AI-DRIVEN DECISION-MAKING IN EDUCATIONAL MANAGEMENT: CHALLENGES AND OPPORTUNITIES IN EDUCATION MANAGEMENT

[1]OKOUGBO, S.; & **[2]BARNABAS, P. A.**
[2]Department of Educational Foundations and Management, Faculty of Education, Ambrose Alli University, Ekpoma, Edo State, Nigeria.
E-mail: [1]meetwiseone89@gmail.com; & [2]perpdesi@aauekpoma.edu.ng
Phone: [1]+2348050717490; & [2]+2348037808403

Abstract
The paper examined the concept of AI-driven decision-making in educational management by exploring the conceptual foundations of Artificial Intelligence, educational management, and AI-enabled decision processes. This paper also highlighted critical challenges associated with AI adoption, including ethical concerns, algorithmic bias, data privacy and security, inadequate digital infrastructure, resistance to organizational change, limited AI competencies among educational managers, and regulatory issues. It further looked the opportunities presented by AI, including improved strategic planning, enhanced student performance monitoring, efficient resource management, personalized learning support, and strengthened institutional accountability. The paper argued that while AI has considerable potential to improve educational management, its successful implementation depends on responsible governance, human oversight, institutional readiness, and adherence to ethical principles. The paper concluded that the successful adoption of AI-driven decision-making in educational management depends on balancing technological innovation with ethical principles, professional expertise, and human-centered leadership. Therefore, the paper suggested that when AI-enabled decision processes are implemented responsibly, the potential to enhance institutional effectiveness and contribute to the delivery of quality, equitable, and sustainable education would be achieved.

Keywords: *AI, AI-driven Decision-Making, Challenges, Opportunities for Educational Management*

Introduction
The rapid advancement of Artificial Intelligence (AI) has become one of the defining technological developments of the Fourth Industrial Revolution, fundamentally transforming organizational processes, governance systems, and decision-making across virtually every sector of society. Education has emerged as one of the sectors experiencing profound changes through the adoption of AI technologies, with applications extending beyond teaching and learning to institutional planning, educational leadership, policy formulation, quality assurance, student administration, and organizational management (OECD, 2021; UNESCO, 2023). The increasing availability of educational data, cloud computing, machine learning algorithms and intelligent analytics have created unprecedented opportunities for educational managers to make more timely, accurate, and evidence-based decisions.

Educational management is inherently a decision-intensive process involving the planning, organization, coordination, supervision, monitoring, and evaluation of educational programmes and institutional resources to achieve predetermined educational goals. Traditionally, educational decisions have relied heavily on administrators' professional experience, intuition, and manually generated reports. Although these approaches remain valuable, they are increasingly challenged by the complexity of contemporary educational systems, growing student populations, expanding institutional data, accountability demands, and rapidly changing policy environments (Bush, 2020). Consequently, educational

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

institutions are increasingly embracing AI technologies to strengthen administrative efficiency, improve institutional effectiveness, and support strategic decision-making.

AI-driven decision-making refers to the application of intelligent computational systems to analyze large and complex datasets, generate predictive insights, identify patterns, automate routine processes, and support managerial decision-making (Russell & Norvig, 2021). Within educational management, AI-powered systems can forecast student enrolment, predict dropout risks, optimize staff deployment, improve budget planning, monitor institutional performance, evaluate teaching effectiveness, and facilitate evidence-based policy decisions (Luckin, 2018; Holmes et al., 2022). Intelligent dashboards, predictive analytics, recommendation systems, and generative AI applications are increasingly supporting educational leaders in addressing complex managerial challenges with greater speed and precision.

Despite these significant opportunities, integrating AI into educational management presents several ethical, legal, technical, and organizational challenges. Concerns relating to algorithmic bias, transparency, accountability, cyber-security, data privacy, digital inequality, workforce preparedness, and overreliance on automated systems continue to generate debate among researchers and policymakers (Floridi & Cowls, 2019; UNESCO, 2023). Furthermore, AI systems cannot replace the contextual understanding, ethical reasoning, emotional intelligence, and professional judgment required for many educational leadership decisions. Consequently, AI should be viewed as a decision-support tool that complements rather than replaces educational managers. It is against this background, this paper examines AI-driven decision-making in educational management by conceptualizing its key constructs, exploring its opportunities and challenges, and proposing strategies for its responsible and sustainable integration into educational administration.

