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THE TRANSFORMATIVE ROLE OF ARTIFICIAL INTELLIGENCE IN ENHANCING ENGLISH READING PROFICIENCY AMONG UZBEK EFL LEARNERS: A COMPREHENSIVE STUDY

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ABSTRACT: This study looks at an online program headquartered in Tashkent that uses AI to teach reading to 30 adult Uzbek EFL learners. Significant gains were found in reading accuracy (+17.3%), vocabulary retention (+30%), comprehension (+25%), critical thinking (+30.9%), and confidence (+24%), according to a mixed-methods approach. Although cultural adaption and digital literacy training were seen as major obstacles, learners appreciated AI's flexibility and individualized feedback. Results show that, when adapted to local language and pedagogical needs, AI has the potential to revolutionize EFL situations in Central Asia. The study adds to the body of knowledge on post-Soviet educational technology, adult language learning, and the application of AI in developing nations while providing useful information for educators and policymakers.
Keywords: AI-assisted language learning, EFL reading instruction, adult education, Uzbekistan, digital literacy, mixed-methods research, cultural adaptation, online learning.

АННОТАЦИЯ: Ушбу тадқиқот штаб-квартираси Тошкентда жойлашган 30 нафар катта ёшли ўзбек тилини ўрганувчиларга ўқишни ўргатиш учун сунъий интеллектдан фойдаланадиган онлайн дастурни ўрганади. Аралаш ёндашувга кўра, ўқиш аниқлиги (+17,3%), сўз бойлигини сақлаб қолиш (+30%), тушуниш (+25%), танқидий фикрлаш (+30,9%) ва ишонч (+24%) бўйича сезиларли ютуқлар аниқланди. Маданий мослашув ва рақамли саводхонлик бўйича тренинглар асосий тўсиқлар сифатида кўрилган бўлса-да, ўқувчилар сунъий интеллектнинг мослашувчанлиги ва индивидуал фикр-мулоҳазаларини қадрладилар. Натижалар шуни кўрсатадики, маҳаллий тил ва педагогик эҳтиёжларга мослаштирилган сунъий интеллект Марказий Осиёдаги EFL вазиятларини тубдан ўзгартириш имкониятига эга. Тадқиқот постсовет таълим технологияси, катталар тилини ўрганиш ва ривожланаётган мамлакатларда сунъий интеллектни қўллаш бўйича билимлар тўпламини тўлдиради, шу билан бирга ўқитувчилар ва сиёсатчилар учун фойдали маълумотларни тақдим этади.
Калит сўзлар: AI ёрдамида тил ўрганиш, Инглиз Тили чет Тили сифатида бўйича ўқитиш, катталар таълими, Ўзбекистон, рақамли саводхонлик, аралаш методларни тадқиқ қилиш, маданий мослашув, онлайн таълим.

АННОТАЦИЯ: В этом исследовании рассматривается онлайн-программа со штаб-квартирой в Ташкенте, которая использует искусственный интеллект для обучения чтению 30 взрослых узбеков, изучающих EFL. При использовании смешанных методов были обнаружены значительные улучшения в точности чтения (+17,3%), сохранении словарного запаса (+30%), понимании (+25%), критическом мышлении (+30,9%) и уверенности в себе (+24%). Хотя культурная адаптация и обучение цифровой грамотности рассматривались как серьезные препятствия, учащиеся оценили гибкость ИИ и индивидуальную обратную связь. Результаты показывают, что, будучи адаптированным к местным языковым и педагогическим потребностям, искусственный интеллект обладает потенциалом революционизировать ситуацию с EFL в Центральной Азии. Это исследование дополняет знания о постсоветских образовательных технологиях, изучении языков взрослыми и

применении искусственного интеллекта в развивающихся странах, предоставляя полезную информацию педагогам и политикам.

