continue to have problems in reliably differentiating human and AI writing, and this may compromise their confidence in tackling academic integrity problems in artificial intelligence-produced work.

Collectively, it is this data that indicates that although more than half of the educators report they are competent practicing AI in the multiple dimensions of writing assessment, a significant minority appears uncertain or sceptical, mostly due to doubts on how AI might shift their professional roles. SDT stipulates that for an intrinsic motivation to have a chance of growing, competence must be facilitated. this implies that institutions should not only engage in technical training, but they should facilitate discussions in relation to pedagogical purpose, professional identity, ethics of AI use. Seeing these elements from one wholesome perspective can motivate the teachers' sense of competence and stimulate more reflective, confident, and determined deployment of AI tools in their teaching assignments.

4.1.2.3 Relatedness in SDT Theory

Table 4

Relatedness

Questions	Agree %	Neutral %	Strongly Agree%	Disagree %	Strongly Disagree %
AI influences my understanding of student writing	44	31	11	6	7
AI fosters collaborative learning	51	20	17	10	1
AI changes the way I provide feedback on student writing	56	17	4	9	14
AI enhances my engagement with students	40	20	11	20	9
AI requires me to adapt my feedback strategies.	44	27	11	13	4

Figure 4
Relatedness
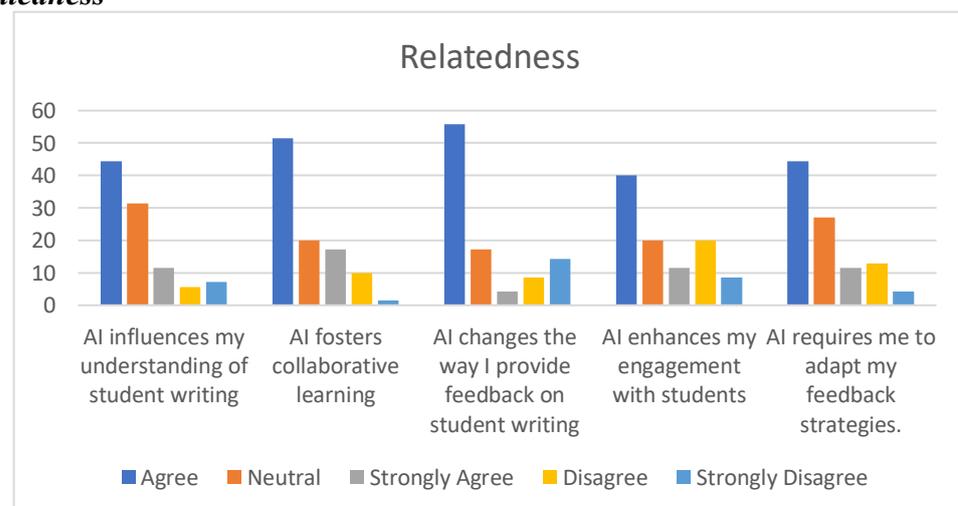
Explaining further according to the Self-Determination Theory (SDT) construct – specifically the dimension of relatedness – the data in table 3 shows more granular picture of how teacher's view the influence of AI on relationship

with students. Relatedness, one of the three basic psychological needs, as figured out by Deci and Ryan (2000), implies the sensation of being socially connected, valued and emotionally involved in communications. In terms of education, this entails the creation of relationships between teachers and learners that are deep and genuine-all too often mediated by personalised feedback, face to face conversations, and understanding of each learner's idiosyncratic difficulties and progress path.

The data reveals that most respondents agreed or strongly agreed that AI determines their understanding of student writing (55%), and promotes collaborate learning (68%). The above figures imply that teachers understand AI as more than a mechanical device, but an asset that makes it possible to interpret and answer to students' needs better. AI's potential to rapidly process text, detect patterns of writing or give formative feedback to students could provide teachers with a profound understanding of student strengths and weaknesses — adding to a more knowledgeable and responsive pedagogy. In the same vein, the idea of the collaborative learning presupposes AI's integration in a way that involves the students' intercommunication or the students' and teachers' intercommunication, such as the use of shared documents, peer feedback platforms, or the AI tools which help to organize group revision processes. This reflects a positive congruence with relatedness, where technology becomes a bridge during which there would be a more dynamic learning exchange.

However, according to the data, we can see that there are enormous tensions. Though 60 respondents (56%) agreed or strongly agreed that AI alters their way of giving feedback, a significant number of them (23 respondents, 23%) disagreed or strongly disagreed. More importantly, when they were presented with the question whether AI contributes to their engagement with students, only 40 agreed, 29 either disagreed or disagreed strongly, and 20 were neither. This indicates a disorganized scenery with a significant number of teachers who are still not convinced AI has a positive impact on constructing or intensifying engagement. These results reinforced frequent worries in literature, regarding the depersonalizing effect of AI, especially if it has an automating ability for answers that previously needed empathy, contextual understanding, or encouragement. To the extent that feedback is seen as too general or mechanical it can undermine the affective connection that helps move students and make them feel seen, heard, and guided.

Furthermore, the fact that 71% of surveyed people report that they see a necessity of adapting the feedback strategies to AI means that there is a transitional period of teaching professionals who are trying to find a compromise between the efficiency and emotional connection. For some, this adaptation may be selective use of AI to perform repetitive tasks (e.g., grammar correction, spelling, structure), so the teacher can instead provide more higher-order feedback – argumentation, voice, and clarity – an area that depends on relational clues and personal instruction. For others, the sense of adapting may seem too burdensome and unclear with no institutional support or training that will result in less instead of increased connection.

SDT approach shows that the issue of relatedness is not the amount of interaction but the quality – whether students and teachers feel connected on an

emotional and cognitive level. If the implementation of AI integration is done so without taking into consideration the interpersonal aspect of teaching, it poses a way of eroding this central psychological want. But when AI is mindfully used, with teacher agency, personalization, and student-centred practices as room-for-movement, it could amplify relatedness by outsourcing cognitive labour and liberating more meaningful I–person relations.

In short, although the data reflects some favourable cues – especially in the context of AI's ability to increase understanding and foster cooperation, it also reflects conflicting signs. Mixed responses on AI impact on teacher-student engagement indicate an important note that institutions should not just invest in AI tools but also invest in promoting relational pedagogy through professional development, an ethical standard, and promotion of feedback models that will not decimate the human connection. Only if such conditions are met, the need for relatedness can be defended, and intrinsic motivation can blossom and AI tools can be adapted to not destroy but to enhance the relational tissue of the classroom.

4.2 Interview Analysis

This chapter presents a detailed thematic analysis of qualitative data collected through semi-structured interviews of twenty English language teachers who teach at technology-oriented universities in Lahore, Pakistan. In this study, the technology-oriented university is one that has fully-furnished computer labs for ESL classes. The main aim of this study was to investigate how English language teachers perceive, experience, and value the integration and use of artificial intelligence (AI) to assist in the teaching of undergraduate writing, and particularly its applicability to English as a Second Language environments.

The selection of the participants is purposive and includes teachers who are actively teaching English in tertiary institutions as well as teaching in institutions that promote technological innovation in education. Universities that appear in this research tend to have a strong digital infrastructure such as language labs, learning systems that integrate AI, as well as digital technologies for the assessment that makes such universities suitable for exploring the AI incorporation in language education.

English language educators from many specialties participated, including the areas of academic writing, grammar, literature, and applied linguistics. The diversity of expertise that was found in the participating teachers resulted in a rich collective insight into the roles, difficulties and opportunities of AI in the area of academic writing instruction.

With the aggregated feedback of participants, the researcher gets a detailed picture of the AI technologies that are used in classroom contexts, including grammar checkers, content generators, feedback mechanisms and adaptive learning programs. Moreover, the responses demonstrate the impact of such resources on the instructional approach, the objectives of assessment, student empowerment, and continual transformation of teachers' tasks. The accumulated reflections do more than bring out how AI will encourage more efficiency and involvement; they also trigger discussion regarding accuracy, potential overuse, and the role of human control.

Overall, in taking a holistic glance at the changes AI brings to ESL writing instruction in Pakistani universities, this chapter brings to light the subsequent discussion about how these technologies should be capitalized on while taking into consideration significant pedagogical and institutional issues.

4.2.1 Analysis Procedure

The investigation of the data collected from qualitative analysis from twenty ESL teachers through semi-structured interviews in technology-oriented universities in Pakistan was performed through thematic analysis. Since it allowed to explore and structure the qualitative data, this method was selected as suitable to discover and, then, to interpret the patterns among the interview responses. The aim was to get an insight from the shared experiences, mind sets and perceptions of the selected teachers about AI tools being incorporated into university writing tasks. To analyse the data, the researcher used Looppanel, an accessible AI-based application which can be used for coding and determining thematic patterns. The following sequential steps were followed with regard to the methodology applied:

4.2.1.1. Transcription of Interviews:

Each of the audio recorded conversations was transcribed verbatim so as to ensure authenticity of answers given by participants. This produced a textual file, which could be used properly in subsequent analysis.

4.2.1.2. Uploading Data to Looppanel:

All the transcriptions were uploaded to the software Looppanel, the software provided a single place to organize, tag, and care for whole qualitative data.

4.2.1.3. Initial Reading and Familiarization:

Before assigning codes, the researcher went through all the data in transcribed form completely to have an idea about the whole data. This gave an insight about the recurring themes and patterns in the data.

4.2.1.4. Coding:

The researcher performed open coding by using Looppanel's easy tagging capabilities to label large sections of the data with useful labels. Recurrent themes include "EF", "SP", "AR", "PQ" and "FU" and others were identified and coded. The researcher improved the coding by constantly analysing and comparing codes of different interviews.

4.2.1.5. Theme Development:

Once the first stage of the coding process was complete, Looppanels' visual grouping capacities enabled researchers to aggregate the codes into larger groups. The categories were further developed into main themes in order to emphasize priority areas of teachers' opinions and experience. The final themes identified were: Increased Efficiency and Time Saving (EF), Support for Pedagogical Tasks (SP), AI as Assistant, not a Replacement (AR), Dependence on Prompt Quality and User Expertise (PQ), and Positive Experience and Desire for Training (PD).

4.2.1.6. Refining Themes:

To enhance the reliability of themes, they were re-analysed using Looppanel by checking them against the underlying original data. Refined, merged, resolved gap, ambiguity or strife in themes were tackled. Each theme was explained in detail relative to the manner it answered the research questions.

4.2.1.7. Data Validation and Interpretation:

To make the researched results reliable, coded segments of data were reinserted into the context of the whole answers from participants. Citations of exact words were selected both to reinforce notable expressions and to make the process of interpretation clearer.

With the help of Looppanel, the researcher managed a vast amount of qualitative data, which was both convenient for conducting the wide scope thematic analysis and the detailed textual exploration. The tool's functionalities to monitor codes, illustrate links and structure findings were vital for the sustaining a rigorous and methodical approach to analysis.

The theoretical framework for qualitative analysis of themes was Technology Acceptance Model by Dishaw and Strong (1999). It is a framework that helped to understand how users come to accept and use technology. This study used TAM model to analyse how university teachers perceive the adoption and use of AI tools for providing feedback on undergraduate student writing. TAM focused on constructs like Perceived Usefulness, Perceived Ease of Use, Attitude towards Use, Intention to Use, and Actual Tool Use.

