Development of Village Apparatus Human Resources Through the Utilization of the Learning Management System (LMS) in Kutai Lama Village, Anggana District, Kutai Kartanegara Regency, East Kalimantan Province

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Abstract. *Digital Transformation in the Development of Village Apparatus Human Resources Through the Utilization of the Learning Management System (LMS) in Kutai Lama Village, Anggana District, Kutaikartanegara Regency. Thesis supervised by Prof. Dr. Heru Sulistyo, SE, M.SiDigital transformation has become an urgent need for Human Resources (HR) development in various sectors, including village officials. This study aims to explore the use of a Learning Management System (LMS) to improve the competency of Kutai Lama Village officials, Anggana District, Kutai Kartanegara Regency, East Kalimantan Province. Through the implementation of an LMS, it is hoped that the learning process can be carried out more effectively and efficiently, allowing village officials to access training materials independently and flexibly. The research method used is a qualitative approach with data collection through interviews, observations, and documentation studies. The results show that the use of an LMS not only improves the knowledge and skills of village officials but also encourages collaboration and interaction between participants. In addition, challenges in LMS implementation, such as limited internet access and technological understanding, are also identified. This study recommends the need for infrastructure support and additional training to maximize the benefits of an LMS in developing village apparatus HR.*

Keywords: *Apparatus; Digital; Resources; Transformation.*

1. Introduction

Law Number 6 of 2014 concerning Villages has shifted the paradigm of village governance in Indonesia. This law gives village governments a broader role in managing government affairs and village development, while remaining within the national government system. Villages now have two faces: as independent entities (self-governing communities) and as part of the central government system (local state government). This change requires increased capacity of village officials so they can carry out their duties effectively. However, with the vast number of villages spread across Indonesia, the challenges in providing training and capacity

development for village officials are becoming increasingly complex. Demands for more transparent and efficient use of village funds, along with increasingly stringent regulations, require village officials to possess high competencies in the fields of village administration, finance, and law. To address this challenge, the government, through the Directorate General of Village Governance Development, has initiated a digital-based training policy since 2019. This training uses a Learning Management System (LMS) platform to provide more flexible and efficient training access and reach a wider range of village officials compared to face-to-face training methods.

However, in its implementation, LMS-based training also faces various challenges, such as technological accessibility, human resource readiness at the village level, and the effectiveness of online learning methods compared to conventional methods. Therefore, a comprehensive evaluation of the effectiveness of this digital-based training is necessary to ensure that the implemented policies truly impact the capacity of village officials.

According to 2022 data from the Ministry of Home Affairs, more than 74,000 villages across Indonesia are required to adopt increasingly complex, digital-based governance systems (Kemendagri, 2022). The same report stated that more than 60% of village officials still face limitations in using digital technology for village government administration.

A study by the Central Statistics Agency (BPS) (2021) shows that as many as 45% of villages in Indonesia still experience problems with stable internet access, which is a major obstacle to implementing digital-based training. This aligns with research by Setiawan et al. (2020), which found that the effectiveness of LMS-based training is highly dependent on the readiness of the technological infrastructure and the digital literacy of the training participants.

In Kutai Lama Village, Anggana District, Kutai Kartanegara Regency, the digital transformation process presents its own challenges. Located in a rural area with limited infrastructure, the village must face the challenge of managing its budget more transparently and efficiently. Village officials are expected to possess high levels of competence in village administration, finance, and legal matters, which require capacity building through training. However, due to its remote geographic location and limited access to conventional training facilities, digital-based training solutions are the right choice.

Since 2019, the government, through the Directorate General of Village Governance Development, has initiated a digital-based training policy using a Learning Management System (LMS) to provide more flexible and efficient access. This training is designed to reach more village officials, including those in hard-to-reach areas such as Kutai Lama Village. However, despite the promise of various conveniences, the implementation of digital-based training in this village faces various obstacles, such as limited technological accessibility, a lack of technological understanding among village officials, and the effectiveness of online learning methods compared to face-to-face training methods. Therefore, this study is needed to evaluate the effectiveness of LMS-based training in Kutai Lama Village, Anggana District, and identify factors that support and hinder the successful implementation of this policy.

Currently, village governments in Indonesia face the challenge of increasing the capacity of village officials to carry out their roles and functions as stipulated in Law Number 6 of 2014 concerning Villages. With expanded authority, village officials are required to possess adequate competencies in transparent and accountable village administration, finance, and development management. However, the reality on the ground shows that many village officials still lack sufficient skills in digital-based governance.

