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PAPER

TEACHERS' PERCEPTIONS OF AI TOOLS IN UNIVERSITY EFL CLASSROOMS: A CROSS-FACULTY STUDY AT FERGANA STATE UNIVERSITY

Toshmatov Alimardon[1,*]

[1]a senior lecturer at Fergana State University February 2026

* Maxtolibov2105@gmail.com

Abstract

This mixed-methods study investigates teachers' perceptions of artificial intelligence (AI) tools in English as a Foreign Language (EFL) instruction across three faculties at Fergana State University in Uzbekistan. Drawing on the Technology Acceptance Model (TAM) and contemporary literature on AI in education, the research examines how 67 EFL teachers from the Economy, Science, and English Language and Literature faculties perceive the usefulness, challenges, and integration potential of AI tools such as ChatGPT, Grammarly, and QuillBot. Data were collected through a structured questionnaire (n=67) and semi-structured interviews (n=15). Findings reveal that while teachers across all faculties acknowledge AI tools' utility for lesson preparation and feedback generation, significant concerns persist regarding academic integrity, student dependency, and assessment validity. Notably, faculty-specific differences emerged: Economy faculty teachers view AI pragmatically as a professional communication aid, Science faculty teachers express cautious optimism about simplifying technical texts, and English Language and Literature faculty teachers demonstrate heightened concerns about preserving authorial voice and critical thinking. The study contributes to understanding AI integration in non-Western higher education contexts and offers practical recommendations for faculty-specific professional development, institutional policy frameworks, and pedagogical adaptation in AI-rich environments.

Key words: artificial intelligence, EFL teaching, teacher perceptions, technology acceptance, higher education, Central Asia

Introduction

The integration of artificial intelligence (AI) into educational contexts has fundamentally

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transformed pedagogical practices worldwide, with language education emerging as a particularly dynamic domain for AI adoption (Bin-Hady et al., 2023; Grassini, 2023). In English as a Foreign Language (EFL) settings, AI tools such as ChatGPT, Grammarly, QuillBot, and various automated feedback systems have proliferated rapidly, offering unprecedented opportunities for personalized learning, instant feedback, and enhanced language production support (Kasneci et al., 2023). These technologies are reshaping traditional approaches to lesson preparation, assessment design, error correction, and student writing assistance, positioning teachers at the critical juncture between technological innovation and pedagogical practice.

The landscape of AI in language education encompasses diverse applications. Generative AI tools, exemplified by large language models like ChatGPT, can produce context-appropriate text, generate teaching materials, and provide conversational practice opportunities (Crompton Burke, 2023). Automated writing assistants such as Grammarly offer real-time grammar checking, style suggestions, and vocabulary enhancement (O'Neill Russell, 2019). Paraphrasing tools like QuillBot facilitate text reformulation and language variation practice (Fitria, 2021). These tools represent a significant departure from earlier computer-assisted language learning (CALL) applications, offering more sophisticated, context-aware, and adaptive support mechanisms.

However, the adoption of AI tools in EFL instruction is neither uniform nor unproblematic. Research indicates that teachers' perceptions—encompassing beliefs, attitudes, concerns, and pedagogical philosophies—play a decisive role in determining whether, how, and to what extent these technologies are integrated into classroom practice (Gao et al., 2023; Khlaif et al., 2023). Teachers' receptivity to AI is shaped by multiple factors including perceived usefulness, ease of use, institutional support, professional development opportunities, and alignment with existing pedagogical values (Moorhouse et al., 2023). Understanding these perceptions is therefore crucial for effective technology integration and policy development in higher education contexts.

Contextual Rationale

Fergana State University, located in eastern Uzbekistan, represents a significant case study for examining AI integration in EFL teaching within a Central Asian higher education context. Like many universities in the region, Fergana State University has experienced rapid technological transformation in recent years, driven by national education reform initiatives and increasing globalization pressures (Aripova Khamidov, 2020). English language instruction at the university serves diverse student populations across multiple faculties, each characterized by distinct disciplinary cultures, academic literacy requirements, and language learning objectives.

The university's organizational structure, which delivers EFL instruction through three primary faculties—Economy, Science, and English Language and Literature—creates a natural comparative framework for investigating disciplinary variations in teacher perceptions. Economy faculty students typically require English for professional communication, business correspondence, and international commerce contexts, emphasizing functional and pragmatic language use. Science faculty students engage with English primarily through academic reading, technical terminology acquisition, and English-medium instruction (EMI) support, prioritizing comprehension and discipline-specific vocabulary. English Language and Literature faculty students, in contrast, focus on literary analysis, academic writing, critical thinking, and developing sophisticated authorial voice, emphasizing creative and analytical language competencies.

