

**Artificial Intelligence in Adult Education and Self-Learning:
Providing personalized and adaptive learning experiences
with emphasis on language learning**

WORK PACKAGE 3 - A4

GUIDE FOR SELF-LEARNERS



AI

**ADULT EDUCATION
& SELF-LEARNING**



PELICAN

Emphasys
CENTRE



Funded by the European Union. However, the views and opinions expressed are solely those of the author(s) and do not necessarily reflect those of the European Union or the Education and Culture Executive Agency (EACEA). Neither the European Union nor the EACEA can be held responsible.
Project number: 2023-1-DE02-KA220-ADU-000155302



**Co-funded by
the European Union**



Table of Contents

- Introduction to AI in Self-Learning**
- Understanding AI-Powered Learning Solutions**
- Choosing the Right AI Solution**
- Maximizing Learning Potential with AI**
- Harnessing Data and Analytics**
- Overcoming Challenges and Pitfalls**
- Building a Personalized Learning Ecosystem**
- Case Studies**
- References**

Introduction to AI in Self-Learning

Learning is an individual and dynamic process, with each person bringing their own goals, preferences, and challenges. In recent years, artificial intelligence (AI) has gained increasing importance and is transforming how we approach learning. For self-learners, using AI can offer a range of new opportunities to make the learning process more efficient, flexible, and tailored to personal needs. But what does this mean in practice? This guide aims to help self-learners better understand and apply the opportunities and challenges of AI-based learning solutions.

AI-powered learning solutions typically operate by analyzing data, recognizing patterns, and offering personalized recommendations. This can take various forms. For instance, there are adaptive learning systems that adjust the difficulty level and content based on the user's progress. For a language learner, this might mean that if they struggle with certain grammar rules, the system will provide targeted exercises while de-emphasizing already mastered topics. Such dynamic adjustments can make the learning process more structured and effective.



Another example is intelligent tutoring systems, which offer personalized guidance and exercises, similar to a human tutor. These systems can provide specific explanations, simulate interactive conversations, and respond to individual needs. In language learning, for instance, they can help users practice conversational skills through virtual dialogues or provide precise feedback on pronunciation, allowing learners to work on their abilities independently but effectively.

Understanding and leveraging data and analytics is another key aspect of learning with AI. Many AI tools collect information on learning behavior, offering insights into progress and challenges. This data-driven self-reflection can help learners identify when they are most productive or where they may have gaps, allowing for targeted adjustments to their learning approach.

However, using AI also presents challenges. It is crucial to find the right solution for individual needs. Not every technology fits every learning style or goal. For example, someone who benefits most from visual learning methods will have different requirements than someone who learns primarily through auditory means. This guide aims to assist in making an informed choice by presenting different AI tools and their applications.



Ethical and data protection considerations must also be taken into account when using AI. Data used for personalizing learning must be processed securely and in compliance with applicable data protection regulations. This topic will also be covered in subsequent chapters.

We will further explore case studies and practical examples to illustrate how other self-learners have integrated AI solutions into their learning routines. Whether it is learning a new language, deepening mathematical concepts, or building professional skills – AI can support many areas. We aim to highlight both the strengths and limitations of this technology so that you can make informed decisions about your learning journey.

Our goal is to provide you with tools and knowledge to actively shape your learning process. Whether you are just beginning your journey with AI-based learning or have already gained some experience, this guide will serve as an orientation and offer practical ways to incorporate AI into your learning.



Understanding AI-Powered Learning Solutions

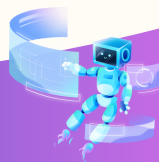
Embarking on the journey to learn a new language as an adult can be both exciting and challenging. Fortunately, artificial intelligence (AI) has revolutionised language learning by offering tools that cater to individual needs, learning styles, and schedules. This section provides a comprehensive overview of AI-powered learning solutions and how they can enhance your self-directed learning experience.

Types of AI-Powered Learning Solutions:

a. Intelligent Tutoring Systems (ITS): These systems act like personal tutors, providing guidance, feedback, and support tailored to your individual needs. They can explain concepts, answer your questions, and offer helpful advice, much like a human tutor would.

b. Adaptive Learning Platforms: These platforms use AI algorithms to adjust the learning content and pace based on your progress and performance. They personalise your learning path, ensuring you're always challenged at the right level.

c. AI-Powered Language Learning Apps: These apps use AI to enhance various aspects of language learning, such as pronunciation, grammar, and vocabulary acquisition. They offer interactive exercises, real-time feedback, and personalised lessons to help you improve your language skills.



