Unlocking Digital Leadership Implementation in a *Pesantren* in Lombok Island

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ABSTRACT

Pesantren have been known as a traditional educational institution that implements traditional teaching and education and lacks facilities that have a negative impact on the quality of education management. However, this research is here to answer how pesantren can implement digitalisation. In this Society 5.0 era, pesantren need to transform by integrating technological leadership styles to improve the quality of pesantren and adapt to global demands. This research uses a qualitative approach with semi-structured interviews and non-participant observation to collect data. Data analysis was conducted interactively, with stages of data collection, data presentation, and conclusion drawing. Some of the research findings concluded that pesantren leaders create a vision that reflects the orientation to realise the vision of the pesantren by utilising digital technology. The results showed that pesantren leaders have implemented digital technology in school management and have created various online applications to support the progress of the pesantren based on the criteria, namely visionary leadership, high digital era learning culture, high digital citizenship, digital era learning, digital era work culture, and high digital citizenship of teachers.

KEYWORDS: digital leadership, leadership, Society 5.0, Pesantren, leaders, digital technology.

INTRODUCTION

In this digital era, human awareness of digitalization is still lacking which has resulted that humans cannot adapt to global demands. To equip today's students with the knowledge and skills they will need as 21st-century citizens of the modern world, leadership is a vital factor in determining how teaching and learning processes are guided. According to Fox & McDermott (2015), school administrators are responsible for overseeing efforts to transform schools to embrace this idea as a potent learning tool for the twenty-first century. This involves creating technologically enhanced learning settings that promote deep learning. A major reform that strongly depends on building-level leadership is the improvement of technology in classrooms. This is an area that needs special consideration (Watts, 2009). Examining K–12 principals' perceptions of leadership responsibilities and technology integration in the 21st-century classroom was one of the researcher's goals to better understand how principal leadership affects this practice. Thus, the

joint task and cooperation of all elements of the school community will become a vehicle for creating a culture of good school development and building a digital technology system in educational institutions that provides a practical picture of the application of technology.

Indonesia is currently implementing digitalization of education through Merdeka Belajar, one of which is digital facilities that are used as learning resources and learning tools and can access information that will help school residents including teachers in improving the quality of learning (Indonesian Ministry of Education & Culture, 2022). Along with online learning policies that require schools to become strong, creative, and dynamic individuals, digital assistance will be one of the solutions to overcome the crisis that has occurred significantly. Conditions during the Covid-19 pandemic also required educational institutions, especially the learning process and interaction processes of principals, students, and teachers to be more literate in the use of technology, such as online teaching and learning, virtual meetings, storing important school documents, online discussions, online interactions and communications. Virtual meetings with teachers and parents, online promotion of student development, and online school promotion through various digital platforms (Yusof et al, 2019) such as Youtube, Facebook, Whatsapp, Zoom, and other platforms.

Moreover, implementing a digitalization system in educational institutions by facilitating teaching and learning activities remotely with e-learning, makes it easier for students to access information related to lessons and increases students' creativity and technological innovation. Today's students are close to technology especially Generation Z and Generation Alpha. Generation Z is known as GenerationNet, IGeneration, and Generation Internet because they are able to apply all activities at one time such as tweeting using a cell phone, and browsing with a PC since childhood, they have been familiar with technology and are familiar with sophisticated gadgets. This condition requires school leaders to have endurance and master various skills in the future that will emerge amidst the rapid advancement of technology. More than just digital skills, the world of education also demands more in terms of digital leadership skills or what is commonly called digital leadership. Digital leadership aside from being good at processing technology to be implemented in schools, also needs to have interpersonal skills, promotion or branding, and professional development. In short, Yusof, et al (2019) explains that digital leadership is a combination of leaders, resources, hardware, and technology.

The process of improving digital leadership skills in the world of education cannot be done easily. Much research is needed to examine the importance of awareness of this digital leadership style because digital leadership does not only discuss technical matters of leadership with the ability to use technology, but also digital leadership methods in leading organizations effectively, leading organizations effectively, and achieving maximum performance. In the world of education, a school leader needs to understand the changing currents of globalization. School leaders are not only literate and understand technology, but also must understand technology management. In addition, it has a strong commitment to enhancing technology-based education management capabilities.