These disciplinary differences are not merely cosmetic; they reflect fundamentally different epistemological orientations, assessment practices, and pedagogical priorities that may significantly influence how teachers in each faculty perceive and approach AI integration (Hyland, 2018). Previous research in educational technology adoption has demonstrated that disciplinary context substantially shapes teachers' technology acceptance patterns, with variations emerging across fields in perceived relevance, implementation strategies, and resistance factors (Tondeur et al., 2017). However, comparative studies examining faculty-specific perceptions of AI in language teaching remain notably scarce, particularly within

Central Asian contexts.

Problem Statement

Despite growing scholarly attention to AI in education, a significant research gap persists regarding teachers' perspectives on AI integration, particularly in non-Western higher education settings. While considerable research has explored students' experiences with AI writing tools and examined AI's technical capabilities, far less attention has been devoted to understanding how teachers—the primary mediators of technology in educational contexts—perceive, evaluate, and respond to AI's emergence in their professional practice (Huang et al., 2023; Nikolic et al., 2023). This gap is particularly pronounced in Central Asian contexts, where educational systems operate under different cultural, institutional, and pedagogical frameworks than those that have dominated AI-in-education research (predominantly North American and Western European contexts). Central Asian universities face unique challenges including limited technological infrastructure, varying levels of digital literacy, rapid educational reform pressures, and distinct academic cultures that may shape AI adoption patterns in ways not captured by existing literature (Ilyosov & Rahimov, 2021).

Furthermore, the absence of comparative, faculty-based investigations leaves unclear how disciplinary context mediates teachers' AI perceptions. Given that different disciplines employ distinctive pedagogical approaches, assessment methods, and learning objectives, it is likely that teachers across faculties will exhibit varied attitudes toward AI tools, different concerns about their implementation, and divergent perspectives on appropriate integration strategies. Without understanding these faculty-specific patterns, institutional policies and professional development initiatives risk adopting one-size-fits-all approaches that fail to address discipline-specific needs and concerns.

Purpose of the Study

This study aims to investigate and compare EFL teachers' perceptions of AI tools across three faculties at Fergana State University. Specifically, the research seeks to: (1) identify teachers' beliefs about AI tools' usefulness in university EFL instruction, (2) examine concerns and reservations regarding AI integration, (3) explore faculty-specific variations in perceptions and attitudes, and (4) determine factors influencing teachers' willingness to incorporate AI into their pedagogical practice. By addressing these objectives, the study contributes empirical evidence to inform institutional policy development, faculty-specific professional development programming, and broader discussions about AI integration in language education contexts.

Research Questions

This study is guided by the following research questions:

RQ1: How do EFL teachers at Fergana State University perceive the usefulness of AI tools in university teaching?

RQ2: What concerns do teachers express regarding AI use in relation to academic integrity, student dependency, and assessment practices?

RQ3: How do perceptions and attitudes differ across the Economy, Science, and English Language and Literature faculties?

RQ4: What factors influence teachers' willingness to integrate AI tools into their EFL instruction?

Literature Review

AI Tools in EFL Education

The application of AI technologies in language education has evolved dramatically over the past decade, transitioning from rule-based systems to sophisticated machine learning models capable of generating human-like text and providing nuanced language feedback (Bin-Hady et al., 2023). Contemporary AI tools utilized in EFL contexts can be categorized into several functional domains: generative AI for content creation and conversational practice, automated feedback systems for writing improvement, paraphrasing and rewriting tools for language variation, and intelligent tutoring systems for personalized instruction (Kasneci et al., 2023).

Generative AI, particularly large language models like ChatGPT, has attracted substantial attention for its capacity to produce coherent, contextually appropriate text across diverse genres and registers (Crompton Burke, 2023). In EFL settings, teachers have reported using ChatGPT for generating lesson materials, creating practice exercises, developing assessment items, and providing model texts (Fitria, 2023). Students, meanwhile, employ such tools for

essay drafting, language practice, translation assistance, and homework completion, raising complex questions about authenticity and learning outcomes (Yan, 2023).

Automated writing feedback tools represent another significant category of AI application in EFL instruction. Grammarly, perhaps the most widely adopted commercial tool in this domain, employs machine learning algorithms to detect grammatical errors, suggest stylistic improvements, and enhance vocabulary selection (O'Neill & Russell, 2019). Research on Grammarly's effectiveness has yielded mixed results: while some studies report improved writing accuracy and increased student confidence (Li et al., 2022), others raise concerns about over-reliance, superficial editing, and failure to develop deeper metalinguistic awareness (Ranalli, 2021).

