

DIGITAL LEADERSHIP OF EDUCATIONAL INSTITUTIONS POST-COVID-19

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Abstract

Digitization brings about changes in the organizational structure and processes that take place in it, including in educational institutions. There has been a change in the educational organization environment with the application of various digital devices to support various activities in human life. In addition, students who study in educational institutions can also be categorized as digital natives. Of course, digital leadership is needed for school principals as learning leaders in educational institutions. During the Covid-19 pandemic, school principals were forced to exercise digital leadership because schools were closed and learning was conducted online. In the post-Covid-19 pandemic, maintenance is needed to maintain the characteristics of digital leaders in school principals. Because schools are experiencing digitalization and students who study can be categorized as digital natives.

Keywords: Digital Leadership, Digital Transformation, Digital Leadership Characteristics

A. Background

There are quite a number of studies regarding the changes that have occurred due to technological developments that have brought humans into the digital era. Digitalization brings changes to the organizational structure and the processes that occur in it. Of course, the birth of this digital era also has an impact on the world of education, especially schools. The world of education takes advantage of the possibilities provided by digital technology such as distance learning, e-learning or providing digital library facilities. In the study of Ribble, M. & Bailey, G. (2007:36), digital technology affects the world of education in at least 3 ways, namely (1) it has a direct effect on student learning and academic performance; (2) affect the overall school environment and student behavior, and (3) affect student life outside the school environment.

During the Covid-19 pandemic, almost all schools were forced to enter this digital era so that the learning processes carried out in various schools took advantage of the development of this digital technology. Digital technology has become part of the world of education today, because many schools have experienced digital transformation, especially as carried out in the learning process during the Covid-19 pandemic. There are quite a number of studies related to schools in this digital era such as 21st century schools, future schools, hybrid learning and so on.

One of the study themes that has attracted quite a lot of attention is the digital era leadership in schools, which is commonly called digital leadership. The leadership here is the leadership of the principal, who is affected by changes because schools enter the digital era. In Fisk's view (as quoted by Sağbaş & Erdoğan, 2022) digital leadership is visionary, a motivator for change, able to integrate ideas within the business to become projects and build connections through creating new opportunities for partnerships/collaborations/utilizing external sources and other forms of collaboration.

Moreover, educational leadership is currently facing so many challenges as a result of changes, including digital transformation. In the view of Ahmad & Ghavifekr (2014) the challenges ahead will be more and more because the principal must work hard to manage and lead his school to ensure that professional standards are increasingly met and manage various kinds of task demands that continue to increase due to changes and the emergence of new challenges that arise. happening in the outside world. Ahmad & Ghavifekr (2014) also pointed out that, indeed, the current schools are functioning relatively well, but the schools will be more complicated to be managed by the principals in the future because the current structure of the schools may no longer be in line with the changing developments. that occur and the new demands on schools that are brought about by the changes that occur. In essence, we are faced with a world with high technology and sophisticated communication channels that force us to deal with a “new world”. Schools are undergoing what is commonly known as digital transformation. In Cortellazzo, Bruni & Zampieri's view (2019), digital transformation refers to the adoption of technology portfolios at various levels, which are used by various institutions such as the Internet of Things (IoT), digital platforms, social media, Artificial Intelligence (AI), Machine Learning (ML), and Big Data, all of which are infrastructure such as electricity. Furthermore, he explained, at the macro level, the shift towards different technologies is setting the agenda for new mechanisms of competition, industry structures, work systems, and relations to emerge. At the micro level, the digitization has impacted on business dynamics, processes, routines, and skills.