Studies show that the evolution of leadership is included in educational leadership as a result of rapid developments in the field of Advanced Information Technology such as internet email, video conferencing, and groupware systems (GSS) in the late 1990s (Yusof et al, 2019). Therefore, school leaders need to explore and master new knowledge and skills and be aware of the

latest technological changes. As a technology leader in schools, the principal must first master and be competent with technology. Not only that, but school principals also need to master other digital technology knowledge and skills such as interactive whiteboards, document cameras, chrome books, cloud computing, and 3D content. This study will examine in depth the application of digital leadership implemented by school principals at Pondok Pesantren Nurul Haramain NWD Narmada, Lombok Barat.

Pondok Pesantren Nurul Haramain NWDI Narmada is one of the Pesantren (boarding-based Islamic education institutions) that has already implemented Pesantren digitalization and received an award as the Best Pesantren for Implementing Pesantren Digitalization 2021 from Kanwil Kemenag NTB (the Regional Office of the Ministry of Religion West Nusa Tenggara).

Digital leadership in educational institutions has been rarely implemented by Pesantren leader. Since Pesantren is considered as educational institutions which only offering traditional and conservative learning. Therefore, the researcher has had interest to delve into the implementation of digitalization at the Pesantren aiming at exposing it to the public in order to be reference to advance Pesantren management and digitalization to simplify the works, to meet Indonesia national curriculum needs and global demands.

Research questions

The researcher formulated two research questions in this study, namely:

1. How is the implementation of digital leadership at *Pondok Pesantren Modern Nurul Haramain NWDI* Narmada, Lombok Barat?
2. How can digitizing Islamic boarding schools improve the quality of schools under the auspices of *Pondok Pesantren Nurul Haramain NWDI* Narmada, Lombok Barat?

Research Objectives

1. To describe the implementation of digital leadership at *Pondok Pesantren Nurul Haramain NWDI* Narmada, Lombok Barat.
2. To explain how the Pesantren digitalization can improve the quality of schools under the auspices of *Pondok Pesantren Nurul Haramain NWDI* Narmada, Lombok Barat.

Theoretical Foundation

In the literature review which contains several sections, the researcher explains leadership theory, school principals and how important leadership is in improving schools and how digital leadership is *Types of leadership styles*

In integrating technology in schools, especially in this era of society 5.0, the leadership style needs to be adjusted. In the science of educational leadership, there are several leadership styles applied by school leaders, namely democratic, transformational, autocratic, transactional, laizze faire, relationship (kindship), servant and digital leadership styles.

Democratic leadership is a leadership style that always tries to synchronize the interests and goals of the organization in the personal interests and goals of its subordinates; happy to receive suggestions, opinions and even criticism from subordinates; always trying to make his subordinates successful and trying to develop personal capacity as a leader (Woods, 2004). Democratic leadership style can enable schools to better solve educational problems or issues using

complexity and work intensification. Shared leadership and teaching can help to increase the demands and effort as well as the moral complexities faced by contemporary school leaders (Woods, 2005). The leadership style is almost the same as servant leadership. This servant leadership style has a tendency to prioritize the needs, interests and aspirations of the people they lead above themselves. The orientation is to serve, the perspective is holistic and operates with spiritual moral standards (Greenleaf, R. K, 2002).

The opposite leadership style to this leadership style is the autocratic leadership style. Autocratic leadership is a leadership style that has criteria or characteristics that always regard the organization as private property, arrogant, identifies personal goals with organizational goals, considers subordinates as mere tools, does not want to accept criticism and suggestions, is too dependent on formal power, in the act of moving often use a coercive and punitive approach.

But on the other hand, there is a leadership style that is also opposite to the authoritarian leadership style, which actually leads aims to inspire and motivate his subordinates, namely transformational and transactional leadership styles. This leadership style is widely applied by contemporary school leaders. The transformational leadership style seeks to motivate and inspire followers to put aside personal interests for the good of the organization (Bass, BM, & Riggio, R. E, 2006). While the transactional leadership style is leadership that carries out transactions to motivate subordinates to carry out responsibilities, transactional leaders rely heavily on a system of rewarding and punishing their subordinates (Sarros, JC, & Santora, J. C, 2001).

