OVERVIEW OF AI APPLICATIONS IN THE FIELD EDUCATION IN VIETNAM

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Abstract

The application of Artificial Intelligence (AI) in education is rapidly transforming the teaching and learning landscape in Vietnam. AI technology is being integrated into various educational platforms to provide personalized learning experiences, support educators, and enhance the overall efficiency of the education system. In Vietnam, AI is utilized to develop adaptive learning programs, intelligent tutoring systems, and automated administrative processes. AI-powered tools such as virtual teaching assistants and chatbots are also being employed to offer real-time support and feedback to students. Furthermore, AI-driven data analytics is used to monitor and improve student performance and engagement levels. AI assists teachers in automating grading, reducing assessment time, and enabling speech recognition systems to evaluate students' English-speaking skills. These innovations contribute to a more dynamic, interactive, and inclusive educational environment. However, challenges such as data privacy concerns, the digital divide, and the demand for a skilled workforce remain significant. Addressing these issues is crucial for the sustainable integration of AI into Vietnam's education sector.

Keywords: AI in education, E-learning, online learning, smart learning

1. Introduction

Over the past five years, the application of artificial intelligence (AI) and online platforms in education in Vietnam has made significant strides, particularly in the context of digital transformation and the impact of the COVID-19 pandemic. The integration of technology into education has not only improved teaching and learning quality but also transformed traditional approaches, expanding access to knowledge for a broader audience.

AI has been integrated into education through various forms, with the most common applications being personalized learning systems, virtual assistants, and learning analytics. AI-powered platforms such as Topica, OLM, and Elsa Speak personalize learning paths based on individual student capabilities. Natural language processing (NLP) technology has been employed to enhance speech recognition and language learning, exemplified by Elsa Speak, which utilizes pronunciation recognition algorithms and real-time feedback. AI-driven systems have also been applied for automated grading,

student performance assessment, and content recommendation, thereby reducing the workload for educators (Nguyen et al., 2021).

Additionally, online platforms have experienced rapid growth, particularly during the pandemic, when the demand for remote learning surged. Learning management systems (LMS) such as Viettel Study and K12Online, along with massive open online courses (MOOCs) like FUNiX, have expanded opportunities for online education. Many universities and training centers in Vietnam have adopted blended learning models, utilizing virtual classrooms on Zoom and Google Meet in combination with digitized lecture systems to ensure interactivity and teaching effectiveness (Pham & Le, 2022).

This development has been driven not only by private sector initiatives but also by government policies. The Ministry of Education and Training has introduced several initiatives related to digital transformation in education, notably the "Plan for Enhancing IT Application and Digital Transformation in Education for the 2022-2025 Period." The government has also encouraged public-private partnerships to foster AI research and implementation in teaching (Tran et al., 2023).

Despite these advancements, challenges remain in AI and online platform adoption in Vietnamese education. Technological infrastructure is unevenly distributed across regions, particularly in rural and mountainous areas, leading to disparities in digital education access. Additionally, the quality of digital content lacks strict regulation, resulting in some platforms failing to meet academic standards. Training teachers and students in digital competencies is another obstacle that must be addressed to maximize the effectiveness of these tools (Vo, 2023).

Overall, AI and online platforms have significantly advanced education in Vietnam, offering new opportunities while posing considerable challenges. To fully harness the potential of technology in education, close collaboration among the government, enterprises, and educational institutions is essential to ensure sustainability and long-term effectiveness.

2. Applications of ai in education

2.1. Intelligent Learning Applications:

By using AI to create personalized courses, programs like VioEdu, Monkey Junior, and Elsa Speak have assisted children in developing their writing, reading, and pronouncing abilities. List the following similarities and differences between Elsa Speak (ELSA, 2025**)** , Monkey (Monkey Junior, 2025), and VioEdu (VioEdu Online Education System, 2025): AI technology is used by all three platforms to give learners immediate feedback and customize their learning paths. With extensive and varied educational activities, the target audience seeks to reach a broad spectrum of learners, from kids to adults. High interaction: Learners may successfully practice and enhance their skills on all three platforms because of their high interactivity.

(a) (b) (c)

Fig 1. The logos of (a) FPT Corporation, (b) Monkey Vietnam, and (c) ELSA Speak

Several components of high school learning objectives, with an emphasis on core topics like math, English, and Vietnamese, and the primary objective of offering online lectures, practice questions, and test papers. Learning resources are modified by the adaptive system in response to student performance. One disadvantage is that it hasn't broadened the scope of study and mostly concentrates on basic courses; on the plus side, there are plenty of lectures, a variety of assessments, and content that is in line with Vietnam's general education curriculum.