This shows that digital transformation at the micro level or organizational level is also starting to occur in educational institutions, which need to carry out digital transformation. Klein (2020) demonstrates the importance of digital leadership, not only in fully digital organizations but also in organizations undergoing digital transformation. Because digital leadership means leading digital transformation and leading organizations in a digital environment. In the view of Sağbaş & Erdoğan (2022), the general characteristics of digital leadership are a leader who has a digital transformation vision, is able to develop flexible and adaptable policies, has digital intelligence and knowledge, can motivate his subordinates, allows subordinates to make mistakes and demonstrate empathic and conciliatory behavior. Sağbaş & Erdoğan (2022), concluded that digital leadership resembles other leadership styles in several respects. On the other hand, students who are categorized as millennials are often seen as digital generations or digital natives. Students born after 2000 have lived in the digital world since childhood and have the skills to operate digital devices to support their activities. Because of this, new terms have emerged about millennial children's learning such as cybergogi (see, Rahma, Sucipto,

Affriyenni & Widwaswari (2021) or "learning by googling" (see, Cimiano & Staab, 2004). information and communication technology tools. In Indonesia, as stated by Nababan, et.al. (2021), the challenges of the Industrial Revolution 4.0 era must be answered quickly and accurately in order to be able to increase Indonesia's competitiveness in the midst of global competition. However, the problem is that educational institutions in Indonesia at the primary and secondary education levels face the fact that their educational policies have not been able to respond quickly to opportunities to improve the teaching profession so that it can be in line with the development of education in the digital era. In this case, one of the strategic things is educational leadership. Because educational leadership will not only have an impact on improving student learning outcomes but also related to school performance to be able to become an effective school that is able to respond to developments around it. Such educational leadership, in the digital era, is commonly called digital leadership.

Based on this description, this study asks the question: What is the general mindset of school principals as digital leaders of educational institutions? Specifically, this question is asked in the context of Indonesia as a country undergoing social transformation with all its challenges and opportunities for education and principals are basically learning leaders (see Ahmad & Ghavifekr, 2014). The research objective is to formulate a general mindset of digital leaders for educational institutions in Indonesia.

B. RESEARCH METHODS

This study uses a multi-case case study method, namely the digital leadership of school principals in two districts in West Java, Indonesia. The selected schools are public and private schools. While the study focused on the results of Klein's (2022) literature review which formulated the characteristics of digital leadership, which included three groups of characteristics, namely (1) digital business, (2) social attitudes, and (3) general mindset. The focus of the study is on the general mindset characteristic group because it relates to the personality of the leader when carrying out his leadership duties at school. While the other two groups of characteristics are more related to the context of implementing digital leadership in educational institutions. Data were collected through interviews and observations. Interviews were conducted with a number of school principals and were complemented by observations of the leadership practices carried out. In-depth interviews were conducted to explore the general mindset of school principals as leaders of educational institutions who nowadays inevitably face the digital environment that affects education. In addition, during the Covid-19 pandemic, the school environment, especially the learning process, is carried out by utilizing digital technology.

C. THEORETICAL FRAMEWORK

Lindqvist & Pettersson (2019) concludes from the results of their research that principals play an important role in setting the direction to support students and teachers working with digitalization for learning. The principal also plays an important role in developing teachers and students, although here it is still necessary to involve parents as stakeholders in the learning process. This shows the important role of school principals

in producing quality graduates. Leadership plays an important role in complex causal models of educational effectiveness and school improvement (see, Damayanti & Mirfani, 2021). Furthermore, another requirement of leadership in schools today is the demand to be able to bridge the gap between knowledge and skills in the world of technology so that they can provide direction and guidance to lead digital development in their schools and spread these practices into the school learning environment (Hamzah, 2010). Nasir & Wahab, 2021))

The leadership that is often mentioned in the latest scientific articles in this digital era is digital leadership or e-leadership. In general, this digital leader, proposed by Quddus et al. (2020) are people who are able to utilize information technology to achieve common goals within an organization. Furthermore, Quddus et al. (2020) mentions several characteristics of digital leadership. First, digital leadership communication requires the use of electronic media to communicate with subordinates, including using social networking media such as line, facebook, instagram and twitter. Second, digital leaders must be able to think and work together without space, time and cultural constraints because they use technology tools to communicate with many people effectively and efficiently. Third, digital leaders are able to monitor and manage virtual work effectively.

What Quddus et al. (2020) it is still a general characteristic. The results of a literature review conducted by Klein (2020), the characteristics of digital leaders include (1) digital business which includes innovative visionaries, network intelligence, digital intelligence, understanding complexity, agility, digital talent scouts and business intelligence; (2) social attitudes that include motivating, exemplary, open, socially intelligent leaders, respecting diversity, democratic delegation, subordinate oriented and ethical; (3) general mindset which includes being able to adapt, agile, learn from mistakes, creative, self-aware, dare to make decisions, and lifelong learners.

