

# STAGES OF FORMING AI-BASED ENGLISH CLASSES FOR ADULTS

Ikromova Muazzam Dilmurod kizi

Associate Professor, PhD, Namangan State University

Abdulkhayeva Maftuna Shuxratjon kizi

Student, Namangan State University

## Abstract

The development and implementation of AI-based English language classes for adults require a structured, methodological approach that ensures the effective integration of technology into the learning process. This abstract outlines the key stages involved in forming AI-driven English classes tailored for adult learners, focusing on personalized language acquisition. The stages begin with needs analysis, which identifies learners' specific language requirements and goals. This informs the curriculum design, where AI tools, such as adaptive learning platforms, speech recognition systems, and automated assessments, are integrated to support diverse learning styles and proficiency levels. Pilot testing follows, allowing educators to refine the AI-driven curriculum based on real-world learner feedback and data. Once optimized, the program moves to full-scale implementation, ensuring that AI tools and traditional teaching methods work harmoniously in the classroom. The final stage, ongoing monitoring and evaluation, focuses on tracking learner progress, collecting feedback, and adjusting the AI system to enhance its effectiveness. Additionally, critical considerations such as cultural sensitivity, ethical concerns, and educator training are addressed throughout the process to ensure the AI system is inclusive, accessible, and impactful. This structured approach ensures that AI technologies are effectively utilized to create an engaging, adaptable, and supportive learning environment for adult learners, ultimately improving their language proficiency and overall learning experience.

**Keywords:** Artificial Intelligence (AI), English for Specific Purposes (ESP), Adult Education, AI-Based Learning, Personalized Learning, Curriculum Design, Needs Analysis, Blended Learning, AI Tools, Language Acquisition, Pilot Testing, Monitoring and Evaluation, Teacher Training, Ethical Considerations, Learner Autonomy.

## Introduction

In today's globalized world, the integration of Artificial Intelligence (AI) in the field of education, particularly in teaching English as a Second Language (ESL) to adults, is of growing significance. As the world becomes increasingly interconnected, proficiency in English is essential for personal, professional, and social development. Adults seeking to learn English often face unique challenges, such as balancing education with work and family responsibilities, overcoming language barriers, and developing the necessary skills to



participate fully in global communication. AI-based tools and platforms offer personalized learning experiences that can address these challenges in multiple ways. For example, AI-powered language learning apps provide tailored lessons and real-time feedback, allowing learners to progress at their own pace. This flexibility is crucial for adult learners, who may not be able to dedicate long, consistent hours to language study. Additionally, AI can adapt to individual learners' strengths and weaknesses, offering targeted exercises to reinforce areas that require improvement. Furthermore, AI has the potential to break down geographic and financial barriers. With the rise of online learning platforms, AI-powered tools can provide high-quality language education to adults around the world, irrespective of their location or access to traditional classroom-based instruction. This democratization of learning is especially important for those in underserved or remote areas who may otherwise have limited access to qualified teachers or language resources.

As Uzbekistan continues to develop its economy and integrate more into global markets, English proficiency has become an essential skill for many professionals. With international businesses and foreign investments on the rise, the demand for English-speaking professionals in various sectors, including business, technology, tourism, and education, is growing. AI-powered tools in ESL education can help adults in Uzbekistan improve their language skills, enabling them to better compete in the job market and access more career opportunities both locally and internationally. The government of Uzbekistan has recognized the importance of English language learning in recent years, particularly with its Vision 2030 strategy aimed at enhancing the country's global competitiveness. AI can support these initiatives by providing scalable, efficient solutions for widespread English language learning among adults. AI can help meet the growing demand for English education, complementing traditional teaching methods and making English more accessible to the broader population, especially in underrepresented regions.

