Ed Process Int J

www.edupij.com

ISSN 2147-0901 (Print), 2564-8020 (Online)

EDUCATIONAL PROCESS
INTERNATIONAL JOURNAL

Editorial

Cite this article: Karakose, T., & Tülübaş, T. (2024). School Leadership and Management in the Age of Artificial Intelligence (AI): Recent Developments and Future Prospects. *Educational Process: International Journal*, 13(1): 7-14.
https://doi.org/10.22521/edupij.2024.131.1

Published Online February 29, 2024

Keywords:
School leadership; school management; digital leadership; artificial intelligence; digital technologies

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School Leadership and Management in the Age of Artificial Intelligence (AI): Recent Developments and Future Prospects

Turgut Karakose, Tijen Tülübaş

Abstract

Background/purpose. With the advent of Artificial Intelligence (AI), it has become possible to invent computer systems that can perform human-like processes to tackle large data and solve complex problems. AI has manifested itself in the field of education through several technologies such as intelligent tutoring systems, adaptive teaching/learning, large-scale assessment and evaluation designs, predictive modeling and learning analytics, educational games. AI has incrementally begun to transform the ways teachers teach, students learn, and schools function with inevitable implications for school management and leadership.

Materials/methods. This study aims to focus on these implications through highlighting possible contributions of AI-based innovations to school leadership and management based on a comprehensive review of early evidence.

Practical implications. With its capability to process large datasets, engage in human-like cognition, thinking, and conversation, make decisions, and execute actions by this means, AI technologies offer several opportunities to improve school-wide leadership, practice open management based on the principles of transparency, participation, and digital skills, create the required synergy to achieve ever-changing educational goals by integrating teachers, students, and parents into educational processes. These technologies have also proven their capacity to help school leaders manage various technical tasks ranging from the management of food/transportation services, supply of instructional materials, human resource management, security, and student information processing. AI also enables learning analytics, or educational data mining, which allows for taking preventive actions and providing customized education by obtaining comprehensive data from students' educational activities across a period.

Conclusion. It is undeniable that the integration of AI-based digital technologies bears several opportunities and challenges for adapting the functioning of schools to the new conditions in the interest of students, teachers, and other stakeholders.

1. Introduction

The term artificial intelligence (AI) is often used as a generic term that refers to a collection of several digital technologies such as machine/deep learning, data mining, natural language processing, and neural networks, all of which serve the purpose of creating computing systems that can perform human-like processes like cognition, sensing, synthesis, and understanding of large data in order to solve complex problems (Baker & Smith, 2019; Chatterjee & Bhattacharjee, 2020). Although the idea of AI dates back to the 50s when Turing (1950) asked whether machines could imitate human intelligence and action, AI has just recently become the trigger of many digital innovations that are rapidly transforming personal, organizational, and societal operations (Bhatta, 2021; Stone, 2019). Considering the unprecedented breakthroughs in the world of AI, it is estimated that AI could contribute $15.7 trillion to the global economy by 2030 and could eliminate 85 million jobs while creating 97 million new ones by 2025 (Jovanovic, 2021). As a result, it would not be too early to state that AI has already 'established itself as a transformative force in a wide range of industries, including education' (Kamalov et al., 2023).

AI has manifested itself in the field of education through several technologies such as intelligent tutoring systems, adaptive teaching/learning, large-scale assessment and evaluation designs, predictive modeling and learning analytics, educational games, virtual/augmented reality, and several other forms of AI-assisted/enhanced instruction (Guan et al., 2020). Research has so far evidenced that AI could improve the learning environment through stimulating enthusiasm, enhancing the creativity of teachers and students, promoting better classroom management, or supporting customized learning (Colchester et al., 2017; Huang et al., 2021; Papadakis et al., 2024; Wang, 2021). The latest development in the AI world, the generative AI, has become central to discussions over AI-integrated education, particularly after the launch of ChatGPT, an AI-based large language model that is capable of engaging in human-like conversations to discuss or solve various complex questions (Chen et al., 2020; Fullan et al., 2023). Similarly, the conditions of the COVID-19 pandemic initiated a rapid increase in the use of such digital technologies such as virtual online classrooms and social media platforms (Harris & Jones, 2020), which has begun to redefine and alter the nature of learning and teaching irreversibly (García et al.2023).

