



17<sup>th</sup> International Conference  
December 5-7, 2024 in Osaka, Japan

## THE ROLE OF SCHOOL ADMINISTRATORS IN PROMOTING THE USE OF INFORMATION TECHNOLOGY AND AI

Guntaphat Suwanreung

Student of Master in Educational Administration, Suan Sunandha Rajabhat University

E-mail: s66561802074@ssru.ac.th

Thada Siththada

Graduate school, Suan Sunandha Rajabhat University

Email: thada.si@ssru.ac.th

### Abstract

This academic article aims to study the role of school administrators in promoting the use of information technology and AI for teaching and learning. From this study it was found that educational institutions in the digital age. It is changing rapidly as well which makes it necessary to have effective management. There is a plan to drive educational institutions to provide education for students. The key players in educational institution administration are educational institution administrators who have appropriate competencies in managing learning that connects ideas and knowledge to learners who are born in the digital age. Executives attach importance to monitoring and monitoring operations continuously. There is development of operational knowledge for teachers. In addition, it will require cooperation from all sectors to participate in every activity under the component of using digital technology in educational institution administration use of information and communication technology can change the process teaching and learning to keep up with the era of technology Including supporting the use of AI for teaching and working effectively.

**Keywords:** Role of school administrators, Technology, AI

### Introduction

Currently, globalization and advancements in information technology create a borderless world that significantly influences the lifestyles of individuals who must adapt to a rapidly evolving knowledge-based environment. This transformation extends to the education sector, which must embrace and leverage the benefits of information technology for development. In Thailand, educational management is tasked with establishing human resource development objectives (Kalyani Bangsi and Chanmanee Silanukit, 2023), planning for the preparation of a workforce ready to enter the labor market upon completing various levels of education, and adjusting curricula and teaching methodologies to be flexible and diverse. This approach aims to enhance the potential and capabilities of human resources, equipping them with the skills, knowledge, abilities, and competencies necessary to navigate the changes and competition inherent in the era of Economy and Society 4.0 (Office of the Secretary of the Education Council, 2017).

Information technology is now regarded as a crucial element in the management of educational institutions. Consequently, administrators must recognize the significance of information technology and actively promote its integration into teaching and learning practices. This includes utilizing computers and information technology devices as tools for delivering knowledge across various subjects. Furthermore, the application of information technology is vital in the learning management process of the 21st century (Wattanachai Boonsanong, 2018). The recent outbreak of the coronavirus in 2019 has further underscored

the importance of information technology in educational management, leading to a transformation in daily life under the new normal. Information technology is now employed as a medium in all aspects of education. Therefore, school administrators must take on a pivotal role in advocating for the use of information technology within educational institutions, serving as leaders in its effective application and providing guidance on its benefits. This leadership will set a positive example for teachers, staff, and students alike (Chonlathee Puasri and Supawadi Lapcharoen, 2021).

The Ministry of Education recognizes the significance of information and communication technology (ICT) while weighing the associated benefits and drawbacks that may emerge from its development and application. This understanding aims to enable learners to enhance their knowledge and develop critical analytical skills regarding the potential impacts of inappropriate usage. Grounded in the principles of a sufficiency economy and moral education, the Ministry advocates for the extensive integration of computers and the Internet in teaching and management to optimize the advantages of ICT in these domains. Consequently, it has established policies and standards for the advancement of ICT in education, facilitating its use within educational institutions and agencies while mitigating internet-related threats. This initiative allows learners, educators, educational personnel, and the public to access and utilize ICT services appropriately, as outlined in the master plan for ICT in education. The Ministry of Education's strategy for 2014- 2016 also emphasizes enhancing the capabilities of teachers and educational personnel in employing ICT for educational purposes, aiming to bolster their potential in this area (Yupawarat Khanteekrom, 2022).

