DIGITALIZATION OF EDUCATIONAL QUALITY MANAGEMENT IN HIGHER EDUCATION

ABSTRACT

Purpose: This research aims to determine the digitalization-based education quality management system at Prof. K.H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap, so various challenges can be found in implementing the digitalization system for education quality management at these two universities.

Methods: This research uses descriptive qualitative research methods with data collection techniques, namely interviews, observation and documentation. This research involves data analysis which includes compiling, categorizing and combining data to form a pattern of education quality management in digital-based higher education at Islamic State University (UIN) Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap.

Result and Conclusion: The result is the digitization of education quality management at the Prof. State Islamic University. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap have proven positive steps towards efficiency and effectiveness in education management, even though they still face obstacles such as weak human resource management and limited infrastructure. The success of digitalization is very dependent on the ability and capacity of human resources, so continuous efforts are needed such as increasing competence through training and development.

Research Implications: The urgency of digitizing management in higher education is absolutely necessary, especially UIN Prof. K. H. Saifuddin Zuhri Purwokerto needs to continue to be promoted, especially information technology, human resources who are experts in the field of information technology, so that good digital literacy from all levels in students, educational staff and lecturers. There is a need to digitize through publications such as social media in the form of Instagram, TikTok, Flayer and everything that is digital based. However, for Nahdlatul Ulama Al Ghazali University, Cilacap, maintenance or maintenance processes are still needed so that it can be ascertained whether an asset can function properly or recover, the distribution of levels is not yet perfect, there are still some lecturers who may not be familiar with accessing the system used, and sources. limited power. For this reason, academic leaders must try to motivate, mobilize, remind lecturers, always improve the system so that their desires can be achieved, increase the use of more contemporary or modern systems and increase human resources by sending teaching staff, especially for academic digitalization services.

Originality/ Value: This study offers original insights into digitalization of higher education quality management is very necessary in improving all services at higher education, both state and private universities in Indonesia.

Keywords: Digitalization, Education Quality Management, Higher Education.

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DIGITALIZACIÓN DE LA GESTIÓN DE LA CALIDAD EDUCATIVA EN LA EDUCACIÓN SUPERIOR

RESUMEN

Objetivo: Esta investigación tiene como objetivo determinar el sistema de gestión de la calidad de la educación basado en la digitalización en la Universidad Estatal Islámico. K. H. Saifuddin Zuhri Purwokerto y Nahdlatul Ulama Al Ghazali Cilacap, por lo tanto, se pueden encontrar varios desafíos al implementar el sistema de digitalización para la gestión de la calidad de la educación en estas dos universidades.

Métodos: Esta investigación utiliza métodos de investigación cualitativos descriptivos con técnicas de recolección de datos, a saber, entrevistas, observación y documentación. Esta investigación implica un análisis de datos que incluye la recopilación, categorización y combinación de datos para formar un estándar de gestión de la calidad de la educación en la Universidad del Estado Islámico (UIS), Prof. K. H. Saifuddin Zuhri Purwokerto y Nahdlatul Ulama Al Ghazali University Cilacap.

Resultado y Conclusión: El resultado es la digitalización de la gestión de la calidad educativa en el Prof. Universidad Estatal Islámica. K. H. Saifuddin Zuhri Purwokerto y Nahdlatul Ulama Al Ghazali University Cilacap han dado pasos positivos hacia la eficiencia y eficacia en la gestión educativa, aunque todavía enfrentan obstáculos...
como una gestión deficiente de los recursos humanos y una infraestructura limitada. El éxito de la digitalización depende en gran medida de la habilidad y capacidad de los recursos humanos, por lo que se necesitan esfuerzos continuos, como aumentar la competencia a través de la formación y el desarrollo.

**Implicaciones de la investigación:** La urgencia de digitalizar la gestión en la educación superior es absolutamente necesaria, especialmente el Prof. Es necesario seguir promoviendo a K. H. Saifuddin Zahri Purwokerto de la UIN, especialmente en tecnología de la información, recursos humanos expertos en el campo de la tecnología de la información, para que haya una buena alfabetización digital en todos los niveles entre los estudiantes, el personal educativo y los profesores. Existe la necesidad de digitalizar a través de publicaciones como las redes sociales en forma de Instagram, TikTok, Flayer y todo lo que sea digital. Sin embargo, para la Universidad Nahdlatul Ulama Al Ghazali, Cilacap, los procesos de mantenimiento o mantenimiento aún son necesarios para poder comprobar si un activo puede funcionar correctamente o recuperarse, la distribución de niveles aún no es perfecta, todavía hay algunos profesores que pueden no estar familiarizado con el acceso y las fuentes del sistema utilizado. poder limitado. Por esta razón, los líderes académicos deben tratar de motivar, movilizar, recordar a los docentes, mejorar siempre el sistema para que sus deseos puedan ser alcanzados, incrementar el uso de sistemas más contemporáneos o modernos y aumentar los recursos humanos enviando docentes, especialmente para servicios docentes. digitalización académica.