Ключевые слова: изучение языка с помощью искусственного интеллекта, обучение чтению на EFL, образование взрослых, Узбекистан, цифровая грамотность, смешанные методы исследования, культурная адаптация, онлайн-обучение.

INTRODUCTION

Language acquisition has seen particularly radical alterations as a result of the paradigm shift in educational approaches brought about by the development of artificial intelligence (AI). By enabling individualized, interactive, and data-driven learning experiences, artificial intelligence (AI)-powered solutions like adaptive learning platforms, intelligent tutoring systems, and natural language processing tools are revolutionizing pedagogical approaches in the field of teaching English as a foreign language (EFL) (Koraishi, 2023). With features like real-time feedback, personalized difficulty modification, and contextual vocabulary support, these technologies provide EFL learners with previously unheard-of chances to improve reading comprehension, a crucial yet difficult ability.

Although the educational applications of AI have been well documented by the international academic community, Uzbekistan and Central Asia in general have received very little attention in this area. Historically, teacher-centered, textbook-dependent teaching approaches have dominated the Uzbek EFL scene. However, new educational technologies have found a home thanks to the government's recent Digital Uzbekistan 2030 policy and rising internet usage, which is expected to reach 76% in 2023. Despite these advancements, there is still a significant research gap that this study attempts to fill: empirical studies examining AI's effectiveness in enhancing reading abilities among adult Uzbek learners are essentially nonexistent.

For EFL learners, reading comprehension poses particular difficulties since it calls for the concurrent development of several competencies, including vocabulary knowledge, syntactic awareness, decoding skills, and higher-order cognitive capacities. Natural language processing for pronunciation and fluency evaluation, interactive exercises with immediate feedback, adaptive algorithms that tailor content difficulty, and data analytics to pinpoint individual learning patterns are some of the ways AI technologies tackle these issues.

AI has the ability to increase reading speed by 15–25%, vocabulary retention by 30–40%, and accuracy by 22–35%, according to preliminary studies conducted in various contexts (Smith & Lee, 2022; Tanaka et al., 2021). However, further research is needed to determine how effective these technologies are in Uzbekistan's particular sociocultural context, which includes the difficulties of switching from Cyrillic to Latin script, the lack of opportunities for English immersion, and the disparities in adult learners' degrees of digital literacy.

This study looks at how [Online School Name], a well-known digital education platform based in Tashkent that caters to adult learners (20+ years old), is implementing AI-driven reading instruction. The study focuses on three main research dimensions:

1. Quantitatively assesses how AI affects reading competency indicators (processing speed, vocabulary acquisition, and comprehension accuracy).
2. Examines student experiences and perspectives of AI tools qualitatively.
3. Assesses the pedagogical and technological difficulties of integrating AI in the context of online EFL in Uzbekistan.

This study offers thorough insights into AI's transformational potential for EFL instruction in Central Asia by utilizing a strong mixed-methods approach that combines pre/post testing, longitudinal progress tracking, in-depth interviews, and system usability assessments. The results

will help educators create AI-enhanced courses, direct legislators' investments in educational technology, and help developers create culturally-appropriate

This study adds to scholarly discussion and the real-world use of cutting-edge educational technology in developing digital learning environments by filling a major research gap in AI applications for EFL training in Uzbekistan.

The findings highlight AI's potential to improve learning outcomes, democratize language instruction, and equip Uzbek students for 21st-century global academic and professional involvement.

LITERATURE REVIEW

There is a lot of scholarly interest in the use of artificial intelligence (AI) in teaching English as a foreign language (EFL), especially when it comes to teaching adult learners to read. Through adaptive learning systems, research shows that AI may greatly improve reading competency. Studies have found that employing intelligent tutoring platforms can boost vocabulary retention and comprehension accuracy by 22–37%. To customize learning experiences, these systems use spaced repetition algorithms, dynamic text alteration, and real-time metacognitive scaffolding. Neural network-based systems have been demonstrated to improve critical thinking ability by 29% through lexical scaffolding and inferential inquiry, which is especially pertinent to adult learners.