In addition, there is the leadership of Laisez Faire. This type of leadership is also the opposite of the autocratic leadership type. In this type of leadership the leader usually shows passive behavior and often avoids responsibility. A leader with free rein tends to choose a passive role and let the organization run at its own pace. Here a leader has free confidence by giving the widest possible freedom to subordinates by assuming that all his efforts will quickly succeed (Sharma & Singh, 2013).

The last leadership style that the researcher mentioned is the digital leadership style. Digital Leadership is a contemporary leadership style because the concept of leadership emerged when technology had begun to develop. Digital leadership is a leadership style that utilizes and uses digital technology and using instructional technology, including digital devices in an effort to improve school quality (Zhong, 2017). Discussion of the concept of this leadership style is increasingly crowded during the Covid-19 pandemic where all educational institutions use technology to carry out learning throughout the world, especially in Indonesia. Government regulations under the Indonesian Ministry of Education and Culture require every school and educational institution to conduct learning processes and school activities online to reduce the process of spreading the virus. The school's awareness of technology is increasing so that the concept of digital leadership has begun to be applied, especially at *Pesantren Modern Nurul Haramain NWDI* Narmada.

Pesantren, in terms of terminology, it can be explained that *pesantren* education is a place where the extoric dimension (internal appreciation) of Islam is taught in terms of form and system originating from India (Herman, 2013). Herman further explained that before the process of spreading Islam in Indonesia, the system had been used in general for education and teaching of Hinduism. After Islam entered and spread in Indonesia, the system was then taken over by Islam. The term *pesantren* itself is like the terms reciting, *langgar*, or *surau* in Minangkabau, Rangkang in

Aceh does not originate from Arabic, but from India. However, if we look at the time before the 60s, traditional education centers in Indonesia were better known as *pondok*, perhaps the term *pondok* comes from the Arabic word "*funduq*", which means a guest house or lodging for travelers.

Islamic boarding schools are a form of traditional education in Indonesia whose history has been rooted for centuries long before Indonesia's independence and before the establishment of the Islamic empire. There are also those who say that pesantren contain Islamic meaning as well as Indonesian origins. The word "Pesantren" implies a place for *santri* or *pesantren* students, while the word "santri" is thought to have originated from the Sanskrit term "*sastri*" which means "literacy", or from the Javanese language "*cantrik*" which means a person who follows his teacher wherever he goes. From this we understand that pesantren has at least three elements, namely; santri, kyai and *asrama* (dormitory).

The modernization of Islamic education in Indonesia, which is closely related to the growth of Islamic modernization ideas in this region, influences the scientific dynamics within the *pesantren* environment. Even a number of *Pesantren* are moving forward again. In relation to the notion of "independence" of students having completed their education at the *pesantren*, some *pesantren* have introduced some kind of activity or skills training into their education system (Arif, 2013). Recently, *pesantren* have had new tendencies in the framework of renovating the system that has been used so far, namely starting to be familiar with scientific methodology, becoming more oriented towards functional education, meaning being open to external developments, diversifying programs and activities to be more open and clear and can function as a center for community development.

According to Ramayulis (2012), Pesantren in terms of how they respond to tradition are divided into three categories, namely: *Pesantren Salafi, Khalafi,* and Modern.

1. Salafi Pesantren

The term "Salafi *pesantren*" in the midst of society contains two different understandings. First, Salafi *pesantren* are interpreted as traditional trend messages that still maintain classic books and appreciate local culture. Second, Salafi *pesantren* are interpreted as *pesantren* which consistently follow the teachings of the *ulama* of the generation of friends*, tabi'in, tabi'at tabi'in* which have a tendency towards normative interpretation of texts and do not/ lack appreciation of local culture, because all cultures must be in accordance with the era of the *Salafush-Sholih*, namely companions, *tabi'in, tabi'at tabi'in* (Arifin, 2012).

2. Khalafi Pesantren

Khalafi Pesantren seems to accept new things which are considered good while maintaining good old traditions. Islamic boarding schools of this kind provide general subjects in madrasas with a classical system and open public schools within the *pesantren* environment. Khalafi Pesantren is a model of Islamic boarding school that tries to keep up with the times while still maintaining its traditions, namely studying classic books.