**Originalidad/Valor:** Este estudio ofrece ideas originales sobre la digitalización de la gestión de la calidad de la educación superior, que es muy necesaria para mejorar todos los servicios de educación superior en las universidades públicas y privadas de Indonesia.

**Palabras clave:** Digitalización, Gestión de la Calidad de la Educación, Educación Superior.

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1 INTRODUCTION

Higher education plays a crucial role in forming a competent and qualified generation. This is the main foundation for achieving sustainable development and societal progress (Ardhiya et al., 2022). In recent years, there has been a significant increase in higher education participation in various countries. Stakeholders in the world of education realize that to maintain their vital role, universities must remain relevant and of high quality (Rahman et al., 2023).

The importance of maintaining the quality of higher education is becoming increasingly prominent amidst the dynamics of the era of globalization and increasingly fierce competition. Therefore, higher education institutions need to take proactive steps to ensure that their educational quality standards are maintained properly (Gupta et al., 2021). These efforts are not only limited to the learning aspect, but also involve various integral elements, such as adequate infrastructure, innovative research, and optimal service to students. In this way, higher education institutions can ensure that they not only survive in global competition, but also make a positive contribution in forming and improving the quality of human resources in this ever-developing era.
One solution that is very relevant to maintaining the quality of higher education is to integrate the education system into the realm of digitalization (Irawan et al., 2020). The application of technology and digital systems in the higher education environment not only makes the learning process easier, but also includes administrative aspects (Anih, 2016). This aspect has experienced significant improvement through the automation of routine processes, from student registration to academic data management. The integration of technology in higher education administration can help reduce staff workload, so they can focus on tasks that require strategic decisions and creativity.

In the context of maintaining the quality of higher education, the main goal pursued is achieving Good University Governance, a concept that focuses on the principles of transparency, accountability, responsibility, independence and justice in higher education (Wijatno, 2009). Good University Governance describes university governance of quality and integrity, where strategic decisions are taken with careful consideration and implemented fairly (Yudianti, 2015).

The complexity of the various aspects involved in maintaining the quality of higher education requires a deep understanding of the quality of teaching and research, infrastructure, student services, and administrative support. All of these elements are interrelated and contribute to a holistic educational experience for students. Therefore, a sophisticated and integrated management system is a must to ensure effectiveness and efficiency in managing all these aspects.

Higher education quality management is not just a concept, but is an important basis for maintaining and improving the quality of education (Rabiah, 2019). In this framework, quality management involves a series of activities ranging from planning, organizing, controlling, to continuous evaluation (Ramdhan & Siregar, 2019). However, in fact there is still minimal research that examines the integration of digital technology with existing quality management systems in Islamic universities, this shows that the potential of digitizing education quality management in Islamic universities has not been fully explored.

In this case, Islamic educational institutions are often ignored by society, both in terms of their potential and contribution (Maadi, 2018). Apart from that, there are disparities or gaps in Islamic universities. These gaps involve differences in terms of quality, access opportunities, responsibilities, autonomy, competitiveness, and institutional reputation which is still inadequate (Ramdhan & Siregar, 2019). There are institutional challenges, namely competition with State Universities (public universities). In reality, in Islamic Universities, there is no adequate quality guarantee (Wiwitan & Yulianita, 2017). Supposedly, Islamic Universities
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should also function as a public service, like other universities in general (Basyar, 2016). So further research in this field needs to be sought to understand in depth the impact of integrating digital technology with quality management in the context of Islamic higher education.

The focus of this research is on two educational institutions, namely the State Islamic University Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap. The argument is that the two universities are still in the adaptation phase to technological developments. By understanding the various challenges faced in implementing the digitalization of education quality management systems at the two universities.

2 THEORETICAL FRAMEWORK

2.1 DIGITALIZATION OF HIGHER EDUCATION QUALITY MANAGEMENT

Professional vocational education management is management that is intelligent and capable of carrying out management functions (planning, doing, checking and reviewing), so that educational goals can be achieved effectively and efficiently (Sugiyono, 2003:21). To improve the quality of international standard vocational education, what can be done is to adopt international standard quality management, namely the ISO 9001:2008 Quality Management System (QMS). The international standardization body that has been recognized for quality management certification in education that has been implemented is SMM ISO 9001:2008. Tampubolon (2001:108) explains that quality is an indication of the characteristics of a product that describes its ability to meet customer needs directly or indirectly, expressed or implied, present and future. The main essence in providing education is improving and guaranteeing the quality of education. This is done as an effort to address competitiveness, public image and educational accountability.

A common problem that often occurs when implementing QMS ISO 9001:2008 is controlling and distributing documents to all management actors. This happens because there are complex process interactions within it, so that document control is carried out not in accordance with the work instructions or SOPs that have been implemented. The complexity of the interaction process is: 1) the process of giving approval; 2) process of reviewing and updating documents; 3) the process of identifying changes and the status of the latest revision of the document; 4) the process of ensuring that the revisions comply with the applicable documents and are available at the place of use; 5) the process of ensuring that the document is valid and can be easily identified; and 6) the process of ensuring that external original
documents can be identified and their distribution controlled. This problem occurs because the document distribution process should be carried out as soon as possible when a document is updated, even though this process cannot possibly be carried out if it is still carried out conventionally.