Concept of Artificial Intelligence

Artificial Intelligence (AI) refers to the branch of computer science concerned with the development of intelligent systems capable of performing tasks that ordinarily require human intelligence, including learning, reasoning, problem-solving, pattern recognition, language understanding, perception, and decision-making (Russell & Norvig, 2021). AI systems employ computational techniques such as machine learning, deep learning, natural language processing, computer vision, and expert systems to analyze data, recognize patterns, generate predictions, and support intelligent decision-making. UNESCO (2023) defined AI as computer systems capable of performing cognitive functions associated with human intelligence through learning from data, interpreting language, recognizing patterns, making predictions, and supporting complex decision processes. Contemporary AI applications are predominantly based on Artificial Narrow Intelligence (ANI), which performs specialized tasks within defined domains. Recent advances in Generative AI, particularly large language models such as Chat-GPT, Gemini, Claude, and Microsoft Copilot, have significantly expanded AI capabilities by enabling human-like text generation, information synthesis, content creation, and interactive problem-solving (OpenAI, 2023).

In educational contexts, AI has evolved beyond instructional support to become an indispensable component of institutional management. AI technologies facilitate predictive analytics, intelligent automation, resource optimization, performance monitoring, administrative planning, and strategic decision-making, thereby enhancing institutional effectiveness and organizational performance (Holmes et al., 2022; Luckin, 2018). Nevertheless, AI should be regarded as an augmentative technology that supports human expertise rather than an autonomous substitute for professional judgment.

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

Educational Management

Educational management refers to the systematic process of planning, organizing, coordinating, directing, supervising, and evaluating educational resources and activities to achieve institutional goals effectively and efficiently. It encompasses the administration of human, financial, physical, technological, and informational resources to improve teaching, learning, research, and institutional development (Bush, 2020). According to Bush, educational management integrates leadership principles with administrative functions to facilitate effective policy implementation, organizational improvement, quality assurance, accountability, and continuous institutional development. Educational managers operate at multiple levels, including ministries of education, educational agencies, school districts, universities, colleges, and schools, where they make strategic and operational decisions affecting institutional performance.

Contemporary educational management has become increasingly data-driven due to growing demands for accountability, quality assurance, institutional effectiveness, and evidence-based policymaking. Consequently, educational managers are adopting advanced digital technologies, including Artificial Intelligence, learning analytics, and business intelligence systems, to improve organizational planning, resource allocation, student success, risk management, and institutional governance (OECD, 2021; UNESCO, 2023).

AI-Driven Decision-Making in Educational Management

AI-driven decision-making in educational management refers to the application of Artificial Intelligence technologies to support educational leaders and administrators in making informed, timely, accurate, and evidence-based decisions through the analysis of large institutional datasets and intelligent predictive models (Russell & Norvig, 2021). Rather than replacing educational managers, AI functions as an intelligent decision-support mechanism that enhances human judgment by providing actionable insights derived from complex educational data.

AI-driven decision-making integrates technologies such as machine learning, predictive analytics, natural language processing, intelligent decision-support systems, learning analytics, and generative AI to improve administrative planning, enrolment management, resource allocation, academic forecasting, staff management, quality assurance, financial planning, and institutional policy development (Siemens & Baker, 2012; Holmes et al., 2022). These technologies enable educational institutions to detect emerging trends, identify potential risks, forecast future outcomes, optimize organizational performance, and support continuous institutional improvement.

