

## Analysis of Utilization of Learning Management System (LMS) as an Effort to Optimize Governance of Village-Owned Enterprises (BUMDES) in Bojonegoro Regency

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### Abstract

*Learning Management System (LMS) is a learning management system that documents educational material and work skills using multimedia packaging (text, animation, video, and sound) as input and content for developing student competencies. In addition to learning in the field of education, LMS can also be used as a training medium for village-owned enterprises (BUMDes). This study aims to determine the development of a proper learning management system (LMS) media for the governance learning process at (BUMDes) in Bojonegoro Regency. The method used in this research is qualitative. Based on DPMD data, out of 419 villages in Bojonegoro Regency, 393 villages already have BUMDes and are legal entities. In implementing the Learning Management System (LMS) at BUMDes, at least 6 applications have been used, namely, Village Information Systems (SID), Village websites with domains, Village Financial Systems (SISKEUDES), Digital Mapping, Letter C Applications and e-Commerce Applications .*

**Keywords:** Learning Management System, BUMDes

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## INTRODUCTION

The development of Information Technology has driven progress in various fields such as finance, business, health and education. In the field of education, until now it is growing rapidly, for example the use of e-learning which is the result of the integration of technology and education which has emerged as a medium for learning using internet technology. Since the 1960s, e-learning has been implicated in a variety of ways in business, education, training, and the military. In education, e-learning refers to the use of software and online learning, whereas in business, military and training, e-learning refers only to online practice.

The skills required in the current digitalization era are different from those required in the previous digitalization era. Today, it is very important to have expertise in information technology. To accelerate the realization of Industry 4.0, the academic world and industry must work together. It is projected that this industrial revolution will have a negative impact on the economy, especially for developing countries which still have high socioeconomic disparities. Therefore, it is important to actualize and implement information technology absolutely. The industrial revolution will also produce a technology-based economy, or often termed a "technology-based economy". Given the many benefits to be gained from implementing digital systems in carrying out their business activities, business actors must have the desire and courage to implement digital systems in carrying out their business activities. Some of these benefits include accelerated transformation of business activities, accuracy and efficiency in exchanging large quantities of information.

According to PP 11 of 2021 concerning BUM Desa, it is a rule for implementing Law 11 of 2020 concerning Job Creation. Government Regulation Number 11 of 2021 concerning Village-Owned Enterprises implementing the Provisions of Article 117 and Article 185 letter b of Law Number 11 of 2020 concerning Job Creation, it is necessary to stipulate a Government Regulation concerning Village-Owned Enterprises. Bumdes which we are familiar with in the laws and regulations -invitees are called BUMDesa. Village-Owned Enterprises in the general provisions of PP 11 of 2021 concerning BUM Desa or BUMDES are legal entities established by villages and/or with villages to manage businesses, utilize assets, develop investment and productivity, provide services, and/or provide other types of businesses for the greatest possible welfare of the Village community. Village-Owned Enterprises consist of BUM Desa and BUM Desa together. PP 11 of 2021 concerning BUM Desa states that village-owned enterprises have the objectives of:

1. Carrying out economic business activities through business management, as well as developing investment and economic productivity, and Village potential;
2. Carry out general service activities through the provision of goods and/or services as well as meeting the general needs of the Village community, and managing Village food storage;
3. Obtain profit or net profit for increasing the Village's original income and developing the maximum benefit for the economic resources of the Village community;
4. Utilization of Village Assets to create added value to Village Assets; And
5. Developing a digital economic ecosystem in the village.

Village Owned Enterprises (BUMDes) are economic institutions that play a role in advancing the village economy. BUMDes have great potential to drive the local economy, increase the income of rural communities, and create jobs. However, in practice, many BUMDes in Bojonegoro Regency face various challenges in effective and efficient governance.

One of the main challenges faced by BUMDes is limited access to adequate training and learning for BUMDes administrators and members. This causes a lack of

knowledge and skills needed to properly manage BUMDes. In addition, there are also obstacles in delivery.

In this context, the development of Learning Management System (LMS) media can be an effective solution in overcoming these challenges. LMS is an information technology-based platform that enables online management, teaching and learning. Through the LMS, BUMDes administrators and members can access training materials, learning modules, and other resources in a flexible and interactive manner.

LMS or better known as the Learning Management System is a software or software for administrative purposes, documentation, activity reports, teaching and learning activities and activities online (connected to the internet), E-learning and training materials. And all of that is done online. (Ellis 2009). According to Rustaman et al, (2005) there are several functions of learning media, including increasing learning motivation and student attention, increasing the effectiveness and efficiency of conveying information, and making it easier to digest material. From the several functions above, we can conclude that the existence of learning media is important to help students in the learning process.