The solution that can be done is to change the document control process, namely by implementing a more reliable digitalization system. The development of increasingly reliable information technology is the main reason for the change from the conventional era to the digital era. This is because in the conventional era all types of work had to be done for a long time, whereas in the digital era everything can be done quickly, even in seconds. Indrajit (2015:1) explains that in the past it could take a long time to process data or information before it was sent to the other side of the world, whereas in the digital era it can be done in just a matter of seconds.

This is proof that there is a shift from the conventional era to the digital era and everything can be done quickly. The development of digital (computerized) technology integrated with telecommunications has brought humans into a period of revolution. The combination of computer technology and telecommunications has brought about a change in the field of information systems (Indrajit, 2015:1). Through information systems (IS), humans can obtain all kinds of information they need more effectively and efficiently. According to Wahyono (2004:2) explains that information Systems is an information generating system with integration between its sub-systems and can provide quality, precise, fast and accurate information according to the management that needs it.

Information Systems has an important role in management control in an organization. This is because the main aim of management control is to assist management in coordinating several sub-units of groups and directing these several parts in achieving a goal (Wahyono, 2004: 5). There are two things that need to be considered from this definition, namely coordinating and directing.

In order for this process to run well, these two processes require a system so that the coordination and direction process can run effectively and efficiently so that the planned goals can be achieved. There are several main benefits of information Systems development for management control, namely: 1) time saving; 2) cost savings; 3) increasing effectiveness (effectiveness); 4) technology development (technology development); and 5) personal accounting development (accounting staff development) (Wahyono, 2004:5).

Irwansyah (2021) stated that the availability of infrastructure is the first requirement because with the availability of technological tools, adoption can occur. UNESCO as quoted
(Mayasari, 2021) stated that it classifies the stages of IT use in relation to learning into four stages. The first stage is the emerging stage.

2.2 HIGHER EDUCATION MANAGEMENT

Higher education should be organized using flexible and dynamic management principles to enable each tertiary institution to develop in accordance with its respective potential and the external demands it faces. Management is often interpreted as science, tips/art, and profession (Fattah, 2013: 1). Nanang Fattah further explained the views of experts on management, Luther Gulick said that management is a science, because management is seen as a field of knowledge that systematically tries to understand why and how people work together. According to Follett (1868-1933); management is the art of getting things done through people. Management in Mary Parker Follett's understanding is the art of achieving goals through other people. Meanwhile Stoner (1987); "management is the process of planning, organizing, leading and controlling the efforts of organizational members and of using all other organizational resources to achieve stated organizational goals."

In line with both opinions, Terry (1977) "management is a distinct process of planning, organizing, actuating, controlling (POAC), performed to determine and accomplish the objectives by the use of human being and other resources." Management is a clear process, starting with planning, organizing, mobilizing and controlling, to achieve predetermined targets using human resources and other resources. Some of the definitions above reflect the fluidity of the definition of management itself.

2.3 DIGITALIZATION OF QUALITY MANAGEMENT IN THE ERA OF DISRUPTION

The rapid progress and development of technology at the beginning of the 21st century also brought the phenomenon of an era of disruption. Disruption is not just a small change, but also a change that can change the fundamental order. The era of disruption has not only changed the face of the media and the industries that support it, but also changed the way we communicate, our attitudes and behavior. Changes in communication can be seen from the use of sophisticated tools as a sign of changing communication methods. One of these fundamental changes is the development or evolution of technology which aims to find gaps in human life. This situation facilitates digitalization resulting from technological developments (especially
This digitalization has changed almost every area of life, including the world of work. This upheaval shows that human activity is shifting from the real world to the virtual world, from human power to mechanical power, from computers to robots. This changes the order that previously existed. There are several negative impacts that can occur, such as the spread of hoaxes and fake news, stolen user data and privacy, reduced productivity and many unemployed. For example, this happened to food sellers who previously had to wait somewhere and wait for customers. However, as technology advances, consumers can buy via online applications. If someone wants to buy the food using an online service, just order it from their gadget application. And later it will be delivered to the desired destination. This also causes conflicts between sellers who have not registered on the online application due to the change in order.

What must be underlined is that the faster technology develops, the easier it is to create more sophisticated technology without disrupting us or making significant changes. In fact, digital advances are driving technological turmoil that is affecting human life. However, to face the challenges of this turmoil, society must position itself as an object of change. In this digital era, there are opportunities and opportunities to develop, what is important is that in providing information you must be able to utilize existing technology.

In this case, humans need to position themselves and improve the quality of humans as biological and social creatures. Understanding as biological creatures makes humans aware of their nature, which can advance human values. Social existence gives rise to awareness of human organizations as social capital. Technological progress must be in harmony with the understanding that humans are biological creatures who are aware of their nature and that humans are social creatures who are aware of forming a social order, not being individualists (Fukuyama, 1999).

2.4 QUALITY OF HIGHER EDUCATION EDUCATION

Rationally, all people, organizations or institutions like and expect everything they have to be of good quality. Various efforts were made in a race against time to utilize existing resources. Resource management starts from planning, implementation and finally evaluation.

