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INTEGRATING AI INTO ESP COURSE TO IMPROVE LANGUAGE LEARNING THROUGH SMART AND EFFECTIVE STRATEGIES

ИНТЕГРАТSIЯ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В КУРС ESP ДЛЯ УЛУЧШЕНИЯ ИЗУЧЕНИЯ ЯЗЫКА С ПОМОЩЬЮ УМНЫХ И ЭФФЕКТИВНЫХ СТРАТЕГИЙ

TIL O‘RGANISHNI YAXSHILASH UCHUN SUN’IY INTELLEKTNI ESP KURSIGA AQLLI VA SAMARALI STRATEGIYALAR BILAN INTEGRATSIYA QILISH

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Annotatsiya

Ushbu tadqiqot sun'iy intellekt (AI) ni maxsus maqsadlar uchun ingliz tili (ESP) kurslariga integratsiyalashni o‘rganadi, til o‘rganishni aqlli va samarali strategiyalar orqali yaxshilash maqsadida. Tadqiqot Farg‘ona davlat universitetidagi talabalar va o‘qituvchilarning fikrlariga qaratilgan bo‘lib, ularning AI vositalari bilan tanishligi, afzalliklari va qiyinchiliklari tahlil qilinadi. Natijalar shuni ko‘rsatadiki, AI asosidagi chatbotlar ESP o‘rganish uchun eng afzal vosita hisoblanadi, 59,38% respondentlar ularning interaktivligi va real vaqtda javob berish qobiliyatini yuqori baholaydi. Shaxsiylashtirilgan o‘rganish AI ning eng katta afzalligi sifatida ko‘rsatilgan, 56,25% respondentlar darslarni individual ehtiyojlarga moslashtirish qobiliyatini ta’kidlaydi. Biroq, AI ga haddan tashqari bog‘liqlik va etik masalalar kabi qiyinchiliklar ham qayd etilgan. Tadqiqot shuni ko‘rsatadiki, AI ESP ta’limida inqilob qilish uchun katta potentsialga ega bo‘lsa-da, uni an’anaviy o‘qitish usullari bilan qo‘shimcha vosita sifatida ishlatish kerak. Tadqiqot O‘zbekistondagi o‘qituvchilar va siyosatchilar uchun amaliy tavsiyalar beradi, til o‘rganishda AI ni integratsiyalashda muvozanatli yondashuvning zarurligini ta’kidlaydi.

Abstract

This study explores the integration of Artificial Intelligence (AI) into English for Specific Purposes (ESP) courses to enhance language learning through smart and effective strategies. The research focuses on the perspectives of students and educators at Fergana State University in Uzbekistan, examining their familiarity with AI tools, preferences, and perceived advantages and challenges. The findings reveal that AI chatbots are the most favored tool for ESP learning, with 59.38% of respondents valuing their interactive and real-time feedback capabilities. Personalized learning is identified as the greatest advantage of AI, with 56.25% of respondents highlighting its ability to tailor lessons to individual needs. However, challenges such as over-reliance on AI and ethical concerns are also noted. The study concludes that while AI has significant potential to revolutionize ESP education, it should be used as a complementary tool alongside traditional teaching methods. The research offers practical insights for educators and policymakers in Uzbekistan, emphasizing the need for a balanced approach to AI integration in language learning.

Аннотация

Данное исследование изучает интеграtsию искусственного интеллекта (ИИ) в курсы английского языка для специальных целей (ESP) с целью улучшения изучения языка с помощью умных и эффективных стратегий. Исследование фокусируется на мнениях студентов и преподавателей Ферганского государственного университета в Узбекистане, изучая их знакомство с инструментами ИИ, предпочтения и воспринимаемые преимущества и проблемы. Результаты показывают, что чат-боты на основе ИИ являются наиболее предпочтительным инструментом для изучения ESP, при этом 59,38% респондентов ценят их интерактивность и возможность предоставления обратной связи в реальном времени. Персонализированное обучение считается главным преимуществом ИИ, с 56,25% респондентов, отмечающих его способность адаптировать уроки к индивидуальным потребностям. Однако также отмечаются проблемы, такие как чрезмерная зависимость от ИИ и этические вопросы. Исследование приходит к выводу, что, хотя ИИ имеет значительный потенциал для революции в образовании ESP, его следует использовать как дополнительный инструмент наряду с традиционными методами обучения. Исследование предлагает практические рекомендатsии для преподавателей и политиков в Узбекистане, подчеркивая необходимость сбалансированного подхода к интеграtsии ИИ в изучение языка.