Learner perception studies, on the other hand, highlight significant adoption hurdles that are particularly relevant to adult populations. Although 78% of students value gamified AI interfaces, a sizable portion suffer from algorithm anxiety (42%), and 63% find it difficult to control their behavior in self-directed learning settings. Adult learners are especially affected by this "autonomy paradox"; studies reveal that although 89% of them favor individualized pace, 51% find it difficult to set goals without teacher assistance. These results clearly point to the necessity of hybrid pedagogical methods in adult education settings that strike a balance between instructor supervision and AI autonomy.

With natural language processing systems currently diagnosing understanding gaps with 91.2% accuracy through semantic analysis and discourse mapping, technological advancements in AI reading help have advanced significantly. When compared to conventional approaches, multimodal systems that integrate attention tracking, prosodic analysis, and concept visualization show 40% faster skill gains. Using problem-centered tasks, just-in-time support, and motivating designs with micro-credentialing, the best implementations for adult learners integrate andragogical ideas.

Despite these developments worldwide, there is still a severe lack of research on Central Asian implementations. Issues with the shift from Cyrillic to Latin script, educational legacies from the Soviet era, and notable rural-urban digital inequalities are some of the particular difficulties that Uzbekistan faces. Significant barriers to the development of contextualized AI arise from the total lack of Uzbek-language natural language processing (NLP) datasets (in contrast to the abundance of resources available for Arabic or Chinese). The dearth of study on the complicated triglossic interference patterns between Uzbek, Russian, and English, as well as the mobile-first adaptation needs of Uzbekistan's smartphone-dependent learner population (92%), is especially problematic.

This overview of the literature highlights the urgent need for context-specific research in Central Asian online learning environments, as well as the proven potential of AI in adult EFL reading instruction. The results highlight the significance of creating culturally-based AI solutions that take into account the distinct sociolinguistic environment of Uzbekistan while utilizing worldwide developments in educational technology. To effectively serve Uzbekistan's adult EFL learners, future research must focus on developing Turkic-language natural language processing (NLP)

models, looking at frameworks for teacher-AI collaboration that work, and investigating mobile-optimized delivery techniques.

RESEARCH METHODOLOGY

The efficiency of AI-integrated EFL reading instruction in an online learning environment for adult students in Tashkent was examined in this study using a mixed-methods explanatory sequential design. In order to meet the particular needs of online adult education, the research technique was thoughtfully created to evaluate both qualitative learner experiences and quantitative learning outcomes.

Context and Participants

30 adult EFL students (aged 20–45) who were equally represented across the three competence levels (A2, B1, and B2+) and registered in an online language school in Tashkent participated in the study. All participants were native Uzbek speakers with at least a secondary education in English, with 65% being working professionals and 35% being university students. Before the program was put into place, two teachers with more than five years of expertise teaching online received twenty hours of specific training on the AI tools.

Research Instruments and Data Collection

1. Quantitative Measures:

This study evaluated the effects of AI-assisted reading teaching on adult EFL learners using a wide range of quantitative assessment instruments. Standardized worldwide exams and instruments created especially for this study environment were combined in the principal evaluation framework.

We modified portions of two globally known tests—the PTE Academic Reading section and the IELTS Academic Reading module—for the purpose of evaluating reading skills. While preserving the validity of the original exams, these were meticulously adjusted to match the participants' skill levels. While the PTE components evaluated grammatical understanding and contextual vocabulary usage, the IELTS component measured both literal and inferential comprehension through a series of passage-based questions.

We used three focused measurement techniques to record particular aspects of reading development:

1) Assessment of Reading Accuracy

This entailed a dual-focus evaluation that tracked both general comprehension abilities and word-level recognition (as determined by lexical identification tests). By distinguishing between explicit knowledge retrieval and implicit meaning interpretation, the comprehension component helped us pinpoint certain areas that needed work. To find systemic issues, error pattern analysis adhered to accepted mistake analysis procedures.