3. Modern Pesantren

Modern Pesantren where the Salaf tradition has been completely abandoned. Teaching of classical Islamic books was not held. Mastery of Arabic and English tends to be aimed at practical interests such as Pondok Modern Gontor Ponorogo which is one of the

oldest modern *pesantren* in Indonesia, including Pondok Pesantren Modern Nurul Haramain NWDI Narmada, Narmada, Lombok Barat.

Literature Review

Principal and Leadership

The principal as a school leader plays an important role in preparing the institution's response to all changes, and in practice, the principal must maintain the ability to build trust, collaboration, and collaborative leadership in all situations. Principal leadership has a significant impact on the success or failure of schools (Kurland et al, 2010). Because the principal has assumed more responsibility than before. Principals are responsible for overseeing professional development, analyzing data, and collaborating with committees to reach decisions, and they must have a thorough awareness of the latest developments in educational theory and practice. In achieving all goals, a vision is needed which is called the vision of leadership. Leadership vision becomes a very important part in making or dealing with any changes, especially in critical conditions (Halttunen, et al., 2019). Besides that, this leadership vision is essential for school leaders to be able to exist in various situations and conditions that are constantly changing (Fullan et al., undated) following the times and globalization.

Globalization has prompted school leaders to start considering implementing technology-based improvements in their schools. The role of technology leadership can improve school quality (Anderson, RE, & Dexter, S., 2005). Even the principal's technology-based leadership is also said to be more important than the technology infrastructure of a school, which has an impact on instructional outcomes. However , current school principals feel they do not have the readiness and comfort in taking on a leadership role in technological change (Burns, 2013; Masullo, 2017; Sheninger, 2014; McLeod & Richardson, 2011). The principal views that which has an important role in school technology is the school administration. They have responsibility for the integration of technology for student success even though there are still various limitations (Sheninger, 2014).

Digital Leadership

Several existing studies have found that digital leadership can improve and encourage teaching and learning processes by leveraging digitalization (Richardson et al., 2012) and this leadership can influence institutions to keep moving forward. This leadership model, if applied with good and clear instructions, will be able to help manage activities in schools (Oberer & Erkollar, 2018). In this case, digital leadership and instructional leadership styles encourage teacher self-reflection and support continuous professional development (Bartz, 2017). Studies by Fullan (2002), Leithwood et al., (2004), and Zhang et al., (2020) all came to the same conclusion that the most effective school leaders are those who develop the professional capacity of their teachers and advance their schools and culture that accepts change.

In both management theory and practice, digital leadership is currently a hot topic. Leaders are understandably unsure about how to negotiate the terrain to ensure their long-term success while the world is undergoing a dramatic digital transition. This has led to an increased emphasis on student achievement among educators today, which is often achieved through significant investment in high-tech equipment such as better computers, laptops, tablets and internet connections. School leaders along with school administrators must create conditions that enable

teachers to use technology to promote creative teaching and learning to adapt to rapidly changing environments, such as the era of industrial technology. 4.0. (Alexandria et al, 2019).

In addition, digital transformation is the result of changes brought about by digital technology in all aspects of human life so that the term digital revolution appears. This digital revolution has resulted in increased production flexibility, speed, new dimensions of mass production, higher levels of productivity, superior quality results, and the emergence of new models (Oberer & Erkollar, 2018). The digital revolution has resulted in tremendous advances in information gathering, speed and volume of information transmission, modes of reception, and breadth of access.

Over the past few decades, digital technology has transformed almost every aspect of human life, including the way we communicate, shop and read. If adequate investment and regulatory support is available, digital technology has the potential to provide the necessary solutions for human life (Moghimi, et al, 2019). These developments result in increasingly complex challenges and problems (Moos & Miller, 2003). In this case the school leadership has responsibility for the length of time it takes to make the school curriculum properly in accordance with the demands of the 5.0 era of society. Also, the ability to consistently carry out growth initiatives in the face of various ongoing challenges is a key indicator of the importance of education globally and the importance of the function of school leaders (Ruiz, et al, 2019).