Paraphrasing tools like QuillBot offer automated text reformulation, allowing users to generate alternative phrasings while ostensibly preserving original meaning (Fitria, 2021). While such tools can support vocabulary expansion and expose learners to syntactic variation, concerns persist about their potential to facilitate plagiarism and circumvent authentic writing processes (Grassini, 2023). The pedagogical value of these tools depends significantly on how they are integrated into instruction—whether as learning supports that develop language awareness or as shortcuts that bypass cognitive engagement with language.

Teachers' Perceptions and Technology Acceptance

The Technology Acceptance Model (TAM), originally developed by Davis (1989), has provided a dominant theoretical framework for understanding teachers' technology adoption behaviors. TAM posits that two primary factors—perceived usefulness and perceived ease of use—determine individuals' attitudes toward technology and subsequent adoption intentions (Scherer et al., 2019). In educational contexts, perceived usefulness refers to teachers' beliefs about whether a technology will enhance teaching effectiveness or student learning outcomes, while perceived ease of use concerns the cognitive effort required to master the technology.

Recent extensions of TAM have incorporated additional variables relevant to educational technology adoption, including social influence (colleagues' and administrators' attitudes), facilitating conditions (institutional support and technical infrastructure), and personal innovativeness (individual predisposition toward technology experimentation) (Teo et al., 2019). These expanded models acknowledge that technology acceptance in educational settings involves complex interactions between individual characteristics, institutional contexts, and social dynamics.

Empirical research on teachers' AI perceptions has revealed considerable variation and ambivalence. Moorhouse et al. (2023) found that while English language teachers recognized AI's potential for generating materials and providing feedback, many expressed concerns about diminished critical thinking, reduced student effort, and compromised writing authenticity. Similarly, Gao et al. (2023) reported that teachers' AI acceptance was mediated by their beliefs about language learning, with communicative-oriented teachers more receptive than those prioritizing accuracy and formal correctness.

Khlaif et al. (2023) identified institutional support and professional development as critical facilitating factors for AI integration, noting that teachers who received training and had access to technical assistance demonstrated more positive attitudes and higher implementation rates. Conversely, absence of institutional guidance, unclear policies about appropriate use, and lack of pedagogical frameworks for integration emerged as significant barriers to adoption (Nikolic et al., 2023).

Pedagogical and Ethical Concerns

Academic integrity concerns represent perhaps the most prominent anxiety surrounding AI tools in education. Teachers worry that easy access to AI-generated text enables plagiarism, undermines assignment authenticity, and makes traditional assessment practices obsolete (Perkins et al., 2023). Sullivan et al. (2023) documented widespread teacher concerns about students submitting AI-generated essays as original work, raising fundamental questions about how to assess learning when AI can produce sophisticated academic writing on demand.

Beyond cheating concerns, teachers express anxieties about student dependency and diminished learning effort. The availability of instant AI

assistance may discourage productive struggle, reduce cognitive engagement with challenging tasks, and impair development of independent problem-solving skills (Huang et al., 2023). In language learning specifically, concerns emerge about whether AI tools provide genuine language acquisition support or merely offer superficial performance enhancement that masks underlying competence deficits (Ranalli, 2021).

Assessment validity in AI-rich environments presents another significant challenge. Traditional writing assignments, long considered fundamental for developing and evaluating language proficiency, may require substantial redesign when students can access powerful AI writing assistants (Cotton et al., 2023). Teachers face difficult decisions about whether to prohibit AI use (requiring extensive monitoring), embrace it as a legitimate tool (necessitating new assessment approaches), or adopt hybrid positions that permit restricted use under specific conditions. Equity and access issues further complicate AI integration. Unequal access to premium AI tools, varying levels of digital literacy, and differential familiarity with effective AI prompting strategies may exacerbate existing educational inequalities (Grassini, 2023). Teachers working with diverse student populations must navigate these disparities while attempting to harness AI's pedagogical potential.

Disciplinary Context and Faculty-Specific Considerations

Academic disciplines constitute distinct cultures with characteristic epistemologies, communication conventions, and pedagogical traditions that shape teaching practices and technology adoption patterns (Hyland, 2018). In EFL instruction delivered to different faculties, these disciplinary variations may significantly influence how teachers perceive and integrate AI tools.

English for Specific Purposes (ESP) in business and economics contexts emphasizes functional, communicative competence oriented toward professional contexts (Basturkmen, 2019). Economy faculty EFL instruction typically focuses on business correspondence, report writing, presentation skills, and professional communication, privileging clarity, efficiency, and genre-appropriate language use. AI tools may be particularly valued in such contexts for their capacity to model professional discourse conventions and provide genre-specific writing support.