The themes derived from twenty interviews' data are as follows in the form of table:

Table 5

Themes derived from interviews

Thematic Analysis Table: ESL Teachers' Perspectives on AI Integration

Code	Theme	Description	Illustrative Quotes
EF	Increased Efficiency and Time-Saving	AI tools significantly improved teachers' efficiency in administrative and instructional tasks. Universally acknowledged as a major time-saver, AI allows educators to handle growing workloads more effectively. This demand for productivity, however, also raises concerns about teacher burnout and the necessity for adequate training.	"AI's contribution to accelerate standard academic processes was articulated considerably."
SP	Support for Pedagogical Tasks	Teachers used AI to improve content design, edit materials, and align curriculum with students' language proficiency levels. AI serves as an instructional companion that enhances lesson quality and instructional diversity, contingent upon the teacher's evaluative and creative engagement.	"It helps improve lesson content and create systematic materials."
AR	AI as Assistant, not a Replacement	While teachers valued AI, they unanimously emphasized it should complement rather than replace educators. Human insight, critical thinking, and pedagogical judgment remain central. Effective integration depends on empowering teachers, not replacing them.	"AI can only serve as supplemental aid… not as a replacement to an expert in teaching."
PQ	Dependence on Prompt Quality and User Expertise	Effective AI use depends on how well teachers frame their prompts. Those with higher digital literacy yielded more accurate and context-appropriate responses. This underscores the need for training in AI prompt engineering and critical evaluation of AI outputs.	"If you are an expert in using AI, the response you get is better."
CR	Concerns About Student Over-Reliance	Teachers were worried that students might rely too heavily on AI for academic tasks, potentially compromising their critical thinking, creativity, and research skills. Some	"Critical thinking and research skills are badly affected."

The themes presented in the table above are presented as under:

1. Increased Efficiency and Time-Saving (EF)

A theme prevalent in all the interviews was that there had been a dramatic improvement in efficiency and time management through implementation of AI tools. For each participant of the twenty interviews, AI's contribution to accelerate the standard academic processes was articulated considerably, with its contribution to enhancing their administrative workflow". This widespread acknowledgement makes AI a powerful force in the continuing reformatting of ESL in universities that are technology-oriented.

The participants pointed out that AI has significantly reduced their workloads with such things as coming up with a lesson plan, summarizing the curriculum, creating assessments, and grading students' work. The efficiency gains were particularly appreciated in the cases where instructors were

responsible for many students or need to customize instruction to various ability levels. Thanks to AI taking care of most of routine and administrative jobs at teaching, educators had more resources to spend on high qualification and intellectually demanding activities, such as curriculum updating, individual commenting or the perception of the progress.

One of the participants put it rather concisely: "With AI assistance, the task is accomplished within one day or even earlier instead of one week". This statement means that AI tools have compressed the time to complete a task that used to take too long, too much on the part of teachers and has made teachers more efficient.

Moreover, the increased productivity by AI wasn't only about getting additional hours, but about freeing mental resources to think creatively and work on new educational scenarios. Many of the educators emphasized that with automation of the repetitive tasks by AI, they could attend to development of creative teaching and interactive learning programs that were previously overlooked due to time constraints. For instance, educators talked about how AI could produce lists of vocabulary or writing prompts or grammar exercises that they could use and customize for their learners.

When re-routing effort to "higher order," thoughtful and strategic task teaching, AI suggests a change in the way teachers are spending their time, not a replacement of their roles. It motivates educators to change the scope of their tasks more by valuing intention than amount of work.

Overall, repeated emphasis on expediency encompasses the claim that AI increasingly becomes practically important and relevant for academic activities. On the other hand, this situation highlights the escalating demands on educators pushing them to use these tools for maximum effects – triggering major debates about training needs, adaptation plans, and larger pedagogical consequences explored in subsequent sections of this chapter.

2. Support for Pedagogical Tasks (SP)

Another important theme emerging in the data is the manner in which AI contributes to different pedagogical activities. ESL teachers in every interview explained how AI facilitates the process of crafting, editing, as well as improving the level of the educational content. Apart from simplifying administrative procedures, AI is being used to design systematic and curriculum-matched materials that students' learning requirements are in line with several levels of proficiency capabilities.

The teacher described AI as being used to organize the lesson materials, to build the topic outlines, to form the writing prompts, build the grammar challenges, formulate MCQs, and develop full classroom activities. In particular, AI was considered to be an efficient and customizable piece of assistance to create the samples of texts such as essays, formal letters and prompt answers that could become valuable explicitly for students. The resources that are available in the form of AI produced materials will assist with speeding up planning efforts as well as assist in the development of coherent, educationally sound content.

Further, educators noted that AI technologies simplify complex subjects and become more understandable for students in such disciplines as psycholinguistics and literary analysis, because, for example, in these fields,

language may be especially difficult. Teachers valued how AI modifies instructional content to suit the language abilities of students in varying proficiency levels of learning. This is particularly useful in classrooms such as ESL, where there are always wide differences in vocabulary, comprehension, and background knowledge between students.

According to a teacher: Using AI, animated visuals were created to accompany lessons on poems and psycholinguistics. The case shows how AI supports multimodal learning – an approach increasingly popular in the ESL classroom for its appropriate combination of visuals, audio, and text. Visual and animated components do not only help students understand abstract or technical content, but they also stimulate interest and generate superior results in the ESL classroom.

It is quite obvious that the AI-generated materials customized for the level to which students had studied were also linked to improved quality of lessons and better streamlined teaching process. Arguably, the flexibility in adapting lesson plans to fit unique circumstances of the students has been what many teachers have gained by first beginning with drafts created by AI. The flexibility in AI allows a teacher to operate in two roles as an editor/designer, while still allowing educators to exercise their creative and pedagogical authority, supported by AI's structure.

Additionally, AI tools were perceived to be helpful for the student-centred learning given that teachers are capable of developing customized formative assessment as well as learning practice exercise that are customized to meet different student needs. Adaptive learning exercises and customized quizzes were considered imperative in large classes where good manual methods of delivering individualized lessons are too cumbersome.

To sum up, this theme unveils the broader picture of AI's role going beyond a mere efficiency, depicting as a supportive pedagogical companion enhancing lesson richness, enlarging instructional variety, and inspiring teaching responsiveness. But the degree to which AI makes a significant contribution here depends on whether teachers are able to evaluate, fine-tune, and critically engage with what the technology provides, which we will explore further in subsequent themes exploring teacher agency and digital proficiency.

3. AI as Assistant, not a Replacement (AR)

The same validation of teachers' critical role was present in all the interviews, despite the use of technological advancement and AI; it never clashed with the experience of learning. Interviewees appreciated the great advantages of AI, which include increased efficiency, wider opportunities to produce content, and increased pedagogical help; however, without exception, interviewees stressed that AI can only serve as supplement aid to teaching but not as a replacement to an expert in teaching. Such a difference underscores that there should be a support for the critical thinking and pedagogical expertise offered by human teachers.

Teachers described AI as a supportive tool which helps to automate daily-routine tasks, developing educational resources, and personalizing learning experience to individual students. However, participants continue to warn of overly relying on AI, or using it in ways that could devalue the teacher. Most of the participants explained that what makes effective teaching special is the

ability to merge creative, context-specific judgments, which is currently not attainable by AI at this stage.

There was a teacher who presented this rather concisely, saying: "AI helps us, but it will never be a complete replacement of human educators, but complementary to them". Such an outlook is consistent with the general agreement stated by all. Even though artificial intelligence can support the organization of certain instructional and administrative functions, the core of real education relies upon human decision-making, person-to-person interactions, and decades of teaching experience.

Results from the interviews represented the fact that teachers deemed their engagement critical for adapting the AI-generated materials to align more closely with the learning goals, meet the learners' varied needs, and conform to the educational purposes. The AI-generated materials are grammatically correct and discuss the appropriate topics, but the socio-cultural insights, the level of ethical consciousness or emotional understanding of the subject, is something AI cannot offer teachers in the classroom. Many educators, therefore, saw themselves as AI editors or curators, creating their AI-generated material before providing it to their students.

Participants also viewed this collaboration as a needed and very advantageous venture in terms of strategy. When teachers use AI to take care of monotonous or draining tasks, they can redirect resources to more exciting, purposeful assignments such as mentorship and creativity in lesson planning. supporting students, providing individualized feedback, developing interesting materials and cultivating dynamic learning environment. A meaningful way ahead for educational institutes that see AI as supporting and building upon but not eliminating teachers is understood in seeing AI as supporting and building upon but not eliminating teachers.

This theme presents an important implication for the educational institutions: Teacher accessibility to tools and support, combined with appropriate training and empowerment are the key to a successful AI implementation since it is these individuals who will be responsible to create sustainable integration of AI to amplify rather than undermine the very essence of the teacher. It is concluded that a cooperative and moderated approach is needed in which AI complements human expertise, without substituting it, and the teacher is the central figure in learning.

4. Dependence on Prompt Quality and User Expertise (PQ)

Student learning outcomes with AI tools is highly dependent on the accuracy and clarity with which the teachers frame their prompts. Based on information from interviews, AI tools can only provide high-quality or pedagogically well-designed outputs if they are guided. Teachers who have had previous experience with AI tools, or who possess greater digital literacy skill levels were better able to structure the prompts they created, yielding more accurate, suitable and effective outputs. As in this statement: *"If you are an expert in using AI, the response you get is better."*

This highlights the difference between the way teachers use AI, and from passive consumers to strategic partners. Passive consumers of AI simply listen to its suggestions, while strategic consumers use AI mutually, revising and tuning outputs to meet educative purposes. High quality AI-based support

depends on two aspects, functionality of the technology and user's ability to handle and review its use. This insight shows that teachers also need support on AI Prompt engineering to enable them formulate appropriate teaching questions to review critically AI-generated responses and tailor the insights to their classrooms. Training deficiency increases the probability that the outputs of AI would be broad, irrelevant, or even incorrect, for those who have not encountered educational strategies.

5. Concerns About Student Over-Reliance and Critical Thinking (CR)

Teachers' views showed a consistent focus on the possibility that students (and even educators) might end up relying on AI tools too heavily with regard to writing, research and content development tasks. Although AI tools can help speed up these processes and be useful in assisting, teachers were afraid that too much reliance would damage essential cognitive and academic capabilities. A response was as follows: "*"Critical thinking and research skills are badly affected."*

According to several interviewees, students can decide to avoid the intellectual difficulties of brainstorming, expressing views, researching things, and writing original texts. Instead of getting down to relevant learning experiences, students would rather choose AI-provided answers, which, free from errors and flaws in structure, do not evoke critical or creative thought. Many educators observed that AI produced material tends to rely on predictable patterns, depth, and may discourage the development of specific points of view among students. This dependence is a major threat to the development of the critical thinking ability, creativity, academic honesty of students and lastly critical skills in higher and subsequent learning. It was also observed that such excessive reliance can lead to intellectual passivity, causing the attention of both teachers and students to be detached from critical inquiry and reflection and fine-tuning of the response, giving them an impetus for quick fixes.

Some teachers were conscious that without being checked, AI could lead to a culture where acquiring of facts becomes more important than the active creation and development of knowledge. Such concerns reflect the necessity for AI adoption in education to be well balanced and critical, which will promote the development of independent thinking, critical literacy, and active knowledge construction among students. It further stresses on how defining clear, ethical rules for such technology in class should be of paramount importance in regulating the classroom use of AI to ensure that shortcuts, which can damage students' learning progress are avoided.