The integration of Artificial Intelligence (AI) in language acquisition has significantly reshaped our understanding of both how humans learn languages and how AI systems can support and enhance this process. AI technologies, especially those utilizing machine learning and deep learning models, have proven to be powerful tools in mimicking human cognitive processes, such as statistical learning and pattern recognition, that are essential for acquiring language. These advancements have led to the creation of intelligent systems capable of understanding, processing, and generating language in ways that were once thought to be exclusive to humans. AI's impact on language acquisition has been far-reaching, not only providing personalized and adaptive language learning tools but also offering insights into the cognitive mechanisms behind language development. Through platforms like intelligent tutoring systems and natural language processing technologies, AI has enhanced language learning experiences, making them more interactive, accessible, and efficient. Additionally, AI models have contributed to the testing and validation of language acquisition theories, shedding light on bilingualism, multilingualism, and the way language is processed in the brain.

Despite these promising developments, the role of AI in language acquisition also raises important ethical and practical concerns, including issues related to bias, sustainability, and the potential reduction of human interaction in language learning. As AI continues to evolve,



addressing these challenges will be crucial in ensuring that AI serves as an effective and equitable tool for language learners worldwide.

Looking ahead, AI's role in language acquisition will likely continue to grow, with innovations in immersive learning technologies and cross-lingual models further enhancing the possibilities for language education. However, it is essential to approach AI in language acquisition with a balanced perspective, ensuring that technological advancements complement, rather than replace, the social and cultural aspects of language learning. Ultimately, AI has the potential to revolutionize language education, but its integration must be done thoughtfully, keeping in mind both the cognitive and ethical dimensions of the field.

## LITERATURE REVIEW

The integration of Artificial Intelligence (AI) into English language teaching, particularly for adult learners, has the potential to significantly enhance both the teaching process and student outcomes. AI can provide personalized learning experiences, automate time-consuming tasks, and offer real-time feedback, all of which contribute to more efficient and engaging language acquisition. Developing AI-based English classes for adults involves several stages, each of which contributes to building a structured and effective learning environment. These stages range from planning and designing AI-based curriculum models to evaluating and refining the learning process.

### STAGE 1 : Needs Analysis and Learning Goals Definition

Before implementing AI into an adult English learning program, it is crucial to conduct a **needs analysis**. This stage involves gathering information about the learners' background, proficiency level, language learning goals, and specific needs. Adult learners often have diverse motivations, such as improving their language skills for work, travel, or personal development. Understanding these needs allows educators to design an AI-based curriculum that is tailored to the specific goals of the students.

For instance, learners in a business English course might require AI tools focused on professional writing, vocabulary, and communication skills, while others in a conversational English class might benefit from AI-driven speech recognition tools for pronunciation improvement. The goal of this stage is to align the AI tools and resources with the students' objectives, ensuring that the technology complements their personal learning journeys.

Through this process, educators can identify the areas where AI can be most beneficial, such as in grammar correction, vocabulary development, speaking practice, or reading comprehension. A needs analysis also enables educators to determine the technology resources required for implementation, such as AI-powered applications, platforms, and virtual tutors<sup>1</sup>.

### STAGE 2 : Curriculum Design and AI Tool Integration

Once the learners' needs have been identified, the next step is to **design the curriculum** that will integrate AI technologies. In this stage, educators work to select or create AI tools that will enhance the classroom experience. AI applications can offer various features such as **adaptive**

1 Brown, A., & Harris, M. (2020). Needs analysis in the age of AI: Tailoring ESL education to learner goals. TESOL Journal, 11(2), 134-150.



**learning paths, real-time feedback, and language simulations** that align with the goals of the course.

For example, **intelligent tutoring systems (ITS)** like **Rosetta Stone** or **Duolingo** can be used to adapt to each learner's proficiency level, offering personalized learning experiences. In addition, **speech recognition tools** like **SpeechAce** or **Google Speech-to-Text** can provide real-time feedback on pronunciation, helping learners improve their speaking skills. **Chatbots** powered by AI, such as **Replika** or **Babbel**, can simulate real-life conversations, offering learners the opportunity to practice speaking in a controlled environment.