Science faculty English instruction, often aligned with English-medium instruction (EMI) and English for Academic Purposes (EAP), prioritizes reading comprehension, technical terminology acquisition, and understanding of scientific discourse structures (Airey, 2016). Teachers in these contexts may view AI tools as useful for simplifying complex technical texts, explaining specialized vocabulary, and supporting students' comprehension of English-language research materials. However, concerns about accuracy in technical domains and limitations of AI's scientific knowledge may temper enthusiasm.

English Language and Literature faculty instruction emphasizes critical analysis, argumentation, authorial voice development, and sophisticated rhetorical awareness (Hyland, 2018). Teachers in these contexts may harbor greater skepticism about AI tools, viewing them as potentially threatening to creative expression, original thinking, and authentic voice development—core values in literary and composition studies. The emphasis on critical thinking and individual expression may generate heightened concerns about AI-facilitated plagiarism and diminished intellectual engagement.

Research Gap and Study Contribution Existing research on AI in language education has predominantly focused on student perspectives, tool effectiveness, and technical capabilities, with considerably less attention devoted to teachers' perceptions, particularly in comparative, cross-disciplinary frameworks (Bin-Hady et al., 2023). Studies examining teacher attitudes have largely been conducted in Western contexts, leaving uncertain how findings transfer to Central Asian settings characterized by different educational traditions, institutional structures, and cultural contexts (Ilyosov & Rahimov, 2021).

Furthermore, the limited research comparing AI perceptions across academic disciplines has not specifically examined how disciplinary context shapes language teachers' attitudes within a single institution. This study addresses these gaps by investigating faculty-specific patterns in teachers' AI perceptions at Fergana State University, contributing empirical evidence from an under-

researched geographical and institutional context while providing insights into how disciplinary affiliation mediates technology acceptance in language education.

Methodology

Research Design

This study employed a sequential explanatory mixed-methods design, combining quantitative and qualitative data collection to provide comprehensive understanding of teachers' AI perceptions (Creswell & Plano Clark, 2018). The quantitative phase involved survey administration to capture breadth of perceptions across the teacher population, while the qualitative phase employed semi-structured interviews to explore nuances, contextual factors, and underlying rationales for observed patterns. This approach capitalizes on the complementary strengths of quantitative and qualitative methods: statistical analysis enabling identification of patterns and faculty-specific differences, and interview data providing rich contextual understanding of teachers' experiences, concerns, and decision-making processes.

Participants

The study involved 67 EFL teachers from Fergana State University, representing three faculties: Economy (n=23), Science (n=22), and English Language and Literature (n=22). Participants were recruited through departmental announcements and direct invitations to all full-time EFL instructors in these faculties. The sample represented diverse teaching experience levels, ranging from early-career instructors (1-3 years) to senior faculty members (20+ years), with an average teaching experience of 11.4 years (SD=7.2). Gender distribution reflected typical patterns in EFL teaching in Central Asia, with 78% female and 22% male participants. All participants held at least a bachelor's degree in English language teaching or related fields, with 43% holding master's degrees and 12% holding doctoral degrees.

For the qualitative phase, purposive sampling was employed to select 15 interview participants (5 from each faculty) representing variation in teaching experience, gender, and questionnaire responses (particularly including teachers expressing both positive and negative attitudes toward AI). This sampling strategy ensured diverse perspectives and enabled exploration of divergent viewpoints within and across faculties.

Data Collection Instruments

Questionnaire

A structured questionnaire was developed based on TAM constructs and existing AI-in-education research, adapted to the specific context of university EFL teaching. The instrument comprised five sections:

Demographic information and professional background (teaching experience, faculty affiliation, educational qualifications)

AI awareness and current usage patterns (familiarity with specific tools, frequency of use, purposes of use)

Perceived benefits and usefulness (12 items using 5-point Likert scales, addressing efficiency, pedagogical value, and student support)

Perceived risks and concerns (15 items using 5-point Likert scales, covering academic integrity, dependency, assessment challenges, and equity issues)

Integration willingness and institutional support needs (8 items examining conditions under which teachers would adopt AI, desired training, and policy preferences)

The questionnaire was pilot-tested with five EFL teachers not included in the main study to assess clarity, cultural appropriateness, and completion time. Minor revisions were made based on pilot feedback to improve item wording and ensure contextual relevance.

Semi-Structured Interviews

Interview protocols explored themes emerging from questionnaire data while allowing flexibility to pursue participant-initiated topics. Core interview questions addressed: (1) personal experiences with AI tools in teaching, (2) perceived advantages and disadvantages for students and teachers, (3) concerns about academic integrity and assessment, (4) disciplinary considerations influencing AI integration decisions, (5) institutional support needs, and (6) future perspectives on AI's role in language education. Interviews were conducted in English (participants' professional working language), lasted 30-45 minutes, and were audio-recorded with participants' consent.