6. Need for Human Oversight and Accuracy Verification (HA)

Finding AI highly efficient and effective in teaching, the ESL teachers kept pointing out that in working with AI-generated content, careful human evaluation and active involvement were needed. When AI takes care of a wide variety of tasks, from lesson design to feedback provision, the output should be checked because it is rarely reliable as-is. Several participants reported that AI systems are capable of creating errors, using overly general answers, and providing examples, which do not fit with the cultural norms as well as they are not appropriate for educational learning. A teacher said, quoting, *"You must change it; otherwise, you cannot use it in the same way,"*, bringing attention to

the necessity for teachers to adapt AI-provided materials so as to make sure that these meet standards of the subject matter and language goals.

In addition, instructors claimed to examine systematically the details acquired from AI systems to ensure that they are truthful, correct and relevant to their educational objectives. It was noted that teachers persist that there should be the maintenance of the professional accountability when using AI tools and overreliance on AI with no actual human supervision can undermine the integrity and accuracy of the educational information. The efficiency improved by AI is impressive though human expertise and contextual awareness, as well as pedagogical insight are essential. Teachers understand that their role extends beyond the interaction with AI; they are active selectors who manage and revise AI created materials so that they serve students' learning and in an effective way, support educational goals.

Finally, a wiser attitude towards AI is pragmatic and considered attitude to the usage of educational technology as the beneficial instrument along with, not in place of, professional skills of teaching. It also implies that teachers should be given AI literacy training, which can help educators not only use such tools, but also criticize and regulate the outputs.

7. Frequency and Patterns of Use (FU)

Another theme highlighted through the teachers' interviews was the pattern of AI usage in the teaching-learning process. The teachers were significantly varied when it came to regular usage of AI. Some interviewees reported an extensive use of AI – integrating within the design of lessons, creation of material, evaluation methods, and managing dynamics in the classroom – while for others it was used more sporadically or in less broader scales. Factors responsible for this difference include digital competency at different levels, disagreement over teaching beliefs, confidence with technology as an individual, and resource availability at the institution.

The teachers who possessed greater digital competencies used AI applications more regularly and competently. Such teachers were likely to view AI as part of their standard teaching process, and used it in a range of tasks such as slide making and personalized resources. Nevertheless, others—especially those with less ability to use technology or a greater commitment to the old ways of teaching—reported they were not overly excited to use AI on a regular basis. Some of the participants embraced this reticence from a desire to use familiar resources – such as physical textbooks, interactions with other students, or their own resources for teaching. As one participant said, *"I usually depend on other methods. Book reading and association with peers continue to be my go-to methods"*. There is apparent preference for existing content creation methods and a certain restraint with regard to the incorporating of automation in infrastructures of education.

The use of AI was frequently marked by situational factors influencing when and how it was being used. In scenarios where workload was severe, timelines were compressed and the content was new, teachers oftentimes would contact AI for assistance. But for some, AI served as a resourceful substitute, to be used when no other traditional method would or could be used.

Finally, this pattern of variation in frequency and adoption of AI by the participants shows that its adoption within the higher education is not

standardized. More so, the potential of AI is not to be mistaken for the facility of its implementation which depends on educators' mindset, technological confidence and involvement in continuous learning. It is necessary for institutions that want to ensure inclusive and successful application of AI in teaching and learning to identify and address such differences.

8. Positive Experience and Desire for Training (PD)

The interviews all showed that in general, AI-supported teaching was met with optimism by educators and they were eager to engage further with the new technological tool in their practices. As a matter of fact, participants generally described their first interactions with AI as beneficial, that these tools streamlined their work, and significantly shaped how they designed lesson plans, developed assessments, and produced education materials. This positive engagement encouraged teachers to turn more to action to be more willing to go deeper into the use of AI into their teaching techniques.

A lot of educators highlighted the contribution of formal training so that they may become able to polish what they do with respect to the use and incorporation of AI in teaching. *"I am interested in getting formal training to use AI tools to the maximum extent"*, said one of the participants. Such feedback highlights the realization of teachers that while AI can bring immediate benefits, winning long-term success will depend on making competence in parts such as formulation of prompt, critically evaluating AI outputs, modifying materials to cater for a spectrum of abilities.

Their professional development focus illustrates the conviction of teachers that AI will be a force in education, not merely as a passing development. In the field of higher education institutions embracing advanced technology, this perspective comes as a useful addition. By giving special consideration to training in AI, teachers hope that they will be able to accommodate and do well in a fast-changing technological classroom environment.

From the perspective of teachers, AI was an opportunity to improve their instructional methods, resource use, and match the educational provision with all learners' needs. However, many of the teachers understood that deficiencies in instruction and systematic training had dampened their proficiency of using AI to great effect.

Lastly, educational institutions have to focus on providing workshops, certifications or their internal training programs that would train educationists to become AI literate. By offering such resources, educators will be enabled to adopt AI into their practice better and the adoption of AI can thus also be made more inclusive for educators of different digital competence levels.

9. Misconceptions and Non-Educational Associations (MC)

Although majority of the participants exhibited a thought out and practical understanding on the use of AI in education, a group of the teachers evidenced wrong ideas on what AI technologies are expected to get accomplished. Some of the participants construed AI as basically a surveillance tool which was meant to monitor student behaviour, catch them misbehaving, or maintain class order. Ironically, the actual role of AI in education (automated marking, student centred teaching and language assistance) is significantly different from these misconceptions, which shows a wide disparity between teacher knowledge and training.

As one of the participants pointed out, AI is regarded as a way to observe and supervise students, with much emphasis on control over its use for educational reasons. An educator saw AI's main task as emphasizing "weak performers" or "rule breakers", regarding AI as a form of punishment, instead of a form of aid. Such attitudes suggest a general deafness with respect to roles of AI in education and its benefits, as for some teachers, it appears as an idea that is barely understood or highly suspicious.

This theme is of particular significance as inaccurate interpretations may hinder effective integration of AI in the classroom especially in technology-oriented universities that should be out in the forefront in driving the innovation. The fact that these misconceptions exist emphasizes an important gap: insufficient pedagogical preparation and low communication from institutions about AI in the school environment. In the lack of formal instruction, the educators may be misled into thinking that AI's primary purpose is surveillance and security as these are often the lessons to be discussed on the media, rather than that of instructional tools.

According to the responses, there is a dire need for educational institutions to focus on initiatives that promote teacher training and digital competency at the same time. There is a need for higher education bodies to enforce targeted workshop, elaborate resources, and sustained support for teachers to do differentiation in AI functionalities and exploit its educational utility. Such endeavours would reduce misunderstandings about AI, create confidence, which would lead to a better integration of these technologies in teaching. Ultimately, it is essential to overcome common misconceptions so that all educators may approach AI with assurance to promote and not distract from language learning goals.

10. Institutional and Technological Enablers (IN)

A critical factor in the themes was institutional support. Good integration of AI tools in teaching was largely dependent upon the provision of technical and institutional support. Essential internet access, advanced language labs, state-of-the-art computers, and administrative support were all cited by respondents as elements that were critical to the introduction of AI successfully into instructional practices.

Teachers in the institutions with the innovative technology and strong digital systems were more associated with AI-resources. With availability of language labs, the staff members could use AI technologies to enhance pronunciation, receive fast assessment, and ensure delivery where content is required. Institutions that have stable online connectivity and its in-house technical support prepare a better foundation for their staff to interact with and implement AI applications.

Such responses show how the support systems already present in learning environments significantly influence adoption in teachers' digital practice. Being fully equipped with infrastructure supported AI tools usage and helped resolving hindrances to constant use and investigation. Institutional support and departmental cooperation played a great role in acceptance of AI in classrooms. Teachers noted that departmental endorsement and support, via workshops, collaborative discussions, or tech training, appropriately encouraged a

collaborative learning environment and made faculty more willing to experiment with AI in the classroom.

To conclude, good institutional and technological support are important factors determining how well AI can be integrated into teaching. Such enablers facilitate adoption, inspire teachers to try and eventually enable the emergence of new teaching methodologies.

5. Discussion and Conclusion
5.1 Discussion

The results of this research provide helpful information regarding the ESL teachers' experience and perception of AI-assisted writing, their experiences which are largely guided by the three fundamental dimensions of Self-Determination Theory (SDT): autonomy, competence, and relatedness. These constructs are valuable in critical frameworks to comprehend how ESL educators in the technology-oriented universities of Pakistan are negotiating their professional agency, pedagogical efficacy, and relational being in the rapidly changing scene of AI-augmented instruction.

The data shows that there are robust themes of autonomy from the ESL teachers experimenting with AI integration into practice. Such a feeling of professional self-direction is consistent with the Self-Determination Theory's stance that autonomy is an essential aspect of intrinsic motivation. The teachers find autonomy to be necessary and not simply desirable. When teacher professionals feel that their judgment is still respected, then they are more likely to accept the use of AI tools on terms that complement their teaching philosophies. Nevertheless, a strong minority had neutral to negative perceptions on assessment autonomy and automation, suggesting an overview of disempowerment. This opposition can be triggered by institutional pressures, ambiguous policies, or lack of participation in the decision formation process. As SDT proposes, the restrictions to autonomy can be detrimental to motivation, especially if modifications come across as imposed by the outside world.

Interview data confirmed these tensions. Teachers liked the potential of AI to eliminate repetitive tasks – grading, planning, materials development, but many were uneasy about being forced to use these tools without adequate consultation. Such a sense of AI as a top-down command rather than a collaborative innovation created doubts. Therefore, successful AI integration thus does not only necessitate access to tools but also inclusive policymaking that protects the autonomy of teachers, facilitates genuinely meaningful experimentation, and pedagogical imagining.

Regarding the notion of competence, the study shows how teachers' self-perception of their capabilities in working with the AI-supported writing instruments in the academic environment. Competence, in SDT, offers an insight to one's feeling of being capable and confident of doing things. According to the findings, it is possible to suggest the generally positive but nuanced perception of competence with AI technologies among teachers. It supports their self-efficacy and is consistent with SDT's focus on competence as part of the intrinsic motivation prerequisites. These findings match with the results of a study by Ghimire et al., (2024) that studied the experiences and attitudes of university teachers regarding AI and LLMs. The mixed-method research concluded that majority of teachers were well aware of the AI

integration and also held a positive view towards using these AI tools in educational activities. Moreover, the teachers had full confidence in making use of generative AI in the classrooms.

Although most teachers are comfortable using AI in different aspects of the writing assessment, a vast portion of teachers is sceptical about it. SDT indicates that the competence should be promoted to develop motivation. Therefore, institutions should offer not only technical training but also the discussion regarding pedagogy, ethics, and identity to support educators in integrating AI into their teaching without hesitation.

Based on the Self-Determination Theory (SDT), specifically the aspect of relatedness, the analysis explains the role of the AI implementation in education on the emotional and interpersonal dynamics between teachers and students. Relatedness refers to the feeling of belonging, being valued, and being involved in meaningful communication, an important aspect in enhancing intrinsic motivation and successful teaching relationships. The picture of the data is subtle. Numerous teachers see the value of AI in developing their understanding of student writing and peer-learning. AI instruments that provide feedback instantly, allow us to detect writing patterns or support group work are seen as useful tools in guiding the teachers towards deeper knowledge about the students' needs and towards creating the more interactive environment in the study group. This indicates that some educators view AI not only as a technical tool but also as the mechanism of fostering responsive and student-focused teaching process. While this positive view is modified by some substantial reservations.