In a nutshell, AI has incrementally begun to transform the ways teachers teach, students learn, and schools function (Kamalov et al., 2023), which has inevitable implications for school management and leadership in the new age. It is undeniable that the integration of these digital technologies bears several opportunities and challenges for adapting the functioning of schools to the new conditions in the interest of students, teachers, and other stakeholders (Chernov & Chernova, 2019; Mishra et al., 2016). Therefore, 'the question is not anymore whether AI will play a role in leadership' (Van Quaquebeke & Gerpott, 2023, p. 272), the question is what new roles are being assigned to today's school leaders 'to prepare the next generation of students for a future in which AI is an increasingly important part of their lives' (Fullan et al, 2023, p.3).

2. Literature Review

2.1. The Typology of AI Technologies

Three main capabilities of AI stand in the literature; data analysis and learning, human-like thinking/cognition, and sensing emotions. These capabilities are also categorized under several typologies with a focus on the type of intelligence, the technologies used to design them, and their specific functions (Benbya et al., 2020).

According to their type of intelligence, these systems are classified into artificial narrow intelligence (capable of focusing only one domain without making any transfer between different domains), artificial general intelligence (equipped with human-level cognition and skill set), and

artificial superintelligence (evolutionary and complex system exceeding human-level cognition and capacity – yet to be reached) (Chernov & Chernova, 2019). According to the technology embedded, AI systems are referred to by terms like machine learning (deep/reinforcement learning), natural language processing (e.g. chatbots), and automated and robotic technologies (Jarrahi, 2018). Depending on their functions, AI systems fall into four main categories: conversational (capable of engaging in human-like conversations, both voice and text-based such as repetitive client queries or chatbots), biometric (those systems that can capture people's fingerprints, facial images, retinas, or hand geometry as well as their behavioral traits like the use of voice or gestures), algorithmic (capable of making decisions and executing actions by processing a predefined set of instructions and large volumes of data, mostly via machine/deep learning), and robotic (physical robots that can assist people to perform complex or automated tasks (Benbya et al., 2020).

AI is also currently used to enhance the capacity of statistical analysis through allowing more complex data mining. AI-enhanced predictive modeling and big data analytics have become two prominent types of these data-mining systems. Predictive modeling as a subset of AI refers to the machine learning capacity to predict the likelihood of certain outcomes depending on past and present data. Big data analytics, on the other hand, refers to AI-based systems that 'allow the collection, management, and analysis of data sets that are too large for conventional database systems' (Santana & Díaz-Fernández, 2023).

2.2. Implications of AI for School Leadership and Management

Chernov and Chernova (2019) state that there are three schools of thought regarding the integration of AI into organizational management: one considers AI as beneficial technology to support decision-making, one emphasizes the potential improvement of humanity through AI-human cooperation, and one sees AI as a threat that can make humans redundant in many parts of life. No matter which school of thought they support, it is evident that principals as school managers/leaders have to tackle the opportunities and challenges brought by AI technologies into the realm of education.

Today, school leaders are expected to make digital leadership a significant part of school management practice and guide the efficient use of recent technologies for the benefit of teaching and learning (Karakose et al., 2022; Tülübaş et al., 2023). This attempt not only requires enabling a more digitally enhanced learning environment but also integrating these technologies to practice effective management and leadership in contemporary schools. As underlined by Cano (2013), one way of realizing this goal could be through assuming an open government style where the principal 'co-innovates with everyone, especially citizens, shares resources that were previously closely guarded; harness[es] the power of mass collaboration, drives transparency throughout its operations and behaves not as isolated department of jurisdiction, but as something new, a truly integrated and networked organization' (Lathrop & Ruma, 2010, p. 20). Cano (2013) also underlines that when this type of open government based on the principles of transparency and participation; when open government is combined with digital leadership, they 'together present a necessary and highly productive symbiosis for schools in the 21st century' (p.23). School leaders can thereby create the required synergy to achieve ever-changing educational goals by integrating teachers, students, and parents into educational processes via the efficient use of the above-mentioned AI-enhanced technologies (Cano, 2013; Chen et al., 2007; Taylor & Adelman, 2000). These technologies have already proven their capacity to help school leaders manage various technical tasks ranging from the management of food or transportation services, supply of instructional materials, human resource management, security, and student information processing (Davis et al., 2010).