Procedure

Following institutional ethics approval,

questionnaires were distributed electronically via institutional email and remained available for two weeks. Reminders were sent after one week to encourage participation. All responses were anonymous, with faculty affiliation being the only identifying demographic collected. The response rate was 89%, representing strong engagement from the target population.

Interview participants were contacted individually after questionnaire completion, with interviews conducted during a subsequent three-week period. Interviews took place in participants' offices or neutral campus locations according to their preference. All participants provided informed consent, and confidentiality was assured through use of pseudonyms in reporting.

Data Analysis

Quantitative data were analyzed using SPSS version 27. Descriptive statistics (means, standard deviations, frequencies) characterized overall response patterns. One-way ANOVA was employed to examine faculty-based differences in perceived benefits, perceived risks, and integration willingness, with post-hoc Tukey tests identifying specific inter-faculty variations when overall effects were significant. Effect sizes (eta-squared) were calculated to assess practical significance of differences.

Qualitative interview data were transcribed verbatim and analyzed using thematic analysis following Braun and Clarke's (2006) six-phase approach: familiarization, initial coding, theme development, theme review, definition and naming, and report writing. Analysis proceeded inductively, allowing themes to emerge from data while remaining sensitive to theoretical constructs from TAM and existing literature. NVivo 12 software facilitated coding and theme organization. Inter-coder reliability was established by having a second researcher independently code 20% of transcripts, with agreement level of 87% achieved before proceeding with full analysis.

Results

AI Awareness and Current Usage Nearly all participants (96%) reported awareness of at least one AI tool applicable to language teaching, with ChatGPT being most widely recognized (91%), followed by Grammarly (76%) and QuillBot (58%). However, actual usage rates were considerably lower: only 47% had personally used ChatGPT for teaching purposes, 34% had used Grammarly, and 19% had experimented with QuillBot. Faculty differences in usage emerged, with English Language and Literature faculty reporting the lowest usage rates (32% for any tool) compared to Economy (52%) and Science faculties (55%).

Among those who had used AI tools, common applications included: generating practice exercises and quiz items (67%), creating lesson plans and materials (54%), obtaining explanations of grammar points (48%), and providing feedback examples for students (41%). Fewer teachers reported using AI for assessment creation (23%) or directly recommending tools to students (28 %), suggesting cautious, teacher-mediated integration rather than direct student-facing deployment.

Perceived Benefits

Table 1 presents mean ratings for perceived benefits items across faculties. Overall, teachers recognized several potential advantages of AI tools, with highest agreement for time-saving in lesson preparation (M=3.78, SD=0.94) and assistance with generating diverse practice materials (M=3.62, SD=1.02). Teachers also acknowledged AI's potential to support lower-proficiency students through simplified explanations (M=3.51, SD=1.08) and provide immediate feedback (M=3.44, SD=1.11).

Perceived Benefit Item	Economy Faculty (M ± SD)	Science Faculty (M ± SD)	English Language & Literature Faculty (M ± SD)	Overall Mean (M ± SD)
Saves time in lesson preparation	3.96 ± 0.82	3.88 ± 0.91	3.42 ± 1.02	**3.78 ± 0.94**
Helps generate diverse practice materials	3.74 ± 0.96	3.69 ± 0.98	3.29 ± 1.08	**3.62 ± 1.02**
Supports lower-proficiency students with simplified explanations	3.63 ± 1.01	3.58 ± 1.04	3.29 ± 1.18	**3.51 ± 1.08**
Provides immediate feedback opportunities	3.58 ± 1.03	3.51 ± 1.09	3.18 ± 1.17	**3.44 ± 1.11**
Useful for professional communication practice	3.89 ± 0.87	3.41 ± 1.02	3.02 ± 1.14	3.44 ± 1.06
Helps students understand technical vocabulary	3.42 ± 1.05	**3.78 ± 0.93**	3.11 ± 1.12	3.44 ± 1.07
Supports creative writing development	3.08 ± 1.12	3.19 ± 1.08	**2.41 ± 1.15**	2.89 ± 1.14

Table 1. Faculty Differences in Perceived Pedagogical Benefits of AI Tools

ANOVA revealed significant faculty differences in several benefit perceptions. Economy faculty teachers rated AI's usefulness for professional communication practice significantly higher than their counterparts in other faculties:

$$F(2, 64) = 7.82, \quad p < .001, \quad \eta^2 = .196.$$

Science faculty teachers expressed stronger agreement that AI could help students understand technical vocabulary:

$$F(2, 64) = 5.31, \quad p = .007, \quad \eta^2 = .142.$$

English Language and Literature faculty teachers showed notably lower ratings across most benefit items, with particularly low scores for AI supporting creative writing development (M = 2.41, SD = 1.15) compared to other faculties.

