

ENHANCING PSYCHO-PEDAGOGICAL PRACTICES: EXPLORING THE ROLE OF ARTIFICIAL INTELLIGENCE IN FOSTERING LINGUISTIC COMPETENCES AND SECURITY

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Rezumat. Inteligența artificială (IA) a devenit din ce în ce mai utilizată în domeniul educației. Acest articol examinează realitatea tangibilă a utilizării instrumentelor AI pentru a dezvolta abilitățile lingvistice și explorează rolul AI în promovarea competențelor lingvistice. Mai mult, subliniază importanța orientărilor etice care contribuie la securitatea tuturor membrilor implicați în procesul de educație. Înțelegând implicațiile și efectele aplicațiilor AI, cursanții sunt împuterniciți să ia decizii informate și să navigheze în mod eficient în mod peisajul tehnologic. Această cercetare se concentrează asupra potențialului transformator al IA în îmbunătățirea practicilor psihopedagogice, în special în ceea ce privește competențele lingvistice și considerentele de securitate.

Cuvinte cheie: competențe lingvistice, securitate, inteligență artificială, linii directoare etice, educație.

Abstract. Artificial Intelligence (AI) has become increasingly used in the field of education. This article examines the tangible reality of using AI tools to develop language skills and explores the role of AI in fostering linguistic competences. Moreover, it emphasizes the significance of ethical guidelines that contribute to the security of all members involved in the education process. By understanding the implications and effects of AI applications, learners are empowered to make informed decisions and navigate the technological landscape effectively. This research focuses on the transformative potential of AI in enhancing psycho-pedagogical practices, particularly in relation to linguistic competences and security considerations.

Key words: linguistic competences, security, artificial intelligence, ethical guidelines, education.

Artificial Intelligence, has emerged as a new and significant technology that holds immense potential for ESL learners in developing their linguistic competences. In today's world, AI is widely used across various fields, and its influence continues to grow steadily with successful projects in recent years. When it comes to language learning, AI-powered tools have transformed the educational landscape, offering tangible benefits and remarkable opportunities.

With the aid of AI tools, the development of language skills has become an attainable reality for ESL learners. An array of digital technologies, based on AI capabilities, are readily available free of charge, serving as invaluable assistants for both teachers and students in the process of language acquisition. These tools provide personalized and adaptive learning experiences, tailoring content and instruction to meet individual needs. Through intelligent tutoring systems, automated language assessments, and language learning applications, learners are empowered to enhance their proficiency in a dynamic and engaging manner.

However, in this pursuit of linguistic competences, it is crucial for EFL learners to consider important ethical aspects that assure all security. Issues such as fairness, accountability, transparency, and bias should be explicitly addressed. By embracing AI tools, learners can foster a sense of autonomy and agency in their language learning journey, while ensuring that inclusive practices are upheld. It is important to not only engage in ethical actions but also approach language learning ethically and assure security, making pedagogical choices that align with ethical principles.

Furthermore, as EFL learners navigate the realm of AI in language learning, it is essential to be mindful of the potential unintended consequences. By understanding the implications and

effects of AI applications, learners can make informed decisions and navigate this technological landscape effectively.

Let us make a short introduction about the importance of Artificial use in learning process. So, the primary objective of AI is to replicate human intelligence by enabling computers to learn. Consequently, AI has emerged as a transformative technology in the field of education. Traditional education, characterized by fixed time, location, and prescribed activities, is contrasted with the continuous learning process, particularly for younger students [3]. According to the fast changes and new progress in technology development education is being revolutionized by the use of AI tools. The new research highlight their ability to evaluate how well students are doing and promote communication between teachers and students. Also according to the last two years experiments the impact of AI on traditional education is undeniable, as it provides teachers and schools with innovative teaching techniques.

There are so many advantages that are presented by numerous researches of the use of AI in the developing students` language skills that it offers *personalized learning experiences* for students, tailoring content to their needs. It provides *intelligent tutoring*, giving personalized instruction and feedback. AI also simplifies grading, *analyzing assignments* and essays quickly. Educators can analyze data using AI to understand student performance and predict their needs. *Virtual assistants* and *chatbots* offer instant support and information. AI helps *create interactive educational content*, generating quizzes and adjusting material to fill knowledge gaps. All in all, it enhances education by *personalizing learning, improving feedback, analyzing data, providing support, and creating engaging content* [4].

Specifically, AI has provided new opportunities, potentials, and challenges for educational innovations, e.g., *the change to personalized learning, the challenge of the instructor's role, and the development of complex educational system* [7]. This educational context requires varied AI educational techniques (e.g., natural language processing, artificial neural networks, machine learning, deep learning, and genetic algorithm) have been implemented to create intelligent learning environments for behavior detection, prediction model building, learning recommendation, etc. [4].