The effectiveness of AI-driven decision-making depends on the quality of institutional data, technological infrastructure, digital competencies, ethical governance, and sustained human oversight. Educational managers remain responsible for interpreting AI-generated insights within institutional contexts, ensuring transparency, protecting stakeholder interests, and making value-based decisions that advance educational goals. Accordingly, AI should be viewed as a strategic partner in educational management that strengthens evidence-based leadership while preserving the indispensable role of human expertise, ethical reasoning, and organizational accountability.

Theoretical Formation

This study is anchored on the Technology Acceptance Model (TAM), Diffusion of Innovation (DOI) Theory, and Evidence-Based Decision-Making (EBDM) Theory, which collectively explain the adoption, implementation, and effective use of Artificial Intelligence (AI) in educational management.

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

The Technology Acceptance Model (Davis, 1989) posited that users' adoption of technology is influenced by perceived usefulness and perceived ease of use. In educational management, administrators are more likely to adopt AI-driven decision-support systems when they perceive them as beneficial, user-friendly, and supported by adequate training and institutional commitment. Although TAM effectively explains technology acceptance, it pays limited attention to the organizational and ethical factors influencing AI implementation.

The Diffusion of Innovation Theory (Rogers, 2003) explained how innovations spread within organizations through factors such as relative advantage, compatibility, complexity, trial ability, and observability. The theory suggests that successful AI adoption in educational management depends on its compatibility with institutional goals, administrative practices, organizational culture, and technological infrastructure. Effective implementation is further strengthened by supportive leadership, institutional policies, stakeholder engagement, and continuous evaluation.

Evidence-Based Decision-Making Theory, as advanced by Pfeffer and Sutton (2006), emphasizes that managerial decisions should be based on the best available evidence, professional expertise, and contextual information rather than intuition or tradition. AI enhances evidence-based decision-making by analyzing large datasets, identifying trends, generating predictive insights, and supporting strategic planning in areas such as student enrolment, academic performance, resource allocation, financial management, and institutional evaluation. Nevertheless, AI should complement rather than replace the professional judgment of educational leaders.

Collectively, these theories provide a comprehensive framework for understanding AI-driven decision-making in educational management. TAM explains administrators' acceptance of AI technologies, Diffusion of Innovation Theory describes the organizational processes that facilitate AI adoption, while EBDM Theory highlights the role of AI in strengthening data-informed and evidence-based managerial decisions. Together, they demonstrate that the effective integration of AI depends on technological acceptance, organizational readiness, and the responsible use of data to enhance educational leadership and institutional performance.

Applications of Artificial Intelligence in Educational Management

Artificial Intelligence (AI) is revolutionizing educational management by enabling educational leaders to make faster, more accurate, and evidence-based decisions. AI-powered technologies such as machine learning, predictive analytics, natural language processing, intelligent decision-support systems, and data mining facilitate institutional planning, optimize resource utilization, improve operational efficiency, and enhance educational outcomes (OECD, 2021; Holmes et al., 2022; UNESCO, 2023). Rather than replacing educational managers, AI serves as a strategic decision-support tool that enhances administrative effectiveness and institutional performance. Major applications of AI in educational management include the following:

1. ***Student Enrolment and Admissions:*** AI has transformed student enrolment and admissions by automating application processing, verifying applicant information, predicting enrolment trends, and supporting admission decisions. Intelligent systems analyze applicants' academic records, demographic characteristics, and institutional admission criteria to improve the efficiency, transparency, and fairness of the admission process. AI also enables educational institutions to forecast enrolment patterns, optimize admission quotas, and improve strategic planning through predictive modeling (Holmes et al., 2022; OECD, 2021).
2. ***Staff Recruitment and Deployment:*** Educational institutions increasingly utilize AI to enhance staff recruitment, selection, and deployment. AI-powered recruitment systems

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

can screen applications, evaluate candidates' qualifications, identify suitable applicants, and reduce administrative workload. Furthermore, predictive analytics assists educational managers in deploying teaching and non-teaching staff based on institutional needs, subject specialization, workload distribution, and projected enrolment, thereby improving workforce planning and organizational efficiency (Russell & Norvig, 2021; UNESCO, 2023).