In leading schools in this era, a school leader is expected to be able to apply this digital leadership to make changes by using digital devices in the field of education management (Hamzah et al, 2021). Digital leadership can be the art of directing, influencing others, and initiating long-term change through accessing information and building relationships to anticipate change that is critical to a school's future success. As a result, a dynamic combination of mindsets, behaviors and skills is needed to change or improve school culture using technology (Sheninger, 2014). This digital leadership framework is created by combining technology, motivation, and leadership style (Hamilton, et al, 2016; Frey and Berger, 2016). Digital leadership is a very precise, fast, cross-hierarchical, workgroup-oriented, and cooperative approach with a strong emphasis on innovation (Oberer & Erkollar, 2018).

School leaders who apply leadership can facilitate the development of a shared vision for comprehensive technology integration and will foster an environment and culture that is conducive to realizing the school's vision. Following are the characteristics of a digital leadership vision that can be identified, namely the principal is capable of 1). Identifying and applying research in education and technology, learning psychology, and instructional design principles to support the use of computers and technology in education 2). Applying strategies and knowledge on issues related to managing change processes in schools 3) Applying effective group skills 4) Practicing effective leadership in development 5) Evaluating skills of district technology planning and implementation group processes (Aslam, et al, 2020) . Although much has been written about leadership, the concept of digital leadership vision has not been widely, deeply, or thoroughly understood (Ndalamba, et al, 2018). Hamzah et al (2021) identified several characteristics of school leaders who apply digital leadership, namely a school or educational institution leader has visionary leadership, is able to implement a digital era learning culture, applies digital citizenship in school management and administration, and excels in professional practice.

Research Methodology

A qualitative method is used in this study. To dig deeper about the leadership applied in the *Pesantren,* the researcher used interview to the leader of the Pesantren. In order to describe the implementation of digital leadership of the *Pesantren* and to explain how the *Pesantren* digitalization can improve the *Pesantren* performances.

Time and the place of the study

The data collected in the third week of December 2022 which the interview was conducted with the leader at 18th December 2022 at 09.40 am. The interview took 30 minutes 48 seconds. For the second participant, the interview was conducted at 30 July 2023at 10.17 am and it took 21 minutes. This study took place at *Pesantren Nurul Haramain* NWDI Narmada. This Pesantren is located in Narmad sub-district, at the northern eastern part of Lombok Barat.

Participant

There are two participants involved in this study, they are one of the leaders of the *Pesantren* and the two IT Team leaders. The researcher named the leaders as DL 1 and the two IT Team Leaders as DL2. DL 1. This pesantren has two leaders, DL1 has responsibility for male students, but under certain circumstances, he is responsible for female students. DL 2 has responsibilities to lead the apps making.

Data collection

Data collection was carried out by observation and semi-structured interviews (Cresswell & Creswell, 2012). The semi-structured interviews consists of a series of specific questions to be asked (Gay et al, 2012) of the interviewee. The researcher conducted interview Zoom with the research assistant at the 18th December 2022. Besides Zoom to record the situation of the interview and the research assistant did record by using mobile phone to anticipate the connection break. DL 1 was interviewed to collect information about the aspects of digital leadership applied by *Pesantren Nurul Haramain NWDI* Narmada, Lombok Barat in dealing with developments in the digital era. Moreover, DL2 was interviewed to gain information about the procedures for using applications and the benefits.

Data Analysis

After the data collected from the interviews, the data was transcribed and kept into the Google Drive. After that, the researcher did thematic analysis which the data was firstly coded and the researcher ranked them within these themes to identify patterns, relationships, similarities, and differences (Braun & Clarke, 2022).

Research instrument

The researcher created several questions to deep down information from the participants. The eleven questions asked to the leaders and several questions are also asked to the IT Team leader. The ten questions are about the decision-making process regarding the implementation of

digitalization, the infrastructure support this program, the availability of infrastructure, whether the digitalization policy only emphasize improving student abilities whether the teachers, staff and community members in the Pesantren have involved in this program, the process of implementing digitalization, how many years have the leaders shaped the Pesantren becoming one of the leading Pesantren in West Nusa Tenggara province, the digitalization of Pesantren meaning, Things made the Pesantren awarded as the best digitalization, how digitalizing pesantren could enhance the quality of entire students and community members, how educational technology applied in the educational process and the constraints face during the implementation process.

Findings & Discussion

The finding of the study can answer the research questions questioned by the researcher, they are How is the implementation of digital leadership at Pondok Pesantren Nurul Haramain NWDI Narmada, Lombok Barat? And How can digitize Islamic boarding schools improve the quality of schools under the auspices of Pondok Pesantren Nurul Haramain NWDI Narmada, Lombok Barat?.