Ключевые слова: *Искусственный интеллект (ИИ), английский для специальных целей (ESP), изучение языка, персонализированное обучение, чат-боты на основе ИИ, смешанное обучение, этические вопросы, образование в Узбекистане*

Key words: *Artificial Intelligence (AI), English for specific purposes (ESP), language learning, personalized learning, AI chatbots, blended learning, ethical concerns, Uzbekistan education*

Kalit so'zlar: *Sun'iy intellekt (AI), maxsus maqsadlar uchun ingliz tili (ESP), til o'rganish, shaxsiylashtirilgan o'rganish, AI asosidagi chatbotlar, aralash o'rganish, etik masalalar, O'zbekistonda ta'lim*

INTRODUCTION

The integration of Artificial Intelligence (AI) into education has become a significant area of interest, particularly in the field of English for Specific Purposes (ESP). As AI technologies continue to evolve, they offer new opportunities for enhancing language learning through personalized and interactive tools. However, the effective integration of AI into ESP courses requires careful consideration of both the potential benefits and challenges. This study explores the use of AI in ESP education, focusing on the perspectives of students and educators at Fergana State University in Uzbekistan.

The study aims to provide a comprehensive understanding of how AI can be integrated into ESP courses to improve language learning outcomes. Investigating the familiarity, preferences, perceived benefits, and challenges of AI tools among participants, this study seeks to identify effective strategies for using AI in ESP education. The findings of this study have practical implications for educators and policymakers in Uzbekistan, where the integration of AI into education is still in its early stages. Considering the challenges and opportunities associated with AI, this study contributes to the development of innovative and effective language learning strategies in Uzbekistan.

LITERATURE REVIEW

The integration of AI tools into English for Specific Purposes (ESP) courses has gained increasing attention as researchers explore innovative approaches to enhance language learning. Several studies highlight the effectiveness of AI-driven strategies while also addressing ethical, pedagogical, and technological challenges.

Xatamova and Ashurov (2024) investigate the role of AI in ESP education for law students, employing a mixed-methods approach that includes both quantitative and qualitative analyses. Their study, involving 500 students, reveals that AI tools significantly enhance vocabulary acquisition, writing skills, and oral communication through situational and genre-based teaching methods. However, they also emphasize ethical concerns, particularly regarding data security and privacy, suggesting that AI integration should be carefully regulated [4]. Similarly, Taylor (2024) examines AI-powered digital tools in a blended learning ESP course for economics students, emphasizing the importance of balancing AI-driven instruction with direct teacher support. His study indicates that while AI can monitor students' progress and engagement, human interaction remains crucial for motivation, personalized feedback, and deep language comprehension [3].

Priya and Vijayalakshmi (2024) focus on AI-driven assessment tools in ESP higher education, analyzing their potential for providing instant feedback and plagiarism detection. They caution against over-reliance on AI for evaluation, advocating for a hybrid approach where AI enhances rather than replaces human assessment. This aligns with the findings of Dziubata (2024), who conducted a case study at the Berezhany Agrotechnical Institute in Ukraine. Dziubata's research demonstrates that AI-powered tools, including ChatGPT, can support ESP learning by facilitating interactive practice, content creation, and personalized assessment. However, the study reiterates that human instructors play an irreplaceable role in motivation, engagement, and individualized learning support [2; 1].

Taken together, these studies underscore the potential of AI to revolutionize ESP education through smart and effective strategies. While AI can enhance learning experiences by personalizing content, automating assessments, and facilitating interactive engagement, all studies stress the need for careful implementation. Ethical considerations, data privacy, and AI readiness among educators remain key challenges. The collective findings suggest that AI should function as a complementary tool rather than a replacement for traditional teaching methods, ensuring that ESP learners benefit from both technological advancements and human-guided instruction.

