

Management Capabilities in Facing Digital Literacy Challenges: A Review

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Abstract

In the digital era, school management skills in digital literacy are very important to improve efficiency, productivity, and security. However, many schools still do not have effective management skills in facing digital literacy challenges, such as lack of technology, information, and communication skills. Therefore, efforts need to be made to improve management competencies in digital literacy. The aim of this research is to establish the management skills in facing digital literacy challenges and effective strategies in improving digital literacy skills. This research employs a literature review approach. This study shows that school management skills in digital literacy still need to be improved. The findings of the research show that, Lack of technology, data, and correspondence skills are the main obstacles in improving school management skills in digital literacy, School management needs to improve their skills in using digital technology effectively and efficiently, The need for training and development of school management skills in digital literacy to improve efficiency, productivity, and security. This article contributes to filling the gap in previous studies by providing a systematic review of management skills in facing digital literacy challenges. Thus, can provide practical recommendations for management to enhance digital literacy abilities and elevate education quality in the digital age.

Keywords: Management; Digital; Literacy

Abstrak

Di era digital, kemampuan manajemen sekolah dalam literasi digital sangat penting untuk meningkatkan efisiensi, produktivitas, dan keamanan. Namun, masih banyak sekolah yang belum memiliki kemampuan manajemen yang efektif dalam menghadapi tantangan literasi digital, seperti kurangnya kemampuan teknologi, informasi, dan komunikasi. Oleh karena itu, penting untuk melakukan tindakan guna meningkatkan keterampilan manajemen dalam literasi digital. Tujuan kajian ini adalah untuk mengetahui kemampuan manajemen dalam menghadapi tantangan literasi digital dan strategi yang efektif dalam meningkatkan kemampuan literasi digital. Studi ini menerapkan pendekatan penelitian literatur. Studi ini mengindikasikan bahwa kemampuan manajemen sekolah dalam literasi digital masih perlu ditingkatkan. Hasil penelitian menunjukkan bahwa: Kurangnya kemampuan teknologi, informasi, dan komunikasi menjadi hambatan utama dalam meningkatkan kemampuan manajemen sekolah dalam literasi digital, Manajemen sekolah perlu meningkatkan kemampuan dalam menggunakan teknologi digital secara efektif dan efisien, Perlunya pelatihan dan pengembangan kemampuan manajemen sekolah dalam literasi digital untuk meningkatkan efisiensi, produktivitas, dan keamanan. Artikel ini berkontribusi dalam mengisi celah kajian sebelumnya dengan memberikan tinjauan yang sistematis tentang kemampuan manajemen dalam menghadapi tantangan literasi digital. Dengan demikian, dapat memberikan rekomendasi yang praktis bagi manajemen untuk meningkatkan kemampuan literasi digital dan meningkatkan kualitas pendidikan di era digital.

Kata Kunci: Manajemen; Literasi; Digital

Introduction

Digital literacy refers to the capability to utilize digital technology proficiently and effectively in different areas of life. In the realm of school administration, digital literacy is crucial for enhancing management's capacity to oversee schools in a digital manner. Digital literacy refers to the capability to utilize digital technologies efficiently and responsibly across different areas of life. Gilster (2012) asserted that digital literacy is the ability to handle technology or information from digital devices competently and effectively in various contexts like education, professional settings, and everyday activities. Gilster's viewpoint is an oversimplification of true digital media, which encompasses various types of information, including audio, text, and images simultaneously. Therefore, Eshet (2004) highlighted that digital literacy should encompass more than simply the ability to utilize various digital resources efficiently. Digital competence represents a mindset for users in the digital realm. As stated by Thang and Chaw (2016) digital literacy includes skills in mastering concepts and not just using technology. This clearly shows the state of technology utilization in education, not only in terms of its use, but also its use to support education. Meanwhile, Bawden (2001) presents a new concept of digital culture, which is based on computer literacy and information literacy.

Computer literacy developed rapidly in the 1980s, when computers were increasingly used not only in business but also in society. Meanwhile, information literacy began to be popular in the 1990s, when information became easier to organize, access, and share online through social platforms (Sunarti et al., 2024). The urgency of digital literacy in school management lies in the ability to increase efficiency, productivity, and security in the use of digital technology. However, many schools still do not have effective management skills in facing the challenges of digital literacy. Some of the problems faced by school management in terms of digital literacy are the lack of technology, information, and communication skills.

