Near East University Journal of Education Faculty (NEUJE)
[volume 7, issue 1]
Received: October 24, 2024 Revised: December 20, 2024 Accepted: December 31, 2024

THE FUTURE OF SCHOOL ADMINISTRATORS' PERSPECTIVES ON ARTIFICIAL INTELLIGENCE AND EDUCATIONAL CHANGE

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Abstract

With the rapid integration of artificial intelligence (AI) in education, school administration, instruction, and learning are reconfigured and conventional approaches are questioned, compelling educational leaders to re-examine their roles. This study investigates school administrators' perceptions of AI's potential to transform education, emphasizing their preparedness, perceived benefits, and concerns. Using a mixed-methods design relying on surveys and interviews, the study seeks to understand better administrators' beliefs about how AI influences operational efficiency, student outcomes, and educational equity. Highlights from key findings show a balance between innovation and concerns, with administrators viewing AI as a tool for innovation (e.g., personalized learning, data-driven decision-making), as well as a concern around privacy, ethical considerations, and culture of change readiness. Key findings from this study inform much-need strategic policy and recommendations directed toward educational leaders in motivating responsible AI usage and serving as a lens for advancing these innovative approaches whilst ensuring they remain ethical and equitable. This study provides insight into the growing conversation surrounding artificial intelligence in education policy and helps to lay the groundwork for future AI-driven school administrative reforms.

Keywords: future of education, school administrators, adoptions, artificial intelligence, educational change

Introduction

The future of education is interlocked with advancements in technology, especially with the emergence of artificial intelligence (AI). With schools working through how to incorporate AI in ways that make sense in their systems, school administrator perspectives matter more than ever. Administrators are in a position to leverage their knowledge of AI's transformative potential as an instructional tool while maintaining sensitivity to the potential drawbacks of its implementation, including issues of equity and ethics about access, as well as the ability of faculty and students to respond to such change. Their guidance is invaluable for leading education reform with the principles of inclusion and equity.

AI has the potential to be a game-changer in the field of education. The possibilities of AI are immense, from personalized learning environments tailored to the needs of each student to tools that can automate administrative functions. AI, for example, can offer individualized feedback, help identify learners who might be at risk of falling behind, and assist educators in developing creative lesson plans. At the same time, the effective embrace of AI also poses ethical challenges surrounding data privacy, algorithmic bias, and the fair allocation of resources. As such, school leaders can help by taking an active part in developing policies, training stakeholders on best practices, and driving a culture of ethical use of AI (Kavitha and Joshith, 2024; Looi, 2024).

The future of education about artificial intelligence: insights from school leaders it is particularly looking to answer the following:

What do you see as the future of artificial intelligence changing the educational experience of students and teachers in your school?

What do you think the role of school administrators is in guiding the ethical use of AI in education?

What are the major hurdles you foresee as your school incorporates AI technologies, and what can you do to mitigate them?

If you could have any AI tool for education, what would you like and how would you use it?

Gaining insight into these perspectives is crucial because administrators are responsible for leading their schools through these transitions while maintaining that AI functions as a tool for equitable, transformative education. For example, Holmes et al. 2019; UNESCO 2022), highlight the vital role of leadership in navigating challenges related to resistance to change, lack of training, and ethical concerns in AI implementation. Artificial intelligence (AI) is fundamentally transforming the educational landscape, presenting substantial opportunities for personalized learning, administrative efficiency and innovative teaching methodologies. As Anderson and Rainie (2023) point out, the incorporation of AI into educational systems promises to bridge significant learning gaps and enhance accessibility. However, ethical concerns—such as data privacy, equity and teacher training—persist as critical challenges (Holmes et al., 2019; Williamson et al., 2023). These issues necessitate active involvement from school administrators to ensure that AI is implemented ethically and equitably. The future of education depends not only on the potential of AI but also on the capacity of educators and leaders to navigate its challenges (Luckin et al., 2019). This study investigates the perspectives of school administrators regarding AI-driven educational change, concentrating on ethical usage, equity and transformation.