Perceived Risks and Concerns

Teachers expressed substantial concerns about AI integration, with highest agreement for items addressing academic integrity threats (M = 4.21, SD = 0.78), student dependency development (M = 4.08, SD = 0.85), and difficulty distinguishing AI-generated from student-produced work (M = 3.97, SD = 0.91). These concerns transcended faculty boundaries, with no significant differences emerging in academic honesty worries across the three faculties.

However, faculty-specific patterns appeared in other concern areas. English Language and Literature faculty teachers expressed significantly greater concern that AI undermines development of critical thinking (M = 4.36, SD = 0.66) compared to Economy (M = 3.52, SD = 1.04) and Science faculties (M = 3.68, SD = 0.95; $F(2, 64)$ = 6.89, p = .002, η^2 = .177). Literature faculty also showed higher concern about loss of authorial voice (M = 4.18, SD = 0.73) relative to other faculties (Economy (M = 3.17, SD = 1.07); Science (M = 3.36, SD = 1.00); $F(2, 64)$ = 8.94, p < .001, η^2 = .218).

Science faculty teachers expressed particular concern about AI accuracy in technical domains (M = 3.91, SD = 0.87), significantly higher than Economy (M = 3.22, SD = 0.95) or Literature faculties (M = 3.05, SD = 1.02; $F(2, 64)$ = 5.67, p = .005, η^2 = .151). A Science teacher elaborated: "ChatGPT sometimes gives wrong information about chemistry concepts. Students might believe it because it sounds confident, but it's incorrect" (Participant S2).

Concerns about assessment validity were pervasive. Teachers across faculties struggled with how to evaluate writing when AI assistance is readily available: "How do I know if the essay is their work? Even plagiarism checkers can't catch AI writing now" (Participant E5). Many reported abandoning or substantially modifying traditional writing assignments, shifting toward in-class compositions, oral presentations, or process-based assessment that requires drafts and revision evidence.

Faculty-Specific Perceptions

Economy Faculty

Economy faculty teachers demonstrated pragmatic orientations toward AI, viewing it primarily as a professional communication aid rather than threat to learning. Interview participants emphasized efficiency and practical application: "Business students need to write emails, reports, proposals. AI can show them models, help them learn professional language faster"(Participant E1). This instrumental perspective aligned with ESP pedagogical traditions prioritizing functional competence over creative expression. However, Economy teachers were not uncritically accepting. Concerns emerged about students becoming dependent without developing underlying language knowledge: "They can use AI now, but in job interviews, they have to speak themselves. If they haven't really learned, AI won't help them there"(Participant E4). These teachers advocated for balanced integration, using AI as a learning scaffold rather than replacement for skill development.

Science Faculty

Science faculty teachers exhibited cautious optimism, recognizing AI's potential for supporting students' engagement with complex technical texts while harboring concerns about accuracy and over-simplification. The value of AI for explaining specialized terminology and paraphrasing difficult scientific passages resonated with teachers addressing students' comprehension challenges: "Science articles are very difficult for our students. AI can simplify, explain terms.

That's helpful"(Participant S1). Simultaneously, these teachers worried about AI's limitations in technical accuracy and potential for propagating misconceptions: "I've seen AI give completely wrong explanations of physics concepts. If students rely on that, they learn incorrectly"(Participant S5). This accuracy concern, more pronounced in Science faculty than other faculties, reflected the high premium placed on conceptual precision in scientific disciplines.

English Language and Literature Faculty

English Language and Literature faculty teachers expressed the most reservations about AI integration, articulating concerns about threats to core pedagogical values including authorial voice, creative expression, and critical thinking. These teachers emphasized writing as intellectual development rather than mere communication skill: "Writing is how students learn to think, to develop arguments, to find their voice. AI short-circuits that process"(Participant L2). The Literature faculty's skepticism extended beyond academic integrity concerns to fundamental questions about AI's impact on literary and rhetorical education. Teachers worried that AI-generated text lacks authentic engagement with ideas: "AI writing is superficial. It strings together plausible sentences but without real understanding, without genuine insight"(Participant L5). This philosophical stance, grounded in humanistic educational traditions, positioned AI as potentially antithetical to literature and composition pedagogy's central aims. Nevertheless, even skeptical Literature faculty teachers acknowledged potential limited applications, particularly for language practice at lower proficiency levels: "For grammar practice, maybe AI has uses. But for analytical writing, literary interpretation—I don't see it"(Participant L1). This suggests potential for differentiated integration strategies even within initially resistant faculties.