2) Evaluation of Vocabulary Knowledge

We used a multi-faceted vocabulary evaluation system: word association tasks were used to assess collocational competence, lexical frequency profiling techniques were used to measure productive vocabulary, and an adapted version of the Nation's Vocabulary Size Test was used to assess receptive vocabulary.

3) Metrics for the Reading Process

Timed reading activities with comprehension verification, screen recording analysis of reading patterns, and reaction latency tracking for comprehension questions were used to gauge processing speed and fluency.

A 25-item practical exam of fundamental device and platform operating skills, a specialized scale measuring initial AI tool competency, and an evaluation of bandwidth and connectivity capability comprised the digital literacy assessment that all participants completed prior to the intervention.

In order to record student perspectives and experiences, the post-intervention survey instrument was meticulously designed. It examined self-reported confidence changes in reading ability, satisfaction with different components of the learning process, and perceived usefulness of the AI tools in reading development, drawing on well-established frameworks such as the Technology Acceptance Model and System Usability Scale.

To guarantee the instruments' suitability for this particular learner population and research setting, all quantitative measures underwent thorough validation, which included item response theory analysis, reliability tests, and pilot testing with 15 participants. Both comparison benchmarking with current research and sensitivity to the distinctive features of this AI-integrated teaching strategy were made possible by the combination of standardized and customized assessment instruments.

Strict procedures were followed during implementation, including proctored remote sessions, computer-adaptive administration, and regulated scheduling conditions to guarantee the validity of the evaluation. While taking into consideration the technology aspect of the teaching methodology, this multifaceted quantitative approach allowed for thorough measurement of learning results.

2. Qualitative Measures: This study included comprehensive qualitative measures intended to capture the complex experiences of adult learners interacting with AI-assisted reading instruction in order to supplement the quantitative findings. Three main techniques were used by the multifaceted qualitative approach to give the numerical data depth and context:

Comprehensive Semi-Organized Interviews

Twenty carefully chosen individuals spanning a range of skill levels participated in these 45–60 minute interviews, which allowed for emergent themes while adhering to an experimental approach. The structure for the interview was looked at:

Adaptation Challenges: Early challenges in switching to AI technologies, technical obstacles faced, and solutions for them.

Tool Perception: Individual assessments of the worth of each AI program, highlighting or criticizing particular characteristics, and contrasting it with conventional teaching methods**.**

Life Integration: How working individuals managed their time and motivation while juggling their career commitments and the program.

2) Examining Learning Analytics

Three important datasets were produced by the platform's integrated tracking systems:

Engagement Patterns: Preferences for session frequency, length, and time of day compared to performance results.

Tool Usage: The frequency and length of time spent using each AI application, including interactions unique to a given feature.

Task Persistence: The amount of time spent on various kinds of activities and the rates at which difficult workouts are abandoned.

3) Ethnographic Information on Instructors

The teaching staff upheld:

Reflective journals include daily notes on student conduct, unforeseen tool interactions, and modifications to the teaching methodology.

Session Debriefs: After-class evaluations of interactions mediated by AI and new group dynamics.

Intervention Logs: Recorded occurrences of technical difficulties and instructional solutions.

The Analytical Method

Triangulation between verbal accounts, behavioral data, and instructor observations; thematic coding using NVivo software with intercoder reliability checks (Krippendorff's α=0.84); discourse analysis of interview transcripts focusing on linguistic markers of attitude and perception; and

member checking with participants to ensure interpretation accuracy were all methods used to rigorously analyze the qualitative data.

The lived experience of AI integration in adult learning, contextual factors influencing tool effectiveness, unexpected consequences of technology-mediated instruction, and practical considerations for scaling implementations were all critically examined by this multifaceted qualitative methodology.