Understanding AI-Powered Learning Solutions

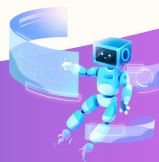
d. AI-Powered Chatbots and Conversational Agents: These tools allow you to practice your conversation skills in a safe and supportive environment. They simulate real-world conversations, providing you with the opportunity to interact with AI-powered bots that understand and respond to your questions and comments.

e. AI Writing Assistants: These tools can help you improve your writing skills by providing feedback on grammar, style, and vocabulary usage. They can also help you generate ideas and organize your thoughts.

Key Features and Benefits:

Understanding how these AI-driven tools function can help you select the ones that best fit your learning needs and preferences. Here are some key features and benefits to consider:

- **Personalization:** AI tailors lessons and exercises to your individual progress, ensuring an optimized learning experience.





- **Real-Time Feedback:** Receive immediate feedback on your performance, helping you identify areas for improvement and learn from your mistakes.
- **Engagement and Motivation:** AI-powered tools often incorporate gamification and interactive elements to make learning more engaging and motivating.
- **Flexibility:** Learn at your own pace and on your own schedule, fitting language learning into your busy life.



Understanding AI-Powered Learning Solutions

To fully benefit from AI-powered language learning solutions, consider the following strategies:

- **Set Clear Goals:** Define what you want to achieve (e.g., conversational fluency, professional proficiency).
- **Regular Practice.**
- **Combine Tools:** Use a mix of applications to cover different skills (e.g., speaking, listening, writing).

AI-powered learning solutions offer a dynamic and personalized approach to language learning for adults. By understanding the types of tools available and their key features, learners can select the ones that align with learning style and objectives. Embracing these technologies can make learner self-directed learning journey more effective, engaging, and enjoyable.

Strategies for Maximizing Benefits:

To fully benefit from AI-powered language learning solutions, consider the following strategies:

- **Set Clear Goals:** Define what you want to achieve with your language learning, whether it's basic communication, travel, or professional proficiency.



- **Regular Practice:** Consistent practice is key for language acquisition. Make time for regular learning sessions, even if they're short.
- **Combine Tools:** Use a mix of AI-powered applications to cover different language skills (e.g., speaking, listening, reading, writing).

AI-powered learning solutions offer a dynamic and personalized approach to language learning for adults. By understanding the types of tools available and their key features, learners can select the ones that align with their learning style and objectives. Embracing these technologies can make your self-directed learning journey more effective, engaging, and enjoyable.



Choosing the Right AI Solution

The diversity of AI-driven tools available today can make selecting the right one overwhelming. However, by considering individual learning preferences, goals, and proficiency levels, self-learners can make informed choices. Below, we provide a decision-making framework to help you evaluate AI solutions and ensure compatibility with your specific needs.

Key Factors to Consider

- Learning Preferences:

Active vs. Passive Learning: Do you prefer interactive exercises (e.g., conversation practice) or passive learning (e.g., video tutorials)?

Self-paced vs. Structured Learning: Are you looking for a tool that allows flexibility, or do you thrive on a guided curriculum?

- Learning Goals:

Specific Skills: Determine whether your focus is on speaking, listening, reading, writing, or all four.

Short-term vs. Long-term Objectives: Are you preparing for an exam or building a lifelong skill?



Professional vs. Personal Use: Consider if the language is for casual use, travel, or professional purposes.

- Proficiency Levels:

Assess whether the tool accommodates beginners, intermediate learners, or advanced speakers.

Look for tools offering diagnostics to determine your starting level.

- Learning Context:

Time Commitment: How much time can you dedicate daily or weekly?

Cultural Context: Does the tool provide region-specific language nuances if you're learning for cultural immersion?