3. ***Timetabling and Scheduling:*** Preparing academic timetables is one of the most complex administrative responsibilities in educational institutions. AI-powered scheduling systems optimize class timetables by considering classroom availability, lecturer workloads, students' course registrations, institutional policies, and resource constraints simultaneously. These intelligent systems minimize scheduling conflicts, maximize resource utilization, and significantly reduce the time and effort required for timetable preparation while improving operational efficiency (Luckin, 2018; Holmes et al., 2022).
4. ***Learning Analytics:*** Learning analytics represents one of the most significant applications of AI in educational management. By analyzing students' academic performance, attendance records, assessment results, learning behaviours, and engagement patterns, AI generates valuable insights that support instructional improvement and institutional decision-making. Educational managers can identify students at risk of academic failure, monitor programme effectiveness, evaluate teaching quality, and design targeted interventions that enhance student success and institutional performance (Siemens & Baker, 2012; Romero & Ventura, 2020).
5. ***Resource Allocation:*** AI improves resource allocation by enabling educational managers to distribute financial, human, technological, and physical resources more efficiently. Through predictive modeling and intelligent optimization techniques, AI assists administrators in determining staffing requirements, classroom utilization, equipment allocation, and infrastructure development based on institutional priorities and projected demand. Consequently, educational institutions can minimize resource wastage while improving operational effectiveness and service delivery (OECD, 2021; Holmes et al., 2022).
6. ***Financial Management:*** Financial management in educational institutions has become increasingly data-driven through AI applications. AI supports budget preparation, expenditure monitoring, revenue forecasting, procurement management, financial risk assessment, and fraud detection by analyzing historical financial data and identifying spending patterns. These capabilities enhance financial accountability, improve budgetary planning, strengthen internal control systems, and support informed financial decision-making within educational institutions (Kaplan & Haenlein, 2020; UNESCO, 2023).
7. ***Predictive Analytics:*** Predictive analytics is a major application of AI that enables educational managers to anticipate future institutional outcomes based on historical and real-time data. AI algorithms forecast student enrolment, graduation rates, staff requirements, academic performance, dropout risks, institutional resource needs, and policy outcomes. These predictive capabilities support proactive planning, early intervention strategies, and evidence-based policy formulation, thereby enhancing institutional resilience and educational effectiveness (Ifenthaler & Yau, 2020; Romero & Ventura, 2020).
8. ***Quality Assurance and Accreditation:*** AI contributes significantly to institutional quality assurance and accreditation by automating data collection, analyzing institutional performance indicators, monitoring compliance with accreditation standards, and generating evidence-based evaluation reports. Educational managers can

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

use AI-generated insights to assess teaching effectiveness, monitor programme quality, evaluate institutional performance, and identify areas requiring continuous improvement. AI therefore strengthens accountability, supports accreditation processes, and promotes a culture of quality assurance and continuous institutional development (OECD, 2021; UNESCO, 2023; Holmes et al., 2022).

The diverse applications of AI demonstrate its transformative potential in educational management. By integrating intelligent technologies into administrative processes, educational institutions can improve strategic planning, optimize organizational performance, strengthen institutional accountability, and enhance evidence-based decision-making. Nevertheless, the successful application of AI depends on adequate digital infrastructure, skilled personnel, ethical governance, high-quality data, and sustained human oversight to ensure that AI complements professional judgment and advances institutional goals.

Challenges of AI-Driven Decision-Making in Educational Management

Although Artificial Intelligence (AI) offers enormous potential for improving educational management, its adoption is accompanied by several ethical, technical, organizational, and legal challenges. These challenges may hinder effective implementation and reduce stakeholders' confidence if they are not adequately addressed. Major challenges include the following:

1. ***Data Privacy and Security:*** AI systems rely heavily on large volumes of institutional data, including students' academic records, staff information, financial data, and administrative records. The collection, storage, and processing of such sensitive information expose educational institutions to risks of data breaches, cyber-attacks, unauthorized access, and misuse of personal information. Consequently, educational institutions must establish robust cyber-security measures and comply with national and international data protection regulations to safeguard institutional data (Floridi & Cowls, 2019; UNESCO, 2023).
2. ***Algorithmic Bias and Fairness:*** AI systems are only as reliable as the data used to train them. When training datasets contain historical biases or incomplete information, AI algorithms may produce discriminatory or unfair decisions regarding student admissions, staff recruitment, resource allocation, or performance evaluation. Such biases may undermine equity, transparency, and public trust in educational decision-making, making regular algorithm audits and bias mitigation essential (Floridi & Cowls, 2019; European Commission, 2021).
3. ***Inadequate Digital Infrastructure:*** The successful implementation of AI depends on reliable digital infrastructure, including stable internet connectivity, electricity, cloud computing facilities, digital devices, and technical support services. Many educational institutions, particularly in developing countries, lack these essential resources, thereby limiting the effective deployment of AI-driven management systems (OECD, 2021; UNESCO, 2023).
4. ***Limited AI Competencies:*** Many educational managers and administrators possess limited knowledge of Artificial Intelligence, data analytics, and intelligent decision-support systems. This shortage of digital competencies often leads to resistance to innovation, ineffective utilization of AI technologies, and overdependence on technical personnel. Continuous professional development is therefore necessary to improve AI literacy and managerial competence (Holmes et al., 2022).
5. ***Ethical and Legal Concerns:*** AI-driven decision-making raises significant ethical and legal issues relating to transparency, accountability, informed consent, explainability, and responsibility for AI-generated decisions. Determining accountability when AI systems produce inaccurate recommendations or unintended outcomes remains a major

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

concern for educational institutions and policymakers. Comprehensive ethical guidelines and regulatory frameworks are therefore essential to ensure responsible AI implementation (Floridi & Cowls, 2019; UNESCO, 2023).

6. ***Resistance to Organizational Change:*** The introduction of AI frequently encounters resistance from administrators, academic staff, and other stakeholders who may fear job displacement, increased surveillance, or reduced professional autonomy. Organizational resistance can slow AI adoption and limit its effectiveness unless institutions promote stakeholder engagement, change management, and continuous awareness programmes (Rogers, 2003; Holmes et al., 2022).
7. ***Poor Data Quality:*** AI systems require accurate, complete, timely, and reliable data to generate meaningful insights. Inaccurate, inconsistent, or incomplete institutional data can produce misleading analyses and poor managerial decisions. Educational institutions must therefore strengthen data governance, improve record management systems, and establish mechanisms for ensuring data quality (Russell & Norvig, 2021).
8. ***High Cost of Implementation:*** The acquisition, customization, maintenance, and continuous upgrading of AI technologies require substantial financial investment. Costs associated with software acquisition, digital infrastructure, staff training, cyber-security, and technical support may limit AI adoption, particularly in resource-constrained educational institutions (OECD, 2021; UNESCO, 2023).

However, addressing these challenges requires strategic investment, institutional readiness, effective governance, ethical compliance, and sustained human oversight to ensure that AI contributes meaningfully to educational management.

Opportunities of AI-Driven Decision-Making in Educational Management

Despite the challenges associated with its adoption, Artificial Intelligence (AI) offers enormous opportunities for transforming educational management through intelligent automation, predictive analytics, and evidence-based decision-making. By analyzing complex institutional data and generating actionable insights, AI enables educational managers to improve institutional effectiveness, enhance service delivery, and strengthen organizational performance. Key opportunities include the following:

1. ***Improved Evidence-Based Decision-Making:*** AI enables educational managers to analyze large and complex datasets quickly and accurately, providing evidence that supports strategic planning, policy formulation, institutional evaluation, and operational decision-making. This enhances the quality, objectivity, and timeliness of administrative decisions (Pfeffer & Sutton, 2006; Holmes et al., 2022).
2. ***Enhanced Institutional Planning:*** Predictive analytics enable educational institutions to forecast students' enrolment, staffing requirements, budgetary needs, infrastructure expansion, and programme demand. These predictive capabilities improve long-term planning and facilitate more efficient institutional management (Ifenthaler & Yau, 2020; OECD, 2021).
3. ***Increased Administrative Efficiency:*** AI automates routine administrative tasks such as admissions processing, scheduling, record management, report generation, and communication, thereby reducing workload, minimizing human error, and enabling educational managers to focus on strategic leadership responsibilities (Luckin, 2018; UNESCO, 2023).
4. ***Optimized Resource Allocation:*** AI supports the efficient allocation of financial, human, technological, and physical resources by identifying institutional priorities and predicting future needs. This improves operational efficiency, minimizes wastage, and promotes prudent utilization of available resources (Holmes et al., 2022).

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

5. ***Early Identification of Institutional Risks:*** AI-powered predictive analytics enables educational institutions to identify potential risks such as student dropout, poor academic performance, financial irregularities, declining enrolment, and resource shortages before they become critical. Early identification supports proactive interventions and institutional resilience (Siemens & Baker, 2012; Romero & Ventura, 2020).
6. ***Improved Quality Assurance:*** AI facilitates continuous monitoring of institutional performance by analyzing key performance indicators, accreditation requirements, teaching effectiveness, and student outcomes. This strengthens quality assurance processes and supports continuous institutional improvement (OECD, 2021; UNESCO, 2023).
7. ***Personalized Student Support:*** By analyzing students' academic progress, learning behaviours, and engagement patterns, AI enables institutions to provide personalized academic advising, targeted interventions, and learner support services that improve retention, achievement, and overall student success (Luckin, 2018; Holmes et al., 2022).
8. ***Strategic Policy Development:*** AI provides educational policymakers and institutional leaders with reliable analytical evidence for developing responsive educational policies, evaluating policy outcomes, and supporting informed governance decisions. This strengthens accountability, transparency, and institutional effectiveness (Russell & Norvig, 2021; UNESCO, 2023).

Implications for Educational Managers and Policy

The integration of Artificial Intelligence (AI) into educational management has significant implications for educational leaders, policymakers, and institutional stakeholders. Educational managers must develop AI literacy and data-driven leadership competencies to effectively utilize AI-powered decision-support systems for institutional planning, policy implementation, resource management, quality assurance, and performance evaluation (OECD, 2021; Holmes et al., 2022). This shift requires a transition from intuition-based administration to evidence-based decision-making supported by intelligent analytics.

Educational institutions must also invest in robust digital infrastructure, reliable data management systems, cyber-security, and continuous staff development to maximize the benefits of AI. Equally important is the establishment of institutional policies that promote transparency, accountability, fairness, and responsible AI governance. Educational managers should ensure that AI systems complement rather than replace professional judgment, particularly in sensitive decisions involving students, staff, and institutional development (UNESCO, 2023).

At the policy level, governments and educational regulatory agencies should develop comprehensive frameworks governing the ethical adoption of AI in education. Such policies should address issues relating to data privacy, algorithmic transparency, accountability, digital inclusion, quality assurance, and institutional compliance with national and international standards (Floridi & Cowls, 2019; European Commission, 2021). Effective collaboration among policymakers, educational administrators, technology developers, researchers, and professional bodies is essential for achieving sustainable and responsible AI integration in educational management.

Future Directions

The future of AI-driven decision-making in educational management lies in the development of intelligent, ethical, transparent, and human-centered systems that strengthen institutional effectiveness while preserving professional values. Future AI applications are expected to integrate advanced predictive analytics, generative AI, adaptive learning systems,

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

intelligent dashboards, digital twins, and real-time institutional monitoring to support strategic planning and administrative decision-making (Holmes et al., 2022; UNESCO, 2023).

Research should focus on evaluating the long-term effectiveness of AI in educational management, particularly its impact on institutional performance, leadership effectiveness, educational quality, organizational efficiency, and student outcomes. Further empirical studies are also needed to examine administrators' readiness, ethical challenges, algorithmic fairness, stakeholder acceptance, and the contextual factors influencing AI adoption across different educational settings (OECD, 2021).

