Chapter 78

Smart Solutions for Smarter Schools:
Leveraging Artificial Intelligence to Revolutionize Educational Administration and Leadership

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ABSTRACT

At an alarming rate, artificial intelligence (AI) and its application is developing and has become an integral part of people's daily lives. AI seems to promote adaptive learning wherein data mining, learning analytics, and real-time analysis are applied which embraces the process of student learning. Adaptive learning not only collects information about students but also gives information about their behavior; hence, it assists the school leaders to plan optimal learning path for the students. However, technology comes with a lot of challenges and ethical considerations that requires huge attention; henceforth, it is being discussed in the present chapter. Furthermore, AI not only gives personalized learning experience to students but also helps the leaders and faculty members to plan and schedule all tasks under school improvement and development process. The article has also analyzed the changes that policymakers need to emphasize to effectively use and implement AI in the education sector.

INTRODUCTION

Artificial Intelligence has already revolutionized varied sectors such as healthcare, finance as well as transportation and in recent years, it has started making its impact on education sector as well. It AI technology not only improves the quality of education but also it changes the traditional ways of managing administrative tasks. In education industry, the system and structure has becoming challenging and competitive especially while meeting international standards; therefore, education institutions are using AI to a greater extent to turn knowledge into comprehensive system (Alam, 2022). It has been noticed that the use of artificial intelligence automates administrative work and helps the staff members

to manage all the workload in effective way. It is useful for teachers in many ways as they can focus on engaging with student's learning needs while the paperwork is being managed automated.

In this respect, the present chapter focuses on the use of artificial intelligence in education industry and how it assists in managing various administrative functions in effective manner. Machine learning as well as AI are the key drivers of growth and innovation in education sector as it optimizes both learning and teaching process; thereby, helps the education sector to benefit both students and teachers alike (Ahmed et al., 2022). AI is an integral part of the education industry as its use is not confined to personalized learning, but it helps the leaders and teachers to identify potential problems and manage the security aspects. The present chapter also outlines how AI helps educational leadership by making effective decisions for quality educational services.

In addition to this, the study also emphasizes on the ethical aspects that are to be considered while using AI as it has societal implications on greater extent. Since, the use of AI is becoming more prevalent in the classroom activities; therefore, it is crucial to ensure that it is used ethically and responsibly. Teachers and school leaders are required to consider the ethical dimensions such as data privacy, transparency and fairness at the time of handling diversified tasks (Ahmad et al., 2022). The study has been using secondary as well as primary sources for data collection in which academic journals, books and online resources have been referred. In this context, in UAE, the education minister announced the partnership between Ministry of Education and Microsoft Open AI for the purpose of integrating artificial intelligence technologies into education sector to improve the economic aspects. This integration of the digital teacher is being supported by artificial intelligence which helps in contributing and improving the teaching methods as per the academic needs of students (Bakht, 2023). This has developed the style of receiving information as well as academic performance of students.

BACKGROUND

Technology has become an essential part of human progress as it allows humans to excel in the environment. However, as technology is becoming more ever-present and classrooms getting more digitized, the upsides and downsides of artificial intelligence have gained focus of many heated debates among educators and tech experts. In this respect, Babitha & Sushma, (2022) says that the quest of creating intelligent machines (which can replicate human behavior) has developed due to artificial intelligence which is the greatest advancement in computer science. AI has been defined as the ability of computer-controlled robot to perform all the tasks that are commonly associated with human intelligence. However, combining various definitions, artificial intelligence can be termed as a technology that develops systems which can think and act like humans and can achieve desired goals.

Considering this, the present chapter is prepared with the theme of developing smart solutions for smarter schools wherein educational institutions are leveraging the use of artificial intelligence to revamp administration and leadership processes. The study in this context describes how AI is transforming education through improving administrative tasks, personalizing learning experience of students and undertaking better decisions for school management (Ismail, Alriyami, & Alhosani, 2023). The main aim of framing the chapter is to examine the impact of AI on administrative tasks and leadership in education institutions. Furthermore, discussion has been made regarding use of AI in improving the learning experience of students and how it benefits them in their academic journey. The application of AI tools is common in tech world; however, there has not been much research done regarding AI's impact on

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