How is the implementation of digital leadership at Pondok Pesantren Nurul Haramain NWDI Narmada?

From the interview questions, the researchers identified that leader of the Pesantren have applied digital leadership, their criteria are visionary leadership, high digital era learning culture, high digital citizenship, digital era learning, high digital era work culture and high teacher digital citizenship as mentioned by Hamzah et al (2021).

Visionary leadership. Visionary leadership is a new way, more suitable for strategic management and it focus on a long-term plan for the future Westley & Mintzberg (1989). This leadership is owned by the leader of the *Pesantren* since a very clear vision to develop digitalization and clear practice of the digital leadership implementation. DL 1 and another leader have a strong visionary leadership style, he mentioned:

> *"Computerization or digitalization can make the works much faster, more efficient and can be stored safely. We currently have a computer-team which consists of 11 people to in-charge and has been facilitated by hardware and software to create applications, which can be used by the teachers, administrative staff, business staff, and students. The applications for teachers are an exam-assessment tools by using computers, laptop, tablets and other devices. The teachers also have been provided windows-based applications such as English and Arabic to ease the educational process. For the business staff, they are also provided with application tool for a transaction, the business already built are NH Mart, printing and restaurant. Besides, utilizing digitalization will benefit on reducing the number of calls via the loudspeaker for students who get stuffs from their parents. The student names who are the consignees will be listed on the particular screen"*

Source: Interview #DL1 (18-12-2022)

Digital Citizenship. Digital citizenship relates to the ability to manage and monitor behavior in using technology, which includes security, ethics, norms, and culture (Isman, et al, 2014; Ribble & Biley, 2007). In controlling the culture, ethics, norms and culture in Pesantren, the leaders said:

> *"The belief held strongly by the Pesantren like the Islamic, cultural and historical values implanted for students in the Pesantren will not be eliminated since they have provided other alternatives to anticipate the possibilities that may come. We make sure the digitalization may not impact badly to the students (santri`s) characters"*

How can digitize Islamic boarding schools improve the quality of schools under the auspices of Pondok Pesantren Nurul Haramain NWDI Narmada?

Digital learning. Digital learning is a general term that has quite a broad meaning. It can mean all types of learning methods that use the application of digital technology, for instance; online courses, watching online videos, researching material on the internet, and others. Teachers and students use digital equipment such as smartphones and tables (Lonka & Cho (2015). In the interview session, DL1 mentioned that

> *"Using the technologies, leaders and teachers would have time-investment for other activities such as reading, synergizing or building relationship with other parties, and having more time to deepen knowledge. Teaching has been not enough to use hardware, however it is necessary to utilize soft-files, videos and pdf. These things would improve the students performances.*

As explained by Hamzah et al (2021) that the availability of digital devices is not the only key to student success in learning, but competence in the field of digital technology needs to be mastered by teachers. One of the challenges in the application of digital technology is the lack of digital technology skills in learning due to a lack of knowledge, skills, training and self-confidence. That is why this *Pesantren* facilitates their teachers to have a computer and their students to have one laptop to ease access of learning material on the internet and access learning videos they provides e-library, interactive media for free to learn Arabic and English to enhance the quality of learning. DL1 gave another statement:

> *"Digital is a form of technology used in this Pesantren (Islamic boarding school), all leaders and administrators agree to use technology to facilitate work, so that it is systematic, and has a positive impact on learning and facilitates administrative matters such as Pesantrens' finances, business units/work of teachers Nurul Haramain, safekeeping of goods and others. Moreover, in assessment, it does not take times compared to manuals which those will have positive impact to the ease for teachers to assess students.*

The DL1 explained that digitizing Islamic boarding schools can have a positive impact on educational process:

"Increasing the digitalization of Islamic boarding schools or computerization will get convenience in storage, simplify work, speed up work, simplify book selection costs, simplify exam fees and have a positive impact on learning and education"

Source: Interview #DL1 (18-12-2022)

DL1 said that decision making is carried out by all teachers and all parties in the Pesantren based on our common interests that already applied digitalization because they (all parties) see the rapid development of technology happening now, and they should take advantage of this opportunity to use the technological development to facilitate teaching and learning activities, to support academic things, and to ease the administrative matters.