The models of leadership in the educational field have diversified significantly, mostly following the changing demands from schools to maintain improvement and effectiveness. Traditional models developed with a leader-centered view have currently given way to more shared/distributed forms of leadership 'acknowledging that modern schools are too complex to be led by a single leader, and school leadership activity is already distributed in nature' (Karakose et al. 2022b, p.1). Likewise, studies focusing on the influence of digital technologies on educational management proposed that leadership in the age of AI warrants more collaborative and shared efforts than that of a single principal (Avolio et al., 2009; Jameson, 2014). For instance, Ottestad (2013) found that teachers' willingness to incorporate these innovations into their daily practice was closely linked to their shared leadership efforts for that matter. This collaborative effort by teachers can also support student learning and development to a significant extent (Fullan et al., 2023). As a result, the primary suggestion for today's principals could be to practice open government and involve the whole school community, including students, in working out how technology can be best integrated into education.

AI technologies have also provided the educational landscape with unprecedented capacity to serve the needs of students, teachers, and parents utilizing large-scale predictive modeling and data analytics. Developments in big data and learning analytics have already become an integral part of educational policy-making (Williamson, 2016). According to Selwyn (2015), these AI-enhanced statistical tools provide 'algorithmically driven systems thinking – where complex (and unsolvable) social problems associated with education can be seen as complex (but solvable) statistical problems… where data analysis… produce educational settings, as much as educational settings producing data' (p. 9). Similarly, learning analytics, or educational data mining, now allows for obtaining data from students' educational activities, and monitoring their dispositions and attainments across a period, which renders it possible to take preventive actions and provide customized education in light of this analysis (Sghir et al., 2023). By focusing on the technical and social implications of these developments, school leaders are now capable of accessing more objective and comprehensive results regarding student outcomes and growth, and making these results more intelligible and vivid to various stakeholders (Selwyn, 2015; Williamson, 2016). This may equally serve the call for more evidence-based management/leadership in education (Dormann et al., 2016; Reay et al., 2017).

In addition to integrating AI technologies into their management and leadership practices, principals are equally expected to promote their use by teachers through changing their attitudes and behaviors (Indra et al., 2022; Karakose et al., 2024; Polat et al., 2022). As underlined by Jameson et al. (2006) it is not only the absence of necessary technological infrastructure or digital tools but also the failure of teachers to internalize their contribution to teaching/learning. Therefore, even if the school principals equip schools with these technologies, and utilize them in school management, without the genuine efforts of the school staff, this would not bring a sustainable improvement. As such, supporting teachers' professional growth concerning these new technologies, giving them a central place in decision-making and strategic actions, establishing a culture of trust and innovation, and supporting teachers' self and collective efficacy beliefs to attain these innovative goals should be at the top of principals' agenda.

3. Conclusion

As suggested by Avolio and Kahai, (2003), the traditional practices of leadership in schools would not be sufficient to sustain the developmental mission of schools in the era of AI, and the role of principals has already moved from a narrow focus on technical management of schools to a broader perspective which demands enhancing the leadership capacity of schools through effective principal leadership (Leithwood et al., 2004). Under these circumstances, school principals are also expected to practice digital leadership (Karakose et al., 2021; Karakose et al., 2022a; Oh & Chua,

2018) through which they can create the necessary 'social influence process mediated by AIT to produce a change in attitudes, feelings, thinking, behaviour, and/or performance with individuals, groups, and/or organisations' (Avolio et al., 2000, p. 617). This could be achieved through not only supporting the existing instructional methods with technology, but also making AI tools a significant means of amplifying teaching/learning practice, and perhaps leading the way to alter how the teacher teaches, what and how students learn, and even the pedagogies underlying these practices (Mishra et al., 2016).

Declarations

Author Contributions. Both authors contributed equally to the current research, and they read and approved the final published version of the article.
Conflicts of Interest. The author declared no potential conflicts of interest.
Funding. The author received no financial support for this article.