To support effective teaching and learning in accordance with the curriculum, electronic learning content media have been developed. Additionally, there has been an allocation of radio frequencies and infrastructure for broadcasting radio, television, and ICT networks, ensuring comprehensive educational services and adequate tools and equipment. A data warehouse and information system for educational management and services have also been established. Furthermore, the 12th National Economic and Social Development Plan highlights the need to improve the quality of education and learning, ensuring equality and comprehensiveness through the reform of the learning system. This reform aims to cultivate human resource competence across the education spectrum, from primary education to lifelong learning, while also developing learning media. Adjustments to the curriculum and the production of human resources are essential to align with evolving market demands, research, and the integration of technology and media in learning. The aforementioned considerations illustrate that the advancement of information technology systems can significantly enhance the Thai education system, provided that age-appropriate media is selected for each child's development (National Economic and Social Development Board, 2015, pp. 19-20).

### **The significance of educational administrators in advancing the utilization of information technology and artificial intelligence is paramount.**

Sak Chai Phu Charoen (2015: 1) articulated that a role encompasses the responsibilities that individuals must assume based on their respective status or position, whether acquired by birth, through actions, or by appointment, as dictated by societal expectations.

Wattana Panich Publishing (2020: 200) further elaborated that a role entails acting in accordance with a prescribed script.

In summary, a role signifies actions or behaviors aligned with one's position or status, consistent with societal expectations or inherent perceptions. It represents the collective expression of rights and duties, enabling individuals to coexist in an orderly society.

## **Theory of the Role of School Administrators**

For school administration to thrive, administrators must consider their own characteristics, roles, and responsibilities to effectively guide the institution toward success. Given that school administrators are tasked with translating policies into practice, role theory serves as a framework for understanding human social behavior at both individual and group levels. This theory is a crucial principle for comprehending the interactions among various societal groups at macro, micro, and intermediate levels. Educators have articulated the concept of role theory for learning and application.

Broom and Selznick (1977) described as follows.

1. The Socially Prescribed or Ideal Role delineates the rights and responsibilities associated with a social position.

2. The Perceived Role refers to the expectations individuals hold regarding their responsibilities in a given position. This perception may not align with the established role, may not conform to every ideal, and can vary significantly among individuals.

3. The Performed Role refers to the role that individuals enact based on their beliefs, expectations, abilities, and opportunities within a given society over time.

Turner (2002) described posited that, at the individual level, the concept of role can be elucidated by examining behavior in two ways: 1. An individual may exhibit varying behaviors or opinions depending on their different statuses or positions. 2. Distinct individuals may demonstrate similar behaviors or opinions when placed in analogous situations.

In summary, role theory serves as a framework for understanding behaviors or actions anticipated by society, which are associated with the power, responsibilities, and rights contingent upon an individual's social status or position. This framework delineates the guidelines that individuals in those positions are expected to follow. Should an individual fail to fulfill the role associated with their status, they risk societal rejection.

## **The role of school administrators in promoting the use of information technology and AI**

### **Educational management in the era of Digital Transformation**

In the 21st century, the integration of digital technology in education has enhanced both administrative efficiency and teaching effectiveness, thereby improving academic outcomes. Furthermore, the evolving landscape of knowledge and information sources in society has rendered life skills indispensable: 1) learning and innovation skills, 2) information, media, and technology skills, and 3) life and career skills essential for success in both professional and personal realms. This aligns with the vision of Thai education in the 4.0 era, which outlines the future of Thailand across four dimensions: 1) establishing a “stable, prosperous, and sustainable” nation, 2) leading innovative changes through service technology, 3) fostering research and development in science and innovation, and 4) formulating a 20-year national strategy that emphasizes the principles of knowing when to add, when to cease, and how to share knowledge.

Aligning national development with global trends is crucial, enabling educators to cultivate learners and enhance educational institutions in preparation for future societal demands. The incorporation of digital technology in educational administration facilitates the establishment of a database system (Big Data) that transcends physical limitations and propels the nation toward a borderless society. The significance of digital technology in educational administration encompasses various domains, including academic management, teaching oversight, human resource management, infrastructure and environmental management, student affairs, and community engagement. Each facet of educational institutions necessitates a robust database management system to inform decision-making processes for educational

administrators. Consequently, leveraging digital technology to develop a comprehensive database system for administration and knowledge management across diverse areas is paramount.