Quite a number of teachers are still doubtful or even sceptical about the potential of AI to engage students in a sincere manner. Although a significant number of people believe AI alters the way feedback is given, there is a considerable amount of its dissenters or those uncommitted to its effects on teacher-student interaction. Such mixed perceptions suggest a lurking worry that AI, especially in its capacity to automate or generalize responses, could be at the risk of depersonalizing interactions and undermining the emotional aspect of feedback-elements critical to relatedness. Besides, many educators recognize the necessity of adjustment of their feedback strategies to accommodate AI. To some, this adaptation is favourable as they can pass on routine duties to AI and work on products and high order personalized feedback. For others, it is an extra weight, especially, in the lack of institutional guidance or instruction, which might jeopardize student relationships, instead of improving them. SDT explains that the quality of relationships is what matters and not the quantity.

If Artificial Intelligence is introduced without a consideration of the human aspect of teaching, then, it stands to damage one of the most important psychological needs there is in education. On the other hand, when AI is applied deliberately with the teacher agency and ethical awareness and student-centred practices, AI might enhance the relatedness, as it can free the cognitive resources and make the students more engaged in a meaningful manner. Basically, the findings indicate that although AI may contribute to understanding and collaboration, it is complex and dependent on contexts in helping create emotional connections. Institutions therefore have to move beyond the provision of AI tools into investing into relational pedagogies and

training that sustain and promote the human element of learning. These findings corroborate with the findings of a case study conducted by Bashir and Ali (2024) that investigated the viewpoints of teachers. These teachers were given a training course on AI tools such as generative AI models and similar. The results highlighted that the teachers demanded for training to use these tools with their students before being fully equipped with all AI-integrated setting.

The results of quantitative analysis have been backed by the qualitative interview analysis. Interview data analysis indicates that ESL practitioners in Pakistan's technology-oriented universities have a complex and constantly evolving viewpoint about AI technologies. The theoretical framework for qualitative analysis of themes was Technology Acceptance Model by Dishaw and Strong (1999). The TAM model was used to analyse how university teachers perceived the adoption and use of AI tools for providing feedback regarding undergraduate students' writings. TAM focused on constructs like Perceived Usefulness**,** Perceived Ease of Use**,** Attitude towards Use**,** Intention to Use**, and** Actual Tool Use**.**

Regarding the issue of perceived usefulness, it was observed in the interviews' data that the teachers tended not to regard AI as a major enabler of efficiency, especially in cases of recurrent academic and administrative tasks such as lesson planning, materials creation, evaluation, and feedback. However, concerning ease of use, they agreed on the point that AI had reduced the amount of time and mental resources that were wasted before on boring manual tasks and allowed more energy to be invested into student interaction and advanced teaching methods.

In addition, when asked about their attitudes, integrating AI tools into language labs and practicing was seen as a positive and evolutionary shift which strengthened both teaching standards and learner independence. AI provided tools that allowed differentiating instruction, meeting individual needs and allowing learners to test language independently, including grammar checkers, speech analysis software, and personalised feedback mechanism.

Nevertheless, teachers could see the advantages, but felt hesitant about adopting them. When asked regarding their intention to use AI tools in the future, it was also noted that the AI systems were not perfect and could generate general content, could make errors in fact or had the possibility to provide non-relevant examples which if not critically evaluated may mislead students. It was clear to educators that they had to apply their own reasoning in evaluating and improving AI-generated materials before they could be used in class instruction. This demonstrated that whereas AI was capable of helping with instruction, it was not capable of figuring out the cognitive capacity of human beings to think critically and respond in contexts and to understand the emotional needs that teachers put into the environment of the classroom.

When inquired about the actual tool use, it was also worth noting that the research mobilized a huge demand for support and development in institutions. There was a need that was persistently demanded by teachers for formalized training, professional growth through some routine training, and clear guidelines on the use of AI tools for ethical and effective teaching. Findings established that some of the respondents had false beliefs on AI, seeing it as a monitoring or controlling form rather than an instructional asset – an important

lesson on necessity of digital literacy programs that unravel these myths and clarify their position as instructional tools.

So more than simply having tools available, AI integration into ESL education in a sustainable way is needed. A holistic approach is required which considers technologies access, empowerment of teachers, rational application and reflective teaching. It is important for institutions to undertake not only technical investments but also to create a culture of innovation that will empower the educators to be competent, safe and reflective about the technology deployed on their teachings.

In conclusion, artificial intelligence stands a great chance of transforming the English language teaching practice into a better one particularly in settings that are technologically innovative, but resource-poor. However, the attainment of lasting success is not dependent on the ability to connect the opportunities of technology and pedagogical ability – a hurdle which requires collaborative effort from both institutions and educators.

5.2 Conclusion

Integrating artificial intelligence (AI) into educational set-ups, specifically, that of the English language teaching, is changing conventional norms of teaching, especially in technologically developing environments such as Pakistan. This study explored university English language teachers' perception of feedback provision in AI-assisted undergraduate writing, and their meaning in teaching within the shift in a technological context. By using the mixed methods design — sequential explanatory orientation, the research covered in-depth, layered insight into the ways in which AI is transforming instructional strategies and interpersonal relations within classrooms. There were two major theoretical models that shaped the study: the Technology Acceptance Model (TAM) by Dishaw and Strong (1999), the Self-Determination Theory (SDT) by Deci and Ryan (2000). TAM allowed analysing the acceptance levels, perceived usefulness, and simplicity of use of AI tools by teachers. On the other hand, SDT (specifically, the "relatedness" element) shed light on the part of AI's impacts on teaching on the emotional and relational aspects of the teaching process, which offered a holistic understanding of both the technical and human-centred problems and possibilities.

The qualitative data showed a mixed view of teacher perceptions. Some educators thought of AI as an ally in improving the efficiency, accuracy, and timeliness in providing feedback. AI applications such as grammar checkers, plagiarisms detectors and content enhancers were perceived to empower teachers in that they could focus more on the higher-order sort of feedback: critical thinking, idea development, and student engagement rather than drowning in routine mechanical fixing. This change, according to most teachers, made room for more reflective, student-centred instruction. Nevertheless, such benefits were not inconsistent with cautions. Many participants expressed reservations regarding the limitations of AI, particularly in regard to servicing the affective and interpersonal aspects of the feedback. AI by nature tends to standardize responses and is not as sensitive as to contextual and emotional individuality of learners. Scholars raised concerns over AI's inability to offer personalized encouragement or empathetic correction, two of the essential

aspects of establishing trust, motivation, and deeper learning relationships with students. This is in accord with the concept of "relatedness" proposed in SDT, whereby emotional relationships between the teacher and the learner are essential in the maintenance of intrinsic motivation and meaningful learning outcomes. In addition, some educators were afraid that over-reliance on the use of AI could make the educational process a more detached process thereby alienating students or even trivializing them as recipients of algorithmically generated comments. They pointed to the danger of undermining the teacher-student relationship and turning teaching into a managerial position that oversees digital tools instead of the relational dynamics that make up successful pedagogy.

On the practical realities, the study observed that university teachers are increasingly including AI in their teaching contexts. The quantitative phase points to the fact that most of the participants had at least experimented with the AI tools in several instructional functions like assessment of assignments, lesson preparation, and provision of feedback. Though the degree of integration between the practiced and the un-practiced was high, there was significant variation depending on the availability of institutional support, level of awareness of the actual teachers, and attitude of the learner towards the deployment of technology. Many had to balance their teaching practices to AI-influenced writing. Teachers did recognize how AI could make formerly time-consuming work less painful and could facilitate more consistent pedagogical practices. They realised that with AI, it was possible to individualise instruction and work with individual needs of students. For example, instant gratification regarding grammar or sentence construction could be provided to students, thus releasing teachers to concentrate upon complex cognitive skills and conceptual clarification in class-room interaction. However, other teachers found this adaptation burdensome, particularly with no institutional policies/training programs to inform good AI applicability. The ambiguity on AI ethics, usage limits, and measurement indicators put teachers in the liminal position–they were conscious of AI's potentials but uncertain as to how to introduce and sustain its use. This vagueness went on to create more cognitive and emotional burden, corridors that teachers were required to make discretionary judgments concerning the reliability of AI-generated content in relation to their teaching objectives. These varied reactions are a reflection of the primary finding of the study: Although AI presents hopeful avenues of improving educational practices, applying it is complicated and highly contingent on contexts. Success is dependent on the long list of variables such as teacher agency, institutional infrastructure, digital literacy, and the most important of all, the maintenance of the human element in teaching.

With the help of TAM, it was possible to analyse the initial attitudes that determine the inclination of teachers to use AI tools. The study identified perceived usefulness and ease of use as the significant determinants of the AI adoption. Teachers who felt that their work became more effective and controllable with the help of AI tools were more likely to apply them in a regular and creative way. However, perceived usefulness was often limited by considerations for accuracy and relevance. For instance: participants reported cases when AI-driven feedback was either too vague or out of context, calling

for human intervention. Additionally, teachers lacking the digital confidence found it difficult to regard AI as a "helping hand" rather than the replacement or surveillance mechanism. This emphasizes the need to improve digital literacy of the teachers and emphasizes the role of focused professional development programs.

SDT brought an important psychological angle to the fore, and "relatedness" came out as the dominant theme. Teachers' real-world experiences suggested the conflict between the efficiency and understanding—although AI could optimize instructional conveyance, it was unable to build the affective connections that marked the transformative education. Teachers emphasized the necessity of sustaining an emotional resonance in feedback, especially, in ESL contexts, where motivation, encouragement, and identity confirmation will be key facets. They reasoned that, AI could support, and never replace the empathetic involvement and mentorship that supports successful language learning. In addition, the qualitative data indicated that AI has the potential of contributing or destroying relatedness depending on how AI is implemented and implemented. When AI tools are carefully deployed, along with the guidance of the teachers, an understanding of context, and an ethical discernment, they can enhance our process of teaching, thereby saving our cognitive and affective bandwidth for human interactions that move us forward into the future. On the other hand, if used in a careless manner or instead of human judgment, AI may upset relational dynamics and transform the classroom into a transactional space.

Based on the results, the integration of the AI in the study suggests a multilayer approach. Institutions need to envisage teacher training programs that primarily address such areas as digital literacy, ethical use of AI, and pedagogical best practices. Teachers require specific instructions, hands-on workshops, and unceasing support to comfortably move around the changing AI space. Universities should put in place proper policies that will help define the role and boundaries of AI in classrooms. These policies should be developed in relation with educators to make them practical and contextual. AI should not be considered to be a merely technological add-on but a pedagogical catalyst. Institutions should encourage reflective teaching methods that employs AI embellish and not replace the connection, the creative and critical thinking of people. The teaching must be protected with emotional aspects. Teachers should be encouraged to use AI tools with discretion and responsibility and with a priority to the engagement, motivation, and trust of students. The findings underline the need for infrastructural support – including availability to trustworthy AI tools and tech support teams, and collaborative networks, so that educators do not feel alone and lost in the whirlpool of technological change.