RESEARCH METHODOLOGY

Participants demographic

This dataset provides insights into the gender and age distribution of a group of 32 respondents. The overwhelming majority are female (29 respondents, 90.63%), while only a small fraction are male (3 respondents, 9.37%) as shown in Table 1. This significant gender imbalance suggests that the surveyed group is predominantly female. All the respondents were either professors or students from Fergana State University from the Foreign Languages Faculty.

In terms of age, the largest group consists of 21-year-olds (9 respondents, 28.13%), followed by 24-year-olds (8 respondents, 25%). Most respondents fall within the 19-26 age range, with only one outlier at 37 ears old. This suggests that the surveyed group consists primarily of young adults, likely students or early-career professionals. The small representation of older participants may indicate that the survey was targeted toward a younger demographic.

Table 1: Gender and age distribution analysis

		What is your gender?		
		female	male	Total
How old are you?	19	2	0	2
	20	3	0	3
	21	8	1	9
	22	4	0	4
	23	1	0	1
	24	7	1	8
	25	1	1	2
	26	2	0	2
	37	1	0	1
	Total	29	3	32

Research design

This study employs a mixed-methods approach, combining quantitative and qualitative data to explore the integration of AI tools into English for Specific Purposes (ESP) courses. The research design is structured to assess the familiarity, preferences, and perceived advantages and challenges of AI in language learning among students and educators at Fergana State University. The study aims to provide a comprehensive understanding of how AI can be effectively integrated into ESP courses while addressing potential ethical and pedagogical concerns.

Data collection

Data was collected through a structured survey distributed to 32 participants, primarily students and professors from the Foreign Languages Faculty at Fergana State University. The survey included both closed-ended and open-ended questions to gather quantitative data on participants' familiarity with AI tools, their preferences, and perceived advantages and challenges. Additionally, qualitative data was collected through open-ended responses to gain deeper insights into participants' experiences and opinions regarding AI in language learning.

Data analysis

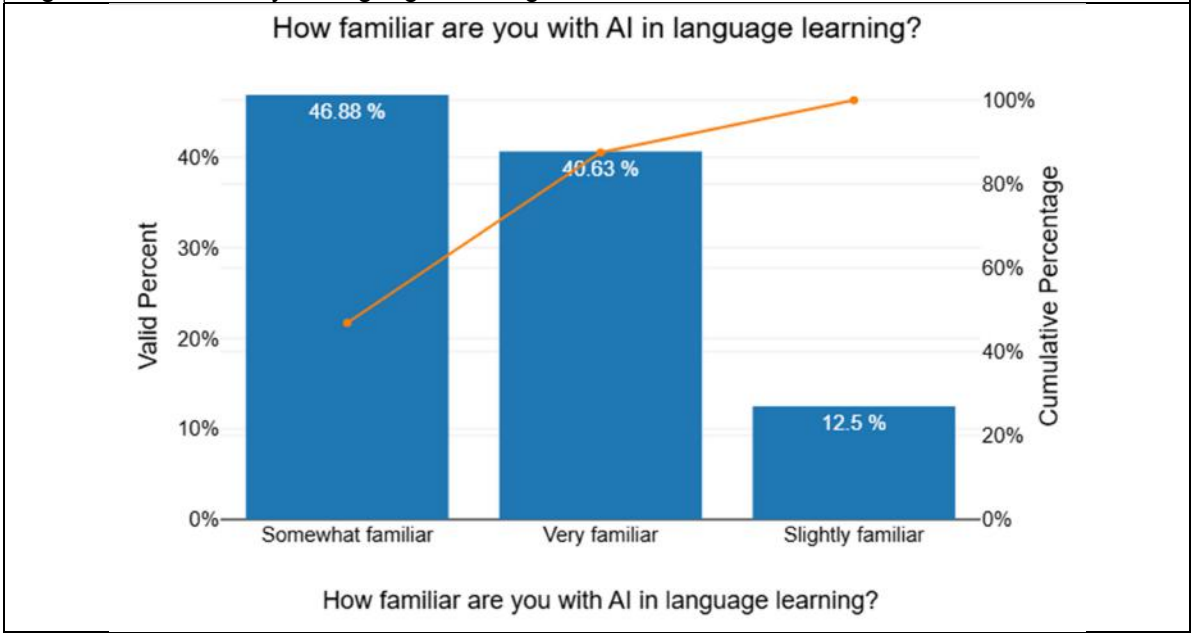
Quantitative data was analyzed using statistical methods, including frequency distribution and the One Sample Wilcoxon-Test, to determine the significance of the findings. Qualitative data from open-ended responses was analyzed thematically to identify common patterns and themes related to the use of AI in ESP courses. The combination of quantitative and qualitative analyses

provides a robust understanding of the participants' perspectives and the potential impact of AI on language learning.