2.2. Online learning platform:

Platforms like Coursera (Arnis Silvia et al., 2015), Edumal (TOPICA Education Joint Stock Company, 2024), Kyna (Tram Ho, Kyna English, 2024), and Khan Academy (Thanh Nguyen Chi et al., 2020) have been widely implemented and used, allowing students to access remote courses and track their learning progress through AI algorithms. Here are the similarities and differences of the platforms. The similar features regarding educational goals, the platforms all aim to provide high-quality education for everyone, from students to working professionals; the range of subjects offered by Edmodo includes a variety of courses and subjects, from general education to specialized skills, while Coursera provides online courses from top universities and organizations worldwide. Edumal offers courses on soft skills, foreign languages, information technology, business administration, and many other fields. Additionally, Khan Academy provides free online lectures and exercises, mainly in general education subjects such as Mathematics, Science, History, and Language. The courses include video lectures, quizzes, and projects; online learning, all of which are online learning platforms, allowing learners to study anytime, anywhere through the Internet. Different features such as Edmodo, which primarily targets teachers, students, and parents, creating an interactive online classroom environment, while Coursera is aimed at university students and working professionals who want to enhance their professional skills. The standout advantage is that Khan Academy is completely free, with rich and high-quality learning materials. Providing concise and easy-to-understand lectures along with practical exercises to reinforce knowledge, Coursera collaborates with many prestigious universities and organizations, offering valuable certificates, high-quality course content, and regular updates.

2.3. Support for special needs students:

The similarities and differences of companies using AI to support special students, such as (Institute of Information and Communication, 2025), (Gameloft, 2025) and (LightUp Education, 2025) are as follows:

Regarding the general objective, the companies aim to improve the quality of education and support special needs students through the application of artificial intelligence (AI) technology, targeting students who require additional learning support and those who need special assistance during their studies; Using artificial intelligence to create personalized educational content, provide instant feedback, and adjust learning materials to suit each student. Different features show that offers courses and learning materials for special students, focusing on developing life and learning skills, while Gameloft creates educational applications, especially educational games, using AI technology to help students learn in an engaging and intuitive way. Additionally, LightUp.vn provides online learning solutions, using AI to suggest lessons that match the needs and abilities of each student; The target users all range from students to the elderly who have a need for supplementary learning and personal development. The common advantages aim to contribute to high-quality education, diverse content, and meet the special needs of learners.

(a) (b) (c)

Fig 2. The logos of (a) Gameloft Vietnam, (b) Vietnam Institute for Innovation and Digital Transformation, and (c) Light Up English Vietnam.

2.4. Supporting teachers in creating online lessons:

Recently, the development of AI technology has been accelerating, and many organizations have created software to support the creation of offline and online lectures, helping teachers in primary and secondary schools as well as university lecturers reduce the time spent on lesson preparation. Below are some websites that help teachers and lecturers create lessons, package them, and upload them to E-learning platforms for students to study online, contributing to the transformation of teaching and learning in Vietnam as well as worldwide.

a) iSpring suite 10

iSpring Suite 10 has the function of converting PowerPoint into interactive e-learning lectures, supporting multimedia such as images, audio, video, and animations. iSpring has the function to design tests and interactive questions, offering 14 types of questions, including multiple choice, drag-and-drop, sorting, and fill-in-the-blank. In addition, it also integrates automatic grading and personalized feedback; the ability to record and edit lecture videos, allowing voice recording or dubbing into the lectures, integrating video editing tools, cutting, and adding transition effects; At the same time, iSpring also builds courses with characters and dialogue simulations, adding animated characters and dialogue simulations to increase interactivity and creating realistic situations to help learners absorb better. In addition, iSpring can also publish diverse content, exporting files in formats such as SCORM, xAPI, HTML5, and MP4. In addition, it supports running on computers, phones, and tablets without the need for additional software installation and has the capability to integrate with LMS (Learning Management System), compatible with LMS platforms such as Moodle, Blackboard, TalentLMS, and Canvas, tracking students' learning progress through LMS, with support for teamwork and collaboration, allowing multiple people to edit and review course content, and supporting cloud work through iSpring Cloud. iSpring has a rich resource library, providing over 89,000 templates for interfaces, backgrounds, characters, and icons to design lessons, helping instructors create content faster without starting from scratch. The strength of this software lies in its ability to integrate AI to enhance lectures, with AI supporting automatic content alignment, image and sound optimization, and voice recognition to create automatic subtitles. Additionally, it is easy to use, requires no programming, has an intuitive interface, operates as a plugin on PowerPoint, does not require programming skills, and is user-friendly for both educators and businesses.