Quality results will not just come, it all goes through a long process starting from providing quality resources, and the process must also be quality. The definition of quality results can be because the products and services are in accordance with demand, in accordance
with needs or because the products and services comply with the provisions or quality standards that have been determined.

Likewise, in managing higher education institutions, it should be based on established quality standards. The quality standards set are the minimum standards that must be achieved or fulfilled. This means that universities must prepare and have quality standards that they want to achieve. Quality standards are a reflection of the conditions of expectations of relevant stakeholders, especially users who are graduates of the university concerned. The main tasks of higher education, better known as the Tri Dharma of Higher Education, are: education, research and community service. The quality standards that are prepared and must be owned are also related to these three main tasks. Along with the issuance of Law Number 20 of 2003 concerning the National Education System (UU Sisdiknas), in 2003 the Directorate General of Higher Education began to implement Quality Assurance in Higher Education in stages. Higher Education Quality Assurance aims to guarantee quality. The issuance of Law Number 12 of 2012 concerning Higher Education (UU Dikti) strengthens the Higher Education Quality Assurance System which has been implemented since 2008. Although with a new name, namely the Quality Assurance System.

According to Article 51 of the Higher Education Law, quality higher education is higher education that produces graduates who are able to actively develop their potential and produce knowledge and/or technology that is useful for society, the nation and the state. To obtain quality higher education, the government organizes a Higher Education Quality Assurance System (SPM Dikti). Article 3 paragraph (1) Minister of Education and Culture Regulation no. 50 of 2014 concerning SPM Dikti; The Higher Education Quality Assurance System consists of an Internal Quality Assurance System (SPMI) and an External Quality Assurance System (SPME). Article 3 paragraph (2) s.d. paragraph (4) Minister of Education and Culture Regulation no. 50 of 2014 concerning SPM Dikti. SPMI as referred to in paragraph (1) letter a is planned, implemented, controlled and developed by higher education institutions.

2.5 EDUCATION QUALITY MANAGEMENT

Management is the art of organizing and carrying out activities to achieve predetermined goals. To achieve the goal call it through several tasks known as management functions, starting from planning to finally carrying out evaluations. Likewise with quality management in higher education, starting from setting quality standards to finally evaluating the process and results. In accordance with Law no. 12 of 2012 concerning Higher Education article 52
paragraph (1) states that quality assurance of higher education is a systemic activity to improve the quality of higher education in a planned and sustainable manner. (2) Quality assurance as referred to in paragraph (1) is carried out through determining, implementing, evaluating, controlling and improving Higher Education standards.

The higher education SPMI cycle according to Minister of Education and Culture Regulation no. 50 of 2014 concerning Higher Education Quality Assurance Systems article 5, namely: a. establishing Higher Education Standards determined by universities is an activity to determine standards/measures; b. implementation of Higher Education Standards set by Higher Education is an activity to fulfill standards/measures; c. evaluation of the implementation of Higher Education Standards set by Higher Education Institutions is a comparison activity between the output of activities to fulfill standards/measures with the standards/measures that have been determined; d. controlling the implementation of Higher Education Standards set by Higher Education Institutions is an activity to analyze the causes of standards/measures that are not achieved in order to take corrective action, and e. Increasing Higher Education Standards set by Universities is an activity to improve standards/measures so that they are higher than the standards/measures that have been set.

Determination of quality standards refers to Permenristek and Dikti No. 44 of 2015 concerning National Higher Education Standards (SN Dikti), which consists of national education standards, national research standards, and national community service standards. No matter how good the plans and quality standards set, it will not change anything if it is not followed by the commitment of the parties in higher education. The mental attitude of implementing SPMI is: (1) all thoughts and actions of higher education management must prioritize quality, (2) all thoughts and actions of higher education management must be aimed at satisfying stakeholders (internal and external), (3) every party carrying out their duties in the education process at HEIs must consider other parties who use the results of carrying out their duties as stakeholders who must be satisfied, (4) every decision/policy making in the education process at HEIs must be based on data analysis, not based on assumptions or engineering, and (5) every decision/policy making in the educational process at universities must be carried out in a participatory and collegial manner, not authoritatively. To be able to build a culture of quality, university leaders, all lecturers and academic support staff must provide a commitment to continuous quality improvement. Universities must have a quality management system that can guarantee the implementation of continuous quality improvement.
3 METHODOLOGY

This research uses descriptive qualitative research methods. In this research, researchers act as key instruments to investigate the condition of natural objects. The aim of descriptive research is to create systematic, factual and accurate descriptions of the status of human groups, objects, conditions, systems of thought or current events. Thus, descriptive qualitative research provides an in-depth and detailed picture of the phenomenon under study (Sukmadinata, 2012). The context of the phenomenon examined in this research concerns the digitalization process of higher education quality management at the Prof. State Islamic University. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap.