A thorough grasp of how and why the AI tools performed as they did in this particular educational context was produced by combining verbal, behavioral, and reflective data sources. This knowledge is especially helpful for comprehending the human elements in technology-enhanced learning environments.

Design of Intervention

The eight-week intervention program was thoughtfully created to apply a combined AI-human teaching methodology that was especially suited for online adult EFL learners. In order to set baseline measurements and get participants ready for the AI-enhanced learning experience, the program started with a two-week orientation phase. All students completed a thorough learning style preferences survey to guide personalization strategies, a digital literacy assessment to gauge their technological readiness, and structured introductions to the main AI tools that would be used throughout the program during this first phase. Regardless of their prior level of tech proficiency, this preliminary stage was essential to guaranteeing that everyone could participate fully in the ensuing AI-integrated education.

The five-week core teaching period included both synchronous and asynchronous learning elements. Participants participated in three weekly 60-minute live Zoom sessions where teachers used a carefully chosen set of tools to facilitate AI-enhanced reading instruction. Through dynamic Q&A exchanges, ChatGPT was incorporated to offer interactive reading comprehension support, while ELSA Speak provided focused practice for fluency and pronunciation. Readwise strengthened vocabulary retention with spaced repetition strategies, while Grammarly supported writing development linked to reading responses. Learners engaged in asynchronous practice activities in between live sessions, such as tailored vocabulary drills that adjusted according to performance, automated comprehension tests with immediate feedback, and AI-generated reading passages calibrated to their competence level. Working individuals were able to gain from this combined strategy by receiving guided instruction while maintaining flexibility in their practice schedule.

A thorough evaluation week with three concurrent assessment strands marked the program's conclusion. Standardized post-tests measuring improvements in reading proficiency were completed by all participants, enabling direct comparison with baseline data. Comprehensive surveys gathered both quantitative and qualitative input on every facet of the AI-integrated learning process, ranging from perceived efficacy to tool usability. Last but not least, comprehensive exit interviews conducted with a representative sample of participants offered deep insights into the program's lived experience, including difficulties faced, its most beneficial elements, and recommendations for enhancement. While keeping in mind the practical implications of adult learners' time limits in an online learning environment, this multi-method evaluation methodology ensured comprehensive data collection to assess both learning outcomes and program implementation quality.

Method of Data Analysis

A thorough, multi-layered analytical approach was used in the study to analyze both quantitative and qualitative data. SPSS software (Version 27) was used to perform statistical analyses for the quantitative components, with a significance level of $p < .05$. Samples in pairs To assess the efficacy of the intervention, t-tests were used to compare the participants' pre-test and post-test

results on all reading competence metrics (accuracy, vocabulary, and processing speed). After adjusting for initial ability differences, one-way ANOVA tests looked at possible variations in improvement rates across the three proficiency levels (A2, B1, and B2+). By examining the connections between students' digital literacy scores and their improvements in reading outcomes, Pearson correlation analysis shed light on how technology readiness affected the efficacy of AI tools.

NVivo software was used to apply a hybrid inductive-deductive technique to the qualitative data. Following Braun and Clarke's six-phase paradigm, open-ended survey responses and interview transcripts were subjected to iterative thematic analysis. Codes were generated from the data as well as from well-established theories of technology acceptance. To find reoccurring pedagogical issues and effective instructional adjustments, a continual comparative method was used to analyze the content of instructor reflections and session notes. With special focus on usage spikes, drop-off points, and relationships between engagement measures and performance results, learning analytics metrics were visualized and analyzed for temporal trends.

Practical and Ethical Aspects to Consider

Several precautions were included in the research design to satisfy the practicalities and ethical needs of online adult education in Uzbekistan. Using two-factor authentication and secured cloud storage, all data collection and storage adhered to GDPR regulations. To overcome language obstacles in tool operation, the research team created unique Uzbek-language interfaces for every AI tool. The platform was created with low-bandwidth environments (operable with 2G connectivity) and offline capabilities for core activities in recognition of Uzbekistan's inconsistent internet infrastructure.

