




Education and artificial intelligence

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Article Info

Submitted: 20.12.2024

Accepted: 30.12.2024

Published Online: 30.12.2024

Keywords

Artificial Intelligence
Data Mining
Education Research
Machine Learning
Science Education

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Abstract

Research in the field of education has an important place in science and society. In recent years, there has been a significant increase in the number of researches in the field of educational sciences and artificial intelligence, and many journals publish special issues in this field.

The reflections of artificial intelligence, from preschool to graduate education, are revealed by many studies. Academic journals on artificial intelligence and education contribute to this field. The aim of the "International Journal of Educational and Artificial Intelligence" (IJEDAI), the first issue of which was published, is to be beneficial to science and humanity by conveying current developments in the fields of education and artificial intelligence in education, and by sharing original studies.

In this editorial article, the focus is on the discussion of artificial intelligence tools and features in education in terms of creating articles suitable for IJEDAI content.

In the first issue of IJEDAI, science education and artificial intelligence studies were included. In the first issue of IJEDAI, Kösen and Dede's (2024) study on STEM education, Aşçı et al. (2024) study on the reflection of artificial intelligence on science education, Özeler et al. (2024) study on virtual laboratory applications, Şentürk (2024) study on creative comics were presented.

To cite this article:

İlhan, N. (2024). Education and artificial intelligence. *International Journal of Educational and Artificial Intelligence*, 1(1), 1–3.

INTRODUCTION

Educational research is important in order to improve qualifications in the field of education or to find solutions to problems. In terms of scientific and social development, countries value research in the field of education. In recent years, research in the field of educational sciences and artificial intelligence has been given importance, the number of researches in this field has increased significantly, and many journals publish special issues in the field of education and artificial intelligence. The implications of artificial intelligence, from pre-school to postgraduate education, are shown by many studies (Morales-García et al., 2024; Wang et al., 2024). Many AI tools are spreading rapidly because they enable learning through online and open educational resources (Gardner & Yuan, 2021).

Artificial intelligence is the development of machines with a certain level of intelligence and capabilities similar to those of humans (Chen et al., 2020). Artificial intelligence technologies are used in many areas, from the creation of educational materials to measurement and evaluation. Some artificial types in the literature: machine learning, data mining, natural language processing, deep learning, artificial neural networks, expert systems (Mukhamediev et al., 2022; Wang et al., 2024). Artificial intelligence tools such as ChatGPT, Copilot and Gemini are very common and well-known tools and are used in education and many fields by giving voice and written commands. AI-powered tools provide ease of work for teachers in education (Owan, et al., 2023). Publishing research in education and artificial intelligence in open access journals is important for developing the theory-practice relationship in education.

It is important that Artificial Intelligence tools or applications have some characteristics to be considered Artificial Intelligence. Some important features that AI tools should have are: learning ability, problem solving, data analysis and visualisation, autonomous behaviour, natural language processing, perception ability, prediction.

The first issue of IJEDAI included studies on science education and artificial intelligence. Kösen and Dede (2024) published a study entitled "Thematic content analysis of STEM Studies published in the field of science education in Türkiye". The study entitled "Reflections of artificial intelligence on science education in Türkiye" was published by Aşcı et al. (2024). Özeler et al. (2024) published a study entitled "The effect of virtual laboratory applications on the achievement of secondary school students in learning the granular structure of matter". The study entitled "An alternative teaching tool: Creative comics." was published by Şentürk (2024).

RESULTS

The academic journal, which includes artificial intelligence and education, contributes to this field. The "International Journal of Educational and Artificial Intelligence" (IJEDAI), whose first issue has been published, aims to convey the current developments in the fields of education and artificial intelligence in education, and to be beneficial to science and humanity by sharing original studies. This editorial discusses the creation of articles suitable for the content of IJEDAI, its classification in terms of educators, the characteristics of artificial intelligence tools and applications.

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