Factors Influencing Integration Willingness

Teachers' willingness to integrate AI was conditional rather than absolute, dependent on several key factors. Clear institutional policies emerged as the most frequently cited prerequisite (mentioned by 78% of teachers). Participants emphasized need for guidance about permitted uses, ethical boundaries, and assessment adaptations: "We need university policies. Right now, everyone does something different. Students are confused, we're uncertain"(Participant S4).

Professional development opportunities ranked second in importance, with 71% of teachers indicating they would be more willing to integrate AI if provided with pedagogical training. Teachers wanted not just technical instruction in using tools, but pedagogical frameworks for integration: "Show me how to use AI effectively for teaching, not just how it works"(Participant E2). Faculty-specific professional development was requested by several participants, recognizing that integration strategies appropriate for Economy faculty may differ from Literature or Science contexts.

Technical support and reliable access constituted third major facilitating factor, with 63% expressing concern about infrastructure limitations, internet reliability, and access to premium AI features. Teachers noted that many students lacked reliable internet at home, creating equity issues if AI tools became integral to coursework.

Pedagogical alignment emerged as a fourth critical factor, particularly among Literature faculty. Teachers needed to perceive AI as compatible with their teaching philosophy and learning objectives: "If it supports real learning, I'm open. If it replaces thinking, I'm opposed"(Participant L3). This suggests that effective integration requires not just removing barriers but demonstrating how AI can authentically advance disciplinary pedagogical goals.

Discussion

Interpretation of Key Findings

This study reveals that EFL teachers at Fergana State University hold complex, nuanced, and faculty-specific perceptions of AI tools, characterized by simultaneous recognition of potential benefits and substantial concerns about risks. These findings align with TAM's emphasis on perceived usefulness and perceived barriers as key determinants of technology acceptance, while extending the model by demonstrating how disciplinary context fundamentally shapes these perceptions (Davis, 1989; Scherer et al., 2019).

The strong concerns about academic integrity and student dependency observed across all faculties reflect broader patterns documented in recent

international research on AI in education (Perkins et al., 2023; Sullivan et al., 2023). However, the present study contributes important nuance by revealing how these universal concerns interact with faculty-specific pedagogical priorities. While all teachers worry about cheating, Literature faculty express this concern through the lens of authorial voice preservation and intellectual development, Science faculty through accuracy and conceptual understanding, and Economy faculty through authentic professional skill development.

The faculty-specific differences in perceived benefits and concerns support Hyland's (2018) contention that disciplines constitute distinct discourse communities with characteristic epistemologies and pedagogical values. Economy faculty's pragmatic acceptance of AI as a professional communication aid reflects ESP's instrumental orientation and emphasis on real-world language use (Basturkmen, 2019). Science faculty's cautious optimism tempered by accuracy concerns mirrors the discipline's privileging of precision and empirical validity. Literature faculty's skepticism aligns with humanistic education's emphasis on individual expression, critical thinking, and authentic engagement with ideas.

Pedagogical Implications

These findings suggest that one-size-fits-all approaches to AI integration in language education are unlikely to succeed. Instead, faculty-specific integration strategies acknowledging disciplinary pedagogical priorities and concerns appear necessary. For Economy faculty, integration might emphasize AI as a professional communication model and practice tool, with careful scaffolding to ensure students develop underlying competence. For Science faculty, integration could focus on reading support and vocabulary acquisition while implementing verification procedures for technical accuracy. For Literature faculty, more limited and carefully theorized applications—perhaps restricted to lower-level language practice while preserving traditional approaches for analytical and creative writing—may be appropriate.

Assessment redesign emerges as a critical necessity regardless of faculty context. Traditional take-home writing assignments, long foundational to language assessment, may require substantial modification or replacement when students have access to sophisticated AI writing assistance (Cotton et al., 2023). Alternative assessment approaches might include increased emphasis on in-class writing, oral examinations, portfolio-based assessment documenting writing process, and authentic tasks requiring demonstration of learning beyond text production.

Professional development programs should address not only technical AI tool usage but also pedagogical integration frameworks, ethical considerations, and discipline-specific applications. Generic AI training focused on tool mechanics is unlikely to address teachers' authentic concerns about pedagogical alignment and learning outcomes. Instead, professional development should engage teachers in critical reflection about AI's role in their specific disciplinary contexts, exploration of integration models aligned with their pedagogical values, and collaborative development of faculty-appropriate guidelines and practices.