Based on this, a Learning Management System (LMS) was developed as a learning medium using the available open sources. It is hoped that it can attract students' attention, motivate students, and adapt it to students' interests so that it is hoped that the information conveyed through the media can be captured by students and tested in the teaching and learning process to see the practicality of using the Learning Management System (LMS). LMS has the scope of administration, material delivery, assessment, monitoring, and communication. Materials in pedagogic and professional competencies, which are made with multimedia packaging (text, animation, video, sound) in the LMS will accelerate (accelerate) the mastery of science and technology which can improve the quality of learning optimally. According to Ryan K. Ellis in the book *A Field Guide to Learning Management System* (2009: 1), "Learning Management System, the basic description is a software application that automates the administration, tracking, and reporting of training events". Ryan K. Ellis explained that LMS is a software or software for administrative purposes, documentation, searching for material, reporting an activity, providing training materials for online teaching and learning activities that are connected to the internet. LMS is used to create web-based online learning materials and manage learning activities and their results. This LMS is often referred to as an e-learning platform or learning content management system (LCMS). In essence, LMS is an application that automates and virtualizes the teaching and learning process electronically.

The use of LMS in BUMDes governance in Bojonegoro Regency has great potential to increase the accessibility and effectiveness of learning and strengthen good governance. Through this media, BUMDes administrators and members can increase their knowledge, skills and understanding in managing BUMDes properly. In addition, LMS can also facilitate more efficient communication, collaboration and supervision between BUMDes members, village government and other related parties.

In implementing LMS at BUMDes, at least 6 applications have been used, namely, Village Information System (SID), Village website with domain, Village Financial System (SISKEUDES), Digital Mapping, Letter C application and e-Commerce application. In managing websites and information services, the Bojonegoro Regional Government empowers existing community groups, namely the Lentera Community Information Group (KIM). Internet access is also expected to encourage village-owned enterprises (BUMDes) to promote their local products using e-commerce channels or markets. place. BUMDes can work with local startups using the internet of things (IoT) to increase the productivity and efficiency of economic activity. In turn, people's welfare will increase through digital innovation.

Therefore, the development of Learning Management System (LMS) media as an effort to optimize BUMDes governance in Bojonegoro Regency is a relevant and important research topic. By exploring the potential of LMS and implementing this platform in the context of BUMDes, it is hoped that it can improve the quality of BUMDes management and BUMDes' contribution to village economic development in a sustainable manner. Media research and development is carried out among other things to: 1. Know the development of a media learning management system (LMS) that is appropriate for the governance learning process at (BUMDes) in Bojonegoro Regency.

### **METHODS**

Research methods include data and data collection techniques, research models, and operational definitions of variables. According to Sugiyono (2013: 29), research methods are basically a scientific way to obtain data with specific purposes and uses. The nature of research can be understood by studying the various aspects that encourage research. This research uses descriptive qualitative according to H. Hadari Nawawi (1995:63), descriptive research method is defined as a problem-solving procedure that is investigated by describing or describing the state of the subject or object of research (a person, institution, community and others). At the present time based on facts that appear or as they are. The discovery of these symptoms also means not only showing the distribution, but also including efforts to express their relationship to each other in the aspects being investigated. After collecting and compiling the data, an analysis and interpretation of the meaning of the data is carried out.

### **RESULTS AND DISCUSSIONS**

Bojonegoro Regency, is an area in the Province of East Java, located at position 60 59' to 70 37' South Latitude and 1120 25' to 1120 09' East Longitude, with a distance of + 110 km from the provincial capital. The area of Bojonegoro Regency is 230,706 ha with a population of 1,311,042 people at the end of 2018, and administratively it has territorial boundaries, namely to the north of Tuban Regency, to the south of Madiun, Nganjuk and Jombang Regencies, to the east of Lamongan Regency and to the west of Ngawi Regency and Blora Regency (Central Java Province). Regional Division Bojonegoro Regency consists of 28 sub-districts, covering 11 sub-districts and 419 villages. There are several things that are important for us to know related to regional development, where most of the Bojonegoro Regency area is an agricultural area, so in the development concept it is necessary to pay attention to land availability, geographical location, soil type, agro-climate, regional resources, facilities and infrastructure. These resources and conditions will ultimately affect developments and prospects for regional development development.

Village-owned enterprises (BUMDes) in Bojonegoro have been established in almost every village. Out of 419 villages, 393 villages already have BUMDes. Based on DPMD data, out of 419 villages in Bojonegoro Regency, 393 villages already have BUMDes and are legal entities. The growth rate of each BUMDes is divided into 4 categories. There are 15 villages in the advanced category (starting to provide PAD to villages), in the developing category there are 64 villages (not yet maximized), in the new growing category there are 173, and in the basic category there are 161 BUMDes. While 26 villages still do not have BUMDes.