The data in this research was collected through observation, interviews and documentation studies. Interviews act as a tool to identify research issues and gain deeper understanding from informants (Sugiyono, 2012). An intensive interview process was carried out with the Chancellor, lecturers and Education Staff at the State Islamic University, Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap. Through observation, researchers understand behavior and the meaning behind it (Sugiyono, 2012), focused on organizational dynamics at the State Islamic University, Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap. Documentation studies involve reviewing books, literature, notes and reports that are relevant to the research problem. This approach aims to obtain a theoretical basis and written opinion by investigating literature related to the research problem (Nazir, 2011).

Data analysis in this research was carried out in several stages including: first, data from observations and interviews were arranged in the form of narratives and schemes after being verified and reduced. Second, data categorization is carried out to support hypotheses or inferences. Third, the data is organized into units that can stand alone and form a pattern of education quality management in higher education. Fourth, these units are combined to form a pattern of education quality management in higher education. Fifth, relationships between hypothetical inferences are built systematically by dialogue with relevant theories (Sugiyono, 2014). Sixth, the theory that was built was re-analyzed to be standardized as a digital administration-based higher education management theory at the Prof. State Islamic University. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap.
4 RESULTS AND DISCUSSIONS

4.1 DIGITALIZATION OF EDUCATION QUALITY MANAGEMENT AT UIN PROF. K. H. SAIFUDDIN ZUHRI PURWOKERTO

State Islamic University Prof. K. H. Saifuddin Zuhri is trying to improve academic quality by implementing a digital administrative culture related to digital management concepts. This action aims to optimize efficiency, transparency, and accessibility in various aspects of academic management and can provide a better academic experience for the entire academic community. (Akhmad et al., 2024). In this context, improving education quality management at UIN Prof. K. H. Saifuddin Zuhri based on digitalization can be known based on a statement from the head of TIPD UIN Prof. K. H. Saifuddin Zuhri follows:

"The first step in this process begins with recruiting prospective PMBH students. We start this process from the start by promoting prospective new students through outreach in high schools, as well as through electronic media such as YouTube. Apart from that, we also distribute brochures as part of our efforts to search for and identify potential student candidates." (head of TIPD UIN Prof. K. H. Saifuddin Zuhri 24 July 2023).

He further explained that
"In the process of admitting new students, we have two routes, namely the achievement route and the examination route. Using applications to register prospective students involves information system management that we have developed since the beginning of 2010 under the name SIA (Academic Information System). In 2015, we migrated this system to SISCA (Academic Information System) which will continue to be used until 2023 for higher education administration management. 2023 is an important year because we migrated from the old system to a new system which we call the Integrated Education Information System (SIPINTER). " (head of TIPD UIN Prof. K. H. Saifuddin Zuhri 24 July 2023).

On the one hand, according to the Head of Academic Affairs and the Head of General Affairs,
"The concept of digital administrative culture for us is a form of simple and efficient administrative management. We at this higher education institution have a strong determination to ensure the smooth running of the academic spirit at UIN Saizu without facing obstacles that could have been avoided. We are trying hard to realize the systems which supports all aspects by adopting digitalization of academic services at all levels, involving all parties from the lower level to the top level, including students, educational staff, and lecturers or teaching staff. We hope that, through digitalizing this service, all aspects of academic services can run quickly, efficiently, and without any obstacles that could slow down the educational process." (Head of academic and general affairs at UIN Prof. K. H. Saifuddin Zuhri, 28 July 2023).
However, in implementing digitalization to improve quality management, there are also obstacles, and these obstacles show the need for careful and strategic handling. Some challenges include resistance to change from those involved, lack of adequate resources for implementation of new technologies, as well as the need to align policies and procedures with the digital environment (Benu et al., 2019). This is also found in the digitization of education quality management at UIN Prof. K. H. Saifuddin Zuhri, through a statement from UIN TIPD Staff Prof. K. H. Saifuddin Zuhri can know that:

“Several inhibiting factors originate mainly from human resources (HR) in the field of informatics. One of the obstacles is that there are often communication barriers between 13nly13en and implementers or subordinates. For example, even though the leader directs a certain goal, the implementer who handles the task may not receive complete information or not meet the leader’s expectations. Other obstacles include the presence of two servers with a price of over one billion, but the drawback lies in the network infrastructure which is not yet fully online. Especially if there are frequent power outages, the server cannot continue to operate because there is no UPS. Even though TIPD has reported and proposed to procure UPS or repair existing ones, to date there has been no follow-up. This situation is very critical because it can result in server damage or failure if the power outage continues.” (TIPD UIN Staff Prof. K. H. Saifuddin Zuhri, 24 July 2023).

Meanwhile, according to the Head of Academic and General Affairs at UIN Prof. K. H. Saifuddin Zuhri:

“In managing educational institutions to improve academic quality, there are several inhibiting factors that need to be overcome. One 13nly13 that has a real influence is the lack of development of literacy culture in all aspects, including students, education staff and lecturers. For example, institutions have established activity allocation guidelines through the academic calendar at the beginning of the academic year. However, this calendar is not yet fully effective as a guide in carrying out activities, so that sometimes it results in time management that is not optimal for some activities” (Head of academic and general affairs at UIN Prof. K. H. Saifuddin Zuhri, 28 July 2023)

Furthermore, several efforts are needed that can be a solution to these obstacles, as according to the head of TIPD UIN Prof. K. H. Saifuddin Zuhri:

“In my 13nly13en, introducing management information systems to all members of the academic community is not an easy task, considering the recognition that not everyone has IT skills and background. However, with current technological developments, this task is not difficult, especially because almost all members “The academic community has used smartphones. The existence of these devices is very helpful in introducing management information system features, which are basically not much different from the applications provided by the UIN Prof. K. H. Saifuddin Zuhri Purwokerto institution.” (head of TIPD UIN Prof. K. H. Saifuddin Zuhri 24 July 2023).

