Eclecticism in Language Teaching: Developing Educational and Methodological Content for an English Language Qualification Course Using Artificial Intelligence

Zada Kemelbekova – Guldana Seidaliyeva – Xeniya Degtyareva – Saule Yessenaman

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Abstract
The following article provides an in-depth analysis of the utilization of an eclectic approach in foreign language instruction, particularly emphasizing the creation of educational and methodological materials for an advanced training program catered to English teachers, integrating artificial intelligence. This course curriculum is tailored for educators who lack prior experience in utilizing and instructing English to enhance their professional competencies and improve the overall efficacy of the educational process. The article offers valuable insights into the potential benefits and challenges of using AI in language education, shedding light on the evolving nature of language teaching in the digital age. The growing use of artificial intelligence (AI) in education is causing a significant shift in teaching methods, especially in language instruction. The study explores the educational content of an advanced training course designed to equip secondary school teachers with the necessary skills and knowledge to teach English using AI technologies effectively. Thirty-two teachers of schools in Almaty, Kazakhstan, participated in the pilot part of the test of the content of the course and studied according to the developed course for six weeks. The course takes a comprehensive approach, including theoretical principles, practical use of AI tools, and hands-on experience. Focusing on interactive learning, ongoing evaluation, and personalized assistance, the method aims to seamlessly enhance teachers' ability to incorporate AI into their lessons.
Key words: AI-powered technologies, Secondary school teachers, Education, AI tools, Interactive learning

Introduction

The incorporation of AI has led to a substantial revolution across various industries, and the education sector is no different. In language education, AI offers a diverse range of cutting-edge tools that can enhance the overall learning process significantly. However, despite this potential, numerous high school educators face a shortage of the essential training needed to adeptly integrate these technologies into their teaching methodologies. It explores the creation of a thorough training initiative to bridge this gap. The initiative is specifically crafted to concentrate on the pedagogical integration of AI within English language instruction. In the modern age of technology, artificial intelligence (AI) has become a transformative influence in education, offering inventive solutions to improve teaching and learning methods. In English language teaching (ELT), AI technologies like natural language processing (NLP), machine learning, and adaptive learning systems have been utilized to develop more effective and engaging educational experiences.

This in-depth article thoroughly explores AI's present capabilities and prospects in ELT, carefully analyzing a diverse range of AI-powered tools and their significant effects on students and teachers. Generative AI tools have unlocked exciting possibilities for language practice, allowing learners, educators, and other stakeholders to harness their potential.

However, reaping the full benefits of these tools necessitates a blend of motivation and skills from all parties involved. It is crucial to recognize that, alongside numerous advantages, barriers and risks warrant thorough examination. Additionally, active engagement and attentive listening to the voices of the individuals for whom these technologies are intended are imperative for making well-informed decisions.

The incorporation of modern technologies, notably artificial intelligence (AI), is increasingly vital in education, particularly in teaching foreign languages. An inclusive strategy amalgamating diverse methodologies and advancements significantly shapes effective educational curricula. This piece explores the design of a professional development program tailored for English language instructors, emphasizing the integration of AI into the educational experience. The study's primary objective is to address the necessity for integrating AI into English language instruction and to bridge the existing gaps in English Language Teaching (ELT).

Encompassing a broad spectrum of learners spanning all proficiency levels, the study embraces the full spectrum of AI applications, explicitly emphasizing the acquisition of English language skills. By utilizing an elective approach to analyze emerging trends rather than predefined criteria, the findings offer a comprehensive overview of the current utilization of AI within the context of English language education. This information aims to provide valuable insights to both practitioners and academic communities. Educators could benefit from a framework for integrating AI into English language instruction, including pedagogical methodologies and their integration with language skills.

Additionally, the study seeks to identify and address challenges, helping educators navigate potential misuse and understand existing limitations. Educational decision-makers, funders, and policymakers can draw upon this research to inform evidence-based policies and establish a strategic direction for effective practices. Furthermore, researchers have an opportunity to gain insights into the current landscape of AI in English language education and to identify potential research gaps that require attention in Kazakhstani schools.

Literature review

English language teaching and learning in Kazakhstan

The field of English Language Teaching (ELT) is in constant flux due to technological advancements, evolving pedagogical theories, and the growing global need for English proficiency. It encompasses digital tools, communicative and task-based approaches, the significance of cultural competence, and challenges such as teacher training and learner motivation. The present study aims to offer a comprehensive overview of the dynamic landscape of English language education in Kazakhstani secondary schools by integrating AI-powered technologies into their practice. With English solidifying its position as a global lingua franca, practical teaching, and learning strategies are essential to meet diverse needs worldwide. The demand for English proficiency spans various domains, including business, academia, and tourism, placing the onus on ELT professionals to implement innovative approaches while dealing with ongoing challenges.

The role of English is significant in Kazakhstan's trilingual education policy (OECD, 2018). However, its impact is limited due to the optional nature of English in secondary school graduation tests and university admissions. To enhance the status of English and consequently improve student attitudes and motivations, making the subject mandatory in high-stakes secondary school exams could be instrumental. This suggestion aligns with Kazakhstan's language policy and 2050 strategy (OECD, 2020). It stresses the importance of linguistic proficiency, particularly in English, for seamless integration into the global economy and active engagement in international dialogue. As a result, educators are implementing a more diverse and practical

approach to English Language Teaching (ELT), emphasizing the development of linguistic skills alongside the promotion of intercultural competence.

Kazakhstan has introduced various policies and initiatives to enhance the country's English Language Teaching (ELT) quality. These efforts encompass the trilingual language policy, which emphasizes English as one of the primary languages, the incorporation of English education from the early primary school years, an updated curriculum, and measures to promote the use of English in teaching STEM subjects. The upcoming reforms, scheduled to commence in 2023, will mandate that teachers undergo mandatory knowledge upgrades every three years and adhere to newly established teacher standards. These changes are expected to raise the professionalization of teaching and enhance the overall standard of education.

Additionally, the government's commitment to strengthening the country's digital infrastructure and cultivating digital skills within the workforce will positively impact technology integration in educational institutions. This comprehensive approach is positioned to drive progress in pedagogy and the acquisition of English language skills within the country. The newly implemented teacher standards signify a constructive advancement in the education sector. These standards are formulated to incentivize and empower teachers to continuously enhance their skills and expertise.

Most notably, the standards also aim to ensure that teachers receive acknowledgment and incentives for their dedication to professional development. This positive encouragement can create a more motivated and capable teaching force, benefiting educators and students. As English language teaching and learning (ELT/L) is the term used in scholarly literature, it has been adopted for this study.

Rapid advancements in technology and digital platforms have significantly enhanced the accessibility and effectiveness of teaching and learning English. These innovative tools offer individuals valuable opportunities to improve their English language skills. While some argue that introducing English-teaching technology could render traditional classroom instruction and English educators obsolete, viewing the Fourth Industrial Revolution as an opportunity to seamlessly integrate Artificial Intelligence into the English language teaching and learning process is essential. We can develop a comprehensive approach to enriching global competence by fusing language literacy with digital literacy.

The final questionnaire to assess the effectiveness of the AI-based English Language Teacher Development Course revealed the following ideas:

1. The first module includes practical tasks aimed at creating small projects using AI tools for a deeper understanding of the module topic: Introduction to Artificial Intelligence.
2. Module 5 includes practical tasks and feedback on implementing networking and creating virtual groups and forums for discussion and the exchange of experience between participants and trainers.