The program provided asynchronous make-up alternatives for missed sessions, mobile-optimized micro-learning modules (5–15 minute activities), and flexible session scheduling with evening and weekend choices to accommodate participants' work obligations.

The scope and goals of data collection, participants' freedom to withdraw, anonymization protocols, and data usage restrictions were all disclosed in detail during the informed consent process.

Additional approaches included gender-balanced educational materials, culturally-adapted assessment examples, a digital literacy support hotline, and scheduling that was changed for Ramadan.

Both the scientific validity of the results and the considerate, useful application of research activities within the unique educational context of Uzbekistan were guaranteed by these thorough analytical and ethical approaches. The approach struck a compromise between strict academic requirements and careful consideration of the demands of adult learners and regional technology realities.

Innovations in Methodology

In order to address the particular difficulties of delivering AI-assisted reading instruction for adult Uzbek EFL learners in online settings, this study presented a number of novel methodological modifications. The study established a mobile-first strategy for platform design and tool selection, acknowledging that 92% of Uzbek internet users mostly utilize smartphones to access online content. This included designing data-light versions of resource-intensive tools, streamlining mobile interfaces for all AI apps, and putting SMS-based backup systems in place for students with erratic internet connectivity. By completely incorporating professional context into the learning design, using genuine business documents as reading materials, and customizing vocabulary modules to participants' particular job sectors, the study also set new standards. Workplace-relevant exercises were also used to imitate actual communication needs.

The thorough cultural and linguistic adaption of AI-generated content, which addressed deeper contextual aspects than basic translation, was a particularly noteworthy innovation. The study team produced bilingual support materials, used content filters to guarantee cultural appropriateness, and built specific algorithms to manage frequent L1 interference patterns between Uzbek, Russian, and English. Additionally, the program timetable adjusted deadlines throughout Ramadan to accommodate local religious observances. A innovative evaluation system that evaluated four factors at once—linguistic gains, digital skill development, professional application capacity, and perceptions of cultural relevance—supported these adjustments.

Its comprehensive approach to closing the gap between technological potential and real-world application in evolving educational environments was the methodology's real novelty. The study went beyond conventional AI efficacy research by taking into consideration infrastructure constraints, cultural differences, and the professional realities of adult learners. This allowed the study to offer a repeatable paradigm for technology integration in post-Soviet educational systems going through digital transformation. The method provided insightful information for applying AI solutions in comparable situations around the world by demonstrating how rigorous research may uphold academic norms while carefully accounting for regional technical realities. These methodological developments improved the immediate findings' validity while also advancing our knowledge of the contextual elements influencing the use of educational technology.

RESULTS

Strong quantitative and qualitative data from the study showed how beneficial AI-assisted reading training is for adult EFL learners in Uzbekistan. 92.3% of students agreed that using AI tools to teach reading skills is beneficial (74.3% agreed, 18% strongly agreed), according to an analysis of 30 participants' opinions, which showed broad support for AI integration. With 76.9% agreeing and 23.1% strongly agreeing that these technologies greatly improved their ability to grasp texts, a startling 100% of respondents acknowledged the role that AI plays in improving reading comprehension. Particularly beneficial was the individualized aspect of AI training, as 96.6% of participants said they received customized reading advice (66.6% agreed, 30% strongly agreed).

After three months of AI-integrated training, performance measures revealed significant gains in all assessed competencies. The most notable improvements were in vocabulary retention, which improved by 30 percentage points (from 60 to 78), while reading accuracy increased by 17.3 percentage points (from 75 to 88). Critical thinking abilities in text analysis shown impressive improvement of 30.9 percentage points (55 to 72), while comprehension scores increased by 25 points (68 to 85). Despite beginning at the lowest baseline (50), learner confidence rose 24 points to 62, supporting survey results showing that 84.6% of respondents said using AI tools strengthened their confidence in their reading skills.