Meanwhile, according to TIPD staff at UIN Prof. K.H. Saifuddin Zuhri,

“One of the 13nly13en we are considering is 13nly13e to a cloud system, 13nly13 we would rent virtual servers 13nly13e than having our own physical servers. With this
step, we can have data backups stored in multiple locations, thereby reducing the risk of adverse events desired, such as a fire. Choosing multiple server locations, for example, by placing one server in the Jakarta data center and another server in Batam, is expected to increase the level of security. The use of a cloud system also provides flexibility and a better level of security. Although we still use servers that we have purchased as backup, but will only be activated in emergencies, increasing the level of security automatically.” (UIN TIPD Staff Prof. K. H. Saifuddin Zuhri, 24 July 2023).

4.2 DIGITALIZATION OF EDUCATION QUALITY MANAGEMENT AT NAHDLATUL ULAMA AL GHAZALI UNIVERSITY CILACAP

Digitalization of education quality management is an important aspect in the development of higher education at this time, enabling institutions to optimize efficiency, increase transparency, and provide accurate data to support strategic decision making in efforts to improve the quality of education (Aziz, 2015). At Nahdlatul Ulama Al Ghazali University, Cilacap, it is known that this aspect is a major concern in improving its educational services. This can be seen based on the following statement from the Information Systems Manager at Nahdlatul Ulama Al Ghazali University:

"In searching for information, it was found that the main focus was on managing information systems related to PDDikti. This information system is implemented digitally due to limited human resources who can manage it, and in general, we choose to use OChoosing. This system is free and directly connected to PDDikti via SEVIMA. To overcome potential operational obstacles, we decided to switch to the paid cloud version of SEVIMA. There are several advantages that we found in using SEVIMA, such as direct connection with PDDikti updates for system updates. This system covers various aspects, from new student registration to graduation, so the content is complete. Previously, the information system was centralized, but now it has become decentralized, allowing each dean or staff to access certain information according to the level or access they have. In principle, most processes are digital-based, except in terms of grades or honorarium which still use conventional methods. The use of the SEVIMA cloud-based information system has been going on for 2 years. Initially, we used the unpaid version, but because we experienced problems related to payment and PMB, we decided to switch to the paid version." (Information Systems Manager at Nahdlatul Ulama Al Ghazali University, 31 May 2023.).

However, in the process there are also obstacles that require this aspect to continue to be developed, so that its role can run optimally, these obstacles are as stated by the Deputy Chancellor 1 for Academic Affairs at Nahdlatul Ulama Al Ghazali University as follows:

“One of the significant obstacles we faced was related to the availability of three servers. When factors beyond our control occur, such as natural disasters such as lightning causing power outages, servers can be disrupted and require maintenance to ensure optimal function or recovery. "Apart from that, another obstacle faced is the lack of
human resources who have professional expertise in the Information Technology Systems and Services Unit (SSDI) which is specifically responsible for management information systems" (Deputy Chancellor 1 for Academic Affairs Nahdlatul Ulama Al Ghazali University 31 May 2023).

Furthermore, Nahdlatul Ulama University Information Systems Manager Al Ghazali explained that:

“There are several obstacles that may be faced, including imperfection in level distribution. Some lecturers may not be familiar with the system access used, and limited resources are also a challenge. Therefore, it should be noted that improving academic quality does not only depend on technical aspects, but also involves human resource management and increasing users' understanding of the system being implemented. This is very important to ensure smooth implementation and effective use of the system in the academic environment." (Information Systems Manager at Nahdlatul Ulama Al Ghazali University, 31 May 2023).

These various obstacles require the Nahdlatul Ulama Al Ghazali Cilacap University to be able to seek alternative solutions, so that the process of implementing education quality management can continue to be optimal, because basically the quality of education is the main pillar in achieving the university's goals (Syafii et al., 2023). The efforts made by Nahdlatul Ulama Al Ghazali University Cilacap can be seen from the following statement by the Vice Chancellor 1 for Academic Affairs,

"One step is to collaborate with third parties. Apart from that, academic leaders need to try to motivate, mobilize and remind lecturers so that all academic systems or applications must be used to ensure a smooth and well-organized academic process. If there are lecturers who do not comply with instructions, the Institution can impose sanctions by recording lecturers who have not uploaded RPS as an example. The same thing applies to lecturers who have not uploaded questions or grades according to the schedule set in the system. These steps, over time, form "progress in increasing the level of user participation to use system facilities in an orderly manner. Although not yet complete, this reflects that this effort is focused on addressing the problem." (Deputy Chancellor 1 for Academic Affairs, 31 May 2023).