The findings of this study corroborate to various studies that have been conducted recently in the similar field. One such example is a study by Zawacki-Richter, Marín, Bond, and Gouverneur (2019) who did a comprehensive systematic review of 146 peer-reviewed articles to try and infer roles and scope of artificial intelligence applications in higher education. It revealed an appalling imbalance in the current literature with most research tending to favour technological and computational advances over pedagogical interests and experiences of educators. The authors highlighted that AI is often linked

with such benefits as improvement of efficiency in assessment, learning analytics, and provision of personalized instruction, however when used, it brings the critical issues of ethics, data privacy and the possibility of creating educators as marginalized agents in decision making process. Notably, they highlight the lack of teachers' voice in AI research and urge for more consideration of the consequence of AI integration on pedagogy, teachers' agency, and educational relationships. This observation particularly applies to the current research that aims to fill the gap in this regard by focusing on university English language teachers' perceptions of AI assisted student writing in Pakistan. The results of Zawacki-Richter et al.'s (2019) study confirm the necessity to continue the investigations that consider educators as research participants and confirm the significance of paying attention to the perceptions, adaptations, and reflections of teachers related to the use of AI tools in real-life instructional settings. Additionally, the review is in line with the theoretical foundations of Self-Determination Theory and, specifically, the concept of relatedness, because it finds that the unbridled adoption of AI might jeopardize the interpersonal mechanisms indispensable to successful educating and learning.

Another study of this nature is by Yin and Satar (2023), who explored the perception of English teachers on artificial intelligence (AI) in language teaching and highlighted the double aspect of educators' response to AI implementation. Their research, placed in the context of English language teaching, shows, that on the whole, teachers recognize the potential of AI tools for improving teaching effectiveness – in automating backstage processes, providing immediate feedback, and support for academic training through adaptive technologies. However, alongside the perceived benefits, the study finds significant hesitation, especially when it comes to AI's inability to grasp contextual nuances, cultural references, and the very essence of language teaching, i.e., the emotion-related aspect. Teachers feared that though the AI provided a way to facilitate surface-level instruction and test-making, there is no element of human delicacy in the design of affective, empathetic, and individualized pedagogy by the AI. These findings are strongly consistent with the current study where the same was found to be a combination of optimism and caution on the part of university English language teachers in Pakistan. Those who participated in both studies underscored the fact that even though AI alleviates cognitive and administrative burdens, it does not replace relational aspects of teaching that are outlined in Self-Determination Theory (SDT), with particular relevance to the component of relatedness. Yin and Satar's study reaffirm the view that the interaction between a teacher and his or her student is at the core and irreplaceable aspect of successful instruction, which highlights that AI should be considered a supportive, not a substitutive tool in the settings of pedagogical environments.

This study is timely and significant in addressing the current debate on AI in education, particularly in the relatively under studied space of Pakistan's technology integrated universities. It demonstrates how teachers are not the recipients of technology but active agents handling its implication in pedagogy and student engagement and their professional identities. The incorporation of AI into students' writing at the undergraduate level also is not universally

accepted or completely rejected. It is not cautious, but optimistic, it is not critical, but reflective, it is not determined to change things, but longing to save humanity of teaching. Since educational institutions are aspiring to achieve technological innovations in their structures, it becomes highly necessary to make sure technological advancements are in line with psychological, emotional, and relational requirements of educators as well as learners. Overall, AI has potentials for transformative influence on the practices concerning writing instruction and feedback in the English language education. Its success, however, does not rest only on access and technical implementation, but also creating the ethical, empathetic, and pedagogically sound teaching environments. The way forward requires teamwork – where institutions, teachers and technology meet to invent a future that is intelligent and human, a future of education.

5.3. Research Limitations

In this study, we aimed to explore university teachers' perceptions of providing feedback and adapting their teaching practices to AI-assisted undergraduate student writing in Pakistan.

However, there were some limitations related to the research that should be acknowledged.

- The study was confined to some of the technology-integrated universities in Pakistan. This limits the generalizability of the findings to other institutions that may not have similar levels of technological integration or exposure to AI tools.

- The sample size was restricted to 70 respondents for the survey and 20 for interviews. Although the use of purposive sampling assisted in focusing on experienced teachers, the relatively small and specific sample may not fully represent the broader population of university English language teachers nationwide.

- Access to teachers with direct and consistent experience with AI-assisted writing tools was a challenge. As AI adoption in education is still emerging in Pakistan, participants' experience and familiarity with AI varied significantly and therefore could have affected the quality and correctness of their responses.

- The research concentrated only on teachers' perceptions and did not include students' perceptions. This limits the understanding of how AI-assisted writing tools impact the teaching-learning dynamic from both the teacher's and the student's perspective.

- Data collection depended on self-reported responses in both survey and interviews. This can lead to bias since individuals may have answered according to perceived expectations or institution constraints than actual practice.

- Time and resource constraints limited the capacity to conduct a longitudinal study. Therefore, the results are based on a cross-sectional snapshot at a point in time and do not reflect changes over time in teachers' attitudes or practices as AI develops further.

5.4 Recommendations for Future Research

The current study suggests different recommendations for future researchers:

- Future researchers need to consider longitudinal studies as to how the perceptions and practices of teachers change with them as AI tools are being embedded more into the education systems. This would develop a better understanding of the sustainability and the long-term effects of AI in writing instruction.

- There is need to include student perspective on AI writing in future research. Studying the ways students see, use, and react to AI feedback may contribute to obtaining a more general vision of its effectiveness, usability, and impact on writing skills and motivation.

- AI tools might be relevant and accepted in different degrees by disciplines. Future research can compare AI assisted writing adoption and perception in disciplines such as social sciences, engineering, or health sciences to understand how the contextual factors have an impact on the adoption and impact of AI assisted writing.

- Future research could focus on educators' experiences with specific AI tools (e.g., Grammarly, ChatGPT, Turnitin) to produce more tailored information about their strength, weakness, and pedagogical implications. Tool-specific evaluations may lead to best practices for implementation and training.

- Emphasis should be laid on Pedagogical Frameworks for the use of AI. Scholars may investigate or even create instructional models or frameworks for ethical and fruitful incorporation of AI in the teaching of languages. This could be strategies on how to balance AI support with the critical pedagogy, academic integrity, and the student autonomy.

- There is a manifest need in research that measures effectiveness of teachers' digital literacy and competence in AI capacity training. Research is in a position to determine which training is most suited to teacher confidence, ethical awareness and pedagogical adaptation.

- Following SDT, more exploration of the emotional, relational, and ethical ramifications of AI use in feedback would be needed in future work. What is the role of AI in the concept of trust, empathy, or student-teacher rapport, and what are possible protections against the depersonalization of teaching?

- Jesup and Platt (2017) offer some insight into how institutional leadership, policies, and infrastructure affect the adoption of AI in higher education. Using this as a point of departure, future research may explore this topic further. Comparative case studies between different universities with regard to the level of support they receive can reveal the elements of organization that support or impede the effective integration.

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Appendices
Appendix 1
Interview Protocol

Respondents: University Teachers
Time: 20- 25 minutes
Purpose: The study aims to explore university teachers' perceptions of providing feedback in AI-assisted writing using the Technology Acceptance Model (TAM) as a framework. The interview focuses on teachers' opinions, their experiences in AI assisted writing of undergraduate students.

Perceived Usefulness
Q1- How has AI technology impacted your efficiency in completing tasks?
 Probe 1.   Can you give an example?
  Probe 2.   Why do you think so?

Perceived Ease of Use
Q2- How was your experience of using the AI technology?
Probe 1. Can you explain?
Probe 2. Can you provide an example?

Attitude towards Use
Q3- Does AI technology support specific tasks you need in your role as a teacher?
Probe 1. Can you explain?
Probe2. Can you give an example?

Intentions to use AI tools
Q4- How likely are you to continue using AI technology?
Probe 1. Why or why not?
Probe 2. Can you explain?

Actual Tool Use
Q5- How frequently do you use AI in your daily work?
Probe 1. Why do you think so?
Probe 2. Can you give an example?

Appendix 2

Survey Questionnaire

Dear participants, this questionnaire intends to collect information about your teaching practices in adapting to undergraduate student writing using AI tools. Your responses will be confidential and used only for research purposes only. You are requested to answer all statements. Thank you for your time and cooperation.

Age

☐ 45 and above   ☐ 35-44   ☐ 25-34

☐ Below 25

Teaching Experience

☐ Less than 5 years   ☐ 5-10 years   ☐ 11-15 years

☐ Over 15 years

For each statement select one option:

Strongly Disagree **(SD)**, Disagree **(D)**, Neutral **(N)**, Agree **(A)**, Strongly Agree **(SA)**

Sr.	Statements	SD	D	N	A	SA
	Autonomy					
1	I control how I assess AI-assisted student writing					
2	AI allows flexibility in teaching strategies					
3	My feedback is not dependent on AI					
4	I decide when to integrate AI in writing assessment					
5	AI does not replace my role in evaluating student writing					
	Competence					
6	I can effectively evaluate AI-assisted student writing					
7	AI changes how I provide feedback					
8	I can identify AI content in student writing					
9	I can evaluate AI-generated feedback					
10	AI affects how I assess student writing quality					
	Relatedness					
11	AI influences my understanding of student writing					
12	AI fosters collaborative learning					
13	AI changes the way I provide feedback on student writing					
14	AI enhances my engagement with students					
15	AI requires me to adapt my feedback strategies.					

Appendix 3
Transcripts of Interviews

1st Interview
Q#1 How has AI technology impacted your efficiency in completing tasks?

AI has helped a lot in completing the task in the sense, earlier we used to spend weeks on one project or on one activity or one assignment or one task, but now with the help of AI the task can be completed within a day or in less time, depending on what type of assistance we are seeking from AI and secondly, it's an efficient way of completing our task.

Q#2 How was your experience of using the AI technology?

I'm very much satisfied because the experience entirely depends on you personally because AI responds to you according to the questions that you ask from it. Because if you are an expert in using AI, the response that you would get from AI would be different. If you yourself are confused and you are not an expert, then possibly the responses or the answers would be entirely different.

Q#3 Does AI technology support the specific tasks that you need in your role as a teacher?

Yes, I mean in terms of teaching, I always seek assistance, especially in getting new ideas, in assigning projects to my students, I always get examples and ideas from AI, what type of projects can I assign them, what type of topics I can give them for assignments or group activities or even individual activities.

Q#4 How likely are you going to continue using AI technology?

I would, I mean continue using it, even I appreciate and I ask my students to even seek help from AI because instead of giving me a very erroneous answer or instead of giving me superficial knowledge, it's better if they can get some good answer from AI, at least even if they would get the idea, possibly they would clear their concepts.

Q#5 How frequently do you use AI in your daily work?

In daily work, it depends because whenever I find difficulty in any matter, I always stick to AI, I always seek its help, be it a lecture preparation or be it you can say my personal task, I always rely mainly on AI.

2nd Interview
Q#1 How has AI technology impacted your efficiency in completing tasks?

Well, AI, artificial intelligence, it is everywhere. For a language practitioner, it's a heaven. And I'm not sure about other professionals, how does it impact their life? For me, it has made my task easier. I mean, we would take hours and hours for preparing our sessions and assessments. But these days, in no time, you can prepare. But one should not actually blindly follow it. It is very important. It is pertinent to use it intelligently and tailor it according to your needs.

Q#2 How was your experience of using AI technology?

Incredible. I cannot actually put it right in words.

I mean, if we shut our eyes and just criticize it for the sake of nothing, so it means we are missing an opportunity or a window for multiple options in the future. As a language practitioner, we have to admit, we have to accept and that

it is or it provides us a window of opportunities for us. It works like Google, right? I mean, a search engine, right? Data is there.

And of course, one needs to use it or tailor it according to his or her needs.

Q#3 Does AI technology support the specific tasks that you need in your role as a teacher?

Specifically, I mean, it is everywhere. It is basically a search engine, right? Or I mean, whatever you put, right? Obviously, you get some data. But I mean, as it is in the initial stage, one should not actually rely upon it blindly. So one should actually use it intelligently. There are certain things which may not be useful for us and one should not actually use it.