According to data from the Ministry of Home Affairs (2022), more than 60% of village officials experience difficulties using digital technology for administrative and financial management purposes. Another challenge is limited internet access in remote areas, which hinders the effectiveness of digital-based training. Furthermore, research by Setiawan et al. (2021) shows that digital literacy levels among village officials remain low, preventing the optimal use of Learning Management System (LMS)-based learning methods.

This situation is exacerbated by Indonesia's geographical constraints, consisting of thousands of islands with varying accessibility, making face-to-face training for all village officials inefficient in terms of cost and time. Although digital-based training initiatives have been in place since 2019, the program's effectiveness remains unmeasured, particularly in improving the competence and quality of village officials' services to the public.

2. Research Methods

This study uses a mixed methods approach, a combination of quantitative and qualitative methods. This approach was chosen to gain a more comprehensive understanding of the effectiveness of Learning Management System (LMS)-based training for village officials in Indonesia. Quantitative methods are used to measure the level of LMS adoption, training effectiveness, and the improvement of village officials' competencies using statistical data. While qualitative methods are used to explore factors that influence the success or obstacles in implementing LMS training through in-depth interviews and document analysis. This type of research is evaluative research, which aims to measure the extent to which LMS-based training policies are effective in improving the capacity of village officials.

3. Results and Discussion

General Description of Kutai Lama Village Kutai Lama Village is located in Anggana District, Kutai Kartanegara Regency, East Kalimantan Province. This village has diverse human resource potential, but still faces challenges in developing the capacity of its village apparatus.

1) Learning Management System (LMS) Implementation: In 2023, Kutai Lama Village began implementing a Learning Management System (LMS) to improve the competency of village officials. The LMS is a web-based platform that allows online access to training materials.

2) Village Official Participation Of the 30 registered village officials, 25 (83%) actively participated in the training program provided through the LMS. Data shows that participation rates increased as officials' understanding of digital technology increased.

3) Training Outcome Evaluation: Evaluation results showed that 70% of village officials experienced increased knowledge and skills after participating in the training. The final exam showed an average score of 80, indicating a good understanding of the material taught. Learning Management Systems (LMS) are highly effective tools for improving the quality of learning and human resource development.Most participants admitted to not having a deep understanding of Learning Management Systems (LMS). Some stated that they only knew LMS as a platform for online learning, but did not fully understand the benefits and features it offered. One participant stated,

Mr. Maullidin (Village Head), stated:

"I know LMS is for online learning, but I don't know how it works or what I can learn in it."

Mrs. Maisyarah (Finance Head):

"I've heard of LMS, but I don't know much about its features. I only know that it's used for online courses. I'd like to know more about how I can use an LMS to improve my skills, especially in the areas I'm interested in."

Mr. Heriyansyah (Secretary):

"I first heard the term LMS when I signed up for this training. I thought it was just a place to access learning materials. However, after attending a few sessions, I became curious about how an LMS could help me in the learning process, such as tracking my progress and interacting with the instructor."

Mrs. Desi Ratna Sari (Head of Service):

"I know that an LMS is an important tool for distance learning, but I feel confused by the various terms and features. For example, I've heard about discussion forums and quizzes, but I don't fully understand how to use them to learn more effectively."

From the results of this interview, it is clear that the training participants have a desire to understand more deeply about LMS and how to use it to support their learning process.

Noor Ikhsan Muttaqin, S.IP., M.Si., an LMS trainer, explains:

"With an LMS, the teaching and learning process becomes more structured and accessible. Village officials can learn anytime and anywhere, which is crucial given their limited time and mobility."

Participants had high hopes for the use of LMS in developing village apparatus human resources. They hoped the LMS would provide easier access to training materials and skills development.

Mr. Maullidin (Village Head), one of the participants, said:

"I hope that with the LMS, we can learn anytime, anywhere. This will be very helpful for those of us who sometimes find it difficult to attend in-person training."

Mr. Heriyansyah (Secretary):

"I really hope this LMS can provide a variety of materials relevant to our needs in the village. With structured modules, we can more easily understand and apply the knowledge we gain. Furthermore, I also hope there will be a discussion forum within the LMS so we can share ideas and experiences."

Mrs. Maisyarah (Finance Head):

"My hope is that this LMS can be an interactive tool. I want learning videos and quizzes to help us gauge our understanding. This way, learning will be more enjoyable and less monotonous. I believe that if the LMS is well-designed, we will be more motivated to learn."