Incorporating these ideas into the course content will give the participants a more interactive and holistic learning experience, contributing to their effective learning and AI skills in English lessons.

Overall, the participants all stressed the need to cultivate 21st-century skills essential in the current professional landscape. These skills have been smoothly incorporated into the updated curriculum, with English instructors playing a central role in promoting them by encouraging student engagement in collaborative group tasks and impactful presentations.

The significance of AI in the realm of English Language Teaching

AI is a short term for "Artificial Intelligence," in which "artificial" refers to a simulated, non-real, yet not entirely deceiving construct, and "intelligence" denotes a

capability that can surpass genuine items due to its superior attributes in a specific context. Intelligence is multidimensional, encompassing various aspects such as reasoning, self-awareness, emotional understanding, planning, consciousness, and creativity.

AI entails incorporating artificial intelligence into educational methodologies to provide effective support throughout learning. In his discussion, Joshi (2019) emphasizes that artificial intelligence (AI) is not solely about creating a superintelligent computer capable of solving all problems. Instead, the focus is developing machines that imitate human actions and cognitive abilities. The main objective of artificial intelligence is to build computer systems, whether software or hardware-based, that demonstrate traits and behaviors traditionally associated with human intelligence. As a theoretical framework for computer systems, AI can perform tasks that typically necessitate human intelligence. This encompasses many abilities, including speech recognition, language comprehension, decision-making, and visual perception. These are all aspects of human intelligence that can be replicated by artificial intelligence.

There is a growing demand for AI to develop expert systems and tackle complex issues such as pattern recognition and natural language processing. For example, AI functioning as a language tutor provides personalized and persistent training, delivering abundant feedback and scaffolded activities tailored to individual learners, all within a low-pressure environment. One of the most remarkable promises of AI is its potential to accelerate the development of skills and capabilities.

Recent studies have demonstrated that artificial intelligence (AI) is an invaluable language teaching and learning tool. AI can support language-specific skills, such as improving reading comprehension, practicing repetitive language exercises through interactive platforms, and providing corrective feedback on English pronunciation. Furthermore, AI can contribute to broader teaching and learning activities by automatically grading assignments, offering personalized feedback, creating adaptive educational experiences, providing intelligent tutoring, and utilizing prediction systems to enhance learning.

AI plays a multifaceted role in language education, offering diverse benefits to educators and learners. In light of the growing integration of AI in education, educators need to understand the potential uses of AI in aiding the teaching and learning of the English language for non-native speakers. Therefore, conducting a thorough analysis of current research is essential to offer the academic and professional community valuable insights into how AI is being leveraged to support English language educators and students. AI is applied in various important English Language Teaching (ELT) areas. It improves speaking, writing, and reading skills and assists in pedagogy and self-regulation. It is worth noting that among these language skills, the use of AI to support listening skills has not received as much attention as in other areas.

Incorporating AI into an eclectic approach

AI technology encompasses three user categories:

1. learner-facing for pupil use in learning activities,
2. teacher-facing for assisting teachers in tasks such as grading and
3. system-facing for administrative staff in managing and analyzing student data.

AI systems in ELT/L target specific users and objectives, providing capabilities to mine extensive data, operate using natural language (speech, listening, writing), and apply language rules and patterns. AI is crucial for the implementation of personalized one-to-one teaching and learning experiences. AI technology plays a crucial role in conveying a wide range of information and enhancing the effectiveness of the English

learning process. The availability of diverse learning technologies makes it simpler for students to comprehend the concepts their instructors explain.
Moreover, students can conveniently learn without face-to-face interaction with teachers. A plethora of language learning applications driven by Artificial Intelligence (AI) technology cater to the needs of both English educators and learners. An eclectic approach to education involves carefully selecting and integrating diverse methods and strategies based on each student's unique needs and characteristics. Integrating AI technology can significantly enhance this approach in the following ways:

Personalized Learning
Incorporating AI in English Language Teaching (ELT) presents a prominent benefit of delivering personalized learning experiences. AI systems can analyze individual learner data and adjust instruction to accommodate each student's needs, preferences, and advancement. For example, adaptive learning platforms such as Duolingo and Rosetta Stone utilize AI algorithms to tailor lessons, exercises, and feedback, ensuring learners have content corresponding to their proficiency level and learning speed.

Intelligent Tutoring Systems
Intelligent tutoring systems (ITS) leverage artificial intelligence (AI) to simulate personalized tutoring experiences. These systems, such as Carnegie Learning and ALEKS, utilize natural language processing (NLP) and machine learning techniques to interact with students, providing real-time feedback and guidance. They can evaluate language skills, identify specific areas of challenge, and adapt teaching methods accordingly, enhancing the learning process.

Automated Assessment and Feedback
AI-powered tools utilize natural language processing (NLP) to assess written and spoken English automatically, providing instant and impartial feedback. Platforms like Grammarly and WriteLab analyze grammar, syntax, style, and coherence, offering suggestions for improvement. Additionally, speech recognition technologies integrated into applications such as ELSA Speak and Google Assistant assist users in honing their pronunciation and speaking skills by providing real-time feedback on their spoken English.

ELSA Speak
ELSA Speak employs cutting-edge speech recognition and machine learning technology to assist users in enhancing their English pronunciation. The application delivers an in-depth analysis of pronunciation errors and offers customized exercises to target specific areas for improvement. By replicating a natural English-speaking setting, ELSA Speak allows users to hone their speaking abilities within an AI-supported environment.
The seamless incorporation of AI in ELT hinges on comprehensive training for educators on effectively using these technologies. Professional development initiatives should prioritize equipping teachers with the necessary skills and knowledge to integrate AI tools seamlessly into their instructional methods. Moreover, AI should complement rather than replace the human element of education, with educators assuming a pivotal role in mentoring and supporting learners.

The application of AI tools to English language learning brings forth numerous advantages:

1. AI is capable of performing tasks that are beyond the reach of individuals. For example, it can assess English down to the phoneme and offer instant feedback on one's language proficiency.

2. AI tools are readily accessible at any time and location, providing learners with flexibility, sometimes even without an internet connection.
3. AI tools for learning spoken English offer a more accessible and effective alternative to traditional methods.
4. These highly scalable tools can accommodate more students than traditional teaching methods.

Eclecticism in AI-powered Teaching: Strengths and Weaknesses

The concept of eclecticism in AI-powered education entails integrating various AI techniques, such as machine learning, natural language processing, and computer vision, to tailor to individual students' unique needs and learning preferences. Using machine learning algorithms, AI can analyze students' learning behaviors and customize teaching materials to meet their needs. Natural language processing enables AI to engage students in natural conversations, offering personalized feedback and support. Moreover, computer vision can monitor students' participation and focus levels during online classes.

This approach can deliver personalized learning experiences, enhance student engagement, and improve learning outcomes. However, it also presents notable challenges, including ensuring data privacy and security, addressing algorithmic bias, and integrating AI into educational environments.