Choosing the Right AI Solution

Checklist for AI Solution Selection

Use this checklist to systematically evaluate potential AI tools:

Criteria	Considerations	Rating (1-5)
Alignment with Goals	Does the tool cater to your specific learning goals?	
Skill Coverage	Does it comprehensively cover the language skills you aim to improve?	
Personalization	Can the tool adapt lessons based on your progress and proficiency level?	
Feedback Mechanism	Does it provide real-time, actionable feedback for speaking, writing, or grammar?	
Engagement	Does it incorporate gamification or other engaging methods to maintain motivation?	
Flexibility	Can you adjust the pace and structure of lessons to fit your schedule?	
Usability	Is the user interface intuitive and accessible?	
Content Quality	Are the lessons rich, culturally relevant, and updated frequently?	
Compatibility	Does the solution work on your preferred devices (e.g. smartphone, laptop)?	
Affordability	Does the pricing model align with your budget? (Consider free trials or subscription plans.)	
Privacy and Security	Are user data policies transparent and compliant with data protection regulations?	
Support and Resources	Are there additional support materials, such as forums, FAQs, or customer service?	



Choosing the Right AI Solution

Decision-Making Framework

Follow these steps to systematically evaluate your options:

- Identify Priorities:

Assign weights to each criterion in the checklist based on its importance to you. For example, if feedback is crucial, give it a higher priority.

- Research Potential Tools:

Explore reviews and testimonials for AI solutions like Duolingo, Babbel, or Memrise.

Visit product websites or watch demos to understand their offerings.

- Test Shortlisted Tools:

Take advantage of free trials or demo versions.

Use diagnostic tools (if available) to assess how well the platform adjusts to your level.



- Compare and Score:

Use the checklist to score each solution based on how well it aligns with your priorities.

Calculate total scores and select the tool with the highest compatibility.

- Reassess Periodically:

As your learning needs evolve, reevaluate the effectiveness of the chosen solution and explore alternatives if necessary.



Choosing the Right AI Solution

Practical Example

Imagine you are a beginner aiming to improve conversational Spanish for travel within six months. Your key priorities might be:

- Focus on speaking and listening skills.
- Flexibility to fit lessons into a busy schedule.
- Affordable pricing.

Based on these criteria:

- You shortlist Duolingo (gamified lessons), Pimsleur (audio-based learning), and Rosetta Stone (immersive practice).
- After testing the tools, you find that Pimsleur best meets your needs due to its emphasis on conversational practice and hands-free usability.

Conclusion

Choosing the right AI solution involves a balance of self-awareness, thorough research, and experimentation. By using the provided checklist and decision-making framework, you can confidently select a tool that supports your learning journey effectively.



Maximizing Learning Potential with AI

AI has the potential to revolutionise education, making learning more personalised, engaging, and effective. Here are some ways AI can be used to maximise learning potential:

- **Self-regulated learning:** AI can analyse your learning style and identify strengths and weaknesses to create a customised learning experience.
- **Language learning platforms:** AI-powered language learning applications can provide platforms for personalised lessons, practice exercises, and real-time feedback.
- **Real-time feedback:** AI can provide you with immediate feedback related to your work, helping you identify improvement areas and learn from your mistakes.
- **Increased student engagement:** AI can make learning more fun and interactive, increasing your engagement.
- **Intelligent tutoring systems:** AI-powered tutoring systems can provide you with one-on-one support, explaining concepts and answering content-based questions.



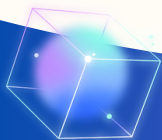
Maximizing Learning Potential with AI

- **Increased student engagement:** AI can make learning more fun and interactive, increasing your engagement.
- **Improved learning outcomes:** AI can help you learn more effectively and efficiently, leading to better learning outcomes.
- **Accessibility:** AI can make education more accessible to you with disabilities by providing tools such as text-to-speech and speech-to-text.
- **Interactive content:** AI can create engaging and interactive learning materials, such as simulations, games, and virtual reality experiences, to help you interact while learning.
- **Natural language processing:** AI can understand and respond to your questions naturally, making the learning experience more intuitive.
- **Tailored recommendations:** AI can offer personalised advice and suggestions to optimize self-regulation strategies by analysing your patterns and behaviours.



Harnessing Data and Analytics

- How can you use data and analytics to track your progress?
 - Use AI dashboards to monitor completed tasks, time spent on topics, and achievement milestones (e.g. Google Classroom, Moodle).
 - Analyse performance data to identify areas of strength and those needing improvement (e.g. Quizlet AI, Duolingo for Schools, ReadTheory).
 - Set short- and long-term goals based on tracked progress.
- How can AI help you identify your learning needs and make informed decisions?
 - Generate assessments, provided by AI to highlight specific areas that require attention (e.g. ChatGPT).
 - Explore AI-recommended resources focused on addressing identified gaps.