In the context of Digital Transformation, educational institutions must adeptly utilize digital technology to enhance their administrative functions. The shift toward borderless communication underscores the pivotal role of digital technology in this transformation. Educational administrators must adopt innovative ideas, principles, and management strategies that align with technological advancements. Key digital technologies that administrators should master include Cloud Computing, which offers server services via the Internet, facilitating data storage, software utilization, and hardware investment, alongside personnel training for system management.

Mobility Devices, such as smartphones, tablets, and other portable computing devices, enable access to information anytime and anywhere, providing applications that connect users to various knowledge sources both within and beyond educational institutions. In an age where social media significantly influences societal attitudes, behaviors, and beliefs—through platforms like LINE, Facebook, Twitter, WeChat, and Instagram—educational administrators must judiciously select and utilize these tools in accordance with the specific needs of their institutions.

The Internet of Things (IoT) facilitates the integration of various devices in daily life through Internet connectivity, fostering innovations in teaching management and transforming administrative systems into Smart Offices or remote work environments. Effective administration adheres to a quality management process (PDCA), focusing on enhancing excellence in information and communication technology (ICT) across four domains: 1) management systems, 2) professional teaching management, 3) organizing activities to promote professional learning, and 4) community engagement. Nanthida Patiworn has articulated a model for the continuous development of digital technology skills among educational institution administrators. This model, known as the quality cycle (PDCA) or the Dreaming cycle, aims to cultivate digital technology competencies through a systematic approach. It begins with assessing the needs of administrators, followed by implementing workshops to enhance understanding and skill application. Executives are then encouraged to reflect on outcomes through learning exchanges that demonstrate skill acquisition, ultimately applying these digital competencies in their professional roles (Supreeya Kosaeng, 2022).

### **The integration of digital technology within educational administration during the era of Digital Transformation**

As outlined in the Digital Development Plan for the Economy and Society, 2016, highlights the following aspects: 1) Educational Transformation: This involves fostering a learning organization, enhancing educational preparation, and promoting development for both educators and students, facilitating the acquisition of new knowledge and the efficient utilization of interconnected information infrastructure. 2) School Stability: As learning organizations, educational institutions continue to require students to attend school to cultivate knowledge, attitudes, skills, and competencies in an ever-evolving world.

School administrators play a pivotal role in managing educational institutions to achieve their objectives, particularly in the integration of technology within school management, the organization of teaching and learning to optimize benefits, and the cultivation of high-quality students in accordance with established standards. Educational technology must adhere to the principles of efficiency and effectiveness. In the digital age, school administrators are required to cultivate a vision, recognize the significance of, and adeptly utilize information technology. They should encourage teachers to develop a vision, appreciate the importance of,

and acquire skills in employing digital technology for effective learning management, thereby enhancing competitiveness in educational administration and elevating the quality of education within schools.

Furthermore, students should be encouraged to engage with contemporary techniques and methods that leverage information and communication technology, fostering social opportunities and instilling confidence in students, parents, and communities to enhance student quality. This approach aims to improve educational standards and cultivate characteristics befitting students in the digital era. Additionally, school administrators in this technological age must possess the skills necessary to advocate for the use of technology and information, employing a vision that harnesses data to generate value. The objectives of school management and instructional leadership are to motivate teachers to adopt innovative technologies and information, thereby creating a distinctive educational experience that exceeds expectations for students, parents, and stakeholders. This involves fostering a conducive working atmosphere and organizational culture, promoting creativity, and inspiring both teachers and students to continuously innovate in management practices and teaching methodologies.