Strengths of Eclecticism:

- Personalized Learning: Eclecticism enables educators to tailor AI interventions to meet students' individual needs. By integrating various AI techniques, educators can customize learning experiences based on students' strengths, weaknesses, and learning styles, ultimately leading to more effective learning outcomes (Roschelle et al., 2012).
- Adaptive Instruction: AI can dynamically adjust the difficulty and content of lessons based on student performance and understanding. This is made possible through combining techniques such as intelligent tutoring systems (ITS), adaptive learning platforms, and machine learning algorithms (Brusilovsky & Millán, 2007).
- Enhanced Feedback: AI can provide more frequent and detailed feedback than traditional methods, allowing students to monitor their progress and identify areas for improvement. This can be achieved by leveraging natural language processing (NLP) and sentiment analysis to interpret student responses and offer personalized guidance.
- Efficiency and Scalability: Eclectic AI systems can automate repetitive tasks such as grading and assessment, freeing educators' time for more meaningful student interactions. This enables large-scale implementation and addresses diverse learning needs within varied populations (Woolf, 2009).

Weaknesses of Eclecticism in AI Implementation:

- Complexity and Implementation Hurdles: Integrating multiple AI techniques can be complex and may require specialized expertise, leading to challenges in integration, system maintenance, and cost-effectiveness
- Data Bias and Equity: AI algorithms rely on training data, and biases within this data can influence outcomes and perpetuate inequalities. Addressing these biases is crucial for ensuring fair access to high-quality education
- Diminished Human Connection: Over-reliance on AI can reduce human interaction and limit social and emotional learning opportunities. Educators play a vital role in fostering student engagement and addressing individual needs, a role that AI cannot fully replace (Dede, 2009).

Ethical Considerations

AI-driven education raises ethical concerns regarding privacy, data ownership, and potential misuse. Educators must be mindful of these issues and ensure that AI systems are responsible for their development and implementation (UNESCO, 2021). Using various methods and ideas in a particular context, eclecticism holds promise for improving personalized learning experiences in AI-powered teaching. By incorporating diverse teaching approaches, AI can cater to individual learning styles and preferences, enhancing the educational experience. However, its practical implementation requires careful consideration of its limitations, such as potential biases in AI algorithms and the need for human oversight to ensure quality education. Additionally, the ethical implications of AI in education, including privacy, data security, and equitable access to technology, must be addressed to ensure responsible and fair use of AI in teaching. By proactively addressing these challenges and promoting responsible development, AI can be a powerful tool to enhance teaching and learning, enabling more equitable and effective educational outcomes for all students.

The Challenges of Artificial Intelligence in English Language Teaching (ELT)

According to Crompton et al. (2024), it is noteworthy that comprehensive coverage of the obstacles and potential perils linked to AI systems in the domain of English Language Teaching (ELT) is scarce. Nonetheless, the authors emphasized four primary issues that were discernible.

1. *Technology breakdowns* encompassed many issues, from technical malfunctions and poor connectivity to specific instances of incorrect answers provided by AI.
2. *Limited capabilities* were an exciting challenge that was also revealed and did not meet the advanced requirements of the users. Specifically, some users sought greater chatbot capacity, while others desired more natural interactions. These constraints resulted in a decreased interest among learners in utilizing the chatbot.
3. Using powerful AI technologies has evoked various manifestations of *fear among* users. An analysis of axial codes revealed three primary categories of fear experienced by individuals when interacting with AI. Firstly, there needs to be more certainty regarding providing personal information due to data storage and access control uncertainties. Secondly, users express fear stemming from a lack of clarity about how AI operates, leading to anxiety related to the unknown. Lastly, a study on user perceptions highlighted concerns about the potential loss of genuine emotional experiences and natural interactions in human-AI interactions.
4. *Standardizing languages and ideologies* poses a significant challenge, requiring establishing a common linguistic framework and reconciling diverse belief systems and principles held by various groups and individuals.

Educators and educational leaders must stay mindful of the challenges that come with the increasing prevalence of AI systems. It is essential to address and mitigate these challenges when possible. AI developers should also consider the challenges outlined in the literature and make adjustments to ensure that language encompasses the cultures and needs of all students in English language teaching/learning. Additionally, it is advisable for students to acquire digital literacy skills as English learners and to use AI tools carefully and thoughtfully. Ribeiro's (2020) research emphasizes the significant role of Artificial Intelligence (AI) in English Language Teaching (ELT).

The complexity of the English language structure often challenges ESL/EFL students, making exploring innovative approaches to enhance the teaching and learning process

essential. Leveraging AI technologies such as machine learning, intelligent search, and natural language processing can effectively transform English language education. This study aims to comprehensively examine the impact and potential applications of AI in ELT, shedding light on its role and significance in addressing the challenges faced by language learners. The study hypothesizes that diverse**,** eclectic approaches rooted in artificial intelligence may enhance educational and methodological resources for instructing English teachers.

Incorporating artificial intelligence (AI) in educational settings presents many challenges for English teachers. Teachers' lack of proficiency in AI technologies primarily hampers their ability to integrate these tools into the classroom seamlessly. Moreover, pervasive skepticism toward AI held by students and educators forms substantial obstacles to adopting cutting-edge methodologies within the educational sphere. Additionally, the disparity between emerging technologies and their practical application in education may lead to the suboptimal realization of AI's potential benefits in learning.

To effectively tackle these challenges, it is crucial to pursue further research focused on developing specialized training programs for educators to integrate AI in educational environments proficiently. Additionally, establishing seamless interactions between teachers and AI technologies enhances the learning experience. Our upcoming article will present a comprehensive training program tailored for English language instructors. This program will equip them with the necessary skills to incorporate artificial intelligence into their teaching practices adeptly. By completing this course, educators will understand AI principles, explore cutting-edge educational technologies, and obtain practical insights into implementing them in their classrooms.

Our primary goal is to support English educators in integrating artificial intelligence into the classroom, improving learning outcomes, and fostering a more interactive and effective learning environment for students.

Research design

The literature review needed more input from English language teachers regarding their perspectives and views. To address this gap, we surveyed to gather insights on their usage and opinions of AI in English Language Teaching (ELT).

1. AI-powered tools teachers use
2. What teachers use AI tools for
3. Teachers' views on AI in ELT
4. AI in ELT: the future

Course description

The study's materials encompass the English Language Qualification Course curriculum designed for secondary school educators. The course focuses on teaching English as a foreign language by integrating artificial intelligence. The curriculum comprises five modules, culminating in a final stage centered on the practical application of acquired knowledge.

Module 1: Introduction to Artificial Intelligence.

- This module aims to provide participants with an overview of the concept of AI, its significance in education, and its fundamental operational principles.
- The session also delves into specific examples illustrating the application of AI in language learning.

Module 2: Using Artificial Intelligence in English Language Learning.

- Participants explore diverse online platforms, applications, and automated systems that leverage AI for English language learning in the module.
- This focus will be on understanding the potential for interactive lessons and courses with personalized levels of complexity.

Module 3: Developing Lessons Using Artificial Intelligence.

- The study group gains insights into developing personalized learning programs tailored to individual learner data, utilizing intelligent tutors, and analyzing learning outcomes using machine learning algorithms.

Module 4: Evaluating the Effectiveness of Learning Using Artificial Intelligence.

- This module undertakes a comparative analysis of learning outcomes with and without AI integration while evaluating student progression and analyzing achievement using specialized tools.

Module 5: Practical Application of Knowledge.

- During the final stage, participants in the course apply their newfound knowledge by creating and presenting lessons implementing innovative technologies.
- Additionally, they exchange ideas with colleagues and specialists and compile a detailed report outlining the training outcomes with the proposed strategy for future implementation.