Overcoming Challenges and Pitfalls

- What are common challenges and pitfalls in AI-driven self-learning?
 - Dependence on AI tools may reduce critical thinking and self-reflection.
 - AI insights may reflect biases if trained on limited or unreliable datasets.
 - Personal data collected by AI systems can contain risks if not securely managed.
- What strategies can help mitigate risks and ensure a balanced approach?
 - Use AI tools alongside human mentorship, coaching, or group learning.
 - Limit reliance on AI and include non-digital resources for a holistic approach.
 - Find systems with strong privacy protocols and transparent data practices.



- How can you ensure the AI systems they use are inclusive and representative?
 - Select platforms trained on data reflecting various cultures, genders, and socioeconomic backgrounds.
 - Find AI systems designed to accommodate diverse learning needs and styles.
 - Provide feedback to platforms to promote better inclusivity in their algorithms.
- How can critical thinking and digital literacy help you navigate AI tools?
 - Analyze and verify information before accepting it.
 - Use multiple sources to confirm the accuracy of recommendations.
 - Learn how AI algorithms work to better understand their limitations and biases.



Building a Personalized Learning Ecosystem

Building a personalized learning ecosystem in AI is about integrating diverse learning resources, tools, and habits to create an environment where learning is flexible, effective, and sustainable. AI-driven educational platforms can adapt to your learning style and progress. These tools can provide personalized learning paths, recommend content based on interests or knowledge gaps, and track performance over time. AI-enabled apps can help you with note-taking, organizing learning materials, or summarizing complex concepts. Tools like flashcard apps with spaced repetition algorithms can help reinforce memory, while productivity apps using AI can help manage your learning schedule and tasks.

The road to improving your learning ecosystem is one that can be greatly improved by the use and with the help of AI capabilities. Start by defining your learning goals, whether they're mastering the basics of AI or exploring specialized topics like machine learning or natural language processing. Break down these goals into smaller, manageable tasks, and use AI tools to help track your progress.



Use AI to guide you through resources (courses, articles, podcasts, videos, etc.) that match your current knowledge and desired learning outcomes. Tools that recommend content based on your previous activities or preferences can help you stay on track. AI tools can help identify areas where you need more support or challenge, allowing you to switch to different materials or deepen your focus on specific areas.

AI can be used for Focus and Time Management: AI-powered tools like productivity apps can help you stay focused by blocking distractions, tracking your study time, and sending reminders. AI tools can help you find and organize resources such as online articles, research papers, videos, or even community-based knowledge from forums and discussion groups. AI-powered analytics tools can be used to track your learning progress. These tools can give you feedback on where you're excelling and where you need more focus. Regular self-assessments can help you reflect on what you've learned and adjust your approach as needed. AI tools can provide valuable feedback on your understanding of concepts, allowing you to adjust your learning approach in real-time. This flexibility helps to optimize your learning and keep you motivated by celebrating milestones or adjusting challenges to your needs.



Learning Communities can also help to create an environment of open learning and growth. Platforms like Reddit, LinkedIn groups, or specialized AI communities provide spaces to ask questions, share insights, and learn from others. AI tools can also help you discover and engage with the most relevant communities based on your interests.

Use AI tools that help with self-reflection, such as journaling apps or personal learning dashboards. These tools can encourage you to track your learning progress, identify patterns, and adjust your learning strategies accordingly. AI tools can help you identify what's working and what isn't, allowing you to adapt your approach. For instance, if you feel stuck on a topic, AI might recommend different ways of approaching it or alternative resources.

Building a personalized learning ecosystem for AI self-learners is about integrating AI tools into your learning process while balancing them with other resources like courses, community engagement, and productive habits. By creating a dedicated, flexible environment and leveraging technology to track and adapt your progress, you can ensure a rich, sustainable learning experience. Consistency, adaptability, and engagement with both AI tools and fellow learners will make your journey through AI education not only effective but also enjoyable.



Case Studies and Success Stories

EnglishBot

Introduction

The study examined the effectiveness of EnglishBot, an AI-powered conversational chatbot, in improving students' spoken English skills compared to traditional listen-and-repeat methods. The research addressed three main questions: whether chatbot elements lead to better learning outcomes under fixed usage conditions, the impact of free usage and self-directed learning on engagement and progress, and how chatbots influence engagement and reduce language anxiety.