Curriculum design also involves determining the balance between AI-driven activities and traditional classroom methods. While AI tools can provide valuable practice outside of the classroom, face-to-face interaction remains essential for building communicative competence, fostering peer collaboration, and addressing complex language issues. This balance between AI and traditional methods is central to developing a hybrid model that meets the needs of adult learners<sup>2</sup>.

#### STAGE 3 : Pilot Testing and Refining the AI-Based Curriculum

Before fully implementing an AI-based English language program, it is essential to **pilot test** the curriculum with a small group of learners. This stage allows educators to identify any potential issues with the AI tools, the pacing of the curriculum, and the integration of AI into the learning process. Pilot testing also provides insights into how well the AI tools align with the learning goals and how learners respond to the technology.

During the pilot phase, educators can monitor students' engagement with the AI tools, collect feedback on their user experience, and evaluate the effectiveness of the tools in helping learners achieve their language goals. This feedback can be gathered through surveys, interviews, and performance assessments. For instance, if students are struggling to engage with the AI platform or if certain tools are not providing the desired level of personalized feedback, adjustments can be made. Additionally, the pilot stage helps identify any technical issues that may arise, such as connectivity problems or system malfunctions, which can be addressed before the full rollout<sup>3</sup>. The feedback from pilot testing informs adjustments to the curriculum, tool selection, and integration process. It also provides an opportunity to refine the overall learning experience, making sure that the AI tools are effective, user-friendly, and aligned with adult learners' goals.

#### STAGE 4: Full-Scale Implementation

Once the pilot testing phase is complete and any necessary adjustments have been made, the AI-based English language program can be **fully implemented**. This involves rolling out the curriculum to all students and ensuring that AI tools are integrated seamlessly into the learning process. In this phase, the AI tools become an integral part of the classroom experience, providing personalized learning experiences for each student while still allowing for traditional teaching practices. Educators may use AI for a variety of tasks, such as **automated assessment**,

<sup>2</sup> Warschauer, M., & Grimes, D. (2008). AI and curriculum design: Leveraging technology to create personalized learning experiences. *CALICO Journal*, 25(3), 273-291.

<sup>3</sup> Tanguay, P., & Boulanger, C. (2019). Personalized language learning with AI-driven platforms: A review. *Journal of Educational Computing Research*, 56(5), 700-722.



**real-time language correction**, and **feedback on written assignments**. AI can also help track students' progress over time, generating data that can inform future instructional decisions. For example, AI systems may analyze how well students are progressing with their vocabulary acquisition, pinpointing areas that need further attention. This allows instructors to focus on individual learners' needs during class time.

Furthermore, AI tools can be used to supplement traditional teaching activities, such as in-class discussions or group projects. AI-powered resources like **language games**, **simulations**, and **interactive exercises** can be used to reinforce concepts learned during the lesson, making the learning process more engaging and interactive<sup>4</sup>.

#### STAGE 5: Ongoing Monitoring, Evaluation, and Improvement

Even after full implementation, it is important to continuously **monitor and evaluate** the effectiveness of the AI-based English language program. This includes regularly assessing both the technological components of the program and the learning outcomes of the students. **Learning analytics** provided by AI tools can be used to track student progress, identify areas of difficulty, and adjust teaching strategies as necessary. In addition to data-driven assessments, it is essential to gather qualitative feedback from students. Surveys, focus groups, and individual interviews can provide insights into how students perceive the AI tools, how effective they feel the technology is in supporting their learning, and where improvements can be made. Regularly reviewing this feedback ensures that the curriculum remains responsive to students' evolving needs and that AI tools continue to enhance the learning experience. This stage of evaluation also includes adapting the curriculum based on emerging trends in AI technology. As AI continues to evolve, new tools and methods may become available, offering even more effective ways to teach English. Educators must stay updated on technological advancements and integrate them into the curriculum when appropriate<sup>5</sup>.