School administrators are not mere conduits; they must also be visionaries, thinking about AI and its implications over the long- term in education. This was, in part, addressing disparities in access to AI tools that could widen existing inequities, and making sure that AI is supporting inclusive education. For example, AI can benefit personalized learning, but if the resources are unevenly distributed, it is only a privilege for some. Because of this, administrators must advocate for policies and investments that democratize access to these technologies.

This research seeks to add to the conversation in the growing discourse of the future of education and the transformative role of AI, by understanding the perspective of school administrators. The result will help inform administrators on how to balance the realities of the adoption of AI with the ability to leverage its capability to enact meaningful and equitable change in education.

Literature Review

The role of artificial intelligence (AI) in education has been a hot research topic in recent years, researchers highlighted that it has transformative potential for both teaching and administration. Through three key themes of the literature review, namely, anticipatory education in the future, school administrators' role in AI implementation, and implication of educational change, this paper explores the challenges and opportunities raised by AI technologies for education stakeholders.

It is understood that we need to delve into the world of artificial intelligence in education and change the way we view learning and understanding.

Artificial intelligence is a tool that can be used to personalize learning and for overall administrative efficiency. Luckin et al. (2019), AI can change the landscape of education by creating learning experiences based on student-specific requirements, which helps them to teach in a more engaging and understanding way. Similarly, Holmes et al. (2021) explain that AI-based solutions like smart tutoring systems, automated assessment, or virtual teaching assistants are transforming the dynamics of the classroom. But these benefits depend on correctly deploying and fairly accessing intelligence technologies, as UNESCO (2022) points out. The incorporation of artificial intelligence (AI) within educational settings has been extensively examined in contemporary research. AI technologies—such as adaptive learning platforms—significantly enhance personalized education by addressing the unique needs of individual students and fostering greater engagement (Holmes et al., 2019; Masood et al., 2023).

Moreover, Abulaiti (2024) highlight that AI promotes administrative efficiency, thereby allowing educators to concentrate more on pedagogy. However, equity continues to be a significant issue, as Kumar and their firends (2023), contends that the advantages of AI are frequently inaccessible to underfunded schools, which exacerbates the digital divide. Additionally, Pedro et al., (2023) stress the necessity of ethical frameworks to guarantee responsible AI implementation in education systems worldwide. The integration of AI also prompts concerns regarding data privacy, with Williamson et al., (2023) warning about the potential misuse of student information. These studies collectively underscore AI's dual capacity as both a transformative and disruptive influence within the realm of education.

The role of AI goes beyond the classroom. The automation of routine tasks-tracking attendance or grading papers – frees up time for teachers to spend more time engaging with students and pedagogy. As described by Rainie and their friends (2021), AI-based analytics can help school administrators predict student outcomes and specific at-risk students, while shaping evidence-based decision-making.

Role of School Administrators

The role of school administrators is critical in leading the adoption and ethical use of AI in education. As such, they must cultivate a setting in which AI can be integrated and mitigate challenges surrounding data privacy, algorithmic bias, and ethical dilemmas (Holmes et al. 2019). AI leadership, in this regard, consists of induction of AI tools, and also teacher and staff training for their effective use in schools.

One of the challenges noted in the literature is resistance among educators and stakeholders to changes. Filiz and Nayir (2015) argue that as change agents, administrators must promote AI benefits, but address concerns and misconceptions. These strategies include effective communication, professional development programs, and collaboration with technology providers.

Methodology

Research Design

The qualitative research design guided this study exploring the perceptions of school leaders on artificial intelligence and educational transformation. We utilize a phenomenological approach to examine administrators' lived experiences, attitudes, and perceptions (Moustakas, 1994).

Study Group

School administrators – preferably primary, secondary, and high school who have background in-or familiarity with –AI applications in education. Use purposive sampling to include selected people who know about the integration of AI in educational settings.