References

Ahmad, S. F., Alam, M. M., Rahmat, M. K., Mubarik, M. S., & Hyder, S. I. (2022). Academic and administrative role of artificial intelligence in education. *Sustainability, 14*(3), 1101. https://doi.org/10.3390/su14031101

Avolio, B. J., & Kahai, S. S. (2003). Adding the "e" to e-leadership: how it may impact your leadership. *Organizational Dynamics, 31*(4), 325–338. https://www.sciencedirect.com/journal/organizational-dynamics/vol/31/issue/4

Avolio, B. J., Kahai, S., & Dodge, G. E. (2000). E-leadership: implications for theory, research, and practice. *The Leadership Quarterly, 11*(4), 615–668. https://doi.org/10.1016/S1048-9843(00)00062-X

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: current theories, research, and future directions. *Annual Review of Psychology, 60*(1), 421–449. https://doi.org/10.1146/annurev.psych.60.110707.163621

Baker, T., & Smith, L. (2019). Educ-AI-tion rebooted? Exploring the future of artificial intelligence in schools and colleges. https://www.nesta.org.uk/report/education-rebooted/

Benbya, H., Davenport, T. H., & Pachidi, S. (2020) Artificial intelligence in organizations: current state and future opportunities. *MIS Quarterly Executive* 19(4), 1–15. http://doi.org/10.2139/ssrn.3741983

Bhatta, N. (2021). Emerging ethical challenges of leadership in the digital era: a multi-vocal literature review. *Electronic Journal of Business Ethics and Organization Studies, 26*(1), 30–46. http://ejbo.jyu.fi/pdf/ejbo_vol26_no1_pages_30-46.pdf

Cano, E. V. (2013). Open government and e-leadership in schools mediated by ICT. *Croatian Journal of Education, 15*(1), 11–41. https://doi.org/10.15516/cje.v15i1.429

Chatterjee, S., & Bhattacharjee, K. K. (2020). Adoption of artificial intelligence in higher education: A quantitative analysis using structural equation modelling. *Education and Information Technologies, 25*, 3443-3463. https://doi.org/10.1007/s10639-020-10159-7

Chen, G., Shen, R., Wang, J.,& Chen, Z. (2007). Collaborative education model and its application in e-learning. In *The proceedings of IEEE computer society-computer and information science* (pp. 856-860). IEEE.

Chen, X., Xie, H., Zou, D., & Hwang, G. J. (2020). Application and theory gaps during the rise of artificial intelligence in education. *Computers & Education: Artificial Intelligence 1*: 100002. https://doi.org/10.1016j.caeai.2020.100002

Chernov, A & Chernova, V. (2019) Artificial intelligence in management: challenges and opportunities. In Hammes, K., Machrafi, M., & Samodol, A. (Eds.) *The proceedings of the 38th international scientific conference on economic and social development* (pp. 133-140). Varazdin Development and Entrepreneurship Agency.

Colchester, K., Hagras, H., Alghazzawi, D., & Aldabbagh, G. (2017). A survey of artificial intelligence techniques employed for adaptive educational systems within e-learning platforms. *Journal of Artificial Intelligence and Soft Computing Research, 7*(1), 47–64. https://doi.org/10.1515/jaiscr-2017-0004

Davis, E. B., Kee, J., & Newcomer, K. (2010). Strategic transformation process: toward purpose, people, process and power. *Organization Management Journal, 7*, 66–80. https://scholarship.shu.edu/omj/vol7/iss1/10

Dormann, C., Binnewies, C., Koch, A. R., Ackeren, I. V., Clausen, M., Preisendörfer, P., ... & Zlatkin-Troitschanskaia, O. (2016). Transferring best evidence into practice: assessment of evidence-based school management. *Journal for Educational Research Online, 8*(3), 14-38. https://doi.org/10.25656/01:12803

Fullan, M., Azorín, C., Harris, A., & Jones, M. (2023). Artificial intelligence and school leadership: challenges, opportunities and implications. *School Leadership & Management,* 1-8. https://doi.org/10.1080/13632434.2023.2246856

García-Peñalvo, F. J. (2023). The perception of artificial intelligence in educational contexts after the launch of ChatGPT: disruption or panic? *Education in the Knowledge Society 24*, 1–9. https://doi.org/10.14201/eks.31279

Guan, C., Mou, J., & Jiang, Z. (2020). Artificial intelligence innovation in education: a twenty-year data-driven historical analysis. *International Journal of Innovation Studies, 4*(4), 134–147. https://doi.org/10.1016/j.ijis.2020.09.001

Harris, A., & Jones. M. (2020). COVID 19–school leadership in disruptive times. *School Leadership & Management 40* (4), 243–247. https://doi.org/10.1080/13632434.2020.1811479.