The gap between digital literacy demands and management conditions in schools shows that much still needs to be done to improve management skills in facing digital literacy challenges. The purpose of this study is to determine the skills needed and effective strategies in improving digital literacy skills for school management. Thus, this study can contribute to improving the ability of school management in facing digital literacy challenges and improving the quality of education in the digital era. This article contributes to filling the gap in previous studies by providing a systematic review of management skills in facing digital literacy challenges. Thus, this article can provide practical recommendations for school management to improve digital literacy skills and improve the quality of education in the digital era.

Method

This study uses a literature study method to determine management's ability to face digital literacy challenges. This study is a qualitative study using a literature study method. This study aims to determine management's ability to face digital literacy challenges through analysis of relevant literature. The data sources in this study are literature relevant to the research topic, namely journal articles, books, and other documents related to management's ability to face digital literacy challenges. The literature used was obtained from online databases such as Google Scholar, Eric, and Web of Science. The literature search period in this study was from 2010 to 2023. This period was chosen because research on management's ability to face digital literacy challenges has grown rapidly in the last decade. The databases selected in this study are Google Scholar, Eric, and Web of Science. These databases were chosen because they have a

good reputation and provide access to journal articles and other documents relevant to the research topic. Google Scholar was chosen because it provides access to a wide range of journal articles and other documents, while Eric was chosen because it focuses on education and Web of Science was chosen because it has a good reputation for providing quality journal articles. Data analysis in this study used thematic analysis to determine the management's ability to face digital literacy challenges. Thematic analysis involves identifying and analyzing themes related to management's ability to face digital literacy challenges.

Results and Discussion

Digital literacy refers to the capacity to locate, assess, utilize, disseminate, and produce content through information technology and the Internet (Alfida, Maryam and Rianti, 2019; Subaveerapandiyan et al., 2022). The results of this study indicate that management skills in facing digital literacy challenges are very important to increase efficiency, productivity, and security in the use of digital technology. The themes related to management skills in facing digital literacy challenges, namely technological skills, information skills, communication skills, human resource development, and policy implementation, indicate that management needs to have comprehensive skills to face digital literacy challenges.

1. **Technological Ability**, Adequate technological ability is essential for management to use digital technology effectively and efficiently. By having good technological ability, management can increase efficiency and productivity in the use of digital technology.
2. **Information Ability**, The ability to search, evaluate, and use digital information effectively is essential for management to make the right and effective decisions. By having good information ability, management can improve the quality of decisions and face digital literacy challenges better.
3. **Communication Ability**, The ability to communicate effectively using digital technology is essential for management to improve communication and collaboration with stakeholders. By having good communication ability, management can improve the quality of communication and face digital literacy challenges better.
4. **Human Resource Development**, Developing human resources who have good digital literacy skills is essential for management to improve overall digital literacy skills. By developing human resources who have good digital literacy skills, management can improve efficiency, productivity, and security in the use of digital technology.
5. **Policy Implementation**, Implementing policies that support the use of digital technology effectively and efficiently is very important for management to improve digital literacy skills. By implementing supportive policies, management can improve efficiency, productivity, and security in the use of digital technology.

Management is essentially the process of achieving goals by utilizing the energy of others. In simple terms, management includes planning and implementing group efforts in order to achieve goals, but with minimal capital expenditure in terms of time, money, resources, and challenges. In other words, the basic understanding of management is planning, organizing, implementing, and supervising a task that seeks to allocate resources in a way that adds value. In the school environment, for example, we see that management focuses more on initiatives to mobilize and enhance human resources (empowering and motivating human resources), whereas administration places greater emphasis on executing essential elements like curriculum, equipment, school finances, and other regular tasks Sergiovanni, in (Burhanuddin, 2002). Thus, management can be understood as the process of reaching objectives by utilizing the efforts of other individuals (Widiasa, 2007).

Management is the process of achieving goals by utilizing the energy of others. In this context, management includes planning, organizing, implementing, and supervising a task that seeks to allocate resources in a way that provides added value. Management focuses more on initiatives to engage and strengthen human resources, so that it can increase efficiency and productivity in achieving goals. Management plays a very important role in achieving organizational goals. By carrying out effective planning, organizing, implementing, and supervising, management can allocate resources in a way that provides added value and increases efficiency and productivity.