In an English Language Qualification Course, teachers were introduced to AI tools with an eclectic approach. Examples of AI applications in an eclectic approach:

Combining techniques:

- AI allows teachers to combine traditional teaching techniques (such as grammar exercises or text reading) with modern interactive technologies (such as virtual games or online courses). This helps provide a better understanding of the material.

Adapting to the student level:

- The AI can automatically modify the complexity of the tasks and the learning speed depending on the success and difficulties of each particular student, providing an individual approach.

Time Optimization:

- Using AI to automate routine tasks, such as writing tests or pronunciation assessments, allows teachers to spend more time individually communicating with students and developing their communication skills.

Participants

The study group included 32 selected secondary school teachers from schools (№30 Gymnasium, №159 Gymnasium) in Almaty, Kazakhstan. Of the participants, 94% were female (30 individuals), and 6% were male (2 individuals). The teachers represented various age groups, with the youngest being 24 and the oldest being 57. Their work experience ranged from 1 year to 16 years or more (Appendix - Table 1).

Procedure

The effectiveness of the developed teaching and methodological content designed for the professional development of secondary school educators in English language teaching by applying artificial intelligence was evaluated during the experimental phase of the research. An English Language Qualification Course spanned four

weeks, conducting online classes via the Google Meet platform in synchronous workshops and asynchronous assignments for self-testing.

The primary focus of the practical work with educators occurred during the third module, designed to facilitate skills and knowledge acquisition related to using AI-based tools and applications for English language teaching. The most excellent attention when working with AI-powered tools was paid to developing such language skills as writing, speaking, and listening, examples of working with which are described in practical cases 1-3, respectively.

Practical case 1

For the enhancement of writing skills, Grammarly stands out as a highly effective tool based on artificial intelligence that can be utilized. The course participants were asked to bring one essay on a free topic, which should be written by their students (The example of the essay was written by the book 'Excel for Kazakhstan', grade 9, module 6). Subsequently, the group collectively examined the application of the Grammarly tool.

1. Initial spell-checking: there was a spelling mistake in the words 'honourable', and 'neighbours'. The student missed the letter 'u'.
2. Correctness of word choice and phrasing: instead of writing just 'old', the student should write 'and old'.
3. Presence of punctuation marks: there was no full stop at the end of the sentence 'Everyone should visit seven houses and receive seven guests at home'.
4. Checking the level of formality and proper tone: It was a formal letter to the teenager's magazine, and the student should describe one celebration of his country. There were no comments about the tone from Grammarly (Figure 1).

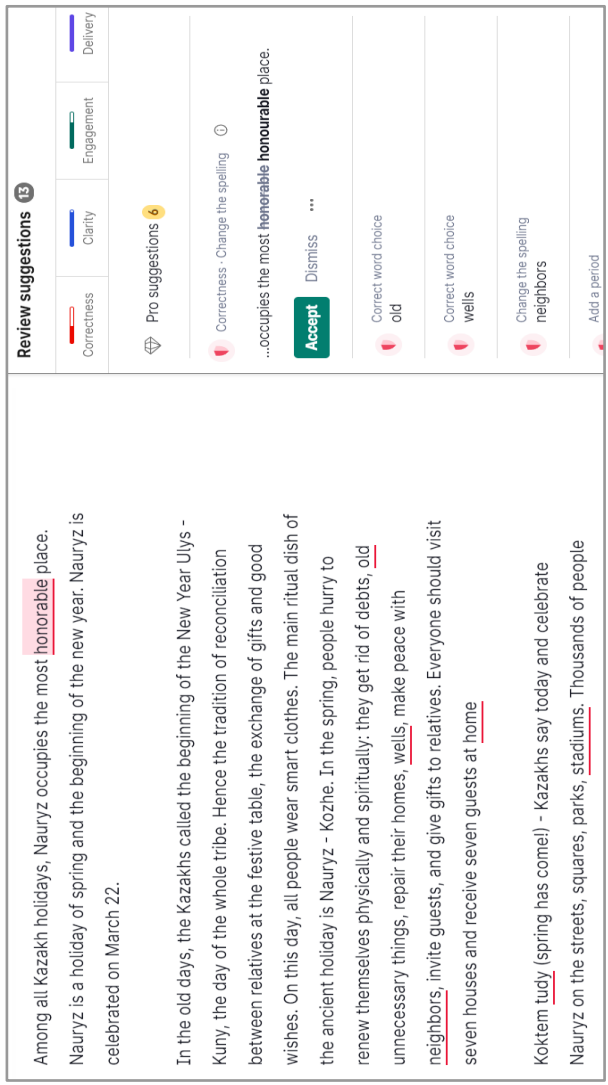


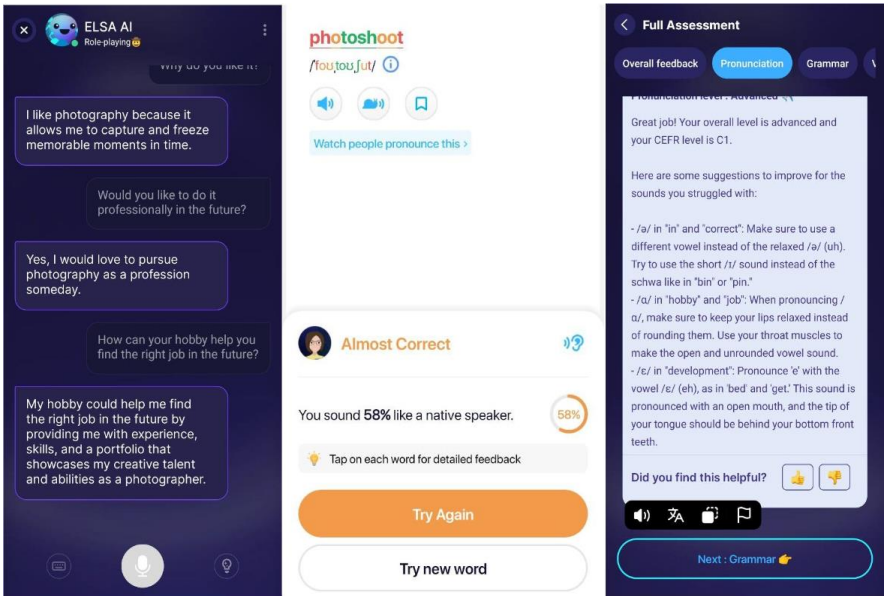
Figure 1. An example of using the Grammarly tool for checking a writing passage

The course participants mastered this tool for checking written work in 4 categories: correctness, clarity, engagement, and delivery. Each of the categories provided explanations for the existing error and gave options for its correction, which helped teachers cope with checking written work in the shortest possible time and allowed further improvement of their students' writing skills.

Practical case 2

Given the constraints of limited lesson time and the absence of an authentic language environment for many students, teachers face the challenge of effectively developing and assessing the speaking skills of all students within a single lesson (Figure 2).

Figure 2. An example of using the ELZA application for developing speaking skills



The ELSA application generated significant interest among educators due to its ability to facilitate interactive dialogues with the English Language Speech Assistant. In addition to enabling conversations, the application also evaluated pronunciation, use of contextual vocabulary, and grammatical constructions, and provided an overall assessment of speaking skills within the specific practice topic of 'Hobby' (The example of the topic was taken from the book ‘Excel for Kazakhstan’, grade 9, module 1).