Results

Two studies were conducted: the first with fixed usage, where participants completed one lesson per day for six days, and the second with free usage, allowing participants more flexibility. EnglishBot users engaged significantly more with the learning materials, spending 2.6 times more time than the traditional group under fixed conditions, and 2.1 times more in free usage. EnglishBot was rated as more engaging, and its users generally performed better, particularly in vocabulary retention and fluency. Follow-up tests showed that EnglishBot users retained more vocabulary in the long term. However, neither method resulted in significant improvements in free conversation skills, likely due to the short duration of the learning period. There were no notable reductions in language anxiety for either group, though EnglishBot users had more stable anxiety levels.



Case Studies and Success Stories

EnglishBot

Conclusion

The study concluded that EnglishBot's interactive and adaptive structure effectively fosters engagement, increases learning time, and improves performance in specific tasks like vocabulary and scripted conversations. However, challenges remain in improving free conversation skills and reducing language anxiety. Future improvements should focus on personalized feedback and more open-ended dialogue opportunities to create a more comprehensive language learning experience.



The screenshot displays the EnglishBot interface. On the left, a 'Lesson One' vocabulary list is shown with columns for the word, its phonetic transcription, and its definition. On the right, a chat window shows a conversation between the user and the bot, with numbered callouts (1-6) highlighting specific features like input fields, buttons, and feedback messages.

Q Questioner **R** Responder



Duolingo, Rosetta Stone, and Grammarly

Introduction

A group of adult professionals in Warsaw, Poland, sought to improve their English skills to enhance their career prospects. Given their busy schedules, they opted for self-learning methods, but faced challenges due to varying proficiency levels, learning preferences, and limited time. The learners required versatile solutions to meet their diverse needs.



Results

To address these challenges, the learners implemented AI-powered solutions, including Duolingo, Rosetta Stone, and Grammarly. These tools offered personalized learning experiences tailored to individual proficiency levels. Duolingo and Rosetta Stone provided adaptive learning focused on conversational English and workplace vocabulary, while Grammarly offered real-time feedback on grammar and pronunciation. Mobile-friendly apps allowed learners to practice during commutes, making learning more flexible. As a result, learners showed improvements in conversational fluency and workplace communication, gained greater independence in tracking their progress, and increased confidence in using English in professional settings.



Conclusion

The integration of AI-powered tools proved successful in supporting the learners' varied goals, offering personalized, flexible, and efficient language learning. These tools empowered the professionals to improve their English skills at their own pace, fostering both autonomy and confidence in using the language in their careers.



Leveraging AI for Language Learning in Poland

Introduction

In Poland, AI-based language learning tools like Babbel and Duolingo have proven highly effective in helping adult learners acquire new languages. These tools are particularly beneficial for those balancing education with work or family responsibilities, as they offer flexible and engaging learning experiences tailored to individual needs.

Results

For example, Duolingo has gained popularity among Polish adult learners seeking to improve their English proficiency. Its adaptive AI system provides gamified lessons, making learning enjoyable and motivating. The inclusion of features like role-playing and pronunciation feedback using GPT-4 technology has enhanced learners' confidence in conversational English. A community center in Warsaw also integrated AI-powered tools such as Babbel and Busuu into its programs for underserved communities. This hybrid approach, combining AI with human-led workshops, enabled participants to improve their English skills while gaining cultural insights critical for integration into broader European contexts. The AI tools' analytics allowed educators to track progress and allocate resources efficiently.



Leveraging AI for Language Learning in Poland

Conclusion

The integration of AI-powered language learning tools in Poland, both independently and in hybrid settings, has proven to be an effective method for improving language skills among adult learners. These tools not only foster engagement and efficiency but also support learners in gaining valuable cultural knowledge, enhancing their ability to integrate into new environments.



Olena's Journey to Learning Czech with AI

Introduction

Olena, a 55-year-old woman from Ukraine, moved to the Czech Republic to be with her children. Despite being fluent in Ukrainian and Russian, Olena faced significant challenges in adapting to her new life due to her limited knowledge of Czech. Recognizing the importance of learning the language for integration and communication, she sought alternative solutions as traditional language classes were difficult to attend due to her busy schedule.

Results

Olena turned to AI-powered language learning platforms like Duolingo and Memrise, which offered Czech courses tailored for beginners. These platforms utilized adaptive learning algorithms to personalize her experience, focusing on vocabulary and grammar most relevant to her needs. The AI-driven systems provided real-time feedback on her pronunciation and helped her practice speaking and listening skills. The use of spaced repetition techniques ensured retention of essential vocabulary and phrases. With the flexibility to learn at her own pace, Olena could focus on areas she found most challenging, learning whenever she had time.