Huang, J., Saleh, S., & Liu, Y. (2021). A review on artificial intelligence in education. *Academic Journal of Interdisciplinary Studies, 10*(3), 206–217 https://doi.org/10.36941/ajis-2021-0077

Indra, R., Ritonga, M., & Kustati, M. (2022, August). E-leadership of the school principals in implementing online learning during COVID-19 pandemic at public senior high schools. *Frontiers in Education, 7*, 973274. https://doi.org/10.3389/feduc.2022.973274

Jameson, J. (2014). Distributed e-leadership and trust: the visibility/invisibility paradox in the ecology of online school communities. *International Congress for School Effectiveness and Improvement*. Yogyakarta, Indonesia.

Jameson, J., Ferrell, G., Kelly, J., Walker, S., & Ryan, M. (2006). Building trust and shared knowledge in communities of e-learning practice: collaborative leadership in the JISC eLISA and CAMEL lifelong learning projects. *British Journal of Educational Technology, 37*(6), 949-967. https://doi.org/10.1111/j.1467-8535.2006.00669.x

Jarrahi M. (2018). Artificial intelligence and the future of work: human-AI symbiosis in organizational decision making. *Business Horizons, 61*(4), 577-586. https://doi.org/10.1016/j.bushor.2018.03.007

Jovanovic, B.(2021). 55 Fascinating AI statistics and trends for 2021: key AI statistics. https://dataprot.net/statistics/ai-statistics/

Kamalov, F., Santandreu C. D., & Gurrib, I. (2023). New era of artificial intelligence in education: towards a sustainable multifaceted revolution. *Sustainability, 15*(16), 12451. https://doi.org/10.3390/su151612451

Karakose, T., & Tülübaş, T. (2023). How Can ChatGPT Facilitate Teaching and Learning: Implications for Contemporary Education. *Educational Process: International Journal, 12*(4): 7-16. https://dx.doi.org/10.22521/edupij.2023.124.1

Karakose, T., Kardas, A., Kanadlı, S., Tülübaş, T., & Yildirim, B. (2024). How Collective Efficacy Mediates the Association between Principal Instructional Leadership and Teacher Self-Efficacy: Findings from a Meta-Analytic Structural Equation Modeling (MASEM) Study. *Behavioral Sciences, 14*(2), 85. https://doi.org/10.3390/bs14020085

Karakose, T., Kocabas, I., Yirci, R., Papadakis, S., Ozdemir, T. Y., & Demirkol, M. (2022a). The development and evolution of digital leadership: a bibliometric mapping approach-based study. *Sustainability, 14*(23), 16171. https://doi.org/10.3390/su142316171

Karakose, T., Papadakis, S., Tülübaş, T., & Polat, H. (2022b). Understanding the intellectual structure and evolution of distributed leadership in schools: A science mapping-based bibliometric analysis. *Sustainability, 14*(24), 16779. https://doi.org/10.3390/su142416779

Karakose, T., Polat, H., & Papadakis, S. (2021). Examining teachers' perspectives on school principals' digital leadership roles and technology capabilities during the COVID-19 pandemic. *Sustainability, 13*(23), 13448. https://doi.org/10.3390/su132313448

Lathrop, D., & Ruma, L. (2010). *Open government: collaboration, transparency, and participation in practice.* O'Reilly Media.

Leithwood, K., Louis, K.S., Anderson, S. & Wahlstrom, K. (2004). *How leadership influences student learning: A review of research for the Learning from Leadership project.* New York: The Wallace Foundation.