RESULTS AND DISCUSSION

The data reveals that a majority of respondents (87.51%) have at least some level of familiarity with AI in language learning. Among them, 46.88% are "Somewhat familiar," while 40.63% are "Very familiar," indicating that AI-related tools and concepts are relatively well-known within this group as illustrated in Figure 1. This suggests that AI is increasingly integrated into their learning experiences or professional environments.

Figure 1: AI familiarity in language learning



A smaller portion, 12.5%, is only "Slightly familiar," and no respondents reported being completely unfamiliar with AI in language learning. The absence of invalid responses further reinforces the reliability of the dataset. Overall, these findings highlight a growing awareness and engagement with AI-driven educational tools, which could be leveraged for future learning strategies.

A p-value of <.001 is obtained, which is below the established significance level of 0.05. Therefore, the One Sample Wilcoxon-Test result is significant for the present data and the null hypothesis is rejected. Therefore, the sample is not assumed to be from a population with a mean of 6.4375, p= <.001.

The data highlights that AI chatbots are the most favored tool for English for Specific Purposes (ESP) learning, with 59.38% (19 respondents) selecting them as in Table 2. This strong preference suggests that learners value interactive, conversational AI for practicing language skills in a dynamic and engaging manner. The ability of chatbots to provide real-time feedback and simulate real-life communication scenarios likely contributes to their popularity.

Table 2: AI tools preference for ESP learning

Which AI tool is most useful for ESP learning?	Frequency	%	Valid %
Personalized learning platforms	7	21.88%	21.88%
Translation tools	3	9.38%	9.38%
AI chatbots	19	59.38%	59.38%
Grammar correction tools	3	9.38%	9.38%

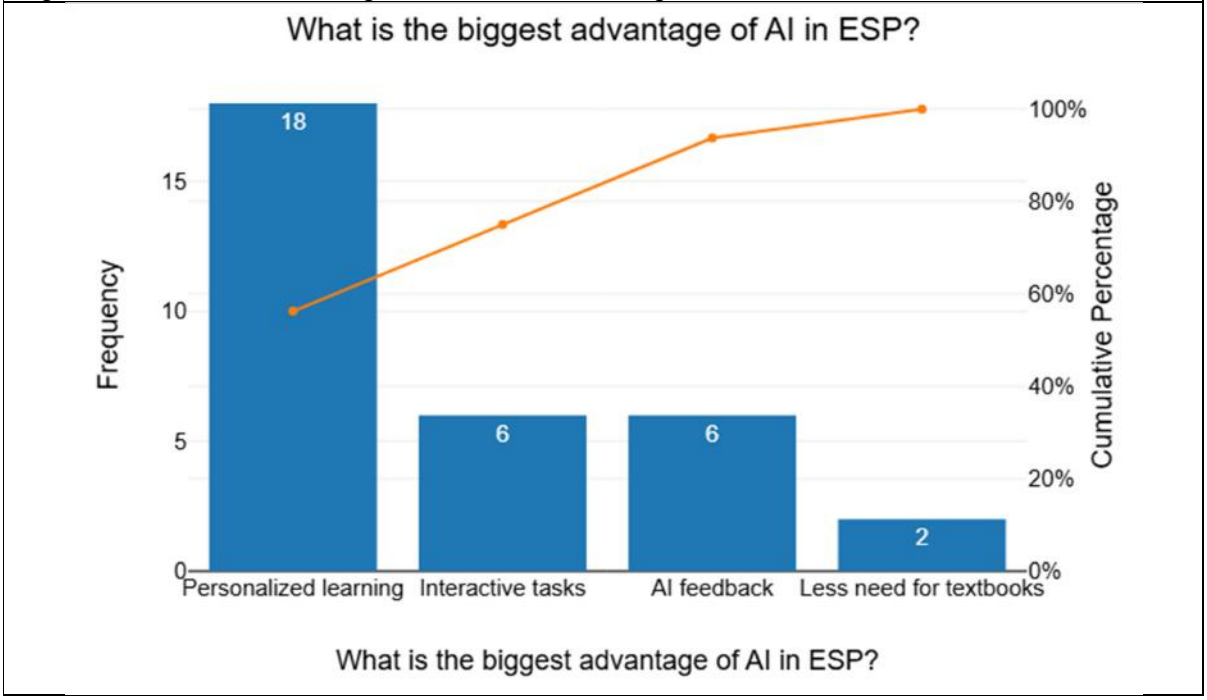
Table 2: AI tools preference for ESP learning