Furthermore, according to the Nahdlatul Ulama Al Ghazali University campus information system manager,

"We are making continuous efforts to improve the system, with the aim of achieving independence in an information system that can meet basic needs.” (Al Ghazali Nahdlatul Ulama University Information Systems Manager, 31 May 2023).

4.2 THE URGENCY OF IMPLEMENTING DIGITAL-BASED EDUCATION QUALITY MANAGEMENT IN HIGHER EDUCATION

In an educational institution, especially in higher education, in the current era, management in academic services is required. Starting from the acceptance of prospective new
students, teaching and learning activities, student attendance including student graduation data. In UIN college, Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap can be said to have digital-based academic or information services in general. So that every service at the two universities can be carried out and completed efficiently. From this, it is necessary to have a management information system in order to simplify the process of administrative activities of higher education institutions. Facing a new era of education, changes are needed in the education system that are closely related to the need for information systems in the advancement of the world of education. This view highlights the efforts of the world of education to adopt computer devices as communication tools in order to substantially optimize performance (Rusdiana & Nasihudin, 2016).

The education management information system is an activity that supports management functions which consists of planning, organizing, staffing, directing, evaluating, coordinating, and budgeting. In developing a management information system in educational institutions, it can be said to be very necessary. This is due to the globalization of educational institutions which demands to provide information that is more accurate, faster and more convenient. This is also part of the quality of service so that it creates a distinct advantage in competing in educational institutions (competitive advantage). Competitive advantages can be achieved if institutions can provide services or services that suit customer needs so that customers are satisfied with the services provided. Apart from that, users of educational services are also satisfied with the results obtained and competitive outcomes (Sonia, 2020).

Education management information systems have a role as a tool in helping to improve educational standards. The existence of educational standards is an effort to mature humans so they are able to be closer to the Creator through teaching and guidance which is a benchmark for the quality of education. It is also said that the education management information system plays a very important role in an educational institution which is very helpful in the operational processes of educational institutions which have been designed in accordance with current educational criteria. Thus, it can be easily accessed because it is technology-based or digital. The existence of an education management information system also plays a role in supporting the smooth flow of information to obtain accurate results (Ujung et al., 2023).

Digital-based academic information systems play an integral role in supporting students in their study journey (Rahmat Hidayat, 2009). With its existence, students can access their academic information quickly and efficiently via online platforms. This system provides easy access to lecture schedules, exam results, and other information related to the teaching and learning process. Thus, a digital-based Academic Information System helps increase the
efficiency and effectiveness of the lecture process (Chisenga, 2006), allowing students to better focus on learning and achieving their academic goals.

This is the background to the development of an information management system at UIN Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap. The implementation of information technology in the academic realm not only simplifies administration, but also creates a more structured and connected learning environment. With this system in place, both universities can provide a more holistic learning experience for students, enabling them to better optimize their academic potential. With the features provided by the information management systems at both universities, they are increasingly customized, supporting intellectual growth and preparing students to face the challenges of this digital era.

In fact, from before they go to college until they complete their education, this academic information system becomes a comprehensive tool to support students’ journey. When registering, students can easily access information about study programs, entry requirements and registration procedures via digital platforms. During the lecture period, this system helps students plan class schedules, monitor academic progress, and manage assignments efficiently. And when entering the educational completion stage, this system helps ensure that the academic record archiving process is accurate and can be accessed whenever needed by students and related parties. In this way, digital-based academic information systems become students’ loyal partners throughout their academic journey (Gama et al., 2021).

4.3 HUMAN RESOURCES AND INFRASTRUCTURE AS IMPORTANT FACTORS IN DIGITALIZING EDUCATION QUALITY MANAGEMENT IN HIGHER EDUCATION

Of course, in implementing digital-based services there are several inhibiting factors faced. As is the case with both universities, Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap. Inhibiting factors that occur at the Prof. State Islamic University. K. H. Saifuddin Zuhri Purwokerto, namely that not everyone knows about information technology, so managers or higher education institutions must try to socialize or introduce the system by changing the culture from manual to getting used to using digital systems, human resources who are experts in the field of information technology are not yet sufficient, miscommunication often occurs between leaders and implementers, the network infrastructure is still not 100% online, the literacy culture is not very good from all levels among students, educational staff or lecturers.
Meanwhile at the Nahdlatul Ulama Al Ghazali University Cilacap college. The inhibiting factors that occur at Nahdlatul Ulama Al Ghazali Cilacap University are the need for maintenance or maintenance processes so that it can be ascertained whether an asset can function properly or recover, level distribution is not yet perfect, there are some lecturers who may not be familiar with accessing the system, use, and limited resources. Thus, it can be concluded that the obstacles in efforts to digitize higher education quality management can be identified through two main factors.