Mrs. Desi Ratna Sari (Head of Service):

"I hope this LMS can be easily accessed by all village officials, including those who may not be very tech-savvy. It's important for us to receive inclusive training. Furthermore, I hope there will be a certificate we can receive upon completion of the training, as a recognition of the effort and time we've invested."

With these expectations, the participants showed enthusiasm and desire to utilize the LMS as an effective self-development tool.

There are several challenges they faced before using the LMS. One of the main challenges was the lack of information technology knowledge among some village officials.Mr. Maullidin (Village Head) convey:

"Some of my colleagues still have difficulty using computers and the internet. This presents a challenge in itself to effectively utilize the LMS."

Mr. Heriyansyah (Secretary):

"I'm very excited about the LMS, but I also find it challenging. Many of us are unfamiliar with digital platforms. For example, when trying to access online training materials, I often get confused by the navigation. I wish there were dedicated training sessions on using this technology."

Mrs. Maisyarah (Finance Head):

"Like many of my colleagues, I've also encountered difficulties. Besides technical issues, there are also concerns about data security. We need a better understanding of how to protect the information we input into the system. This is crucial for us to feel more comfortable using the LMS."

Mrs. Desi Ratna Sari (Head of Service):

"I strongly support the use of an LMS, but I feel that support from the management is crucial. Some of us don't have stable internet access in the village. If there are solutions to this problem, such as providing hotspots or offline training, it would really help us make better use of the LMS."

By sharing these experiences and challenges, training participants hope to find joint solutions to improve the use of LMS in their environment. Despite their optimism, the trainers also identified several potential challenges in implementing an LMS. One of these is the varying levels of digital literacy among village officials.

"Not all village officials have the same technological skills. Therefore, initial training is needed to ensure everyone can use the LMS effectively," he said.

Interview results during the Learning Management System (LMS) training process:

a.   Training stages

Mr. Maullidin:

"I found this training very beneficial. I wasn't very familiar with technology before, but the instructor explained things very clearly. I learned how to manage training materials and interact with village staff through this platform. This will be very helpful in improving the human resource capacity in our village."

Mrs. Fitriani, Head of Village Welfare

"I really like the interactive features in the LMS. We can discuss and ask questions directly to the instructor. Plus, the materials are easily accessible at any time. This gives me more flexibility in learning and revising material I don't understand."

Mr. Tomi Ruslan,

"Yes, I'm confident this training will have a significant impact. With the LMS, we can continue learning and developing our skills without having to wait for face-to-face training. It will also make it easier for us to share information and knowledge among BPD members and the community."

The interviews above demonstrate that LMS training participants were enthusiastic and gained significant benefits from the training. They believe that using an LMS will enhance human resource development in villages and facilitate access to information and learning.

b.   Training time

Participant 1: Maullidin (Village Head)

"The training lasted two days. Each day, we studied for about six hours, with a break in the middle of the session. I felt the time given was sufficient to understand the basics of the LMS."

Participant 2: Fitriani, Head of Village Welfare

"We attended three days of training. Each session was packed with very useful material, and we were also given time for hands-on practice. The total training time was about 18 hours, and it really helped us understand how to use the LMS."

Participant 3: Mr. Tomi Ruslan (Chairman of BPD)

"The training lasted two and a half days. The first day we focused on theory, and on the second and final day and a half, we did more practical work. I think the time allotted was quite effective."

Trainer: Muriyanto, S.STP.M.Si. (LMS Trainer)

Training Time: "This training is designed for three days, with a total time of about 20 hours. We divided the sessions into theory and practice so that participants can immediately apply what they learn. I saw that the participants were very enthusiastic, and they were able to absorb the material well within the allotted time."

From the interviews above, it can be concluded that the duration of LMS training varies between two and three days, with a total training time of 18 to 20 hours. Participants felt this time was sufficient to understand and practice effective LMS use.

c.   challenges faced during training

Interview 1: Mr. Maullidin, Village Head Challenges Faced: "One of the main challenges I faced during the training was a lack of initial understanding of technology. Most of us, especially the older ones, were not familiar with using software like an LMS. This slowed down the learning process. However, the instructors were very helpful and patient in explaining each step."

Interview 2: Fitriani, Head of Village Welfare. The challenge that Faced with:

"I found the unstable internet connection difficult. Several times, during practical sessions, the connection dropped, making us lose focus. Furthermore, some features in the LMS were still confusing to me, such as how to upload materials and manage discussion forums."