Which AI tool is most useful for ESP learning?	Frequency	%	Valid %
Total	32	100%	100%
Invalid	0	0%	
Total	32	100%	

Other AI tools received significantly lower preference. Personalized learning platforms were chosen by 21.88% (7 respondents), indicating that some learners appreciate AI-driven adaptive learning experiences. Translation tools and grammar correction tools each received 9.38% (3 respondents), suggesting that while useful, they are not the primary choice for ESP learning. The data suggests a growing reliance on AI chatbots for practical language use, with other tools playing a more supportive role.

The data indicates that personalized learning is seen as the greatest advantage of AI in English for Specific Purposes (ESP), with 56.25% (18 respondents) selecting it as shown in Figure 2 This suggests that learners highly value AI's ability to tailor lessons, adjust difficulty levels, and provide individualized support based on their needs. Such adaptability enhances engagement and efficiency in language acquisition.

Figure 2: Perceived advantages of AI in ESP learning

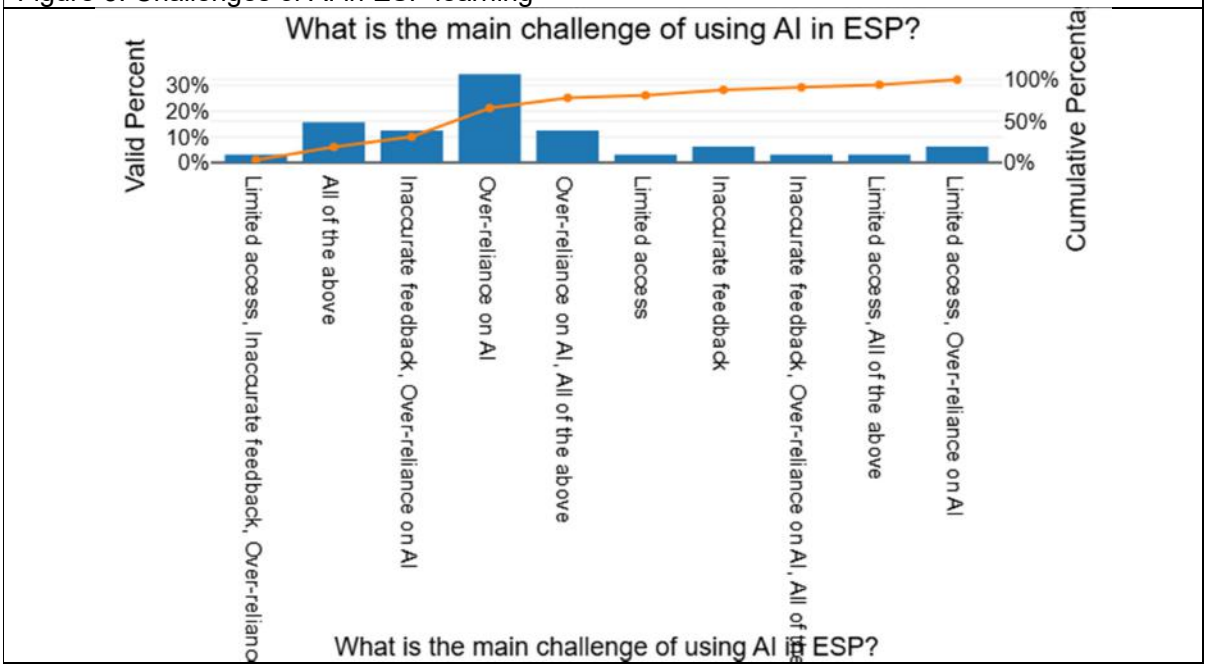


Other advantages were rated significantly lower. Interactive tasks and AI feedback were each chosen by 18.75% (6 respondents), highlighting that while learners appreciate AI-driven engagement and corrective feedback, these aspects are secondary to personalization. Meanwhile, only 6.25% (2 respondents) viewed the reduced need for textbooks as the biggest advantage, implying that traditional learning materials still hold some value in ESP education. The findings emphasize that AI's primary strength lies in creating customized learning experiences rather than merely supplementing traditional methods.