1. Daily lessons: the application contains ready-made lessons that you can choose based on the topic the user needs to master. The topics to choose from include ‘Basic’, ‘Lifestyle’, ‘Education’, ‘Self Introduction’, etc. Talking about hobbies, the participants chose the option ‘Create your scenario’ to talk about photoshooting because the daily lesson for this topic was limited.
2. Checking the pronunciation: the ELZA application featured an option ‘Pronunciation’, that allowed the user to listen to words at normal and slow speeds and record their pronunciation of the word, after which course participants could see how accurately they had pronounced the word ‘photoshoot’.
3. Practice speaking skills with Elza AI Speech Assistant: Using the function of communication with the language assistant, the course participants were able not only to build a dialogue with full recognition of their speech but also it helped them to receive precise and correct answers to the questions asked.

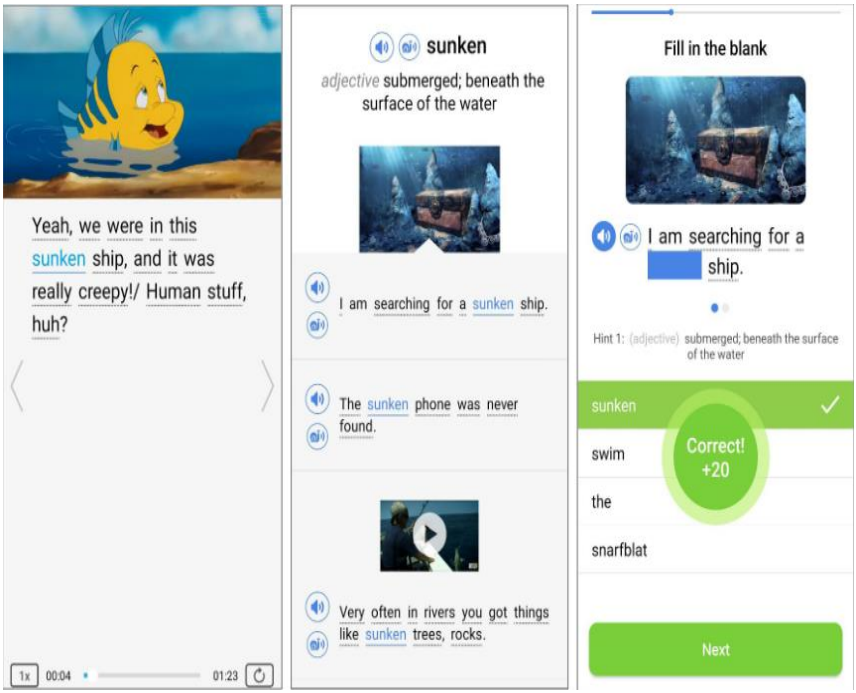
4. Giving feedback: following the completion of the voice session with the English Language Speech Assistant, the course participants were given feedback. The assessment was conducted in three main categories: pronunciation, grammar, and vocabulary, and the app also gave overall feedback on the user's speaking skills, including relevant and engaging responses, clear and fluent language, using the right tone (Figure 2).

The ELZA application offers a wide range of pre-designed lessons and the option to generate new dialogues using artificial intelligence. However, educators have highlighted certain drawbacks alongside the benefits, with the primary concern being the absence of a British accent. This limitation restricts the application's utility, particularly in educational settings where students are taught British English pronunciation.

Practical case 3

The FluentU application was an innovative language application for improving listening comprehension in the target language, the peculiarity of which is that it includes only authentic video materials. The application allows users to watch short videos at a time and learn new words without leaving the FluentU application (Figure 3).

Figure 3. An example of using the FluentU application for developing listening comprehension



The course participants learned the main functions of the FluentU application:

1. Interactive subtitles: This ability to work with new words without using other third-party services and dictionaries was a clear advantage for teachers. It was also helpful to learn the meaning of an unknown word without stopping watching and add it to the dictionary for further study.

2. Comprehension quizzes: After watching a short video fragment, users were asked to take a quiz to check how precise the fragment was and whether any points were worth paying attention to and watching the video again. Quizzes might be in the form of multiple-choice questions or filling in the blanks.

3. Progress tracking: After completing the quiz and working with words, the app shows the results for the completed quiz and the day. There is also a Teacher dashboard option, which allows the teacher to track students' progress individually, which will allow him to adjust the learning trajectory and help students fill in their gaps in grammar or vocabulary when learning English.

After working on the sub-module on developing listening skills using applications, the course participants noted that the FluentU application was the easiest to use technically and the most effective due to its use of actual-world videos combined with an interactive system of tasks. This application allowed teachers to become familiar with a wide range of different video formats, which ultimately proved helpful in developing listening skills, expanding vocabulary, and becoming familiar with different English accents from around the world.
Two tests were conducted to obtain reliable data based on the experiment results to determine secondary school teachers' awareness of AI and its potential in the educational process. These tests were provided both before and after the commencement of the group's training.
Participants completed questionnaires designed to assess the training materials' quality and utility and provide feedback on their effectiveness and relevance in real-world teaching practice.

Practical tips for teachers on how to incorporate AI tools into their classrooms effectively

Feedback from the trainees during the practical sessions and the questionnaire results also confirmed the importance of individual attention and constructive feedback to improve professional skills. Most participants recognized the potential of AI in education, which can improve the process of learning a foreign language when used rationally. Based on the results, we have developed practical recommendations for using AI tools to help teachers effectively integrate modern technologies into traditional educational processes. We hope the study of specific tips for using AI services to develop student's language skills, mainly writing, speaking, and listening, can help practice teachers when implementing an eclectic approach and building a unique pedagogical trajectory for teaching a foreign language.

Writing tips using Grammarly as an example:

1. Multiple edits based on feedback: Grammarly provides instant feedback on students' writing, with recommendations for improving grammar, style, and structure. This helps them not only to get the text grammatically correct but also, within an eclectic approach, students will be able to develop self-editing skills by learning through their mistakes. This is available for students with all levels of language proficiency.

2. Adapted recommendations: This service allows for selecting the correct words and phrases in the context of a particular writing style. By adapting the recommendations depending on the context, Grammarly allows students not only to improve their overall writing skills but also to practice different writing styles, especially these options will be helpful when working on academic essays. This is available for students with higher levels of language proficiency.

3. Personalized exercises: Working with this service, students receive individual advice on improving their writing style and can receive personalized tasks on request to develop the ability to use a foreign language in writing flexibly. For example, Grammarly can provide tasks to practice writing a specific type of essay, such as description, narration, etc. This is available for students with all levels of language proficiency.

Speaking tips using ELZA AI as an example:

1. Role plays: Implementing the communicative approach, ELZAAI can create simulated role-playing dialogues based on real-life situations. By receiving feedback on pronunciation, grammatical errors, and intonations in real time, students can adjust them individually according to their needs and the level of the students. This is available for students with all levels of language proficiency.

2. Structured exercises: To practice speech fluency, the service can develop structured exercises based on previously studied topics (for example, describe your past weekend). This allows students to review previously studied topics, overcome communication barriers, and develop confidence in speaking a foreign language. This is available for students with all levels of language proficiency.

3. Interactive discussions and debates: Organising discussions and debates using AI technologies allows students to improve their speaking skills, critical thinking skills, and creativity. By asking new questions, ELSA AI helps maintain a conversation, encouraging students to give more detailed answers or find the most appropriate arguments. This is available for students with higher levels of language proficiency.