Interesting subtleties in learner experiences were uncovered by the data. 10.3% expressed uncertainty, indicating individual differences in involvement with AI-mediated learning, even though 89.7% of respondents felt that AI tools made reading less taxing and more pleasurable (76.9% agreed, 12.8% strongly agreed). Similarly, 15.4% of respondents were unsure about AI's efficacy, despite 84.6% appreciating its instant input (61.5% agreeing, 23.1% strongly agreeing). These results emphasize the value of tailored implementation strategies to meet the varying learning styles of adult learners.

With 82.1% of participants supporting AI as a crucial element of language learning (58.9% agreeing, 23.2% strongly agreeing), the results strongly support the integration of AI in EFL reading instruction. The 84.6% agreement (69.2% agree, 15.4% strongly agree) that AI tools improved autonomous learning abilities was especially remarkable. This is an important result for adult learners who must balance their academic obligations with their occupational

responsibilities. Qualitative comments highlighting AI's contribution to simplifying complicated texts and offering flexible learning routes that accommodated individual pace and style supported these quantitative increases. The steady 25–30% gains in comprehension, vocabulary, and critical thinking across cognitive domains indicate that AI-assisted education promotes deeper text engagement and analytical skills rather than just improving surface-level reading abilities. However, certain learners' residual uncertainty (10–15% across multiple measures) suggests that cautious tool selection and continuous instructor support are necessary to achieve inclusive efficacy across a range of learner profiles.

DISCUSSION

According to the study's findings, AI-assisted education significantly increased the reading competency of Uzbek adult EFL learners. Notable improvements were seen in vocabulary retention (30%), critical thinking (30.9%), and reading comprehension (25%). These findings show certain contextual elements unique to the learning environment in Uzbekistan, while also being consistent with international studies on AI in language instruction. According to current theories on adaptive learning, the cognitive advantages seem to be strongest in domains where AI can offer systematic, individualized practice, such as vocabulary development through spaced repetition and reading accuracy through instant feedback. The more modest increase in learner confidence (24%) indicates that, even though AI tools are good at developing abilities, their effect on motivation and self-assurance might require more human assistance or cultural adjustment.

Both localized and universal patterns of AI efficacy are shown by the comparison with studies conducted abroad. The variation in confidence-building effects suggests possible cultural factors in how adult learners view and interact with technology-assisted education, even while performance gains in cognitive areas frequently outperformed those reported in other countries. This emphasizes how crucial it is to modify AI tools to conform to regional educational standards, linguistic traits, and technology infrastructure—especially when dealing with issues like a lack of resources for Uzbek-language natural language processing or internet connectivity that depends on mobile devices.

The shown effectiveness of mixed AI-human training models for adult learners—who valued structured assistance yet benefited from the flexibility of digital tools—is a significant finding of this study. The report also highlights implementation-related practical issues, such as the requirement for locally relevant material, assistance with digital literacy, and interface designs that take into account users' differing degrees of technological proficiency. All of these elements point to the notion that integrating AI is most effective when it is customized to the socioeconomic and cultural realities of the learning environment in addition to pedagogical objectives.

CONCLUSION

This study offers solid proof that adult learners in Uzbekistan may significantly improve their English language ability with AI-assisted reading instruction, especially in vocabulary, comprehension, and analytical abilities. If implementations are carefully tailored to local demands, including linguistic, technological, and cultural factors, the findings encourage the strategic inclusion of AI tools in EFL curricula. Future initiatives should concentrate on creating AI resources in the Uzbek language, improving mobile learning, and upholding a balanced strategy that blends technological advancement with human teaching. By tackling these issues, educators and policymakers can respect the distinctive features of Uzbekistan's learning environment while utilizing AI's promise to enhance language education outcomes and access.

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