The most commonly cited challenge of using AI in English for Specific Purposes (ESP) is over-reliance on AI, with 34.38% (11 respondents) selecting it as the main issue (Figure 3). This suggests that learners recognize the risk of becoming too dependent on AI tools, potentially

hindering their ability to develop independent language skills. Additionally, 12.5% (4 respondents) selected a combination of "Over-reliance on AI" and "All of the above," reinforcing the concern that excessive dependence on AI could limit critical thinking and active learning.

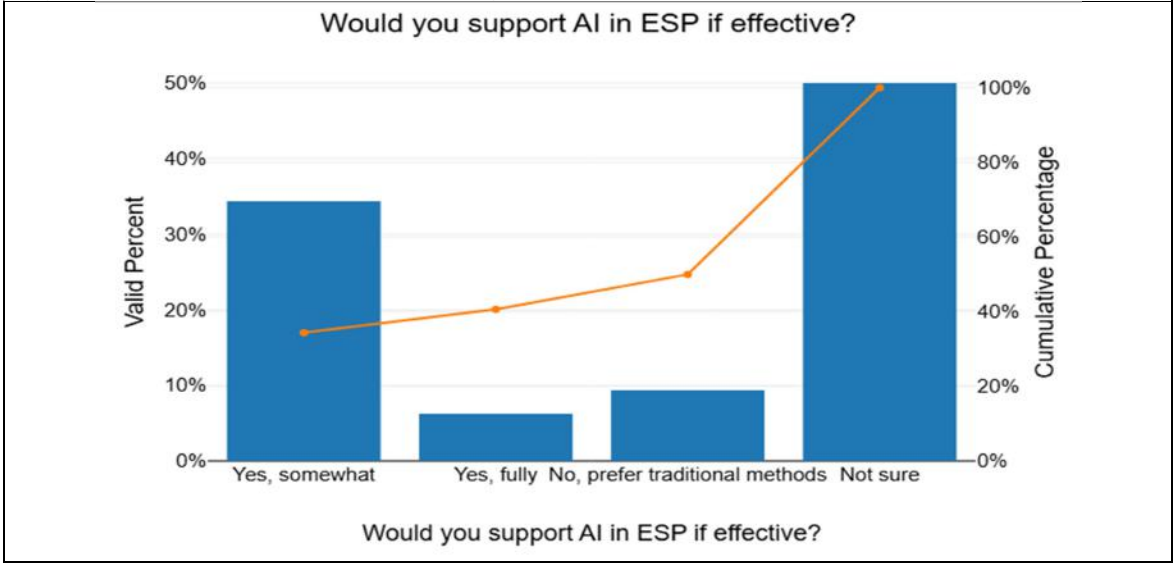
Figure 3: Challenges of AI in ESP learning



Other challenges were also noted but to a lesser extent. 15.63% (5 respondents) identified all listed challenges—limited access, inaccurate feedback, and over-reliance on AI—as significant obstacles, while 12.5% (4 respondents) specifically highlighted both inaccurate feedback and over-reliance. Limited access was the least mentioned issue, with only 3.13% (1 respondent) identifying it as the sole challenge. The data suggests that while AI is a valuable tool in ESP learning, maintaining a balance between AI assistance and human involvement remains crucial for effective language development.

The data shows a mixed level of support for AI in English for Specific Purposes (ESP), with a significant portion of respondents remaining uncertain. 50% (16 respondents) indicated that they are "Not sure" about supporting AI, suggesting that many learners may lack sufficient knowledge or experience with AI in language learning to form a strong opinion as on Figure 4. However, 34.38% (11 respondents) expressed some level of support, indicating that while they see potential in AI, they may have reservations about its effectiveness or implementation.