Listening tips using FluentU as an example:

1. Combining authentic materials and interactive exercises: The FluentU application promotes effective integration of the audiolingual approach in developing students' listening skills. Listening to accurate, authentic materials (e.g., fragments of films, shows, news clips, etc.) allows students to immerse themselves in the language environment as much as possible and to test the understanding of the audio fragment listened to; the application provides interactive tasks (e.g., multiple-choice questions, filling in the gaps).

2. Repeated listening: Based on the immersion method, this application provides the opportunity to listen to the same audio fragment multiple times, which, while maintaining an eclectic approach, helps students develop attention to detail and also helps them remember the correct

pronunciation of words in a foreign language. This helps to identify weak points in listening comprehension and work on them individually for each student.

3. Analysis of audio materials: With FluentU, students can analyze the most complex phrases and expressions heard by actively working on new vocabulary and grammatical structures. Gradually developing active listening skills, students will automatically be offered audio materials that match their language proficiency, which can motivate them to listen to more complex materials as they progress.

Data analysis tools

A survey administration software, Google Forms, was used to collect the pre-and post-test results of the participants. An advanced analytics software, STATISTICA 12.6, was operated for descriptive analysis and data visualization procedures.

Ethical issues

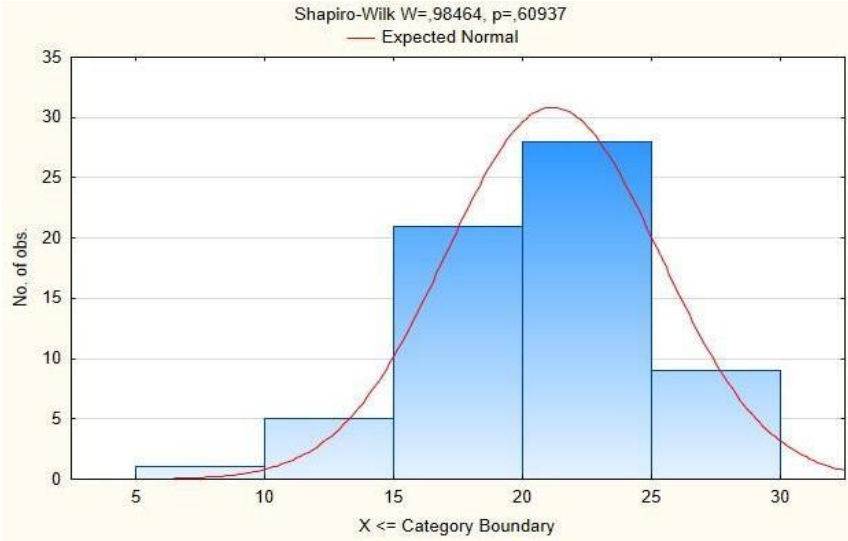
This research was held with a commitment to upholding ethical standards throughout the study process. Before participation, all subjects were provided comprehensive information about the study's objective, tasks, procedures, potential difficulties, and benefits. Efforts were made to ensure a diverse and representative sample. Data were collected and analyzed accurately, and the findings were reported honestly. Any potential conflicts of interest were disclosed.

Findings

Given that the experiment involved a single group of teachers and assessments were conducted both before and after the course, it was appropriate in our study to utilize the Student's T-test for independent samples. For reliable data analysis, it was essential to assess the normality of the data within the study group, which involves evaluating how well the sample of subjects conforms to a normal distribution by the Shapiro–Wilk test (Shapiro, Wilk, 1965).

The frequency histogram's curve accurately represents the observed data, as evidenced by the Shapiro–Wilk test, which yielded a significance level of 0.60937, exceeding the threshold of 0.05. Consequently, we can conclude that the hypothesis of normality is not rejected. The variance analysis was performed using Levene's test, which indicates a significance level of 0.33, which exceeds the threshold value of 0.05 (Levene, 1960). This result confirms that the variances in subgroups (pre-test and post-test) are homogeneous.

The significance level of the t-test is 0.04, which is below the threshold of 0.05. Therefore, we concluded that the factor examined in this test emphasized an impact on outcomes. Specifically, the training provided in the course enabled participants to acquire theoretical knowledge and practical skills in utilizing AI for teaching English (Figure 4).



Structured curriculum and practical activities were indicated as successful in bridging the gap between theoretical understanding and practical application, thus enhancing the overall teaching efficacy of the participants. The findings substantiated that collaboration with educators during online seminars yielded favourable outcomes while revealing certain challenges (Figure 5).

Figure 5. The results of the Student's T-test for independent samples

Group 1: Pre-test **Group 2: Post-test**	**T-tests**
	Answers
Variable	
Mean Pre	20.15625
Mean Post	22.18750
t-value	-2.00999
df	62.00000
p	0.048788
Valid N Pre	32
Valid N Post	32
Std. Dev. Pre	4.414853
Std. Dev. Post	3.631737
F-ratio Variences	1.477759
p Variances	0.282339
Levene F(1,df)	0.934710
df Levene	62
p Levene	0.33740

Furthermore, analysis of the course programme results shows a significant increase in students' academic achievements and an improvement in the overall effectiveness of learning. The qualitative study includes an assessment of teachers' satisfaction with new technologies, their willingness to integrate AI into daily practice, and perceptions of changes in the educational environment.

Discussion

Despite the extensive array of available educational resources, it has become a new requirement for secondary school teachers to explore and integrate AI tools into the English language teaching process and engage with current trends in pedagogical practices.

After completing Module 1, participants have gained a comprehensive understanding of AI-enhanced education, its fundamental basis, principles, and essential requirements, which are directly relevant to English language teaching. The module addressed multifaceted dimensions, including pedagogical, psychological, technical, social, and ethical considerations, preparing the teachers for AI-enhanced teaching practices (Pedro et al., 2019).

By mastering AI literacy in Module 2, secondary school teachers will provide their students with a personalized approach with targeted support at just the right time (Luckin et al., 2016). Participants were familiarised with learner-facing, teacher-facing, and system-facing AI technologies and systems (Pokrivčáková, 2019). This approach not only facilitated the acquisition of new knowledge using an appropriate AI system but also aided in identifying individual knowledge gaps and recommending effective strategies to fill them.

To enhance the effectiveness of training in Module 3, chatbots and AI tutors were selected based on the following criteria:

1. *Language proficiency:*
- The selected chatbots should have a high level of English proficiency and present content ranked at different levels of language complexity to cover the needs of secondary school students with varying degrees of English proficiency.
2. *Pedagogical alignment:*
- The capabilities of chatbots should align with the principles of ELT methodology and follow curriculum objectives, while also facilitating the development of all language skills (speaking, listening, writing).
3. *Interactivity*:
- To maintain student interest and motivation in the subject chatbots should offer interactive and engaging activities.
4. *Feedback and assessment:*
- Tracking progress and constructive feedback should be provided on students' performance helping them understand their mistakes and learn with them.
5. *Technical reliability:*
- Chatbots should be technically reliable and compatible with various devices, commonly used in educational settings.
6. *Data privacy and security:*
- The chatbot should comply with data privacy control to protect students' personal information.
7. *Accessibility:*
- Chatbots should be free and accessible to a wide range of educational institutions.

The actual chatbots - ChatGPT, TalkPal, and Languate - were chosen as platforms for innovative learning experiences by focusing on practice and real-life scenarios.