D. RESULTS AND DISCUSSION

The world is undergoing changes due to the development and application of digital technology in various life activities. These changes are marked by, among others, the emergence of the term Industrial Revolution 4.0, society 5.0, e-commerce and the like. These changes also occur in the educational environment, especially in the practice of managing educational institutions and the learning process in schools. The students themselves who are categorized as digital natives take advantage of this digital technology for various purposes in learning such as recording study materials, using e-books, tracing and rediscovering information and discussing with fellow students via text messages or video-calls.

The emergence of the term digital leadership and digital transformation, which was originally used in the context of business organizations, is now starting to penetrate into educational organizations. Digital leadership is also used for institutional leadership in education, namely the leadership of school principals. This digital leadership marks a new era in managing educational institutions that inevitably have to digitize in many aspects of managing educational institutions. During the Covid-19 pandemic, schools were closed

and students were studying from home by utilizing digital technology. School management has also shifted to utilizing digital technology. In other words, principal leadership is also forced to become digital leadership. When the situation gradually improves and schools reopen and carry out learning activities, it does not mean that the leadership that is carried out using digital technology is over. The Covid-19 pandemic has actually taught education managers to be able to carry out processes within educational organizations by utilizing this digital technology. The principal's digital leadership studied here is one part of the important digital leadership characteristics of Klein (2020), namely the general mindset of the principal himself. This general mindset is seen as the basis for what the principal does in relation to the implementation of his leadership and carrying out leadership to manage schools effectively and improve the quality of learning. Therefore, this study focuses on this general mindset in an effort to understand what is in the principal's view of digital leadership.

This study of the general mindset of principals is seen based on aspects as formulated by Klein (2020), as follows:

1. Adaptable

All school principals who became informants in this study realized that the school environment had changed with this digital technology. Various policies related to school management have started to use digital technology, such as various data for education-related information systems. The students themselves, have become part of the digital society and are accustomed to using digital devices for various purposes. The teachers are also used to the learning process using digital devices. Principals recognize the importance of adapting to these developments. Although for senior principals who will soon enter retirement, the process of adapting to the digital environment is slower compared to younger school principals in their 40s. The ability to adapt is apparently influenced by the term of office that must be carried out. For principals with a long term of office because they are still young, the desire to adapt to the changing environment due to digital technology is greater than for principals who will soon end their tenure and retire. However, due to the necessity of the national education authority to use information systems based on information and communication technology, the principals are compelled to adapt to the development of their environment.

Therefore, there are two factors that encourage adjustment. First, the principal's own internal factors feel the need to adapt to developments. Second, external factors, namely because of policies and regulations related to the digitalization process in educational institutions. Both are important driving factors for school principals to adapt to the changing environment due to digital technology. This will be related to the aspect of self-awareness which will be discussed in the next item.

2. Agility

Of course, the ability to adapt will be related to the ability to use information and communication technology and applications that are commonly used to communicate. Most of the informants in this study stated that they were quite good in their ability to

operate word and excel. However, there are those who claim that they are still learning to be able to use word and excel to carry out their duties as school principals. As for the applications commonly used on smartphones such as WA and social media, all of them stated that they were quite skilled and used to use them in carrying out their work.

Even though the applications on the smartphone are seen as helpful in carrying out work, especially in obtaining the latest information, they still provide additional work. The school principals admit that they need to be skilled at filtering information in order to be able to distinguish which information is true and which is a hoax. The ease of sending information often leads to hoaxes. Therefore, it always takes time to check and recheck the information it receives, especially through social media. Thus, technical skills to operate these digital devices must still be equipped with intelligence in the form of digital literacy. In fact, the most important thing is the ability in the form of intelligence to process information that is considered important to carry out the leadership role in educational institutions. The principals view the importance of intelligence to be able to distinguish true information and hoaxes as a form of intelligence in carrying out their leadership.

