

Chapter 10

Cost-Benefit Analysis of AI Adoption in Educational Management

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Abstract:

A paradigmatic shift has occurred in how an institution operates, plans for educational delivery, and delivers educational services through the use of Artificial Intelligence (AI) in Educational Management Systems. Although numerous benefits exist to implementing AI, there exists a substantial number of risks, and ethically-related concerns in adopting AI in educational administration. This chapter does a comprehensive cost/benefit analysis of the implementation of AI into educational administration. A comparative analysis of the financial, infrastructure, and human capital investments associated with the implementation of AI are compared with the long-term benefits of improved educational performance and administrative efficiencies. An examination of the direct and indirect costs of implementing AI includes; the cost of purchasing and maintaining technology, the cost of training personnel in the proper use of AI, the cost of providing adequate data security, and the cost of providing a moral/ethical compass to users of AI. Additionally, this chapter examines the tangible and intangible benefits of implementing AI into educational administration. This chapter also compares two different types of case studies of developed and developing educational systems using examples of the successful integration of AI into educational administration. The purpose of this comparison is to provide educational administrators and policymakers with evidence-based decisions regarding the implementation of AI into educational administration that are both fiscally responsible, ethically sound, and beneficial to improving equity, efficiency, and sustainability in educational delivery. Strategic planning, accessible digital infrastructure, and regulatory protections were identified as critical components to ensure the implementation of AI technologies in education. The final objective of this chapter is to make the argument that AI can be used to support educational reform when implemented with careful consideration, flexibility, and regulation.