During Module 4 participants made lesson plans including chatbots for improving students' language skills as well as expanding their vocabulary and grammar awareness. Additionally, within the practical sessions with selected chatbots, participants were engaged in discussions regarding prerequisites for secondary school students to independently interact with AI tutors. It was essential to introduce students

to guidelines for further learning experiences facilitating their particular goal settings without the teacher's assistance (Hew et al., 2023).

The final module was devoted to discussing the benefits, challenges and prospects of using AI in English language classes. The study group could identify benefits that might help them in teaching, such as immediate feedback, a student-centred approach, availability, and reduced workload. It seems AI chatbots are aimed only at improving the quality of the educational process and reducing the teacher's workload, as they can create lesson plans, educational materials, and scenarios for extracurricular activities (Frances et al., 2023).

Following an evaluation of each module of an English Language Qualification Course, the following conclusions can be drawn:

1. Module "Introduction to Artificial Intelligence in Education":
- Based on the results of the analysis of test items and the practical application of knowledge, this module was effective. Teachers better understand the basic concepts and principles of artificial intelligence in education.
2. Module "Tools and Applications for English Language Learning with AI":
- Based on the results of the survey of participants, the module was useful, but more detailed practical examples of implementing tools could be provided to increase efficiency.
3. Module "Methodological approaches to the integration of AI in the educational process":
- Based on the results of monitoring the teachers' lessons, their methodical level has improved significantly after passing this module.
4. Module "Development of educational and methodical content using AI":
- Analysis of teachers' educational materials showed their high quality and successful use in the classroom.
5. Module "Practical exercises and feedback":
- Based on the results of the survey and analysis of practical exercises, feedback from experienced teachers played an important role in improving the quality of training.

Thus, the course programme has successfully improved the qualifications of English teachers. However, improvements could be proposed in the module to provide practical examples of the use of tools and to develop training content using AI. Based on the participants' feedback and analysis, adjustments can be made to the course programme to ensure greater learning effectiveness.

As a result of the evaluation of each module of an English Language Qualification Course, the program has had a significant positive impact on the professional development of the participants. Modules such as "Introduction to Artificial Intelligence in Education" and "Methodical Approaches to Integrating AI into the Learning Process" were particularly effective and helped teachers better understand the principles and practical application of artificial intelligence in the learning environment.

Nevertheless, the results showed that the module "Tools and Applications for English Language Learning with AI" required improvement in providing more detailed practical examples of the use of tools. It is also worth noting the success of the module "Development of educational and methodical content with the use of AI," where teachers demonstrated the high quality of the created educational materials.

Our research study demonstrates the strengths and weaknesses of the eclectic approach using AI combinations:

Strengths of Eclecticism in the Context of AI-Powered Teaching

1. Flexibility: Because eclecticism is inherently flexible, educators can swiftly change course and modify their approaches in response to data that artificial intelligence provides.

2. Diverse Learning Strategies: An eclectic approach promotes using various AI-enhanced communicative, task-based, and structural learning strategies.

3. Promotes Autonomy: With AI assistance, students can use technology independently, investigate various sources, and guide their learning.

Weaknesses of Eclecticism in the Context of AI-Powered Teaching

1. Over-reliance on Technology: Teachers' professional judgment may be compromised if they depend too much on AI tools to decide on educational courses.

2. Lack of Focus: When dealing with various AI systems, an eclectic approach may occasionally need coherence or organization, making it easier for learners to follow a consistent learning trajectory with clear guidance.

3. Variability in Implementation: Ineffective educators may unevenly apply eclecticism, producing a range of learning outcomes that can make integrating AI analytics more challenging.

We can state the following from a critical perspective on eclectism in the context of AI-powered instruction: Although AI has many benefits in eclectic language instruction, it is essential to keep a balanced perspective. Weighing the benefits of individualized learning, adaptability, and diversity of approaches against the drawbacks of over-reliance on technology, possible inconsistency in paradigm application, and difficulties with successful implementation is necessary.

Combining eclecticism and AI in language instruction has enormous potential to advance instructional approaches. To create a productive and fulfilling language learning environment, instructors must carefully traverse its complexities and strike a balance between the use of technology and pedagogical principles. Subsequent investigations may explore particular case studies where AI and eclectic approaches have worked well together, offering models for optimal outcomes.

From our point of view, one compelling example of an eclectic approach combined with AI in teaching English as a Foreign Language (EFL) in Kazakhstan can be found in the case study of a digital language learning platform called "Duolingo."

The guidelines for EFL teachers in using AI with the combination of an eclectic approach

We present several valuable recommendations for educators based on your experience in integrating an eclectic methodology with AI-enhanced instruction within English as a foreign language classroom. Below are practical and actionable suggestions for your consideration:

- Examination and personalization of requirements:

- Personalised Learning Profiles: Identify each student's unique needs, interests, and skill levels. Employ AI techniques, such as language assessment platforms, to collect relevant data.

- Define Goals: Collaborate with students to set precise, personalized learning objectives focused on their speaking, vocabulary, grammar, and pronunciation abilities.

- Utilize a Variety of Teaching Methods:

- Task-Based Learning: Employ AI-generated exercises that replicate verbal situations encountered in daily life. Prompts generated by AI can aid in fostering group discussions or engaging in role-playing activities.

- Content-Based Instruction: Incorporate topics of interest, such as science, to facilitate teaching grammar and vocabulary within a contextual framework.

- Tools for Artificial Intelligence Based on Language:

- Speech Recognition Software: Employ artificial intelligence methodologies to enhance pronunciation skills. Applications like Google Speech Recognition provide immediate feedback on pronunciation.
- Chatbots and Virtual Assistants: Facilitate student interaction through AI chatbots, such as ChatGPT, to enhance communication skills. This approach may reduce anxiety and increase confidence.

- Exercises for Enhancing Vocabulary:
  - Contextual Words and Phrases: Employ AI algorithms to generate customized vocabulary lists for students, tailored to their interests and frequently utilized terminology in daily contexts. Gamification: Utilise AI-driven language quizzes and games to facilitate engaging and enjoyable vocabulary acquisition for students.
- Grammar Practice: Adaptive Learning Platforms:
  - Employing AI-driven grammar correction tools, such as Grammarly, offers students tailored feedback on their writing tasks, enabling them to practice their skills audibly.
  - Grammar Exercises with Interactivity: Assist learners through assessments and tasks generated by computers, which adjust to their learning styles, offering explanations and examples as required.
- Training in Pronunciation:
  - Phonetic Resources: Employ artificial intelligence to develop customized pronunciation exercises that focus on the intonation patterns and sounds that pose challenges for students.
  - Auditory Engagement and Emulation: Provide students access to audio samples generated by AI, which they can replicate. This may involve articulating in diverse accents and pronunciations.
- Feedback and reflection:
  - Documentation and Review: Employ artificial intelligence methods to document student speaking exercises. In playback sessions, students can listen to their progress and recognize areas that require enhancement.
  - Peer Review: Employing AI-generated criteria as a framework, identify avenues for students to provide constructive feedback on one another's speeches and presentations.
- Symbolic and Asynchronous Education: using symbols and learning at different times:
  - Blending Learning Environments: Mix online and in-person teaching using AI technologies. Please encourage students to practice talking to AI when fewer people use it.
  - Discussion forums are a good way for students to work on their vocabulary and speaking skills by writing before speaking. Debates can happen at different times using AI technology.
- Everyday Life and Cultural Background:
  - Exchanging cultures: AI can help students talk with native English speakers online. This will give students actual practice speaking English.
  - Practical Simulations: Make simulations with AI that help students practice speaking English in everyday situations like ordering food, scheduling appointments, or trading goods.
- Continuous Professional Development:
  - It refers to the ongoing learning and improving skills in your chosen field. It involves staying up-to-date with new developments, attending training programs, and seeking growth opportunities to enhance your expertise and advance your career.