Table 1. Demographic characteristics of the participants

Number	Gender	Age	Length of service	Length of service in administration
1	F	50	22	3
2	M	29	5	1
3	M	38	13	2
4	F	45	19	2
5	M	31	15	3
6	M	29	5	1
7	F	30	10	1
8	M	56	30	3
9	F	41	18	4
10	M	45	17	1
11	M	55	30	5
12	M	28	7	1
13	M	39	13	2
14	F	42	14	3

Data Collection Methods

Following the obtaining of required permits from the Ministry of Education of the Republic of Benin, online interactions and interviews with the participants were held between 01 November and 28 December 2020. All rules were explained well ahead of the study, and they had been given reassuring notes about the purpose of the study and confidentiality. I spent approximately 35 min on each of the interviews. Five open-ended questions were asked to the participants, and their responses were written down on interview sheets. Les questions que les participants devaient répondre dans ce formulaire d'entretien étaient en un français clair, simple, compréhensible, et correct. Interview Form is "The Future of school Administrators' perspectives on Artificial Intelligence and Educational Change. The form is divided into two sections.

The first part consists of demographic (personal) information about school administrators, and the second part consists of questions for the interviews, which will disclose the aim of the research. This set of questions was also pilot-tested with several school administrators to pilot these questions. Data analysis First the data obtained were conceptualized and organized logically. Subsequently, templates were developed to enable thematic analysis of the data through the content analysis approach (Creswell and Poth, 2018). The researchers formed their groups and themes depending on the thematic and code exploration, and they also resolved the data and then encoded it (Patton, 2014). The participants were coded as A1, A15, etc. (A referring to Administrator) the encodings were divided and placed below the themes. Lastly, encoding was made into frequency and percentage tables. There were 5 primary schools, 5 secondary schools, and 4 college/university administrators in the Republic of Benin, Ministry of National Education in the 2023–2024 academic year. Second, the researchers themselves acted as an intermediary between the participants and the data being collected in the study. Researchers also ensure

that the information is analyzed in detail and the hypothesis is construed. Key informants for this study are school administrators from primary, secondary, and high schools, preferably those with knowledge or experience of insisted use of AI applications in education in the Republic of Benin. There were 60 well-experienced and responsible participants in their current jobs whose data were taken from this research.

Limitations

The study is based on a small, purposive sample, which restricts generalizability. Knowledge-based are local and segment-specific and cannot be generalized.

Findings

The study was conducted based on the answers to the two interview questions administered to each subject.

The study found six themes, and the results of these themes were tabulated in frequency and percentage as below.

Table 2. AI's Impact on Teaching and Learning Experiences

Theme	Frequency (f)	Percentage (%)
AI's role in personalizing learning.		17,07%
Efficiency in administrative and pedagogical tasks	5	12,19%
Concerns about ethical use and over-reliance	5	12,19%
AI's potential to engage students through innovation	3	7,31%
Academic support and challenges in research	3	7,31%
Real-time monitoring and adaptive learning	4	9,75
Interactive and immersive learning	7	17,07%
AI-driven curriculum optimization	4	9,75
Creating global classroom	3	7,31%
Total	41	100

As revealed in Table 2, the school administrators about the ¨AI's impact on Teaching and Learning Experience¨ identified 41 codes and 9 themes under the views. Seven of the opinions reflected in "AI's effect on Teaching and Learning Experience" explained, "why AI's role is personalizing learning." Five declared that "Efficiency in the work of administration and didactics." Five noted, "Concerns about ethical use and over-reliance. One was all three perspectives- AI can be used in numerous ways "to engage students through this innovation." Three perspectives that "AI assists usefully in academic and that the challenges in research." Four it treats "Real-time monitoring and adaptive learning". Seven "likes Interactive and immersive learning." When four said "AI-driven curriculum optimization." Three perspectives are "Creating global classroom."