Inhibiting factors include limitations in skills and understanding regarding information technology and quality management systems. According to Marsus Suti, Human Resources Management in higher education plays a crucial role in managing Good University Government, with several objectives that must be taken into account. First, provide consideration in HR policies to ensure that the organization has an academic community that is always ready to face the dynamics of change in accordance with established quality standards. Second, implement and maintain all HR policies and procedures that enable the organization to achieve its goals. Third, providing assistance in developing organizational direction and strategy, especially those related to HR implications. Fourth, provide support to help leaders achieve common goals. Fifth, have the ability to handle various crises and difficult situations with the aim of ensuring that the academic community can find solutions to overcome these problems. Sixth, become an effective communication medium between the academic community and organizational management. Seventh, improve and develop organizational standards and values in human resource management (Suti et al., 2020).

Furthermore, there is also the factor of availability of facilities needed in digitizing education quality management. Marsus Suti also explained that providing facilities is a necessity that must be fulfilled in order to make it easier to carry out educational activities. To ensure that these facilities are available adequately, management is needed that focuses on managing facilities and infrastructure. This management is defined as a series of activities that regulate the preparation of all equipment and materials needed to support the educational process. Management of facilities and infrastructure is crucial in supporting the smooth teaching and learning process. This activity includes planning, procurement management, storage of goods and equipment, maintenance, and elimination of maintenance (Suti et al., 2020).
4.4 OPTIMIZING EDUCATION QUALITY MANAGEMENT IN DIGITAL-BASED HIGHER EDUCATION

Both universities have made various efforts to optimize their education quality management, where UIN Prof. K. H. Saifuddin Zuhri Purwokerto, the efforts made are the socialization of management information systems to the entire academic community, efforts to be able to switch to a cloud system so that if a problem occurs there is a backup available, other efforts include the need to digitize through publications such as social media in the form of Instagram, TikTok, Flayer and everything is digital based. In essence, the efforts made are to ensure that all activities are no longer done manually but are completely digital-based.

Meanwhile, Nahdlatul Ulama Al Ghazali University Cilacap collaborates with third parties and at the time of the next application, the academic leadership must try to motivate, mobilize and remind the relevant lecturers so that all academic systems or applications must be used to smooth the academic process in an easy and systematic manner. well, always improving the system so that later the desire is achieved, namely the desire to be independent in an information system that can accommodate basic needs, increasing the use of systems that are more contemporary or modern and also that the content in the system is more complete, subscribing to a larger internet system so as to digitize services more able to serve optimally, increasing human resources by sending teaching staff, especially for academic digitalization services, and increasing maximum financial support from the government.

Thus, steps to overcome these obstacles are directed at optimizing the use of available resources. This involves concrete strategies and actions to maximize the efficiency and effectiveness of the use of existing resources, so that they can provide maximum contribution in overcoming obstacles and achieving desired goals. (Fahmi et al., 2022). Apart from that, Priatmoko explained that in managing Islamic educational institutions, it is important to prioritize the openness paradigm in order to achieve a level of effectiveness and efficiency in the managerial system. These efforts involve continuous improvement in the competency and capacity of human resources involved in the educational institution. By prioritizing openness, Islamic educational institutions can stimulate the development of individual competencies and capacities, create a dynamic learning environment, and ensure conformity with the demands of the ever-evolving times (Priatmoko, 2018).

Nahdlatul Ulama Al Ghazali University Cilacap realizes that the role of leadership is very central to optimizing digital-based education quality management. This condition requires university leadership to be actively involved in the development, implementation and
maintenance of academic information systems. University leaders need to ensure that academic and administrative staff are optimally involved in the use of this technology. Additionally, they need to provide adequate support in terms of training, technology updates and capacity building of related staff. Leadership also has an important role in designing policies that support the effectiveness of academic information systems, including privacy and data security policies, as well as ensuring transparency and accountability in the use of these technologies. With strong involvement and support from university leaders, the implementation of a digital-based academic information system can be successful and provide maximum benefits for students and all academic elements (Tajuddin et al., 2016).

Furthermore, through familiarization with the entire academic community, optimization of digital education quality management can be achieved, as has been attempted at the Prof. State Islamic University. K. H. Saifuddin Zuhri Purwokerto. Academic information systems must be adopted as a whole, and the academic community needs to be given a deep understanding of their functionality and benefits. The application of e-learning practices and digital-based assessments can stimulate active student involvement (Santosa et al., 2022). By implementing this strategy, universities can achieve optimization of education quality management (Krpálek & Krpálková-Krelová, 2017), creating a responsive, innovative and sustainable academic environment in the digital era.

5 CONCLUSION

Digitalization of education quality management at Prof. K. H. Saifuddin Zuhri Purwokerto and Nahdlatul Ulama Al Ghazali University Cilacap have been carried out systematically from the student registration stage to completing their studies. The integration of all processes into a digital-based information system proves that there is a positive step towards efficiency and effectiveness in education management. However, there are several obstacles that are still faced, such as weak human resource management and limited infrastructure. The success of digitalization is very dependent on the ability and capacity of human resources involved in educational institutions. Therefore, continuous efforts need to be made to overcome these obstacles. One solution that can be taken is to increase the competency and capacity of human resources through training and development. In this way, they can more effectively manage digital-based information systems and maximize education quality management. Apart from that, it is also necessary to continuously evaluate and improve existing digital infrastructure in order to minimize technical obstacles that may arise.
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