Conclusion

AI-powered language learning platforms proved to be an effective solution for Olena, allowing her to learn Czech at her own pace and overcome the challenges posed by her busy schedule. The personalized nature of the platforms and their interactive features, such as pronunciation feedback and spaced repetition, supported her language acquisition and integration into her new environment.



Knewton's adaptive learning technology

Introduction

AI-powered learning tools offer self-learners the ability to track their progress and improve their educational outcomes. These systems provide detailed performance analytics that enable learners to visualize their learning journey, identify strengths and weaknesses, and maintain motivation.

Results

AI dashboards allow self-learners to monitor their progress by tracking completed tasks, time spent on topics, and achievement milestones. This data supports motivation and helps learners adjust their strategies for more effective learning. One notable success was achieved through Knewton's adaptive learning technology, where students saw a 62% improvement in test scores. This system tailors learning paths based on individual strengths and weaknesses, providing personalized recommendations and feedback. In Portugal, intelligent tutoring systems deployed for primary school students also showed significant improvements. These systems boosted math grades by 30% while reducing student anxiety by 20%, offering a supportive learning environment through adaptive exercises and real-time feedback.

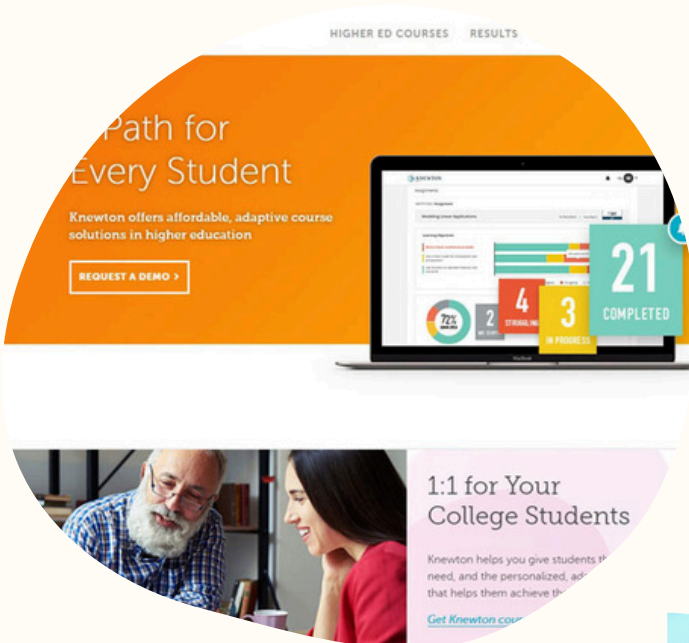


KNEWTON



Conclusion

AI-powered tools significantly enhance self-directed learning by offering personalized feedback, progress tracking, and tailored learning paths. These systems not only improve academic performance but also reduce anxiety, making learning more efficient and engaging. The success of adaptive learning technologies like Knewton and intelligent tutoring systems in Portugal highlights their potential to transform educational experiences.

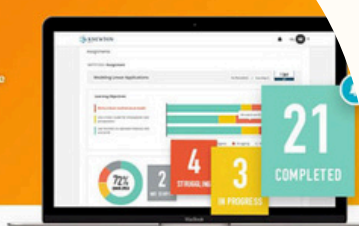


HIGHER ED COURSES RESULTS

Path for Every Student

Knewton offers affordable, adaptive course solutions in higher education

[REQUEST A DEMO >](#)



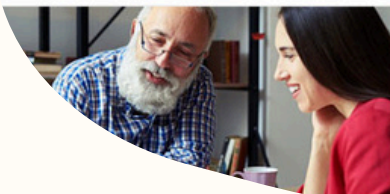
21 COMPLETED

4 IN PROGRESS

3 IN PROGRESS

2 IN PROGRESS

77%



1:1 for Your College Students

Knewton helps you give students the support they need, and the personalized, adaptive learning that helps them achieve their goals.

[Get Knewton courseware](#)



Text-to-Speech and Speech-to-Text

Introduction

AI has proven to be a powerful tool in education, but its over-reliance can potentially hinder independent thinking. To foster a balanced approach, combining AI tools with human mentorship or collaborative learning is essential. Additionally, AI systems must be designed with diversity in mind to ensure they provide inclusive and unbiased learning experiences.