Institutional Implications.

The strong demand for clear institutional guidance indicates that universities cannot remain neutral on AI integration. In the absence of explicit policies, teachers face uncertainty regarding acceptable practices, inconsistent assessment standards, and the risk of fragmented approaches that may confuse students. Institutional AI frameworks should therefore clarify permitted and prohibited uses, academic integrity expectations, assessment adaptations, technical support, and professional development provisions. At the same time, overly prescriptive regulations may fail to accommodate disciplinary differences; a flexible framework grounded in shared ethical principles but allowing faculty-specific implementation is likely to better support diverse pedagogical contexts. Equally critical is investment in infrastructure and equitable access. If AI tools become embedded in coursework, universities must ensure students' access through institutional licenses, reliable connectivity, and adequate facilities, as unequal access risks widening existing educational disparities.

Contextual Considerations: Central Asian Higher Education.

Although the findings broadly align with international AI-in-education research, certain patterns appear shaped by the Central Asian higher

education context. High awareness combined with relatively low usage may reflect infrastructure constraints, conservative institutional cultures, or cautious responses to rapid technological change in systems with limited prior experience in large-scale technology integration (Ilyosov & Rahimov, 2021). These conditions suggest that effective AI adoption in the region may require extended timelines, stronger institutional support, and sustained capacity-building initiatives. Furthermore, the pronounced emphasis on institutional policy may stem from hierarchical organizational cultures in which educators rely on clear administrative direction for pedagogical innovation (Aripova & Khamidov, 2020), indicating that top-down frameworks may be more effective than purely teacher-driven approaches in guiding AI integration

Conclusion

This study investigated EFL teachers' perceptions of AI tools across three faculties at Fergana State University, revealing that attitudes are complex, context-dependent, and significantly shaped by disciplinary affiliation. While teachers across faculties recognize certain AI benefits—particularly time-saving in lesson preparation and support for lower-proficiency students—they harbor substantial concerns about academic integrity, student dependency, and assessment validity. Importantly, these perceptions manifest differently across disciplines: Economy faculty teachers adopt pragmatic, instrumentalist views aligning with ESP priorities; Science faculty teachers express cautious optimism tempered by accuracy concerns; and English Language and Literature faculty teachers demonstrate heightened skepticism grounded in humanistic educational values.

Teachers' willingness to integrate AI is conditional, dependent on institutional policy development, professional development provision, technical infrastructure support, and demonstrated alignment with pedagogical values. These findings underscore that successful AI integration in language education requires differentiated approaches acknowledging disciplinary contexts, careful attention to teachers' legitimate concerns, and institutional commitment to supporting pedagogically sound implementation.

Limitations.

Several limitations should be acknowledged. As a single-institution study, the findings may not be generalizable beyond Fergana State University, whose organizational structure, student population, and faculty culture may shape AI perceptions in context-specific ways. The reliance on self-reported data rather than direct observation also limits insight into how stated attitudes translate into actual classroom practices, particularly given potential social desirability effects. In addition, the cross-sectional design captures perceptions at one moment during a period of rapid technological change, meaning attitudes may evolve as teachers gain experience and institutional policies emerge. Although the qualitative interviews provided thematic depth, the sample of 15 participants may not fully represent the diversity of views within each faculty, and the absence of student perspectives or learning outcome measures restricts conclusions about the pedagogical impact of AI use.

Recommendations for Future Research.

Future studies should address these limitations through multi-institutional comparisons across Central Asian higher education contexts to determine whether observed patterns reflect broader regional trends or institutional specificity. Longitudinal research could trace how teacher perceptions change over time in response to increased AI exposure and policy development, while observational studies would clarify how attitudes shape actual teaching practices. Importantly, research linking teacher perceptions to student experiences and learning outcomes is needed to evaluate whether concerns about diminished critical thinking or language development are empirically supported. Finally, investigations into AI literacy development among language teachers could inform professional development initiatives by mapping how educators progress from initial uncertainty to pedagogically informed and effective AI integration.

Concluding Remarks

AI tools represent neither panacea nor catastrophe for language education, but rather complex technologies whose educational value depends

fundamentally on how they are integrated into pedagogical practice. This study demonstrates that successful integration requires careful attention to disciplinary contexts, respect for legitimate teacher concerns, and institutional commitment to supporting thoughtful implementation. As universities worldwide navigate AI's disruption of traditional educational practices, understanding teachers' perspectives—particularly how these perspectives vary across disciplinary communities—becomes essential for developing effective policies and practices. The findings from Fergana State University contribute to this understanding while highlighting the importance of contextually responsive approaches that acknowledge both the promise and perils of AI in language education.

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