Mishra, P., Henriksen, D., Boltz, L. O., & Richardson, C. (2016). E-leadership and teacher development using ICT. In *ICT in Education in Global Context: Comparative Reports of Innovations in K-12 Education* (pp. 249-266). Springer.

Nishant, R., Kennedy, M. & Corbett, J. (2020). Artificial intelligence for sustainability: challenges, opportunities, and a research agenda. *International Journal of Information Management, 53*, 102104. https://doi.org/10.1016/j.ijinfomgt.2020.102104

Oh, S. P., & Chua, Y. P. (2018). An explorative review of e-leadership studies. *International Online Journal of Educational Leadership, 2*(1), 4–20. https://doi.org/10.22452/iojel.vol2no1.2

Ottestad, G. (2013). School leadership for ICT and teachers' use of digital tools. *Nordic Journal of Digital Literacy, 8*(1–2), 107–125. https://doi.org/10.18261/ISSN1891-943X-2013-01-02-07

Papadakis, S., Gözüm, A.İ.C., Kaya, Ü.Ü., Kalogiannakis, M., & Karaköse, T. (2024). Examining the Validity and Reliability of the Teacher Self-Efficacy Scale in the Use of ICT at Home for Preschool Distance Education (TSES-ICT-PDE) Among Greek Preschool Teachers: A Comparative Study with Turkey. In: Papadakis, S. (eds) IoT, AI, and ICT for Educational Applications. EAI/Springer Innovations in Communication and Computing. Springer, Cham. https://doi.org/10.1007/978-3-031-50139-5_1

Polat, E., Hopcan, S., & Yahşi, Ö. (2022). Are K–12 teachers ready for e-learning? *International Review of Research in Open and Distributed Learning, 23*(2), 214-241. https://doi.org/10.19173/irrodl.v23i2.6082

Reay, T., Berta, W., & Kohn, M. K. (2017). What's the evidence on evidence-based management? *Academy of Management Perspectives, 23*(4), 5-18. https://doi.org/10.5465/amp.23.4.5

Santana, M., & Díaz-Fernández, M. (2023). Competencies for the artificial intelligence age: visualisation of the state of the art and future perspectives. *Review of Managerial Science, 17*(6), 1971-2004. https://doi.org/10.1007/s11846-022-00613-w

Selwyn, N. (2015). Data entry: towards the critical study of digital data and education. *Learning, Media & Technology, 40*(1), 64–82. https://doi.org/10.1080/17439884.2014.921628

Sghir, N., Adadi, A., & Lahmer, M. (2023). Recent advances in predictive learning analytics: a decade systematic review (2012–2022). *Education and Information Technologies, 28*(7), 8299-8333. https://doi.org/10.1007/s10639-022-11536-0

Stone, S.M. (2019), *Digitally deaf: why organizations struggle with digital transformation*. Springer Nature. https://doi.org/10.1007/978-3-030-01833-7

Taylor, L., & Adelman, H.S. (2000). Connecting schools, families, and communities. *Professional School Psychology, 3*, 298–307. https://www.proquest.com/docview/213329367?pqorigsite=gscholar&fromopenview=true

Tülübaş, T., Karakose, T., & Papadakis, S. (2023). A Holistic Investigation of the Relationship between Digital Addiction and Academic Achievement among Students. *European Journal of Investigation in Health, Psychology and Education, 13*(10), 2006-2034. https://doi.org/10.3390/ejihpe13100143

Turing, A. (1950). Computing machinery and intelligence. *Mind, 59*(236), 433–60.

Van Quaquebeke, N., & Gerpott, F. H. (2023). The now, new, and next of digital leadership: how artificial intelligence (AI) will take over and change leadership as we know It. *Journal of Leadership & Organizational Studies 30* (3), 265–275. https://doi.org/10.1177/15480518231181731.

Wang, Y. (2021). An improved machine learning and artificial intelligence algorithm for classroom management of English distance education. *Journal of Intelligent & Fuzzy Systems*, 40(2), 1–12. https://doi.org/10.3233/JIFS-189385

Williamson, B. (2016). Digital education governance: data visualization, predictive analytics, and 'real-time' policy instruments. *Journal of Education Policy, 31*(2), 123-141. http://doi.org/10.1080/02680939.2015.1035758

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