In the school environment, management focuses more on initiatives to engage and strengthen human resources. This means that school management needs to focus on developing effective human resources, so that it can improve the quality of education and achieve school goals. The implication of management in this context is that management needs to prioritize human resource development and allocate resources in an effective and efficient manner. Thus, management can improve efficiency, productivity, and the quality of education. In relation to digital literacy, School management fundamentally involves optimizing human, financial, and material resources to attain library objectives.

Digital literacy is described as the capacity to utilize digital technology efficiently and judiciously in different areas of life, such as employment, education, and everyday activities (Gilster, 1997). Digital literacy encompasses the capacity to critically and creatively comprehend and utilize digital technology (Bawden, 2008). School management in relation to digital literacy is the method of enhancing human, material, and financial resources to reach educational objectives through digital technology. Digital literacy refers to the capability to utilize digital technology efficiently and responsibly across different areas of life.

Digital literacy holds significant importance in the current digital age, as it enables people to access, interpret, and utilize digital information efficiently. Digital literacy encompasses the capability to comprehend and employ digital technologies in a critical and creative manner, enabling individuals to enhance their quality of life and accomplish their objectives. School administration plays a crucial role in enhancing digital literacy within educational institutions. School administration must enhance the use of human, material, and financial resources to reach educational objectives through digital technology.

This can be achieved by supplying sufficient resources, creating a curriculum centered on digital technology, and enhancing the capability of educators and personnel to utilize digital technology. The consequences of digital literacy in school management indicate that educational institutions must focus on enhancing digital literacy abilities for teachers, staff, and students. This can be done by providing continuous training and professional development, and integrating digital technology into the curriculum and learning process. Overall, digital literacy is very important in today's digital era, and school management plays a very important role in improving digital literacy in schools.

By optimizing human, material, and budget contributions, school management can improve digital literacy skills for teachers, staff, and students, thereby improving the quality of education and achieving school goals. Digital literacy, recognized as a challenge in incorporating technology into academic programs Blau, Shamir-Inbal and Avdiel (2020) is described in contemporary literature as the abilities and skills required to manage a diverse and intricate information landscape (Eshet, 2004). The 'Digital Literacy Framework' was created by Eshet-Alkalai (2012) and includes six categories, (a) photo-visual thinking (comprehending and utilizing visual information), (b) real-time thinking (analyzing various stimuli at once), (c) information thinking (assessing and integrating information from several digital sources), (d) branching thinking (navigating

within a non-linear hypermedia environment), (e) reproductive thinking (generating results through technological devices by crafting new content or remixing pre-existing digital material), (f) social-emotional thinking (grasping and implementing the principles of cyberspace).

Heitin (2016) states that digital literacy encompasses these groups, (a) locating and using digital content, (b) producing digital content, (c) sharing or communicating digital content. Consequently, the literature defines digital literacy in numerous ways by connecting a range of different technical and non-technical components. Digital literacy represents one of the hurdles of incorporating technology into academic courses, necessitating particular competencies and skills to effectively maneuver through the intricate information landscape.

The Digital Literacy Framework created by Eshet-Alkalai (2012) includes six categories that encompass different elements of digital literacy, such as photo-visual thinking, real-time thinking, information thinking, branching thinking, reproductive thinking, and social-emotional thinking. The elements of digital literacy highlighted in the literature encompass the skills to locate and use digital content, produce digital content, and communicate or distribute digital content. Moreover, digital literacy encompasses the capacity to comprehend and utilize visual data, handle various stimuli at once, assess and integrate information from several digital sources, and maneuver through a non-linear hypermedia landscape.

Digital literacy is very important in today's digital era, because it allows individuals to access, understand, and use digital information effectively. Digital literacy also allows individuals to create and share digital content, and participate in online communities. The implications of digital literacy for education are that education needs to prioritize the advancement of digital literacy abilities for students. This can be achieved by incorporating digital technology into the curriculum and educational process, along with offering continuous professional training and development for educators

Existence during the time of the fourth industrial revolution poses a challenge in the realm of education. The emergence of the industrial revolution 4.0 era can be highlighted by multiple advancements in the digital domain. For instance, mobile devices, smartphones, the web, computer technology, information, AI, and robotics. In educational settings, it is essential not only to advance science and technology but also to ensure that education produces high-quality human resources capable of competing at local, national, and international levels. One of the initiatives to enhance educational quality in the age of industrial revolution 4.0 is that the principal plays a crucial role in fostering leadership within educational institutions (Jannah, 2020).