AI, is widely recognized, as the smartest solution for making personality education; it can personalize learning paths for individual students, deliver adaptive learning experiences;

and give targeted assistance on challenging concepts. Here are some of the administrators' perspectives:

> *"To me, AI makes learning more personal because it customizes based on individual needs, increasing engagement and facilitating understanding, but the human element is still important." (A1)*
>
> *"I think AI you know just makes administrative and pedagogical tasks so much easier moving forward that it allows them to be more efficient and allows them to spend more time sort of actually teaching." (A2)*
>
> *"Concerns regarding equitable access, ethical use, data privacy, and the potential for the misuse of AI highlight the importance of thoughtful integration and regulation." (A3)*
>
> *"This is first and foremost, about selecting the relevant knowledge to provide to teachers within specific groups of students, to serve various engines of development. In other words, we aimed to address simplified; useful, and effective curricula designed to train specific sectors of development." (A5)*

Table 3. The Ethical Leadership Role of Administrators in AI Integration

Theme	Frequency(f)	Percentage (%)
Ethical oversight and accountability	7	10,93%
Policy alignment. And future-proofing	9	14,0%
Bias prevention and equity	8	12,69%
Balancing AI and human input.	6	9,37%
Training and risk mitigation	5	7,9%
Inclusion and accessibility	7	10,93%
Data privacy and transparency	4	6,25%
Training professional development	10	15,62%
Collaboration and advocacy	3	4,68%
Establishing ethical frameworks and guidelines	3	4,68%
Leading by example	2	3,12%

Table 3 further indicates that views of school administrators on "The Ethical Leadership Role of Administrators in AI Integration" were coded and collated into 64 codes under 11 themes. Seven of the views expressed were from "AI needs like Ethical oversight and accountability." Nine of them describe it as "Policy alignment and future-proofing." 8 stated that it is to have "Bias prevention and equity," 6 said administrators must ensure "Balancing AI and human input," and 5 believe that "Training and risk mitigation" is key for administrators. Seven stated that "Inclusion and accessibility" need to be championed. Data privacy and transparency are other of the four priorities seen by admins "Training PD, Professional development" is the 10 seen by 10. Out of the four theme views, three are necessities of ethical integration. At the same time, another three said Establishing ethical frameworks and guidelines. It facilitates how to guide both staff and students even though the end two view it as 'leading by example.

I would also add the ranking of "the school administrators who drive the adoption and ethical use of AI at school." Here are some of their views:

"AI should be able to cater to all kinds of learners and administrators should promote inclusivity and accessibility." (A6)
"Administrators are called to create clear data safety and privacy policies and make sure all staff and students know how their data is being used by AI systems. Transparency is critical in AI, and needs to be built into systems so that teachers/students/parents trust the process." (A7)
"Administrators need to design institutional structures to guide and manage the use of A.I. in the institution, aligning usage with curricular goals and ethical considerations. They need to create clear, ethical guidelines that highlight responsible AI use while keeping students' well-being front and center." (A10)

Table 4. The Ethical Leadership Role of Administrators in AI Integration

Theme	Frequency(f)	Percentage (%)
Resource Challenges	5	9,43%
Training and Familiarity	9	14,98%
Ethical and Social Concerns	8	15,09%
Adaptation and Localization	6	11,32%
Resistance to Change	5	9,43%
Infrastructure and Resource Challenges	7	13,2%
Balancing AI with traditional methods	4	7,54%
Curriculum rigidity	6	11,32%
Balancing the psychological and emotional needs	3	5,66%

As summarized in Table 4, "Addressing Challenges in AI Adoption in Schools" were identified from 53 codes and 9 themes. Seven of the comments identified it as "Resource Challenges." Nine consider it as Multi-Tasking, Training, and Familiarity. 8 said that "it's Ethical and Social Concerns." 6 said that "Adaptation and Localization" should be ensured by the administrators. View that "Resistance to Change" is significant for administrators. Seven stated that they should champion "Infrastructure and Resource Challenges" Four (4) Perspectives Administrators must focus on "Resistance & Adaptation." And the Other 8 mentioned that "Ethics and Abuse" is crucial. Customization and Evaluation. The three theme views of "are imperative to guarantee proper adoption.