And the other thing is, you know, most of the time we do not use the paid version of it, right? Probably right that the paid version has better options, has more reliable data. Sometimes we do not get authentic data or information from the authentic source. So we should decide what to take.

Q#4 How likely are you going to continue using AI technology?

Even there is a hint of, you know, opportunity, right? Or a small opportunity. One should plunge or one should actually, you know, thoroughly examine it. So obviously, if you want to be a successful language practitioner, we should explore multiple options, right? To enhance our pedagogical skills, delivery of the lecture, say for example, assessments, you know, for everything, right? All right.

Q#5 How frequently do you use AI in your daily work?

Like, tough to say. I mean, most of the time I am involved, right? I frankly admit. I mean, I do not, I even do not discourage the students, like, who actually search it, right, from different AI tools. In fact, I encourage them, right? Those who do it right, it means they are more flexible. So they have more chances to excel in the future job market. So, like, if you, as you said, like, if you use in your daily work, in what ways? Daily work, I mean, like, say, for example, for preparing the sessions.

So I normally, you know, search the information. Like, most of the time, it is not, it doesn't fit, right, to my required tasks, but I always, you know, search it, right? And search multiple options before preparing my sessions. Yeah.

3rd Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

Well, it's well known that undergrad students are getting a lot of help from AI tools to complete their assignments like things and their projects. You know that there are certain things which are of course, they need that AI assistance is required. Sometimes, we ask the students to get some support from AI as well for grabbing more ideas or more factors related to that assignment. So, it's a boon in that sense that students are having an ease as far as collecting and grabbing more ideas related to the issue. But as far as I think you are asking about efficiency, so efficiency is of course the creativity and critical thinking.

So, these kind of skills of the students is definitely you know that are definitely affected by this assistance. So, for saving time probably it is a good thing for the students but as far as their own critical thinking, their research skills, those are I think badly affected.

Q#2 How was your experience of using AI technology?

As I mentioned that it is definitely fruitful in the sense that it is less time consuming to grab more relevant information.

So, earlier we used to Google the information and we had to you know collect relevant information out of lot of searching and exploring the contents from Google like search engines. But now you know that you just give a prompt and you get you know that the most relevant information but by the passage of time probably now it is quite convenient for everyone to grab information. Alright.

Q#3 Does AI technology support the specific task that you need in your role as a teacher?

As I mentioned that if it is you know that as some research like thing is concerned where we want our students to get relevant information probably it is quite helpful. But once we are asking for assignment making or some project completion then students take undue advantage of it and what we need from them to study deeply, to collect information with from you know the different sources that kind of research is gone from their work. So, probably this is a negative impact as well.

Q#4 How likely are you going to continue using AI technology?

AI is good like in classroom sometimes we use if then students are benefited from this. So, sometimes we make certain images out of the description within you know that no time it makes some image like in poetry teaching.

So, you just enter a poem and that poem is converted into you know that based on the contents of the poem an image is created. So, that image is well you know that representing the poem. So, it is a kind of a good thing. Then we can get you know that lots of other animated things into that like if I am teaching psycholinguistics. So, I just ask that show that particular lobe of the brain and give some you know that labeling around that lobe. So, AI tools like chat, GPT or deep seek is giving me the image of that and I can immediately show that in the classroom. So, probably that is a wonderful thing. All right.

Q#5 How frequently do you use AI in your daily work?

Not frequently you know that it is kind of support, but not for everything. The things which are the part of your readings things which are the part of your research. So, probably you have to do that. Yes for paraphrasing kind of thing or converting some text into you know that slides like thing.

So, for that reason we can use AI in the classroom or for a classroom practices, but for not for everything. It is not I mean the replacement of our brains. So, we need to use our brains as well otherwise our brain would be dead very soon.

4th Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

AI helps me in preparing for the lesson planning for the students and you know definitely it says my time. I usually use a CHAT GPT and it gives me a you know constructed view of things. Instead of doing things, instead of reading a lot of books, it gives me a sequence, constructed proper lesson plan and I can use it effectively in the classroom.

Q#2 How was your experience of using this technology?

Every year I liked it because it's easy to use, it saves my time, it you know sometimes when I'm teaching language skills to the students, sometimes I just go into the class and develop a lesson plan right there and then in the classroom instead of you know preparing the whole lesson plan for the students.

Q#3 Does AI technology support this specific task that you need in your role as a teacher?

Yes, it does, like my usually I want to give samples to my students, like if I'm asking them to write a, for example, cause an effect and essay and I want them to look at a sample of a cause and effect essay and then do the writing.

So I can ask AI technology to give great sample according to what I want my students to write and given such prompts to the students, sorry to the AI technology I can develop good samples and other tasks.

Q#4 How likely are you to continue using AI technology?

I want to get proper training in it because I have read some researches where the teachers are totally, you know, they are developing lesson paths through AI, they are even evaluating the students writing through AI, so instead of reading each and every line by themselves AI is helping them in seven times and giving feedback with the students. So I want to get equipped with such training and I want to keep on using it, you know, excel myself in using AI technology.

Q#5 How frequently do you use AI in your daily work?

I would say not most frequently, not very frequently but I do use it, okay. Like especially for development lesson camps, I do use it for, you know, creating tasks for evaluating the students, I would say I do. So not every day but once a week or sometimes twice a week for each subject region.

5th Interview

Q#1 How has AI technology impacted your efficiency in completed tasks?

As far as you may say, efficiency is concerned, I do believe in self-creativity, right? But for last some months, I've been experiencing that AI just gives you a quick reference and nothing else. It means you can give some task to AI, you can get the document already prepared there and you can, you may say, reshape it or repose it according to your demand, it's a time-saving device.

Q#2 How is your experience of using this tool?

I don't use it frequently, but as far as I use it in some quick jobs, I usually take advantage of it. For instance, I was bound to submit two or three tasks in the same day. It wasn't possible for me to do that, but I did it, but I did it with the help of AI. And when I got the test, it was already designed, I told AI my requirements and it gave me some sort of question, appropriate question paper.

But I had to change it because it wasn't up to mark, it wasn't going to fulfill all requirements of mine. But it was good. It saved my time.

Q#3 Does AI technology support the specific task that you need in your role as a teacher?

Yeah, it supports, but you say that 50-60 percent, because every person according to his environment, he will have to reshape the knowledge that has been designed by AI, the document that AI designed for you.

You must change it, otherwise you cannot use it in the same way, because definitely the machine gives you a specific type of knowledge that might not suit your context. So you will have to change the context according to your own taste.

Q#4 How much AI are you going to use this technology?

If I say that I think it is okay, the modern teachers should use it.

I will just try to have a little bit of guidance. For instance, if I am going to write down a document, I will give my idea to it. And I can get just a review, because before I do believe in creativity, I don't believe totally in AI. I am telling you the truth that I don't believe totally in AI, I believe in self-creativity. But before going to self-create with you, you need a reference. So AI can help you as a reference, you may say the fruit of your efforts. Now this is not the fruit of your efforts.

Actually, this is a machine working. That's not the brain working, actually.

So I believe that you should use it or a teacher or a student should use it as a reference or a guideline and nothing more than that. They themselves should create something out of their own mind, out of their own context, whatever they want to write it down.

I believe that machine can be a good supporter of man, but it can never be the absolute substitute of man. Right now, I don't believe so. It might be wrong in future, but right now, I don't believe so.

Q#5 How frequently do you use AI in your daily work?

No, not in my daily work. I don't use frequently. I use to go for book reading, consulting people, having interviews as you are doing right now, talking people, gathering their concepts. And I use a reposite or reshape it according to my demand or my requirement. I don't use it frequently, that's the thing, because I don't believe in patriotism. I don't believe in work done by someone else.

If you want to create something, you will have to reach out of your own mind, out of your own soul. AI provides you just words. It never provides you feelings. It never provides a context. It never provides you, you may say, sensation and values and all that. It can give you words only. So you will have to put human self in that kind of work that have been done already by AI. So AI is not the final. It can be, you may say, a beginning.

6th Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

Well, AI is, according, in my opinion, a very helpful tool if not used as a crutch because what our students do is they completely rely on AI. When AI is a tool that can be an effective assistance, it can cut your time in half.

It can manage your resources for you, and it can help you out in areas that sometimes. When in a time grant seem impossible to.

Q#2 How was your experience of using AI?

My experience of AI technology has always been effective. It has always been friendly because I use or integrate AI in my classrooms during my teachings.

The most important part is, for example, there is a document that I need to go through, and it's a 100 pages for example. I have, I don't have time to read it

or I am fully packed in my day and it just requires like, uh, I have 20 minutes in order to deliver a lecture and it's not of that weightage for example. What I'll do is I'll put it in the, you know, CHAT GPT or any other sources, and I'll give a command to summarise it for you. Double checking the authenticity, it is on me, but what I want for the undergraduate students, that task is done.

So the lecture will be delivered effectively. Time would be saved a lot, and you will be on task.

Q#3 Does AI technology support the specific task that you need in your role as a teacher?

I don't think so. No, it's not a primary thing, but it's a definitely a helpful assistant.

Q#4 How likely are you going to use this technology?

I use it quite frequently, not maybe not that much for, uh, everyday tasks or completely relying on it because I stand by my point. I do not use AI as a crutch. I use it as an assistant. You people have TAs, teachers, you know, use them and all, but then the way the world is progressing, the way.

The times are changing, but we do not need, I'm not saying that we can completely eliminate the human factor from it because human commands are very important. The more clearer your command will be, the more effective the result is. But yes, AI plays a very important role in today's society and our, you know, lives.

Q#5 How frequently do you use AI in your daily work?

On and off. I keep on using it during my lectures like I told you, if there are many PDFs that I want to go through, I'll just put it in, search for keywords, look up data on it, and then if I need some websites to, you know, on one single topic, but to give a lot for a literature review, for example, for research purposes, then I quite frequently use it.

7th Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

This is very important to discuss about AI technology. It was launched in 1940 and 50. Okay, this is basically used to detect the students in the classroom, to watch them, to monitor the people who violate everywhere, everywhere else.

But this is a very up-to-date process. It's very up-to-date process of this. So, by which this is very important to launch in the society because we can detect every type of one who is going to work against the government, who is not proficiently working his job.

If someone else is doing his job not properly, we can detect them. And this is completely monetized. And it is very up-to-date form of monitor and computers. This is completely computerized.

Q#2 How was your experience of using this technology?

This is where, according to my perception, my experience, this is not less than a miracle.

It is very good. This is the way by which we can identify the persons, people, things, and we can generate ideas because it is limitless, I think.

Q#3 Does AI technology support a specific task that you need in your role as a teacher?

Yes, this is very important to discuss that. It can be used as a teacher. This technology also a teacher can use because by using this technology, he can enhance his knowledge, he can know how to speak English, how to teach students, and how to detect the students, those who are not paying attention to the classroom.

Q#4 How likely are you to use AI technology?

Yes, I would like to use in the future.

Within classroom, if somebody else, we have experienced this, if somebody else do some wrong, some mistake, if you just point out your gadget and cameraize that person, he will stop doing something else. And this is just because of artificial intelligence. And he will be very attentive that he is cameraized and he is becoming a pictorial form.

That's why this can be used by which we can reform not only the person, but society. All right.

Q#5 How frequently do you use AI in your role as a teacher?