The era of the industrial revolution 4.0 brings new challenges to the world of education, especially in terms of improving the quality of human resources that can compete in the digital era. In this context, the principal plays a very important role in realizing leadership in educational institutions. The challenges of education in the era of the industrial revolution 4.0 include the need to improve the quality of human resources that can compete in the digital era. This requires the ability to adapt to new technologies, improve digital literacy skills, and develop skills that are relevant to industry needs. The principal plays a very important role in improving the quality of education in the era of the industrial revolution 4.0. The principal needs to have effective leadership skills to direct and motivate teachers and staff in improving the quality of education. Strategies for improving the quality of education in the era of the industrial revolution 4.0 include developing a curriculum that is relevant to industry needs, improving the digital literacy skills of teachers and students, and developing skills that are relevant to industry needs.

The implications of the era of the industrial revolution 4.0 for education are that education needs to prioritize the development of digital literacy skills and skills that are relevant to industry needs. The principal needs to play a very important role in improving the quality of education by directing and motivating teachers and staff in improving the quality of education. The successful achievement of the goals outlined in the Education Act 2542 and the 2nd Amendment Act 2545 has not been realized through effective education management.

The findings from the evaluation of educational quality in Thailand conducted by the Office of National Education Standards and Quality Assessment during the 3rd external assessment in 2557 indicated that student quality fell short of standards across all education levels. At the primary education level, it was discovered that the management and administrative procedures of teaching and learning had not delivered adequate quality to students overall. Furthermore, the assessment results were not applied further, and enhancements to the quality of the assessment system were necessary.

Given the aforementioned context, it is evident that the Thai education system has not enhanced the quality of students to meet standard benchmarks. Regarding management challenges, it was observed that the centralized structure led to inadequate integrated policy management, insufficient resource management, absence of educational standards, ineffective quality assurance systems, lack of systematic policy development, and poor integration with other organizations. Due to the issue of inadequate quality in education management, the general performance of all students in primary education has been observed to be quite low (Ninlawan and Areerachakul, 2015).

Improvements in digital technology Cox (2021); Cox (2022) have necessitated growth in digital knowledge and competencies Baro, Obaro and Aduba (2019); Janssen et al., (2013) spanning from simple to intricate (Baro et al., 2019; Secker, 2016). Artificial intelligence serves as a key illustration of the rapid advancement of technology. In this context, technology is not the primary influence. It serves more as a foundation to establish the necessity for improved comprehension and articulation of digital literacy. Advances in digital technology have demanded more complex and diverse digital knowledge and skills.

Digital literacy, digital competence, digital fluency, and digital agility are some of the concepts related to the ability to use digital technology effectively. The definition and concept of digital literacy are still not uniform and are often used interchangeably with other concepts such as digital competence and information literacy. This confusion can cause difficulties in understanding and developing relevant digital skills. The rapid development of digital technology has introduced new concepts such as digital fluency and digital agility. This shows that digital skills are not only about using technology, but also about understanding and adapting to rapid technological changes.

The implications of the development of digital technology for education are that education needs to prioritize the development of relevant and up-to-date digital skills. Education needs to prepare students to face the challenges and opportunities associated with digital technology. Digital literacy is a very important skill in today's digital era. Digital literacy is not only about using technology, but also about understanding and using it effectively and responsibly. Overall, advances in digital technology have demanded more complex and diverse digital knowledge and skills. Education needs to prioritize the development of relevant and up-to-date digital skills to prepare students for the challenges and opportunities of the digital age.

Conclusion

Management's ability to face digital literacy challenges is essential to improving the quality of education and facing challenges in the digital era. Management needs to prioritize the development of digital literacy skills for teachers, staff, and students to improve the quality of education key points, management's ability to face digital literacy challenges is essential to improving efficiency, productivity, and security in the use of digital technology, digital literacy is a complex and multidimensional ability that includes various technical and non-technical aspects, management needs to prioritize the development of digital literacy skills for teachers, staff, and students to improve the quality of education. Implications, management needs to develop strategies to improve digital literacy skills for teachers, staff, and students, education needs to prioritize the development of relevant and up-to-date digital literacy skills. Thus, management's ability to face digital literacy challenges is essential to improving the quality of education and facing challenges in the digital era. Therefore, management needs to prioritize the development of digital literacy skills to improve the quality of education.

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