3. Learning by error

Willingness to learn from mistakes is recognized by principals as important in carrying out leadership to achieve effective schools. But interestingly, in terms of learning from these mistakes, the principals view the mistakes made by their subordinates rather than themselves. Although admitted, the principal has also made mistakes and then corrected his mistakes. However, in many of the examples given by the principal, the mistakes were actually made by his subordinates, namely teachers and school administrative staff. When digging up information related to the error, more principals conveyed how they corrected and corrected mistakes made by their subordinates.

Viewing the guilty are subordinates seems to be more related to the organizational culture that develops in schools. However, school principals also admit that they can make mistakes. Therefore, there is a kind of invitation from school principals for himself, fellow principals and those who work in educational institutions to be willing to learn from mistakes made and not to repeat them in the future. It is the leader's job to correct his subordinates. But being part of the wisdom of leadership is also for the leader himself to be willing to learn from mistakes. Because the demands of this digital era are the willingness to admit mistakes and want to learn from the mistakes made.

4. Creative

The digital age provides new possibilities. Therefore, it requires leadership that is good at seeing new opportunities and developing new thinking in building effective schools and quality learning. Principals are aware of the many new opportunities that are being exploited by the presence of this information and communication technology. The presence of social media, for example, can be used to communicate more intensely with parents of students. Social media can also be used to monitor student activities and publish school activities.

Therefore, the principal's ability is needed to be able to take advantage of this digital era for educational purposes. The development of creativity to take advantage of the opportunities of this digital era is realized by principals that it is impossible to depend on the principal himself. The principal realizes the importance of discussing with teachers so that they can take advantage of this digital technology development, such as developing learning methods or developing digital technology-based learning.

Thus, school principals see the importance of creativity in utilizing digital technology. However, this creativity does not appear through the principal's own efforts but through discussions with his subordinates. Therefore, it is important for school principals to view open communication and open discussion as prerequisites for the development of creativity. So, it is not the principal himself who is creative, but there is a creative team in the school who is thinking about using technology to develop learning. Principals position themselves more as facilitators who bring up creative ideas that are realized through their leadership acts.

5. Self-awareness

Recognizing the occurrence of change and efforts to adapt to changes through skills using digital tools have emerged among school principals. Especially with regard to skills in utilizing digital devices, school principals learn in various ways. Most school principals start by teaching themselves how to operate digital devices such as smartphones and laptops. Then learn by asking their children or their subordinates and learn by looking at the tutorials presented on Youtube.

That is, in terms of awareness of the inability and inability to use digital devices, this has shown self-awareness. This awareness arises because of environmental developments that are increasingly influenced by digital technology today. This awareness becomes important as a driver to change and adapt to developments. This awareness raises the internal urge to make adjustments, as well as because there is an external urge as discussed in the previous point. This kind of self-awareness encourages school principals to have the enthusiasm to learn something new that is needed to carry out their leadership role in educational institutions. The ease of obtaining learning materials helps him to learn independently, such as learning through Youtube or learning by trying digital devices himself which allows him to also learn from mistakes in operating digital devices.

So, self-awareness about the organizational environment he leads and self-ability in the digital era is already owned and becomes an important framework for carrying out leadership actions. Principals learn about something related to digital technology by taking advantage of the convenience provided by the digital era itself.

6. Decesive courageous

Principals are generally able to carry out the role of decision makers as leaders in their educational institutions. Some make decisions based on information obtained from their subordinates through social media and direct conversation. There are also school principals who complete the required information by searching for the information they need from the internet. The adequacy of the information needed to make decisions is

stated by the principals who are greatly helped by the available digital tools. Data is easier to obtain and information is easier to trace. It's just that you have to be careful to check the truth of data and information, so you don't use hoaxes as a basis for making decisions.

However, school principals also feel the need to coordinate and consult with parties outside their schools, particularly the Local Education Office for public school principals and foundation leaders for private schools. Coordination and communication for issues that are considered important and basic, often not only because they are needed for decision making, but rather are part of the manners or manners that apply to Indonesian society in general. Some of the coordination and communication is also carried out using digital devices, including using WA and Zoom Meetings. Thus, in terms of the courage to make decisions basically lies with the principals. Because in general, the principals are aware that the role of the principal does require them to make decisions. It's just that in the context of digital leadership, the implementation of the principal's role is equipped with the ease of obtaining the data and information needed through their digital devices.