- Keep informed: Join online groups and participate.
- Continuing to learn and improve in your profession.
- Keep yourself informed: Regularly participate in online communities and use resources to share your experiences and discover new ideas for including AI in different educational beliefs.
- Consider how well your methods work and ask your students for feedback to keep improving.

By combining traditional teaching methods with artificial intelligence (AI) tools, you can make a lively learning space that helps you improve your speaking vocabulary, grammar, and pronunciation. Remember that students may need different things as they grow, so be ready to adjust and change.

Ethical issues of using AI tools

Even though the English Language Teacher Development Programme has proven its value and success, given the participants' feedback, make some recommendations for further course improvement and minimize possible risks when working with AI technologies. Therefore, it is necessary to follow specific rules related to ethical issues.

Privacy and data security:

While working with AI-powered applications and tools, course participants had questions about personal data privacy and security. The need for more transparency in collecting and processing personal data has made teachers wary of using these types of tools. Suppose parents of schoolchildren or school management must be adequately informed about the dangers of using AI technologies. In that case, this may entail serious consequences, including hacking and unauthorized access to students' data. In this case, we suggest school management discuss the correct and safe use of AI technologies with parents and students and refrain from providing personal data from unverified and unreliable sources.

Bias:

Imperfections in AI algorithms can lead to bias in the data on which these algorithms are trained. For example, biased algorithms can be based on more stereotypes based on various characteristics (gender, race, religion, etc.), which will lead to an incorrect or unfair result. This can cause harm to users of these services, so it is necessary to have human assistance and, in the event of such a problem, resort to solving it at 'the human-to-human level.'

Responsibility

AI in the educational process most often occurs to check and determine students' grades. However, AI technologies do not always correctly assess students' work, leading to decreased academic performance. Systematic inaccuracies in the work of AI technology can contribute to a complete decrease in motivation to study. In this case, it is also undesirable to completely shift the responsibility for assessing work to technology; teacher supervision and rechecking the results obtained after the AI check are necessary. This will reduce cases of erroneous results, which may result in responsibility for getting out of the current situation.

Quality:

The quality of education should not suffer due to the use of new AI technologies. When measuring only quantitative indicators, this technology cannot distinguish qualitative components. After all, AI algorithms can miss the manifestation of creative, critical, or systemic thinking. In this case, it seems possible for the teacher to

describe the assessment criteria for the AI algorithm in more detail, which may reduce the number of incorrectly obtained results.

Ethical Use of AI-Generated Content:
The core problem that has already arisen today is the issue of students' academic honesty when working with AI tools. Teachers have already seen many essays and reports created by AI, but students assure them of the originality of these works. To solve this problem, first, it is necessary to familiarize students with the rules of academic honesty and implement a system for checking all written works for uniqueness, which can motivate students to create original content.

Conclusion
The English Language Teacher Development Programme, developed using an eclectic approach and integrating artificial intelligence, is an essential step in the development of modern education. It not only helps teachers to master new technologies but also contributes to improving the quality of teaching and achieving high results in learning English. This experience has led to new approaches to language teaching that can be adapted to other educational contexts.
A specialized framework tailored to integrating artificial intelligence in English language teaching (ELT) may be necessary to address language acquisition's unique demands and potential challenges (Emmett et al., 2023). Such a framework could guide the selection, implementation, and ethical use of AI-driven tools in language education settings, fostering a more effective and ethically sound learning environment for teachers and students.

Thus, the course's developed curriculum demonstrates the importance of integrating modern technologies into the educational process and emphasizes the need for teachers' continuous professional development to adapt successfully to new educational realities.

In summary, our research provides the following suggestions from our study:

1. The study shows that the learning material created effectively improved English teachers' skills. It provided access to innovative teaching methods and technologies, supporting their professional development.
2. The research confirms the potential of artificial intelligence in teaching English as a foreign language and integrates AI offers such as adapting learning materials, immediate feedback, and improved analytical capabilities.
3. We advise further research into tailoring learning material for diverse educator groups, including those of different ages and expertise degrees. A deeper exploration of teachers' challenges when using AI in their teaching practices is needed.

Challenges and Prospects

The need to introduce artificial intelligence into the educational process is accompanied by challenges, such as ensuring the confidentiality of students' data and adapting technologies to different learning contexts. However, the potential of AI in modern education is enormous and requires further research and development.
In conclusion, our study emphasizes the importance of developing and utilizing advanced technologies, such as artificial intelligence, in education. This effort contributes to raising the quality of education and preparing educators to address modern challenges and opportunities.

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Zada Kemelbekova
Candidate of philological sciences, associate professor
Abai Kazakh National Pedagogical University, Institute of Philology
Department of Foreign Languages
Dostyk Ave., 13, 050010, Almaty
Republic of Kazakhstan
z.kemelbekova@abaiuniversity.edu.kz
ORCID: 0000-0003-1103-9982

Guldana Seidaliyeva, PhD, acting associate professor
Abai Kazakh National Pedagogical University
nstitute of Philology,
Department of Foreign Languages
Dostyk Ave., 13, 050010, Almaty
Republic of Kazakhstan
g.seidalieva@abaiuniversity.edu.kz
ORCID: 0000-0002-4448-2414

Xeniya Degtyareva
Abai Kazakh National Pedagogical University
Institute of Philology,
Department of Foreign Languages
Dostyk Ave., 13, 050010, Almaty
Republic of Kazakhstan
k.degtyareva@abaiuniversity.edu.kz
ORCID: 0000-0001-6349-5213

Saule Yessenaman
Abai Kazakh National Pedagogical University
Institute of Philology,
Department of Foreign Languages
Dostyk Ave., 13, 050010, Almaty
Republic of Kazakhstan
s.esenaman@abaiuniversity.edu.kz
ORCID: 0000-0003-0382-3419

Appendix Table 1 - Demographic characteristics of the participants

Teacher code	Gender	Age	Work experience (number of years)
T1	Female	25	0-5 years
T2	Female	48	11-15 years
T3	Female	52	16 and above
T4	Female	38	11-15 years
T5	Female	35	6-10 years
T6	Female	29	0-5 years
T7	Female	55	11-15 years
T8	Female	50	11-15 years
T9	Female	43	11-15 years
T10	Female	44	11-15 years
T11	Female	32	6-10 years
T12	Female	36	11-15 years
T13	Female	30	6-10 years
T14	Female	24	0-5 years
T15	Female	51	11-15 years
T16	Male	57	16 and above
T17	Female	43	11-15 years
T18	Female	49	11-15 years
T19	Female	46	16 and above
T20	Female	33	6-10 years
T21	Female	47	16 and above
T22	Female	38	6-10 years
T23	Female	27	0-5 years
T24	Female	33	6-10 years
T25	Female	45	16 and above
T26	Male	40	11-15 years
T27	Female	36	6-10 years
T28	Female	26	0-5 years
T29	Female	53	16 and above
T30	Female	54	16 and above
T31	Female	47	16 and above
T32	Female	41	16 and above