To this list, I would add the importance of "the school administrators who are responsible for overseeing the adoption and ethical use of AI in education." Their views are as follows: Some of them:

"As challenges: Budget constraints and lack of infrastructure make it hard to integrate AI tools effectively into the school system and as a solution, we need to partner with stakeholders and secure grants to ensure equitable access to AI technologies" (A1)
"As challenges: Many teachers aren't trained to effectively use AI tools in the classroom, and as a solution doing continuous professional development workshops will help all teachers gain the skills needed to integrate AI in their pedagogy." (A14)
"As challenge: There's a big disconnect about how AI belongs in the early education landscape, particularly for younger learners," and as a solution, creating tools that

are age-appropriate for K–12 students and including educators as design partners can help fill this gap." (A12)

"As challenge: the dizzying speed of AI developments outpaces schools' capacity to keep adequately updated and trained, and as a solution, develop long-term strategies for gradual implementation of technology to help ease the transition and reduce costs." (A11)

Table 5. AI and Educational Equity: Opportunities and Risks

Theme	Frequency(f)	Percentage (%)
Potential for Closing Equity Gaps	7	12,06%
Risks of Widening Disparities	9	15,51%
Access and Financial Barriers	8	13,79%
Inclusivity and Support for Disabilities	6	10,34%
Democratizing Access to Quality Education	5	8,6%
The Need for Ethical Implementation	7	12,06%
Equal access to AI tools requires infrastructural investments	4	6,89%
AI must be inclusively designed to prevent bias	8	13,79%
Customization and Evaluation	3	5,17%
AI needs cultural sensitivity for effective career guidance	2	3,44%

The subject "AI and Educational Equity: Opportunities and Risks" includes 58 codes and 10 themes, as shown in Table 5. Fifteen participants support "Potential for Closing Equity Gap." 15, on "Risks of Widening Disparities." 14 for "Access and Financial Barriers" 12 for "Inclusive and Supportive of Disabilities." 11 for "Democratizing Access to Quality Education." and 10 for "The Necessity of Ethical Implementation." Four for "Equal access to AI tools require infrastructural investments." 8 for "AI must be inclusively designed to guard against bias" and 3 for "Personalization and Assessment. Also, 2 for "AI needs cultural sensitivity for effective career guidance. "Overall, participants emphasized that while AI has the potential to foster educational equity by personalizing learning and addressing diverse needs, its successful implementation will necessitate careful planning, equitable resource distribution, and proactive measures to mitigate biases and infrastructure gaps. The administrator's views are some of the following:

"AI can fill some gaps by supplying resources where they may be lacking via online platforms as long as schools have internet access, but it cannot replace the more skilled teacher who is necessary for achieving equity." (A9)

"AI-based analytics can help identify learning disparities, providing administrators with data to correct it. But we have to protect against bias in AI algorithms that might reinforce inequities." (A2)

"AI has the potential to democratize access to high-quality education around the globe, but if access to AI is restricted to wealthy institutions, it could widen the gap." (A5)
"AI can help students with disabilities learn better through assistive technologies, but only if such tools are provided at affordable prices and are made generic across the systems." (A6)

Table 6. AI and Educational Equity: Opportunities and Risks

Theme	Frequency (f)	Percentage (%)
AI for teacher professional development	9	15,78%
Career guidance through predictive analytics	7	12,28%
Ensuring creativity in arts education	6	10,52%
Operational efficiency and strategic planning	8	14,03%
Engaging and experiential education	7	12,28%
Student support and well-being	5	8,77%
Teaching and academic integrity	8	14,03%
Parental and career guidance	4	7,01%
Performance analytics for informed decision- making	2	3,5%
Enhancing hybrid learning experiences	1	1,75%

For example, the "Selecting and implementing effective AI tools in education" subject is categorized by 57 codes and 10 themes, as can be seen in Table 6. Nine would like to see "AI for teacher professional development." Seven for "Guidance on careers through predictive analytics." Six for "Ensuring creativity in arts education." Eight for "Operational efficiency and strategic planning. Seven for "Education that is engaging and experiential." Five as regards "Student support and well-being. Eight for "Teaching and academic integrity. Four under "Parental and career guidance," Two under "Performance analytics for informed decision-making." 1 for "Enhancing hybrid learning experiences." In conclusion, attendees emphasized tools that speak to their immediate issues and challenges, embracing AI offerings that improve efficiencies, customize learning experiences, and encourage ethical and inclusive practices throughout the education ecosystem. Here are some of the admin views:

"I would select an AI administrative management tool to maximize school logistics, improve effectiveness in timing, and wall streamlining teacher reviews." (A4)
"I would utilize AI tools such as adaptive learning platforms to personalize lesson plans and support the varied needs of my students." (A2)
"I'd like an AI tool that can analyze student feedback and help me change my teaching methodologies and make courses more effective." (A7)
"I would prefer an AI tool that analyses student feedback to improve my teaching methodologies and make courses more effective." (A6)

Discussion, Conclusion and Recommendations

This study includes 14 school administrators as its participants. New: 5 in Primary School, 5 in Secondary School, and 4 at University all affiliated with the Ministry of Education of the Republic of Benin in the 2023-2024 academic year. The study identified the school administrators to who their opinions were brought to integrate AI into education and in this case, the huge potential of AI and its necessity in society was mentioned, and at the same time, its limitations and challenges were highlighted. Due to the nature of these interviews, these interviews were done virtually.

The research displayed a nuanced comprehension of AI's responsibility in the education system among various stakeholders. There is excitement about the potential of AI to revolutionize teaching and learning but also challenges to address like ethics, equity, and professional development needs. School leaders need to step up as ethical leaders: creating policies that ensure responsible usage of AI and driving for equitable access. Future studies need to identify ways to close the digital gap or step in education professionals with tools to adopt AI (Knox, 2020).

The perspectives gathered on artificial intelligence (AI) in education indicate that there is recognition of its transformative potential, tempered by ethical and practical challenges. The participants, including school administrators, teachers, and students, all acknowledged AI has the potential to personalize learning, streamline administrative tasks, and improve engagement. These advantages correlate with recent research showing that AI enables imbuement with individualized learning, promoting responsiveness to unique learning needs in conjunction with supportive constructor effectiveness (Holmes et al, 2019). Nevertheless, they also pointed to major hurdles. Common themes included ethical concerns related to privacy issues, equitable access, and the threat of excessive dependence on AI. Administrators stressed the importance of strong policies and ethical frameworks to guide the use of AI and ensure that view that administrators and educational leaders must balance innovation with responsibility. Teachers mentioned that the steep learning curve and disparities in resources that limit AI integration reflect wider discussions in the literature on the so-called "digital divides" (Black, 2024; Selwyn, 2022).

However, despite these worries, hope for future opportunities remains, stakeholders saw AI tools that aid inclusive education, critical thinking, and operational efficiency. They emphasized the need for professional development that prepares educators to integrate AI into their work effectively. This further harmonizes with UNESCO's (2022) recommendations regarding utilizing AI to shape global learning outcomes without creating disparities.

Overall, the results highlight the dual aspects of school administrators as ethical leaders as well as advocates for more equitable AI practices. AI has an immense potential to reshape education, but closing infrastructure gaps, tackling ethical dilemmas, and empowering teachers will be the key. Moreover, future research may also examine ways to build different barriers to decrease the digital gap, as well as frameworks for sustainable AI implementation within the educational sector (Seldon, and Abidoye, 2018).

Recommendations

To guarantee the ethical and effective incorporation of artificial intelligence (AI) in educational settings, this study advocates that schools emphasize the formulation of explicit ethical guidelines that address critical issues such as data privacy, equity and responsible usage (Pedro et al., 2023; Williamson et al., 2023). Professional development initiatives ought to be introduced to prepare educators and administrators with the necessary skills for proficient AI application (Masood et al., 2023). Furthermore, investments in infrastructure are essential, particularly to render AI technologies accessible to underprivileged institutions, thereby mitigating the digital divide and advancing educational equity (Veletsianos, 2023). Collaboration among administrators, educators and policymakers is vital to fostering inclusive and innovative learning atmospheres, which will ensure that AI's transformative capabilities are utilized responsibly (Holmes et al., 2019; McArthur et al., 2023). By implementing these strategies, educational institutions can cultivate an AI-driven future that is ethical; however, challenges remain.

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