7. Lifelong learner

Because they are in an educational institution and in general the principals were previously teachers, they have a passion for always learning. There is a pretty good learning ethic among school principals. Therefore, school principals learn to master digital technology devices from anyone and through any learning media. Some learn from their subordinates, some learn from fellow school principals and some learn through social media, especially Youtube. The choice on Youtube is mainly due to the popularity of this application in Indonesia and the many content creators who come from the world of education. Of course, formally also participate in training activities organized by the Local Education Office or through regular meetings of principals who are members of the association of principals. During the Covid-19 pandemic, many training activities were carried out online, forcing school principals to master applications such as Zoom Meeting or Google Meet. After returning to school can conduct face-to-face learning and the pandemic begins to subside, training activities and online meetings are still being carried out although with reduced intensity. Because most of the meeting and training activities have started to be carried out offline.

Thus, the position as a lifelong learner has been embedded in the principal. Because school principals realize that they are leaders in educational institutions. In addition, because there are external demands, especially from the Local Education Office, which requires them to take part in online education and training activities. By participating in online education and training, there are two sides that emerge, namely learning to operate devices that allow it to be connected with online education and training and learning training materials which are the main themes of training which usually have to be conveyed back by the principal to his subordinates at school.

In general, the characteristics of the general mindset as a digital leader in educational institutions already exist in the principal. But of course, to be able to carry out digital leadership effectively, it needs support from the education environment in general. The world of education is known as a world that strongly adheres to the traditions that apply

in these educational institutions. Therefore, even though the general mindset already exists in the leadership of educational institutions, because the school organizational culture does not support it, digital leadership cannot be carried out effectively. Decision making is slow, not because the principal cannot make decisions quickly. But because there are manners in the education bureaucracy that must be followed and obeyed.

Therefore, after the Covid-19 pandemic period and schools returned to running as before, then what was formed in school management during the pandemic returned to the form of the period before the pandemic. Although it must be admitted, there are still methods and ways to manage educational institutions that rely on digital technology during the Covid-19 pandemic. However, it is no longer a top priority to use digital technology in school management, including the way the principal carries out his leadership.

However, the Covid-19 pandemic has become an important chapter in the history of education in Indonesia because it has forced all education personnel to be able to take advantage of digital technology. The digitization process will take place more quickly when compared to the absence of the spread of the virus. Therefore, the seeds of digital leadership that have begun to grow can develop faster on the fertile land of the education world during the Covid-19 pandemic. Therefore, it is not surprising that one part of the characteristics of digital leadership, namely the general mindset, has been formed in principals. To maintain the spirit of digital leadership during the new normal in the world of education, efforts are needed by the Local Education Office or principal associations to maintain this spirit by holding regular training or meetings. In this way, the spirit and spirit to manage educational institutions will be maintained in an environment that is undergoing a digitalization process through the implementation of digital leadership. Schools in the future will rely heavily on this digital technology and are filled by students who are categorized as digital natives, so digitalization will become an important part in managing educational institutions and the learning process in schools.

It's just that further studies are needed regarding the durability of ownership of the general mindset in the midst of changes in education management that return to the way it was before the Covid-19 pandemic. Because there is an impression that digital leadership appears more driven by external factors in the world of education, not driven by the need to manage educational institutions and educational leadership. Therefore, more development initiatives will certainly come from outside educational institutions, but more will come from the authorities who make education policies.

E. CONCLUSION

The characteristics of digital leaders already exist in school principals. These characteristics have been used in managing schools, especially during the Covid-19 pandemic, so that digital leadership has been implemented and has been tested enough to run. Principals learn to be able to operate digital devices because of the demands of carrying out their duties after there is a policy to organize learning from home. External conditions, changes in student characteristics as learners and digital natives, encourage the implementation of digital leadership in schools.

Entering the post-COVID-19 era, efforts are needed to keep the digital leadership running by school principals. The new normal era and the digitalization of education management will still need these digital leaders. Therefore, efforts are needed to maintain the implementation of digital leadership in schools through policy instruments, at least the policies of the Local Education Office and through activities organized by associations of principals.

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