Yes, but I have been using this past many years, but I came to know about right now. There are two forms of AI. One is generic and the other is narrowing. Generic is a computer form. Computer form like computer can be used simply, but it does not have much more data. If you use this technology, it is limitless. It has a lot of data by which you can explore the world, you can explore the people, you can explore everything.

8th Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

Artificial intelligence basically is a new launched technology, and this is basically used to identify some culprits according to my perception, and it is very easy to chase those who are not up to the mark.

Okay, so can you share an example? I do not have studied it, but according to this, we can say that maximum tasks are done by this technology. This is a supported technology here.

Q#2 How is your experience of using this technology?

Sorry for that purpose, I do not have an experience. I would not say even against a single word against this, but I would like to support that. And this is a very updating question which is asked by you. Technology supported man from the beginning of the life.

So it is very good. Whenever I will go through and I will have experience of it, I would like to explain that.

Q#3 Does AI technology support the specific task as you need in your role as a teacher?

As a teacher, I would like to say this technology can be used.

This is very important for everyone. I think so. We have to upgrade ourselves, but our teaching profession is so much immemorial.

It's very old. And mostly there are no teacher training, no sessions. So that's why I think so according to my perception, it is rather difficult for everyone.

Q#4 How are you likely to continue using AI technology?

Yes, of course, if I have been given a chance, I would like to. But through a different type of technology, I make myself privileged. OK, but right now I do not have such as experience of information, this technology, AI technology.

But I think so that would be fine. Actually, I do not have proper means. I basically I just go through from WhatsApp and you may say that Facebook. And I do not even use Skype and many more of that gadgets because this is an invention for the new generation, I think. But I do not have proper use of this gadget.

That's why I cannot say even a single word about that.

Q#5 How frequently do you use AI in your daily work?

In bit and pieces, not regular. Basically, this technology, artificial intelligence, intelligence is a field by which we can only chase the culprits. If you have wrong call, if you have wrong messages, according to my perception, we can chase through this intelligence. And it is very important for the coming generation because now the coming time is over many more other discoveries.

So this is one of them. And the students should use that even like me. If I get a chance, I would enhance my knowledge about that.

9ᵗʰ Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

This is understood because technology and the scientific developments are always there to help human beings. So, AI has impacted my efficiency in completing my educational tasks to a great extent.

Because I have to plan my lessons. So, AI helped me. Obviously, I used the CHAT GPT and other relevant tools as well and lesson planners as well.

And when I have to assess and evaluate research work or the articles or the essays of the students, I also use AI for that purpose and it provides me with a good and you must say a maximum clear answers and clear evaluation as well. It helps me a lot.

Q#2 How was your experience of using this technology?

It was a wonderful experience. Initially, actually, I was like anyone else, I was scared of what would be the level of accuracy by using AI and how it will help me. Obviously, maybe it is a machine language or etcetera.

Initially, I was scared of all these things and I have reservations. But when I used it, it is quite smoothly, smooth to be used and it is really helpful and I am very positive about it. All right.

Q#3 Does AI technology support the specific tasks that you need in your role as a teacher?

Yes, it supports many specific tasks as I have mentioned earlier. It helps me in my lesson planning as well. It helps me in the evaluation of my students research work and the general classroom activities as well.

And it also helps me actually to clear the phonetics and phonology tasks and to design the vocabulary worksheets and the role play and other activities that I want my students to participate and solve in the classroom.

Q#4 How likely are you to continue using AI technology?

You may say 200% if I were to say that. I am very determined, highly determined to use AI in the future and there is a great possibility because it is

my personal conviction and belief that if I will not use AI, AI will use me. Rather, it will replace me because it is a much needed technological advancement in the modern era especially in the field of education and language teaching as well.

There could be so many ways I can use it. I can use it for the audio purpose and video classrooms as well and for the purpose of developing animated videos for the spoken skills of the students and also go and design activities for the writing. So, it helps me in all the four basic modules of language data, you may say speaking, listening, reading and writing as well.

Q#5 How frequently do you use AI in your daily work?

I would say that it has become the part and parcel of my life and I cannot deny it because AI tools and apps I have in my mobile phone as well in my laptop as well. So, whenever I need that I have to develop something, some activity, academic activity, I use them.

I cannot say that I use it once a day or twice a day or thrice a day. Rather, it is always with me like my shadow.

10TH Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

Yes, AI technology is quite helpful because I can get some of the tasks done which do not actually require my intellectual capacity. For example, I can collect data if I have to prepare some lecture and I need to give some introduction or background or historical detail.

I do not need to spend too much time in making slides by myself then I can collect that information from AI tool. Similarly, I can have some preparation of objective questions from AI. So basically I have noticed that when I use AI for those tasks which do not need my creativity or my intellect, then I can save my time by using AI.

Q#2 How was your experience of using AI technology?

Yes, it was good. It was quite time-saving, but of course I have to double-check sometimes because I noticed that sometimes fake references are produced. So I do not totally rely on AI, but I do try to get some kind of information which can be in a chronological order or sometimes I have ideas, but I want better presentable organization of those ideas.

So that is a good experience so far.

Q#3 Does AI technology support specific tasks that you need in your role as a teacher?

Yes, kind of because it helps in lecture preparing and making objective papers as I have mentioned in making slides. Sometimes I need to get certain samples.

For example, in research I wanted to give an abstract as a sample to my students to identify five W's. So I gave prompt to AI and it created abstracts of research papers. I did not take the published research papers and their abstracts because I wanted an easier level.

So it has been quite helpful while preparing for lectures and designing activities in the class.

Q#4 How likely are you going to continue using this technology?

Yes, I'm very much into it. I'm thinking of using all the advancements of digitalization and the tools which can be of helpful in supporting my teaching strategies.

I'll be doing that.

Q#5 How frequently do you use AI in your daily work?

Yes, I guess I cannot say quite frequently because I'm not much trained to use it, but I guess twice a week I use it.

So far, I'm using it for creating activities to be conducted within the class or sometimes gathering information, which is a historical information, which is like background, which is not creative, which does not demand interpretation.

For example, I teach literature. So I will give it a prompt to give me a list of the important symbols used in the poem. So it will give me a list of those symbols and then I know those symbols. I'll deliver my lecture. I will interpret those symbols or sometimes I want some specific quotations to be selected from the text. So I would use the tool to give me a list of all those quotations, which can be incorporated in my lecture relevant to any particular thing.

11TH Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

All right, when we talk about efficiency it simply means that we are talking about the time and definitely it is the one of the biggest key areas which AI has hit by now. Like the things we were supposed to finish in weeks, now you can do it in minutes.

Our time is now sick, right? For example, if you were supposed to create a presentation you already have collected all the data. The data is there with you, the facts are there with you, but the only thing that you are supposed to do was to compile and do it and it used to take a lot of time. Right now you do not have to go for it.

You just enter the data and they will create it for you, right? So this way it has saved the time without affecting our thinking or our approach towards analyzing the things up.

Q#2 How was your experience of using the AI technology?

Very good, it has been doing everything for me. It was honestly a good experience if focusing on the factor, the key factor of efficiency.

But when it comes to the effectivity, definitely it is somewhere negatively impacting our pattern of thinking because we are very much dependent now. Instead of doing our own research, instead of creating the content from our own, we are depending upon getting the things from this system.

Q#3 Does AI support the specific tasks that you need in your role as a teacher?

Yes, it does.

It really depends. I think we cannot talk about AI as a, it's not objective, it's subjective.

It really depends how you're using it. If you want to get some specific information, you can enter the clear and specific data and accordingly it will respond. If you are giving it a general kind of information, not specific, definitely the understanding is not of our level.

They wouldn't be able to grab the right idea. What you are giving, the input, it responds from AI depending on that.

Q#4 How likely are you going to continue using AI technology?

Definitely, because it has now become a need of time.

If you're not going to use it, you'll be staying back. So in what ways you are going to use it? Most of the times, well, we were first of all, we were depending upon getting the content, getting the things sorted, explaining and analyzing, representing data. Now we are taking the advices too.

Q#5 How frequently do you use AI in your daily work?

A lot. A lot indeed.

Now we are not using the regular normal browsers because we know that AI has got access to the browsers. It will automatically filter and get the data from there. So what we are doing, we are instead of getting the random and suppressed data, we are trying to get the compressed data from AI and it has got, like for example, if I said the things on Google, it will open up multiple websites.

I will have to go through each or a lot, right, to figure out what exactly the thing is. Now I am not doing this, AI is doing. When I insert a query on AI, instead of giving multiple sites, it goes through all the sites and collect the data for me and present in the understandable form.

So I'm definitely going to depend on the future.

12th Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

Right, it has impacted my efficiency in completing the tasks in a quite positive manner because I do my task in some hours, in some days, whenever I start any topic, I complete it within days, within hours. But AI does this thing in a quite few minutes, in a quite few seconds.

So I also avail myself of AI tools for my own assistance as well as for the preciseness of my lecture.

All right, so can you give an example?

Yes, before AI, I used like Google and many other websites. But on such platforms, the information or the concerned knowledge is not available in one place or in one site.

Rather, it was scattered. But here, through AI, you just write a question and all concerned information, related, relevant information of that topic is available in only one message, in only one picture.

Q#2 How was your experience of using AI technology?

My experience of using AI technology is quite good and it enhances my own skills as well.

And I get all the information at one platform with no time. So it has good experience with it.

Q#3 Does AI technology support specific tasks as a need in your role as a teacher?

Yes, it also supports specific tasks whenever I need the things, like whenever I have to present any topic, but I don't know how should I present it, then I ask the AI tools to give me the proper presentation of that topic and it gives me quite a structured lecture on my topic.

Q#4 How likely are you going to use AI technology?

I often, and I often likely continue using AI technology because I like it and it enhances my efficiency, it saves my time and increases my skills.

Q#5 How frequently do you use AI in your daily work or in tasks?

I often use it because nowadays, whenever I feel any complexity in my topics, in my presentation, in my lectures, I often use it. I frequently use it.

13th Interview

Q#1 How has the AI technology impacted your efficiency in completing tasks?

I would say that AI has drastically reduced the time that is required to do extensive research on our own and it has assisted us in or at least assisted me in reaching conclusions in a very short span of time.

Q#2 How was the experience of using the technology?

At times it gets a bit hard to trust what AI is sharing with us because as a teacher you bear the responsibility of not spreading misinformation because you're presenting ideas to a number of students and you can't be wrong factually about anything that you're sharing with them, right? So there's always this underlying doubt when using AI technology because as a teacher one does have to double check and verify the information if it's correct or if it's not.

Q#3 Does this technology support specific tasks that you need in your role as a teacher?

Definitely yes.

So one thing which is made easier with AI ChatGPT particularly is that it can provide us with layouts on how we plan the lessons to improve it and make it more effective and make it more efficient as well. So if we are teaching a differentiated audience, planning it through AI or ChatGPT allows me as a teacher to see how can I bring about variation in the content which suits a larger audience at the same time.

Q#4 How likely are you going to continue using AI technology?

I rarely use it for the lessons but I'll definitely keep on going back to it because it is something which is a facility and in today's fast-paced world nobody has got the time to sit for extensive hours so naturally I will continue using it.

Q#5 How frequently do you use AI in your daily work?

My work does not particularly require me to use AI a lot. Let's say I use it once per term before the semester is about to begin to see if there are some things that can be made better with the use of AI or perhaps towards the end of the semester when I am setting their exam paper that's when I prefer using AI to see if their content can be made more readable and accessible to a wider range of audience.