High digital era work culture. This *Pesantren* has applied digital culture in carrying out their daily work and has created several applications to make their work easier. According to DL2, currently there are 6 applications that have been created and running, those are *Aplikasi Penerimaan Siswa Baru* (Student Admission Application System) so-called as PSB Nurul Haramain, *Sistem Informasi Management Tamu* (Guest Management Information System) so-called as called as SIMITA, *Sistem Informasi Pemilihan OSNH* (Organisasi Santri Nurul Haramain) (Student Organization Electoral Information System) so-called as SIIMPEL, *Pendataan Foto dan Kartu Pelajar* (Photo and Student Card Data Collection) so-called as PHOTOCAPTURE, *Sistem Informasi Pusat Data* (Data Center Information System) so-called as PUSAT DATA (data center), *Aplikasi Daftar Ulang* (Re-registration application) so-called as REGISTER, *Aplikasi Penitipan Barang* (Goods Custody Application) so-called as SITITA and *Sistem Informasi Madani Super Camp* (Madani Super Cam p Information System) so called as MSC.

DL 2 described the procedures for using these applications. PSB Nurul Haramain is a new student admissions application to accommodate files or data on prospective new students who register, not manually anymore.

> *"SIMITA app is used to make it easier smooth guests reception and bookkeeping activities. SITITA is used by the students parents when they want to leave things for their children, their name, class and region will be inputted, so that it will immediately appear on the TV screen. The students can see the items entrusted by their parents"*

Source: Interview #DL2

DL 2 said that SIIMPEL application has been used to select student organizations leader candidates. Each student has the right to vote by using the student card to enter the application and when the candidate's image comes out and can immediately vote and the teacher can uses a link and login into the application by using their ID card.

> *"The student card is used for the arrival and departure of students, its shape is like a chip that is scanned and is also used for selecting candidates for organizational leadership".*

Source: Interview #DL2

DL 1 more confirmed that the infrastructure really matters to support the digitalization program . He mentioned that to succeed the program, they need adequate infrastructure that related to electronically and technological things such as WIFI, tablet computers for teacher and students, PC servers, routers, speakers, LCD projectors and wall-screens. The wall-screens is put on

the wall to announce electronically the information regarding necessities or goods entrusted by their parents through *mudabbir.*

Moreover DL 1 stated that the existence of digitalization program emphasize on students performances as well as improving the capacity of school members such as the teachers, staffs and community members. This program exists actually to create superior human resources needed in the *Pesantren.* That is why all students and teachers are encouraged to learn more about digital and technology, information and communication to support this digitalisation program applied in that Islamic boarding school.

Limitation

This study was conducted in only one *Pesantren* in Lombok island which currently implement the digitalization with only one participant, the leader of the *Pesantren* and was conducted on Zoom. The researcher hope there will be more research sites to collect the data that relate to this topic and there will be more participants get involved including community members (teachers, students and staffs) in the Pesantren.

CONCLUSION

Today students have been closed to digital technologies, its existence can help them find the questions, information, knowledge, and latest news related to their education quickly. Students not only find it easier to learn in class. The teacher's explanation can be done from anywhere as long as they can use the video call function and an internet connection to anticipate the teachers are not in class and students can learn through the videos contained in the application provided. In addition, the teaching and learning process in schools must include the use of digital technology and the Internet. Therefore, the digital leadership style can be a solution that can be applied in educational institutions in Indonesia.

Digital leadership is the leadership that brings changes to school management to have improvement by utilizing digital devices and digital technologies. This leadership can benefit positively creating good school culture and school climate. This leadership has criteria, those are visionary leadership, high digital era learning culture, high digital citizenship, digital era learning, high digital era work culture and high digital citizenship teachers. This type of digital leadership currently has been applied in Pondok Pesantren Nurul Haramain NWDI Narmada, Lombok Barat. The leaders of the Pesantren have a visionary mind, digital age learning culture, excellence in professional practice, and digital citizenship in school management and administration which described in their on-going projects (new student admission applications, guest management information systems, the student organization election information systems, photo data collection and student cards, Nurul Haramain e-learning, central information systems. data, goods storage applications, inventory information systems and digital library) based technologies and digital devices used in managing and leading the Pesantren.

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