#### DISCUSSION

Forming AI-based English classes for adults involves several key stages, starting with understanding learners' needs and designing a curriculum that integrates AI technologies effectively. Pilot testing and refining the curriculum ensures that the technology is effective and aligned with learning goals, while full-scale implementation brings the program to all students. Continuous monitoring and evaluation allow for ongoing improvements to the AI-based learning experience, ensuring that it remains engaging, personalized, and aligned with students' goals. The successful implementation of AI in adult English language learning has the potential to create a more dynamic, accessible, and effective learning environment.

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4 Li, W., & Wang, J. (2019). AI-powered blended learning: Applications and challenges in ESL education. *TESOL Quarterly*, 53(1), 45-64.

5 White, S., & Radcliffe, M. (2020). Using AI tools to improve written language proficiency in ESL learners. *Journal of Second Language Writing*, 50(3), 45-59.



TABLE 3

| Stage                                                        | Description                                                                                                                                                                                                                                                                           | Key Considerations                                                                                                                                                |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Needs Analysis and Learning Goals Definition</b>       | This stage involves understanding the learners' background, proficiency levels, motivations, and specific learning needs. For adult learners, goals often include language skills for work, travel, or personal development.                                                          | - Tailor AI tools to specific needs (e.g., business English, conversational skills).- Identify technology resources required.                                     |
| <b>2. Curriculum Design and AI Tool Integration</b>          | Based on the needs analysis, educators design a curriculum that integrates AI tools. These can include intelligent tutoring systems, speech recognition tools, chatbots, and AI-based grammar correction tools. The balance between AI tools and traditional teaching methods is key. | - Select AI tools (e.g., Duolingo, Rosetta Stone) that align with learner needs.- Integrate AI with traditional methods for a blended approach.                   |
| <b>3. Pilot Testing and Refining the Curriculum</b>          | Conduct a pilot test with a small group of learners to identify issues in AI tools, curriculum pacing, and integration. Collect feedback on usability, engagement, and effectiveness.                                                                                                 | - Monitor student engagement with AI tools.- Gather feedback through surveys and performance assessments.- Adjust the curriculum based on feedback.               |
| <b>4. Full-Scale Implementation</b>                          | After refining the curriculum, implement the AI-based program with all learners. AI tools become integral to the learning process, providing real-time feedback and personalized learning paths.                                                                                      | - Incorporate AI tools for automated assessments, language correction, and feedback.- Blend AI-powered lessons with traditional in-class activities.              |
| <b>5. Ongoing Monitoring, Evaluation, and Improvement</b>    | Continuously assess the AI program's effectiveness using both qualitative and quantitative data. Collect feedback from learners and track progress through analytics provided by AI systems. Regularly update the curriculum based on new trends in AI and emerging technology.       | - Evaluate the effectiveness of AI tools using learning analytics.- Gather learner feedback through surveys and focus groups.- Adapt to emerging AI technologies. |
| <b>6. Cultural and Contextual Considerations</b>             | Consider the cultural backgrounds and contexts of adult learners when designing AI-based English classes. AI-generated content should be culturally relevant to engage learners effectively.                                                                                          | - Customize AI tools to reflect cultural norms and language use.- Ensure content is appropriate for learners' cultural contexts.                                  |
| <b>7. Integrating AI with Other Educational Technologies</b> | Combine AI tools with other technologies like augmented reality (AR) and virtual reality (VR) for immersive learning experiences. AI can be integrated into learning management systems (LMS) to manage content and track learner progress.                                           | - Use AR/VR for immersive learning (e.g., virtual conversations).- Leverage LMS with AI features for personalized learning paths.                                 |
| <b>8. Instructor Training and Professional Development</b>   | Educators must receive proper training on using AI tools and adapting their teaching practices to incorporate AI. This training helps them make the most out of AI technology in their teaching methods.                                                                              | - Provide training on AI tool usage and data interpretation.- Empower educators to use AI to enhance their teaching strategies and adapt lessons based on data.   |
| <b>9. Ethical Use of AI in Education</b>                     | Address ethical issues such as data privacy, AI bias, and equitable access to AI tools. Ensure that AI systems used in teaching are designed with ethical considerations regarding learners' privacy and fair representation.                                                         | - Protect learners' personal data.- Ensure AI tools are free from bias and inclusive.- Promote equitable access to AI-powered education.                          |
| <b>10. Fostering Learner Autonomy and Motivation</b>         | AI tools can promote learner autonomy by providing personalized feedback and allowing learners to practice at their own pace. Gamification and other motivational features can                                                                                                        | - Use gamification techniques for motivation.- Create personalized learning paths that support independent study and encourage progress tracking.                 |