Figure 4: Support for AI in ESP learning



Only 6.25% (2 respondents) fully support AI in ESP, highlighting that complete confidence in AI-driven learning is still low. Meanwhile, 9.38% (3 respondents) prefer traditional methods, showing that a small but notable group favors conventional teaching approaches. The overall findings suggest that while AI has potential in ESP learning, there is a need for greater awareness, clearer evidence of its effectiveness, and possibly a hybrid approach that integrates AI with traditional methods.

The findings of this study reveal a high level of familiarity with AI tools among the participants, with 87.51% reporting at least some level of awareness. This aligns with the literature review, which highlights the increasing integration of AI in ESP education (Xatamova & Ashurov, 2024; Taylor, 2024). The preference for AI chatbots, as indicated by 59.38% of respondents, underscores the value of interactive and conversational AI in language learning. This finding is consistent with Dziubata's (2024) research, which emphasizes the role of AI in facilitating interactive practice and personalized assessment. The popularity of AI chatbots suggests that learners appreciate the dynamic and engaging nature of these tools, which can simulate real-life communication scenarios and provide real-time feedback.

However, the study also highlights significant challenges associated with the use of AI in ESP courses. Over-reliance on AI emerged as a primary concern, with 34.38% of respondents identifying it as a major issue. This concern is echoed in the literature, where researchers caution against the potential drawbacks of excessive dependence on AI, such as hindering independent language skills and critical thinking (Priya & Vijayalakshmi, 2024; Dziubata, 2024). The findings suggest that while AI can enhance language learning, it should be used as a complementary tool rather than a replacement for traditional teaching methods. This aligns with the collective recommendation from the literature that AI should support, not supplant, human-guided instruction.

The mixed level of support for AI in ESP learning, with 50% of respondents expressing uncertainty, indicates a need for greater awareness and clearer evidence of AI's effectiveness. This finding is consistent with Taylor's (2024) observation that while AI can monitor students' progress and engagement, human interaction remains crucial for motivation and personalized feedback. The study's results suggest that a hybrid approach, integrating AI with traditional methods, may be the most effective strategy for ESP education. This approach would leverage the strengths of AI, such as personalization and automation, while maintaining the essential role of human instructors in providing motivation and individualized support.

CONCLUSION

This study contributes to the growing body of research on the integration of AI into ESP courses, offering practical insights for educators and policymakers in Uzbekistan. The findings highlight the potential of AI to revolutionize language learning through personalized and interactive tools, while also emphasizing the importance of addressing challenges such as over-reliance and ethical concerns. The practical novelty of this study lies in its focus on the specific context of Uzbekistan, where the integration of AI into education is still in its early stages. In making evidence-based recommendations, this study aims to support the development of effective AI-driven strategies that can improve language learning outcomes in Uzbekistan.

The study's findings suggest that AI can play a valuable role in ESP education, particularly in providing personalized learning experiences and interactive practice. However, the successful integration of AI requires careful implementation, with a focus on balancing technological advancements with human-guided instruction. Future research should explore the long-term impact of AI on language learning outcomes and investigate strategies for addressing the challenges identified in this study. Educators and policy makers will thus be able to ensure that AI is used effectively to support language learning in Uzbekistan and beyond.

REFERENCES

1. Dziubata, Z. (2024). Application of AI Technologies in Teaching ESL and ESP at Agro-Technical Higher Educational Institutions. Pedagogical Discourse, (35), 14-18.
2. PRIYA, C., & VIJAYALAKSHMI, R. (2024). INNOVATIVE APPROACHES: AI-DRIVEN ASSESSMENT TOOLS IN ESP HIGHER EDUCATION. Modern Trends in Multi-Disciplinary Research (Vol-1).
3. Taylor, P. (2024). Blended learning challenges of EFL undergraduate students: Student learning experience in an AI-integrated ESP course. Studies in English Language and Education, 11(3), 10.
4. Xatamova, N., & Ashurov, J. (2024). The Future of Legal English Learning: Integrating AI into ESP Education. SPAST Reports, 1(7).