Chapter 10
Automating Administrative Tasks With AI Efficiency in Education

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ABSTRACT

This chapter will explore the potential of artificial intelligence (AI) to streamline and automate administrative tasks in educational settings, enhancing operational efficiency and allowing educators to focus more on teaching and student engagement. It will examine the types of administrative functions that can be automated, such as grading, scheduling, data management, and communication, and how AI technologies can reduce the time and effort required for these tasks. The chapter will also discuss the benefits of automation in improving accuracy, consistency, and decision-making processes within educational institutions. Additionally, it will address the challenges of implementing AI solutions, including concerns about data privacy, the need for adequate training, and the potential for resistance to change. Through case studies and examples, this chapter will demonstrate how AI can transform administrative operations, ultimately contributing to a more efficient, effective, and student-centered educational environment.

DOI: 10.4018/979-8-3373-5102-5.ch010

INTRODUCTION

In recent years, artificial intelligence (AI) has emerged as a transformative force in many sectors, including education. One of the most promising applications of AI in education is its potential to automate administrative tasks, which have long been a time-consuming and often burdensome aspect of educational institutions. From grading assignments to scheduling classes and managing student data, educators and administrative staff are often overwhelmed by the sheer volume of routine tasks that demand their attention. By harnessing AI to handle these tasks, institutions can not only streamline their operations but also create more time and space for teachers to focus on what they do best—engaging with students and facilitating learning.

This chapter will explore how AI can be applied to various administrative functions within educational settings, highlighting the potential for automation to enhance efficiency, reduce workload, and improve decision-making processes. One of the most well-known applications of AI in education is automated grading. For years, grading has been a time-intensive process for educators, particularly in subjects that require subjective assessments such as essays, projects, or written exams. AI-powered grading systems, however, have the potential to significantly reduce the time and effort required to grade these assignments (Kakungulu, 2024; Rutner & Scott, 2022). By using natural language processing (NLP) algorithms and machine learning models, AI can assess written content for grammar, coherence, relevance, and argumentation, providing instant feedback to students and reducing the administrative burden on teachers (Kakungulu, 2024; Poonpon, 2023). This allows educators to dedicate more time to providing personalized support and engaging with students in meaningful ways.

In addition to grading, AI can also be used to automate scheduling and resource management (Adams & Thompson, 2025; Igbokwe, 2023; Saaida, 2023). Scheduling is often a complex and tedious process that requires balancing multiple variables, such as teacher availability, student preferences, and room assignments. AI systems can optimize this process by analyzing historical data, identifying patterns, and generating the most efficient schedules for both students and faculty. This can save significant time for administrators and ensure that resources are allocated in the most effective manner. Similarly, AI can assist with resource management by tracking the availability and usage of materials, equipment, and facilities, allowing institutions to make more informed decisions about resource allocation and reduce waste.

Another area where AI can improve efficiency is in communication. Administrative staff often spend a considerable amount of time responding to emails, answering questions, and providing updates to students, parents, and faculty. AI-powered chatbots and virtual assistants can automate many of these communication tasks, providing instant responses to common inquiries and freeing up staff to focus on more complex