The guidelines for educational administration in the digital age encompass principles for managing educational change within digital age institutions. Key issues in educational change administration include fostering a culture within educational institutions that is conducive to change, effective knowledge management, and collaborative networking. The administration of information and communication technology in digital age educational institutions involves challenges related to technology acceptance and adaptation, equitable access to technology, and the promotion of acceptance among stakeholders. School administrators play a crucial role in communicating, fostering understanding, cultivating acceptance, and motivating teachers, educational personnel, students, and parents to engage with digital technology for management and student development. This includes nurturing a collaborative learning culture through the use of information and communication technology, integrating digital technology into the organization and teaching of research for both teachers and students, and utilizing digital tools for research and information retrieval. Additionally, supervision, follow-up, and promotion of digital technology usage are essential, with school administrators and teachers evaluating its application in management to align with the institution's missions, policies, and goals. The integration of digital technology in school administration represents a structured administrative process, employing technology effectively. This is achieved through the quality cycle management process (PDCA), which comprises six components: 1) human resource development, 2) management, 3) adherence to good governance principles, 4) participation, 5) leadership, and 6) the utilization of information and communication technology (Supreeya Kosaeng, 2022).

### **AI (Artificial Intelligence)**

Currently, artificial intelligence in education assists educators in managing a variety of tasks, including the creation of lesson plans, development of teaching materials, and even grading assignments, exemplified by AI in Lesson Planning. The utilization of AI for lesson plan creation eliminates the excuse of insufficient time. Today, AI can facilitate this process in a matter of moments. Leveraging the capabilities of AI's data scraping, it efficiently handles vast amounts of information, enabling the generation of a preliminary lesson plan in under one minute by simply inputting keywords and a few straightforward commands. Tools such as Copilot AI Lesson Planner, Lesson Plans AI, and the widely recognized ChatGPT empower educators across all levels to swiftly design initial lesson plans that adhere to established educational design principles.

## Summary

Educational institutions in the digital era are undergoing rapid transformation, necessitating effective management and strategic planning to enhance educational delivery for students. The primary stakeholders in educational management are school administrators, equipped with the requisite competencies to facilitate learning that bridges ideas and knowledge for students raised in the digital age. To attain significant educational objectives, institutions must function adeptly within this digital landscape by managing four key areas: 1) academic administration, 2) budget administration, 3) personnel administration, and 4) general administration. This approach ensures the effective integration of technology as a critical success factor in school administration. A well-defined operational model is essential, with administrators prioritizing ongoing monitoring of operations and the continuous development of teachers' operational knowledge. Furthermore, collaboration across all sectors is vital for engaging in activities that leverage digital technology in educational administration, personnel development, governance principles, participation, leadership, and the application of information and communication technology. This adaptability in the teaching and learning process is crucial for keeping pace with the swiftly evolving technological landscape, ultimately fostering learners with diverse skills capable of generating new knowledge and innovations that thrive in the digital age. Additionally, the role of artificial intelligence in education is increasingly significant.

## References

- Bangsi, K., & Silanukit, C. (2023). The role of school administrators in promoting the use of information technology for learning management as perceived by civil servant teachers under the Khlong Sam Wa District Office, Bangkok. *Journal of Education, Loei Rajabhat University*, 17(1), January - June 2023.
- Chonlatee Puasri and Supawadi Lapcharoen. (2021). Perspectives on digital leadership among secondary school teachers in the Srinakarin Sub-Campus Group under the Office of the Secondary Educational Service Area 2. *Sikkha Journal of Education*, 8(2): 56-64. Retrieved from <https://so05.tci-thaijo.org/index.php/sikkha/article/view/249840/172336>
- Bunsanong, W. (2018). The influence of school administrators on the utilization of information technology in teaching and learning management as perceived by teachers within the Office of the Primary Educational Service Area, Chumphon Area 2. (Master's thesis). Surat Thani: Surat Thani Rajabhat University.
- Yuphawarat Khanteekrom. (2022). The role of educational administrators in advancing information technology and education within the Office of the Secondary Education Service Area of Samut Prakan. Faculty of Education, Bangkokthonburi University.
- Suparee Kosasang. (2022). Digital Technology in Educational Administration during the Era of Digital Transformation. *Journal of Educational Administration, SWU*, Volume 19, Issue 37, July-December. 2022.
- Office of the Secretary of the National Education Council. (2017). National Education Plan 2017–2036. Bangkok: Prik Wan Graphic Company, Limited.
- National Economic and Social Development Board. (2015). The Twelfth National Economic and Social Development Plan 2017-2021. Bangkok: National Economic and Social Development Board.