Future developments should prioritize explainable and trustworthy AI systems that promote transparency, minimize algorithmic bias, and strengthen accountability in educational decision-making (Kaur et al., 2023). Additionally, interdisciplinary collaboration among educational managers, computer scientists, data analysts, policymakers, ethicists, and legal experts will be essential for designing AI applications that are technically robust, educationally relevant, socially responsible, and legally compliant.

Conclusion

Artificial Intelligence (AI) has become a transformative tool in educational management, enhancing institutional decision-making through data analytics, predictive modelling, and intelligent decision-support systems. Its application improves administrative efficiency, strategic planning, resource allocation, quality assurance, and institutional performance, thereby strengthening evidence-based educational management. However, the effective integration of AI is constrained by challenges such as data privacy and security concerns, algorithmic bias, inadequate digital infrastructure, limited technical competence, and ethical and regulatory issues. Addressing these challenges requires robust governance frameworks, supportive policies, continuous professional development, and strategic investment in technological infrastructure. The paper concludes that the successful adoption of AI-driven decision-making in educational management depends on balancing technological innovation with ethical principles, professional expertise, and human-centered leadership. When implemented responsibly, it has the potential to enhance institutional effectiveness and contribute to the delivery of quality, equitable, and sustainable education.

References

Bush, T. (2020). *Theories of educational leadership and management* (5th ed.). Sage.

Davis, F. D. (1989). Perceived usefulness, ease of use, and user acceptance of information technology: *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

European Commission. (2021). *Proposal for a regulation laid down harmonized rules on artificial intelligence (A Intelligence Act):* Publications Office of the European Union.

Floridi, L., & Cowls, J. (2019). A unified framework of five principles for AI in society: *Harvard Data Science Review, 1*(1). https://doi.org/10.1162/99608f92.8cd550d1

Holmes, W., Bialik, M., & Fadel, C. (2022). *Artificial intelligence in education: Promises and implications for teaching and learning:* Center for Curriculum Redesign.

Ifenthaler, D., & Yau, J. Y.-K. (2020). Utilizing learning analytics to support study success in higher education: A systematic review: *Educational Technology Research and Development, 68*(4), 1961–1990. https://doi.org/10.1007/s11423-020-09788-z

Kaplan, A., & Haenlein, M. (2020). Rulers of the world, unite: The challenges and opportunities of artificial intelligence. *Business Horizons, 63*(1), 37–50.

Kaur, D., Uslu, S., Rittichier, K. J., & Durresi, A. (2023). Trustworthy artificial intelligence: A review. *ACM Computing Surveys, 55*(2), 1–38. https://doi.org/10.1145/3583557

Luckin, R. (2018). *Machine learning and human intelligence: The future of education for the*

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng

21st century. UCL Institute of Education Press

OECD. (2021). *Digital education outlook 2021: Pushing the frontiers with AI, blockchain and robots.* OECD Publishing.

Open AI. (2023). *GPT-4 technical report arXiv:* https://doi.org/10.48550/arXiv.2303.08774

Pfeffer, J., & Sutton, R. I. (2006). *Hard facts, dangerous half-truths, and total nonsense: Profiting from evidence-based management.* Harvard Business School Press

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Romero, C., & Ventura, S. (2020). Educational data mining and learning analytics: An updated survey. *WIREs Data Mining and Knowledge Discovery, 10*(3), e1355

Russell, S., & Norvig, P. (2021). *Artificial intelligence: A modern approach* (4th ed.). Pearson.

Siemens, G., & Baker, R. S. (2012). Learning analytics and educational data mining: Towards communication and collaboration: In *Proceedings of the 2nd International Conference on Learning Analytics and Knowledge*, 252–254. Association for Computing Machinery: https://doi.org/10.1145/2330601.2330661

UNESCO. (2023). *Guidance for generative AI in education and research:* UNESCO.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science, 46*(2), 186–204.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478.

Studies in Education All Rights Reserved. © 2026 | https://www.sie.com.ng