14th Interview

Q#1 How has AI technology impacted your efficiency in completing tasks?

Yes. As we know, most of the students are using AI technology.

It's very helpful. But sometimes it's not much helpful and we have to double-check the work again. For example, if we give a worksheet to an AI, and you can take example of chat GPT, when it makes an MCQs, it repeated MCQs, sorry, it makes MCQs again and again.

The options gives us the same. For example, there is a statement. The statements almost have the same senses again and again. If we make the MCQs five MCQs, most of the MCQs have the same statement or the structure, or the, you know, you can say that. So I think it's helpful, but it's not very efficient to put in our daily work or in lectures in university.

Q#2 How was your experience of using AI technology?

As it was good. We can see it's very helpful. But we can't rely on it because some of the things are not understandable by the AI.

For example, if the perspective of the human being is in positive response, AI always gives the positive responses. It avoids to give negative comments. You can take an example.

If we add a question on the AI, just to give us the headings, it only gives the headings that is in the favor of the topic. It don't explain the negative aspects or what is coming around the topic. So I don't think it's very, very helpful.

But overall, it was good. But I had to work again and again on it. So I think it is not useful.

Q#3 Does AI technology support specific tasks that you need in your role as a teacher?

Yes. For example, if we have a shortage of time, we can just enter the topic in AI, and it gives headings.

You only get the headings from that perspective. But you can explain in the lecture. You also easily deliver the lecture of 40 minutes or 50 or 60 minutes just by taking the headings of that AI.

But the other thing, the other explanation that you want to take from it, it's not good. So therefore, I think it's not a specific, but helpful as well. But it helps you in some tasks.

Yes, it helps some tasks. Obviously, it helps a lot.

Q#4 How likely are you going to continue using AI technology?

Yes, I will continue, but only for the headings or some of the explanations, but not for the details. Because I used, you can say, two or three times a week for a heading statement for the students. But I had to check again for the explanation.

So I thought that there is most effort to add my effort, my self-effort in that task. So I think I will not continue on the daily basis, but twice a week or a month, you can say.

Q#5 How frequently do you use AI in your daily work?

Yes, I used two or three times a month, you can say, (3:14) not on a daily basis. (3:15) And I think it's enough for the lectures. When we deliver our lecture, for example, if we are talking about the learning tools, as we see there are the four main learning tools like listening, reading, writing, or speaking.

These four are the topics. We just give the AI whatever the tool is that. It gives the headings on that. But we have to explain ourselves by using the examples of our surroundings. In this way, we can understand the concept towards the student very easily. So I think this is the only way to use the chat, GPT, or the other tools, you can say Sora, or such kind of tools, but not on the frequent or daily basis.

15th Interview

Q1: How has AI technology impacted your efficiency in completing tasks?

AI is mind blowing, it has increased everyone's efficiency in every task and so is my case. AI has added variety, ease, and efficiency in all my tasks, for example i can ask my students to write a full-fledged essay or letter with the help of Ai and then i explain to them all the components of the essay or letter. It saves my time and energy

Q2: How was your experience of using AI?

It was awesome, however, some tools were difficult to learn

Q3: Does AI technology support the specific tasks that you need in your role as a teacher?

Yes, indeed, as I told earlier I can write samples to show my students, further i can design case-study based questions with the help of AI very efficiently and in no time.

Q4: How likely are you going to continue using AI technology?

100% I will use AI in the future and i am already taking many online courses and workshops to learn more about the AI tools.

Q5: How frequently do you use AI in your daily work?

It is not a fixed number, almost in every lecture that is 3 times a week

16th Interview

Q1. How has AI technology impacted your efficiency in completing tasks?

AI technology has significantly improved my efficiency as a language teacher. Tools such as AI-powered grammar checkers, summarizers, and content generators have saved me a great deal of time in preparing lesson plans, grading assignments, and giving feedback.

For instance, AI helps streamline administrative tasks like designing rubrics or drafting student reports. It also allows me to quickly analyze student writing and identify patterns of errors, enabling more targeted instruction.

Q2. How was your experience of using AI technology?

As an English language teacher at a technology-oriented university, my experience of using AI has been largely positive and transformative.

AI has enhanced my teaching practice by simplifying time-consuming tasks such as lesson planning, grading, and providing feedback. It has enabled me to design more interactive and personalized learning experiences for my students, especially in the language labs where AI tools like speech recognition, grammar correction, and vocabulary builders are used regularly.

Overall, my experience has shown that when integrated thoughtfully, AI is not a replacement for teaching but a powerful support system that enhances the quality and efficiency of education.

Q3. Does AI technology support the specific tasks that you need in your role as a teacher?

Yes, AI supports several specific tasks in my teaching role. I use AI tools for creating quizzes, checking grammar, generating writing prompts, and even designing interactive activities for the language lab.

Additionally, AI-driven speech recognition and pronunciation apps help students practice oral skills more independently. These technologies are

especially valuable in our tech-oriented environment, where integrating digital tools into instruction is both expected and encouraged.

Q4. How likely are you to continue using AI technology?

As mentioned earlier, I am highly likely to continue using AI. It aligns with the university's technological environment and supports my goals for delivering efficient, personalized, and engaging instruction. AI is not replacing my role, it's enhancing it.

Q5. How frequently do you use AI in your daily work?

I use AI tools on a daily basis. Whether it's through chatbots for quick reference, platforms for real-time grammar feedback, or AI-based apps for lesson planning and assessment, AI is embedded in almost every aspect of my workflow. It enhances not only my productivity but also the learning experience for my students.

What stands out most is how AI allows me to focus more on creative and pedagogical aspects of teaching by automating routine work. Additionally, it supports differentiated instruction something particularly important in language learning by adapting to students' individual needs and learning speeds.

17th Interview

Q1. How has AI technology impacted your efficiency in completing tasks?

AI technology has significantly enhanced my efficiency as an English language teacher. It streamlines many of my routine responsibilities such as grading essays, generating lesson plans, and providing instant feedback on student writing.

Tools like grammar checkers, speech recognition software, and intelligent tutoring systems help me deliver more personalized instruction while saving time on administrative tasks. This efficiency allows me to focus more on student engagement and curriculum development.

Q2. How was your experience of using AI technology?

As an English language teacher at a technology integrated university, my experience using technology has been overwhelmingly positive and transformative. It has allowed me to move beyond traditional teaching methods and create a more interactive, student-centered learning environment. For instance, using language learning software in the lab has enabled students to practice pronunciation, listening, and grammar exercises independently with instant feedback something that would be difficult to achieve with limited time in a traditional classroom.

Additionally, tools like learning management systems (LMS), AI-based writing evaluators, and digital collaboration platforms have improved my ability to organize content, assess student work efficiently, and engage learners both inside and outside the classroom. While there is a learning curve with some technologies, the long-term benefits in terms of accessibility, personalization, and productivity far outweigh the challenges.

Q3. Does AI technology support the specific tasks that you need in your role as a teacher?

Yes, AI supports several critical tasks in my role.

For instance, I use AI-driven platforms for language assessments, pronunciation practice, and automated writing evaluation. In our language labs,

students benefit from interactive AI tools that provide real-time feedback on speaking and writing, which aligns well with my teaching goals.

Furthermore, AI also assists with tracking student progress and identifying learning gaps, helping me tailor instruction more effectively.

Q4. How likely are you to continue using AI technology?

I am highly likely to continue using AI technology in my teaching practice. As the tools become more advanced and user-friendly, they continue to prove their value in improving both teaching outcomes and student learning experiences.

Integrating AI has become an essential part of my pedagogical approach, especially in a technology-oriented environment.

Q5. How frequently do you use AI in your daily work?

I use AI tools almost daily. Whether it's through automated feedback systems in the language lab, AI writing assistants, or virtual platforms that support collaborative learning, AI is integrated into both my lesson planning and classroom activities.

Its consistent use helps maintain an engaging, responsive, and tech-enhanced learning environment for my students.

18th Interview

Q1. How has AI technology impacted your efficiency in completing tasks?

AI technology has significantly improved my efficiency in several key areas. Materials preparation that once took hours can now be completed in minutes. For instance, creating differentiated reading comprehension exercises for various proficiency levels used to consume entire evenings, but AI helps me generate initial drafts that I can then refine and personalize.

The most dramatic efficiency gains have been in assessment and feedback. When students submit drafts through our department's platform, I can use AI tools to provide preliminary feedback on grammar, structure, and citation formatting, allowing me to focus my attention on higher-order concerns like argument development and analytical depth.

Q2. How was your experience of using AI technology?

My experience with AI language technology has been predominantly positive but not without challenges. The technology effectively handles routine aspects of teaching, freeing time for more meaningful student interactions. However, I've encountered occasional issues with AI-generated content lacking cultural sensitivity or producing oversimplified explanations of complex language phenomena.

Q3. Does AI technology support the specific tasks that you need in your role as a teacher?

AI has proven particularly valuable for creating customized vocabulary lists and exercises targeting technical terminology relevant to my students' majors like generating varied examples of language structures, we're studying in class and developing scaffolded writing prompts that gradually increase in complexity and translating instructions for international students who need occasional language support and providing formative assessment opportunities through interactive practice activities

The technology labs at our university have been essential, as they allow students to engage with AI-powered pronunciation feedback tools and adaptive learning software during dedicated practice sessions.

Q4. How likely are you to continue using AI technology?

I will absolutely continue using AI tools. They've become indispensable for managing the diverse needs of large classes with students of varying language proficiencies.

However, I maintain a balanced approach AI assists my teaching but doesn't replace the human judgment, relationship-building, and nuanced feedback that remain central to effective language education.

Q5. How frequently do you use AI in your daily work?

I use AI tools almost daily, primarily for materials development 3-4 times weekly and roviding initial feedback on student drafts 2-3 times weekly and creating differentiated exercises (2-3 times weekly) and generating examples during lesson planning (almost daily)

Our university's investment in technology labs has been crucial—having technical support staff and proper infrastructure makes integration much smoother than colleagues report at less tech-oriented institutions. The learning curve was initially steep, but professional development workshops offered by our department helped establish effective practices for AI integration.

19th Interview

Q1. How has AI technology impacted your efficiency in completing tasks?

Every task has gone improved from lecture preparation to delivering lectures, i save my time AI tools make the task easier

Q2. How was your experience with AI?

My experience is awesome, as I explained before that every task has gone improved. I am learning about many tools now.

Q3. Does AI technology support the specific tasks that you need in your role as a teacher?

Special tasks like lectures preparing, giving assignments, designing papers and making activities for students.

Q4. How likely are you to continue using AI technology?

Yes I would continue using it in the future as I explained earlier that I am taking training of many tools.

Q5. How frequently do you use AI in your daily work?

I will say that I use it daily

20th Interview

Q1. How has AI technology impacted your efficiency in completing tasks?

AI technology has improved every task and its completion. It is a great addition in the field of education.

Q2 How was your experience of using AI?

AI is of course a great addition, and my experience is really good with AI. I am trying to explore uses of AI for my classes.

Q3. Does AI technology support the specific tasks that you need in your role as a teacher?

Yes, indeed several tasks i take help from AI, I design activities for class work and i prepare case-studies for making exams for my students.

Q4. How likely are you to continue using AI technology?

It is 100% sure that I will make use of technology as it is really great invention and a positive addition. I am thinking of taking some trainings to learn using AI tools.

Q5. How frequently do you use AI in your daily work?

Almost 3 times a week you can say. Although it can't be measured but still I think it is thrice a week.