Although AI has the potential to transform education, good educational outcomes typically do not occur by the virtue of merely using advanced AI computing technologies [4].

More importantly, the use of distinct classes of educational technologies generally imply different philosophical and pedagogical perspectives, which in turn pose critical influences on the quality of learning and instruction [1,7].

AI has opened up new possibilities and challenges in education, particularly in personalized learning and redefining the role of instructors. Various AI techniques have been employed to create intelligent learning environments, enhancing behavior detection, prediction modeling, and learning recommendations. However, it is important to note that the mere use of advanced AI technologies does not guarantee positive educational outcomes. The effectiveness of AI in education is influenced by philosophical and psycho-pedagogical perspectives, emphasizing the importance of considering the quality of learning and instruction. Further research and thoughtful implementation are needed to harness the full potential of AI in education.

Hence, teachers and policymakers need to consider the underlying principles and values associated with various AI technologies before implementation. This understanding ensures that AI aligns with educational goals, instructional strategies, and the broader vision of education.

Teachers and students can use a wide range of tools that incorporate AI to transform their learning environment in a one more efficient, for example tools for text generating like Copy.ai, Decipher or Magic write by Canva, Chat Gpt, the biggest language model, Dalle, etc. While these tools offer immense potential, they also give rise to a set of concerns related to students' security and ethical considerations through the development of students` *AI literacy*.

One crucial concern is *data privacy*. When students use AI tools, their personal data and information may be collected and stored. It is essential for educators and developers to prioritize data protection, ensuring that student data is securely managed and only used for educational

purposes. Safeguards should be in place to protect students' privacy and prevent unauthorized access or misuse of their information.

Another significant challenge relates to the issue of *fake information*. As AI models generate text and content, there is a risk of spreading inaccurate or misleading information. Educators must guide students to critically evaluate the authenticity and reliability of the information produced by AI tools. Teaching students to be discerning consumers of AI-generated content is crucial in fostering digital literacy and responsible information consumption.

Ethics also play an important role in the use of AI tools in education. Developers and educators should stick to ethical guidelines when designing and implementing AI-powered platforms. Issues of bias, fairness, and transparency should be carefully considered to ensure that AI tools do not perpetuate discrimination or reinforce existing inequalities. Additionally, educators must foster ethical awareness among students, helping them understand the ethical implications of using AI tools and encouraging responsible and ethical use.

That is why, the General Data Protection Regulation (GDPR) was approved by the EU parliament on April 14, 2016 and came into force on May 25, 2018. According to the EUGDPR website, "The aim of the GDPR is to protect all EU citizens from privacy and data breaks in today's data-driven world" [8]. Certain aspects of the GDPR are particularly relevant to Artificial Intelligence. Furthermore, in December 2018, the European Commission's High-Level Expert Group on Artificial Intelligence (AI HLEG) published its draft of the AI Ethics Guidelines for comments from the public with the aim to have a final version in March 2019 [8]. The group have adopted EU treaties and legislation on human rights as their ethical principles for AI.

Speaking about ethical implications let us discuss some of the key ethical considerations and what do they include:

1. **Bias:** AI systems can perpetuate and even amplify existing biases in society, such as racial or gender bias. It's important to ensure that AI systems are designed and trained in a way that is fair and unbiased.

2. **Privacy:** AI systems often collect and process large amounts of personal data. It's important to ensure that this data is collected and used in a way that respects individuals' privacy rights.

3. **Transparency:** AI systems can be opaque and difficult to understand. It's important to ensure that AI systems are transparent and explainable, so that users can understand how they work and make informed decisions.

4. **Accountability:** AI systems can have significant impacts on individuals and society as a whole. It's important to ensure that there is accountability for the decisions made by AI systems, and that there are mechanisms in place to address any negative impacts.

Overall, it's important to approach the use of AI with a thoughtful and ethical mindset, and to consider the potential impacts on individuals and society as a whole.

Research has shown that the improper and unauthorized use of AI technologies in educational contexts can lead to various negative consequences. This includes actions such as violating student privacy, deepening bias, enabling academic dishonesty and cheating, manipulating test results, and implementing AI for surveillance purposes [2, 9]. The rapid advancements in AI have given rise to the production of synthetic media, commonly referred to as *deep fakes*. They involve the algorithmic generation, manipulation, and modification of audio tracks, videos, images, and text with the intent to mislead individuals or alter the original meaning of the content.