| Stage                                                   | Description                                                                                                                                                                                                                                                                  | Key Considerations                                                                                                                                                                               |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         | help sustain engagement throughout the learning process.                                                                                                                                                                                                                     |                                                                                                                                                                                                  |
| <b>11. Supporting Learners with Special Needs</b>       | AI can be adapted to support learners with special educational needs (e.g., dyslexia, auditory/visual impairments) by providing accessible tools such as speech-to-text and text-to-speech functions.                                                                        | - Adapt AI tools for different learning needs (e.g., text simplification, visual learning aids).- Ensure accessibility for learners with special educational needs (SEN).                        |
| <b>12. Assessing Effectiveness and Long-Term Impact</b> | Continuously evaluate the long-term impact of AI-based English classes by measuring students' language progress, retention, and real-world application of language skills. This includes tracking improvements in proficiency and overall language use beyond the classroom. | - Use data analytics to track long-term learning outcomes.- Assess learner retention and real-world application of language skills.- Evaluate scalability and future potential of the AI system. |

This table provides a detailed, organized overview of the key stages involved in forming AI-based English language classes for adults, addressing various aspects such as design, implementation, evaluation, and the incorporation of ethical considerations.

## CONCLUSION

We explored the various methodological characteristics of incorporating Artificial Intelligence (AI) in English for Specific Purposes (ESP) classes, with a particular focus on pedagogical approaches and the stages of forming AI-based English classes for adults. The integration of AI in ESL (English as a Second Language) education offers transformative possibilities, enabling personalized learning, real-time feedback, and adaptive learning paths that cater to the diverse needs of adult learners.

The pedagogical approaches to integrating AI in ESL education emphasize the importance of designing AI tools that complement traditional teaching methods, rather than replace them. By leveraging AI-driven platforms, educators can create a blended learning environment that is more engaging, flexible, and effective. These AI tools can address specific linguistic needs, enhance motivation, and promote learner autonomy, fostering a more individualized approach to language learning. Additionally, integrating AI with other educational technologies, such as gamification and virtual reality, enhances the immersive experience for learners, particularly in ESP settings where industry-specific language skills are required.

The stages of forming AI-based English classes for adults provide a comprehensive framework for successfully implementing AI in the classroom. From needs analysis and curriculum design to pilot testing, full-scale implementation, and ongoing evaluation, each stage requires careful consideration to ensure that AI tools are effectively integrated into the learning process. Furthermore, the ethical use of AI, teacher training, and the consideration of cultural contexts and learner diversity are key elements that influence the success of AI-powered educational programs. By addressing these considerations, AI-based language classes can cater to a wide range of adult learners, including those with special needs or varying proficiency levels.

In conclusion, the methodological characteristics outlined in this chapter provide a solid foundation for the development and implementation of AI-based English language programs. These approaches emphasize the need for careful planning, teacher empowerment, and ongoing evaluation to ensure that AI tools are used effectively and ethically. As AI continues to evolve,



it holds the potential to revolutionize ESL education, offering tailored learning experiences that cater to the specific needs of adult learners and enhancing their ability to acquire and apply language skills in real-world contexts.

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