Results

AI has significantly supported students with disabilities across Europe. Technologies such as text-to-speech and speech-to-text have enabled inclusive learning, especially for students with hearing impairments, providing equal access to educational resources. Furthermore, AI-driven tools have improved administrative efficiency by streamlining grading processes, saving educators up to 70% of the time typically spent on assessments. These tools also offer detailed performance analytics, helping institutions adjust curricula and personalize learning approaches.

Conclusion

While AI offers substantial benefits in education, it is most effective when used alongside human interaction to encourage independent thinking. Ensuring AI systems are diverse and inclusive strengthens the educational experience. The combination of AI for accessibility and administrative efficiency has the potential to transform both student learning and educator workflows, enhancing overall educational outcomes.



Incorporating AI in foreign language education

Introduction

This qualitative case study explores the effects of ChatGPT on foreign language learning among 13 preparatory class students at a Turkish university. Over the course of four weeks, students used ChatGPT in various learning activities, and their experiences were analyzed through interviews. The study aims to understand the impact of ChatGPT on language acquisition, including writing, grammar, and vocabulary, as well as its influence on student motivation and engagement.

Results

The findings suggest that ChatGPT has a positive impact on students' learning experiences, particularly in improving writing, grammar, and vocabulary acquisition. The tool's accessibility and versatility in different learning activities were noted as key factors in enhancing motivation and engagement. However, the study also identified potential drawbacks, such as the risk of students becoming over-reliant on the tool, which could potentially lead to skill deterioration if not used appropriately.

Conclusion

The study concludes that ChatGPT holds significant potential to revolutionize foreign language learning by improving language skills and boosting student motivation and engagement. However, it emphasizes the importance of responsible implementation, recognizing that careful consideration is needed to mitigate over-reliance on the tool. Further research is necessary to develop guidelines for its ethical use and to examine its long-term impact on language learning across diverse educational contexts.



References

- Ruan, S., Jiang, L., Xu, Q., Liu, Z., Davis, G. M., Brunskill, E., & Landay, J. A. (2021). EnglishBot: An AI-Powered Conversational System for Second Language Learning. 26th International Conference on Intelligent User Interfaces. <https://doi.org/10.1145/3397481.3450648>
- Li, H., Xu, T., Zhang, C., Chen, E., Liang, J., Fan, X., Li, H., Tang, J., & Wen, Q. (2024). Bringing Generative AI to Adaptive Learning in Education. ArXiv, abs/2402.14601.
- Allam, H., Dempere, J.M., Akre, V., Parakash, D., Mazher, N., & Ahamed, J. (2023). Artificial Intelligence in Education: An Argument of Chat-GPT Use in Education. 2023 9th International Conference on Information Technology Trends (ITT), 151-156.
- Lo, C.K., & Hew, K.F. (2023). A review of integrating AI-based chatbots into flipped learning: new possibilities and challenges. Frontiers in Education.
- Duolingo. (2023). How Duolingo adapts to individual learners. Retrieved from <https://www.duolingo.com>
- Rosetta Stone. (2023). Effective language learning through AI adaptation. Retrieved from <https://www.rosettastone.com>
- Busuu. (2024). Community and AI-driven language learning. Retrieved from <https://www.busuu.com>

References

- Karataş, F., Abedi, F. Y., Ozek Gonyel, F., Karadeniz, D., & Kuzgun, Y. (2024). Incorporating AI in foreign language education: An investigation into ChatGPT's effect on foreign language learners. *Education and Information Technologies*, 1-24.

NOTE: Further links (Video recordings/Interviews) from AI experts can be found on the AI in ADU website <https://aiineducation.eu/>

**Artificial Intelligence in Adult Education and Self-Learning:
Providing personalized and adaptive learning experiences
with emphasis on language learning**

GUIDE FOR SELF-LEARNERS



AI

**ADULT EDUCATION
& SELF-LEARNING**

FOLLOW US

WWW.AIINEDUCATION.EU



Funded by the European Union. However, the views and opinions expressed are solely those of the author(s) and do not necessarily reflect those of the European Union or the Education and Culture Executive Agency (EACEA). Neither the European Union nor the EACEA can be held responsible.

Project number: 2023-1-DE02-KA220-ADU-000155302



**Co-funded by
the European Union**