UNVEILING INSIGHTS: A BIBLIOMETRIC ANALYSIS OF ARTIFICIAL INTELLIGENCE IN TEACHING

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Abstract

The penetration of intelligent applications in education is rapidly increasing, posing a number of questions of a different nature to the educational community. This paper is coming to analyze and outline the influence of artificial intelligence (AI) on teaching practice which is an essential problem considering its growing utilization and pervasion on a global scale. A bibliometric approach is applied to outdraw the “big picture” considering gathered bibliographic data from scientific databases Scopus and Web of Science. Data on relevant publications matching the query “artificial intelligence and teaching” over the past 5 years have been researched and processed through Biblioshiny in R environment in order to establish a descriptive structure of the scientific production, to determine the impact of scientific publications, to trace collaboration patterns and to identify key research areas and emerging trends. The results point out the growth in scientific production lately that is an indicator of increased interest in the investigated topic by researchers who mainly work in collaborative teams as some of them are from different countries and institutions. The identified key research areas include techniques used in educational applications, such as artificial intelligence, machine learning, and deep learning. Additionally, there is a focus on applicable technologies like ChatGPT, learning analytics, and virtual reality. The research also explores the context of application for these techniques and technologies in various educational settings, including teaching, higher education, active learning, e-learning, and online learning. Based on our findings, the trending research topics can be encapsulated by terms such as ChatGPT, chatbots, AI, generative AI, machine learning, emotion recognition, large language models, convolutional neural networks, and decision theory. These findings offer valuable insights into the current landscape of research interests in the field.