#### **Obstacle factor**

Including the management of the BUMDes itself which still exists which is carried out directly to the Village Office. However, the BUMDes management in Dander Village has not been able to implement digital technology-based services, because it requires a large initial budget and implements human resource management in the BUMDes itself.

"During the pandemic, we from BUMDes felt very overwhelmed. To the extent that since the lockdown, the management of BUMDes has decreased. However, the projection of Savings and Loans provided by BUMDes has actually increased, but with a limited number of borrowers" (Interview with the Director of BUMDes, on Thursday, 13 July 2023).

At this time too, many private business entities complained to the Village Government that they felt they were at a loss because there were the same business products or services. because BUMDes manages their products and services below market prices.

"There were a lot of complaints and complaints about the presence of BUMDes that run tent rentals. In Mekarmulya there are residents who have rented tents, these residents then complain because their products or services have decreased since the presence of BUMDes"

During the Pandemic, both the village government and BUMDes. Each village does not provide enough space for Covid-19 prevention facilities, with various problems that occur between villages. What is still running smoothly is only in the Savings and Loans sector which is in synergy with Bank Mandiri.

"Regarding the digitization of management carried out by the Trimekar BUMDes it has not yet reached that realm, because the village is quite remote from the regional government center." (Interview with the Director of BUMDes, on Thursday, 13 July 2023).

In the current era of globalization where information technology is developing rapidly, it requires village governments to be able to adapt to the current flow of globalization. Globalization itself can be a challenge as well as an opportunity for those who can take advantage of it. However, in some villages they are still unable to properly utilize existing technology in the current era of globalization. Utilization of information technology can make services to the community even more optimal. BUMDes itself does not yet have a website that can be accessed by the village community, even the village government website does not exist at all and it is very difficult to access various information. Some BUMDes only reach management via Whatsapp. The management is often outside the procedural BUMDes, because it considers the principle of kinship to be the highest rather than the principle of professionalism.

"Regarding information technology for our community, we don't yet exist, regarding BUMDes and managing the running of the BUMDes wheel, we use the Whatsapp application as a communication.." (Interview with Director of BUMDes Thursday, 13 July 2023)

With the problems that exist within and within the village government environment, BUMDes must have a strategy so that the goal of improving BUMDes management is as expected.

In implementing the Learning Management System (LMS) at BUMDes, at least 6 applications have been used, namely, Village Information Systems (SID), Village websites with domains, Village Financial Systems (SISKEUDES), Digital Mapping, Letter C applications and e-Commerce applications. . In managing the website and providing information services, the Village Government empowers existing community groups, namely the Lentera Community Information Group (KIM). Internet access is also expected to encourage Village-Owned Enterprises (BUMDes) to promote their local products using e-commerce channels or market places. . BUMDes can work with local startups using the internet of things (IoT) to increase the productivity and efficiency of economic activity. In turn, people's welfare will increase through digital innovation. However, Mekarmulya Village still does not have the readiness to carry out digitalized BUMDES, as for members who are still lacking in understanding digital concepts to support the village economy.

#### Supporting factors

Developing a BUMDes business to survive in the midst of a pandemic requires careful business calculations. Realistic things that are very suitable to do during a pandemic by Trimekar BUMDes are the first to conduct a BUMDes Business Feasibility Study. Activity development carried out by BUMDes is a business feasibility study carried out to establish a new business or develop an existing business. And there must be an understanding of digitalization because it is felt that many things do not understand using digitalization to carry out a digital-based economy. The Village Government must be able to adapt to the changes that are occurring.

So seeing that Indonesia is a rising star in the e-commerce market. This is not surprising if you look at the number of internet users in Indonesia, the latest data shows that the number of internet users in Indonesia is increasing every year, bearing in mind that there are still many areas that are not connected to the internet and will get internet access. In Indonesia itself, the internet is used not only to find information or play social media, but also to make the internet a source of income. E-commerce is one of the virtualization processes of trade. Where the virtualization process itself is a transitional process from a process that is carried out conventionally, namely a process with direct interaction between two or more people, now switching to be done online and without having to interact physically. An example of this virtualization process does not only occur from the trade aspect, namely e-commerce, but also other aspects such as e-learning and e-government.

With Indonesia's digital economic potential is quite large. Based on McKinsey data, in 2017 there were 30 million e-commerce customers and every year it increases by 50%. In order to support this, the Ministry of PDT and Transmigration has made various efforts, such as:

1. Establish and improve internet connectivity in rural areas;
2. Capacity building in the form of technical training to develop digital/internet facilities and infrastructure; And
3. Stimulating and increasing digital economic growth through Bumdes together.