Interview 3: Mr. Tomi Ruslan, Chairman of BPDThe challenges that faced:

"I'm having a hard time adapting to the LMS interface. Although I've taken some training before, each platform works differently. I also feel like I need more time to practice independently to better understand all the features. However, I'm confident that with enough practice, I'll get the hang of it."

From the interviews above, it can be concluded that the main challenges faced by LMS training participants in Kutai Lama Village included a lack of technological understanding, internet connection issues, and difficulty adapting to the LMS interface. However, support from instructors and the participants' desire to learn were positive factors in this digital transformation process.

The challenges faced by the trainers during the training were also felt by the participants, as conveyed by the village head:

"One of the biggest challenges is the level of technological literacy among village officials. Some participants initially struggled with using digital devices. However, with intensive guidance, they began to adapt and feel more confident."

The trainer also said something similar:

"One of the biggest challenges was the varying levels of technological understanding among participants. Some were unfamiliar with using digital devices. However, we tried to provide simple explanations and allow sufficient time for practice."

Interview Results after Learning Management System (LMS) training:

a. Impact of Training

Mrs. Maisyarah (Finance Head):

"The LMS training was very beneficial for me. I feel more confident in using technology to manage data and information in the village. With the LMS, I can access training materials anytime and anywhere. This is very helpful in my daily work."

Mr. Heriyansyah (Secretary);

"The impact has been very positive. I can be more efficient in managing budgets and financial reports. The LMS gives me access to a variety of relevant learning resources, allowing me to continuously improve my skills. It also makes collaborating with colleagues easier."

Mrs. Fitriani, Head of Village Welfare;

"Absolutely! This training has opened my eyes to how technology can be used for community development. I can now better design training programs for the community, using the LMS as a platform for delivering the material. This has been very helpful in increasing community participation."

Village Head: Maullidin

"I am very pleased with the results of this training. Our village officials are now more skilled in using technology. The LMS has been an effective tool for increasing the capacity of human resources in the village. I see improvements in their performance, and this has had a positive

impact on public services. I hope this type of training can continue and be expanded to more village officials."

d.   expectations after training

Ms. Fitriani, Head of Village Welfare, said, "This training was very beneficial for me. I feel more confident in using technology to manage data and information in the village. With the LMS, I can more easily access training materials and collaborate with other colleagues."

Mrs. Fitriani continued

"I hope that after this training, we can implement the LMS optimally in the village. This will help improve our work efficiency and simplify the learning process for all village officials."

Mr. Heriyansyah, Village Secretary:

"I'm very enthusiastic about implementing an LMS. During the training, I learned a lot about how to better manage projects and resources. The LMS provides a great platform for sharing information and experiences.""I hope all village officials can use the LMS effectively. This will improve the quality of public service and expedite the decision-making process."

Mrs. Maisyarah (Finance Head)

"This training has opened my eyes to the importance of technology in village financial management. With the LMS, I can learn more about sound and transparent financial management. I hope we can continue to receive support and further training. This way, we can be better prepared to face future challenges and provide better services to the community."

Village Head: Maullidin

"I strongly support this training. Digital transformation is a crucial step in improving the performance of village officials. The LMS provides us with the opportunity to learn and"We are developing the skills needed in this digital age. With LMS training, we can access learning materials anytime and anywhere, which is very convenient. Furthermore, this training will help us improve our services to the community, as we will be better prepared and skilled in using technology for the benefit of the village. I believe that investing in this training will have a positive impact on the future progress of our village."

4. Conclusion

Digital Transformation in Village Apparatus Human Resource Development Through the Utilization of Learning Management System (LMS) in Kutai Lama Village, Anggana District, Kutai Kartanegara Regency, East Kalimantan Province. Digital transformation has become one of the important pillars in human resource (HR) development, especially at the village government level. In Kutai Lama Village, Anggana District, Kutai Kartanegara Regency, the

utilization of Learning Management System (LMS) is a strategic step in improving the competence of village officials. This chapter will discuss how LMS can be implemented to support the development of village apparatus human resources, as well as the impacts resulting from the application of this technology. The Concept of Learning Management System (LMS) Learning Management System (LMS) is a technology-based platform designed to manage, document, track, and deliver training and education programs. LMS allows village officials to access training materials flexibly, interact with instructors, and collaborate with their colleagues. With LMS, the learning process becomes more structured and efficient.

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