(a) (b)

Fig 3. The logos of (a) iSpring Solutions, Inc., American, (b) Napkin AI American

b) https://app.napkin.ai

Napkin AI is an advanced tool that helps convert text content into visual images quickly and efficiently. Designed to assist those who are not graphic design professionals, Napkin AI generates charts, diagrams, and illustrations from text within seconds (Napkin AI, 2025).

c) https://ppt.softtooler.com

PPT.softtooler, also known as workppt, is a presentation creation platform that uses artificial intelligence (AI). It allows users to quickly convert ideas into professional slides in just a few minutes, saving time compared to manual design (SoftTooler, 2025).

d) https://vivago.ai/home

Vivago is an advanced artificial intelligence (AI) application platform that helps users easily create high-quality image and video content. With Vivago.ai, you can turn ideas into reality through features like converting text to video, enhancing video quality to 4K, converting images to video, and many other editing tools. This platform is designed to support both beginners and professionals in creating creative and professional content (Vivago, 2025).

In addition to the mentioned software and online applications, there are currently many more software programs and websites on the market that help teachers and learners acquire knowledge to develop their personal abilities, contribute to building society, and develop communities with a lifelong learning spirit.

3. Conclusion

The application of artificial intelligence in education in Vietnam is in a strong development phase, with many notable achievements. However, there is still much potential that has not been fully tapped. To achieve the maximum benefits from AI, investment and support from government agencies, educational institutions, and the business community are needed to promote the research, development, and application of AI in education effectively and sustainably.

References

Nguyen, T. H., Pham, L. D., & Tran, Q. T. (2021). Artificial Intelligence in Personalized Learning: A Case Study in Vietnam. *International Journal of Educational Technology*.

Pham, M. T., & Le, T. K. (2022). "The Role of MOOCs in Higher Education During COVID-19: A Vietnamese Perspective. *Journal of Online Learning Research.*

Tran, D. H., Hoang, V. C., & Nguyen, P. H. (2023). Public-Private Partnerships in AI Education in Vietnam: Challenges and Opportunities. *Asian Journal of Education and Development*.

Vo, H. N. (2023). Digital Transformation in Vietnamese Education: Infrastructure, Policy, and Implementation. *Vietnam Journal of Educational Research*.

VioEdu (2025). VioEdu - Online Learning System. [Online]. Available: https://vio.edu.vn/

Monkey Education (2025). Monkey Education Website. [Online]. Available: https://monkey.edu.vn/

ELSA Speak (2025). ELSA Speak Vietnam Website. [Online]. Available: https://vn.elsaspeak.com/

Udemy (2025). Udemy - Online Courses & Learning Platform. Udemy. [Online]. Available: https://www.udemy.com/

Arnis Silvia et al (2015). Coursera online course: a platform for english teachers' meaningful and vibrant professional development. *Teflin Journal*, *26*(2), 228-246.

Kyna English (2025). Kyna English Skills Website. [Online]. Available: https://skills.kynaenglish.vn/

Thanh Chi Nguyen et al (2020). A CASE STUDY BY USING KHAN ACADEMY, AN OPEN-SOURCE ENVIRONMENT. *Vietnam Journal of Education*, *4*(4), 22-27, https://vi.khanacademy.org/

Institute of Information and Communication Technology (VIDTI) (2025). VIDTI Homepage. [Online]. Available: https://vidti.org.vn

Gameloft (2025). Gameloft Official Website. [Online]. Available: https://www.gameloft.com

LightUp Education (2025). LightUp Education. [Online]. Available: https://lightup.edu.vn/

Mujahidah, T., Faslah, R. ., & Marsofiyati (2024). The Development of Interactive Learning Media Using Ispring Suite 10 for Office Management Lesson at 48 Vocational High School. *International Student Conference on Business, Education, Economics, Accounting, and Management (ISC-BEAM)*, *1*(1), 603-611

Napkin AI (2025). Napkin AI Website. [Online]. Available: https://app.napkin.ai

SoftTooler (2025). SoftTooler PPT Website. [Online]. Available: https://ppt.softtooler.com

Vivago AI (2025). Vivago AI Website. [Online]. Available: https://vivago.ai