Based on Google and Temasek data, in 2019 the value of Indonesia's e-commerce potential is the highest compared to other ASEAN countries. So it is profitable for the village to sell various kinds of processed products that have the potential to be developed in the village of Bloommulya, such as developing pantin fish which are sported into dry food such as basreng or baso in the form of meatballs so that they can be sold in various regions in Indonesia.

#### CONCLUSION

Based on the results of the research on the development of a Learning Management System (LMS) as a medium for optimizing BUMDes governance that has been carried out, it can be concluded that the development of LMS at BUMDes is still far from feasible to carry out Digitalization with reference to the 6 applications used, namely, the Village Information System (SID), village websites with domains, village financial systems (SISKEUDES), digital mapping, letter C applications and e-commerce applications, the Trimekar bumdes still don't have these facilities. And the concept of digitization is still not understood by Bumdes management, seen from the sales system of several BUMDes which still use traditional methods in commerce. The government of Bojonegoro Regency is still lacking in providing digital trainers to village apparatus to upgrade apparatus in conditions where physical contact is impossible.

#### REFERENCES

- [1] D. Otto and S. Becker, "E-Learning and Sustainable Development," 2018, p. 8.

- [2] H. M. Selim, "Critical success factors for e-learning acceptance: Confirmatory factor models," *Comput. Educ.*, 2007, doi: 10.1016/j.compedu.2005.09.004.
- [3] P. Nicholson, "A History of E-Learning," in *Computers and Education*, Dordrecht: Springer Netherlands, 2007, pp. 1–11. [4] J. L. Moore, C. Dickson-Deane, and K. Galyen, "E-Learning, online learning, and distance learning environments: Are they the same?," *Internet High. Educ.*, 2011, doi: 10.1016/j.iheduc.2010.10.001.
- [5] I. P. Ramayasa, "Evaluation Model of Success and Acceptance of E-Learning," *J. Theor. Appl. Inf. Technol.*, vol. 3182, no. 3, pp. 462–469, 2015, [Online]. Available: <http://www.jatit.org/volumes/Vol82No3/16Vol82No3.pdf>.
- [6] D. Al-Fraihat, M. Joy, R. Masa'deh, and J. Sinclair, "Evaluating E-learning systems success: An empirical study," *Comput. Human Behav.*, vol. 102, pp. 67–86, Jan. 2020, doi: 10.1016/j.chb.2019.08.004.
- [7] R. E. Mayer, "Using multimedia for e-learning," *Journal of Computer Assisted Learning*. 2017, doi: 10.1111/jcal.12197.
- [8] S. Choudhury and S. Pattnaik, "Emerging themes in e-learning: A review from the stakeholders' perspective," *Comput. Educ.*, 2020, doi: 10.1016/j.compedu.2019.103657.
- [9] M. W. Allen, *Michael Allen's Guide to e-Learning*. Hoboken, NJ, USA: John Wiley & Sons, Inc., 2016.
- [10] M. Johnson, "Effective practice with e-learning," *Br. J. Educ. Technol.*, 2005, doi: 10.1111/j.1467-8535.2005.00547\_5.x.
- [11] Y.-H. Lee, C. Hsiao, and S. Hadi, "Enhancing e-learning Acceptance: An Empirical Examination on individual and system characteristics," *Acad. Manag. Proc.*, vol. 2012, no. 1, p. 15828, 2012, doi: 10.5465/ambpp.2012.15828abstract.
- [12] S. Ozkan and R. Koseler, "Multi-dimensional students' evaluation of e-learning systems in the higher education context: An empirical investigation," *Comput. Educ.*, 2009, doi: 10.1016/j.compedu.2009.06.011.
- [13] C. De Medio, C. Limongelli, F. Sciarrone, and M. Temperini, "MoodleREC: A recommendation system for creating courses using the moodle e-learning platform," *Comput. Human Behav.*, 2020, doi: 10.1016/j.chb.2019.106168.
- [14] A. Revythi and N. Tselios, "Extension of Technology Acceptance Model by using System Usability Scale to assess behavioral intention to use e-learning," *Educ. Inf. Technol.*, vol. 24, Jul. 2019, doi: 10.1007/s10639-019-09869-4.
- [15] U. Ependi, F. Panjaitan, and H. Hutrianto, "System Usability Scale Antarmuka Palembang Guide Sebagai Media Pendukung Asian Games XVIII," *J. Inf. Syst. Eng. Bus. Intell.*, vol. 3, no. 2, p. 80, 2017, doi: 10.20473/jisebi.3.2.80-86.