A notable example of AI-generated content is the creation of fictitious individuals through the use of generative adversarial networks (GANs). Websites like "This Person Doesn't Exist" have gained popularity by generating new artificial images with each page refresh. These images appear to depict realistic individuals who do not actually exist. The emergence of deep fakes and the widespread availability of AI technologies raise concerns regarding the potential misuse of these tools within educational settings. It is crucial for educators, policymakers, and technology developers to address these issues and implement safeguards to prevent the negative implications

associated with unauthorized use, privacy violations, bias amplification, academic integrity breaches, and the manipulation of educational outcomes.

In this context, *AI literacy* is very important. It includes knowledge of the concepts, skills, and ethical considerations surrounding the creation and use of AI in order to ensure students' security (United Nations Children's Fund, 2021a, United Nations Children's Fund, 2021b). AI literacy describes the ability to engage with AI as a skilled user but can also include knowledge of how to develop AI, understanding data biases, AI ethics, user rights (United Nations Children's Fund, 2021a, United Nations Children's Fund, 2021b), and being aware of one's own data and its management [13]. The inclusion of AI literacy as an ethical principle for educational field clarifies the importance of educating children and youth about AI so that they may be critically informed and thus better positioned to make good decisions regarding its use in the context of their lives. By integrating AI literacy into education, schools can equip students with the knowledge and skills necessary to engage responsibly and effectively with AI technologies, preparing them for the opportunities and challenges of the AI-driven future.

An *AI literacy* involves topics related to AI ethics and security where students will have opportunity to discuss about ethical considerations and potential risks associated with AI development and highlighting the importance of data privacy and security in AI systems. Topics like *Student Empowerment or Cybersecurity*, *Personal Data Protection* and *AI Bias and Fairness* are welcome as they can emphasize the significance of AI literacy in empowering students to navigate and contribute to an AI-driven society and examine the implications of it on personal data privacy and protection promoting responsible data usage and emphasizing the importance of informed consent. English language lessons obviously will involve bits related to AI literacy.

An example of lesson during which Student Empowerment and the danger of production of synthetic media can learn students besides the use of language forms how to avoid being manipulated by fake information. The objectives of the lesson can be:

- Introducing students to the concept of deep fakes and their potential dangers.
- Raising awareness about the importance of media literacy and critical thinking in the digital age.

The teacher will begin the lesson by asking students if they have heard about "deep fakes" or seen any examples and encourage a brief class discussion to measure their prior knowledge. Also, for topic introduction the teacher will present a simplified explanation of what deep fakes are: manipulated videos or images that appear real but are actually created using AI.

Obviously, a short age-appropriate video or images demonstrating deep fake examples (ensuring they are not too alarming or inappropriate) will be shown to the students. Afterwards, the discussion will focus on how deep fakes can deceive viewers. As usual, the topics will be introduced through the use of text, which can be in the form of audio or written production. The teacher will then introduce new vocabulary and encourage students to apply it in text comprehension activities planned for the post-reading/post-listening stage.

During a ten-minute conversation, the teacher can share strategies for identifying deep fakes, such as checking the source, looking for inconsistencies or artifacts, and seeking multiple reliable sources for verification. Examples of real vs. deep fake images or videos can be shown to the students, encouraging them to identify the differences. Interactive activities like *role-play* or *ideas exhibition* can be effective in this case. Students will be divided into small groups and assigned a scenario related to deep fakes (e.g., a friend sharing a suspicious video). In their groups, students will discuss and act out how they would respond to the situation, emphasizing critical thinking and responsible digital citizenship.

Afterwards, students will have five minutes to *reflect and recap* the key points learned about deep fakes and the importance of media literacy. Finally, as an *extension activity*, the teacher will assign a follow-up project where students can create posters or presentations about deep fakes and share strategies for identifying and combating them with their peers.

Further research is necessary to explore the ethical considerations and potential countermeasures that can mitigate the risks posed by improper use of AI technologies, including

deep fakes, in educational contexts. By promoting responsible and ethical use of AI, educational institutions can harness the benefits of these technologies while safeguarding the integrity, privacy, and well-being of students and educators.

In conclusion, while AI-powered tools offer numerous benefits for enhancing the learning experience in the development EFL skills, attention must be given to students' security and ethical considerations. Data privacy safeguards should be in place to protect student information, and educators should equip students with the necessary skills to critically evaluate AI-generated content. Ethical guidelines should be followed in the development and implementation of AI tools while teaching English to ensure fairness, transparency, and responsible use. By addressing these concerns, the integration of AI in education can be maximized while maintaining a safe and ethical learning environment for students.

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