

## Research Article

# Productivity of Learning Management System in Organizational Development by Utilizing Smart Education

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## Abstract.

This study aims to describe the productivity of the learning management system in the context of organizational development by utilizing intelligent education that applies the latest technological innovations. The researcher uses a qualitative method with a descriptive approach, which will be the focus of the research, followed by interviews and observations, and qualitative data analysis such as manipulation and interpretation techniques that are related to a wider range. There are four research results, including (a) Learning management system as a lecture material platform; (b) Learning management system as assignment submission platform; (c) Learning management system as a discussion forum platform; and (d) Learning management system as a college exam platform.

**Keywords:** learning management system, organizational development, smart education, educational management

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## 1. INTRODUCTION

Digital transformation is now increasingly visible, especially in the world of education, where the majority have used modern technology as a means of learning at various levels of education [1] (Coccoli et al., 2014). One of them is at the tertiary level where the market can reach a global level internationally which indeed, if viewed and considered in terms of competition, is becoming more stringent than in previous years [2] (Fathema et al., 2015). The shift in the way of learning which was originally still conventional to teaching and learning activities that are much more modern, because the teaching and learning process has used a technological approach to be able to provide high-quality services for universities so that in the future they will also remain competitive [3] (He et al., 2020).

In the modern era, the world of education is experiencing increasingly high demands which are also combined with the application of new technologies [4] (Arras & Tabunshchyk, 2022). Learning innovation using technology is able to increase the competitiveness and ability of universities to be able to compete in the era of digitalization [5]

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(Ratnawati & Idris, 2020). The development of educational innovation that is increasingly visible is the existence of websites and e-learning technology which are currently the prima donna and attention of universities to respond to a challenging environment [6] (Kwangmuang et al., 2021). In addition, the application and use of learning technology can be used as a marketing tool for superior programs owned by universities so that their good name and image will increase among the wider community [7] (Gomes et al., 2019).

The learning management system is part of e-learning which is a smart path to be able to provide modern technology tools for certain stakeholders in the scope of higher education [8] (Martínez-Cerdá et al., 2020). It is also very supportive in completing tasks that can be done independently and supports collaborative activities between stakeholders in universities [9] (Campos et al., 2021). According to research from three faculties out of five consider that the learning management system is very important for the teaching and learning process where the highest percentage reaches 85% using the learning management system to support teaching and learning activities in universities [10] (Idris et al., 2019).

One of the organizational developments in higher education is related to the learning management system, which most of them have started to implement in smart education today [11] (Ilham et al., 2020). If you look at the point of view of smart education in Indonesia today, it can be seen that there is a mutually beneficial relationship between teachers, students, and the application of modern technology [12] (Zaballos et al., 2020). Therefore, this study aims to see how productive the application of a learning management system in organizational development is with the use of intelligent education.

## 2. METHOD

The term research method used in this article will refer to some concrete procedures for collecting descriptive qualitative data. In this qualitative research method, we will first look at the focus group which is then followed by interviews or you can say qualitative observations and qualitative data analysis such as techniques for manipulation and interpretation of qualitative data that are related to a wider range [13] (Hamilton & Finley, 2019). The meridological framework such as grounded theory, discourse analysis, conversation analysis and so on is also needed to support qualitative research data sources [14] (Roulston & Halpin, 2021).

The application of this qualitative research method will focus on observations more deeply than other research methods [15] (Bavaresco et al., 2020). Therefore, the use of qualitative research methods in research will be able to produce and obtain a concrete study of a more comprehensive phenomenon [16] (LaMarre & Chamberlain, 2022). In this study, it is also possible to investigate in-depth concepts where if using another approach the essence will disappear, so that the research does not get the maximum results that were previously desired [17] (Padgett, 2017).

The qualitative research method in the article is also useful for examining the condition of natural objects, where the researcher is the most important key instrument [18] (Snelson, 2019). This study aims to understand the phenomenon of what is experienced and felt by the research subject directly by using descriptive methods in the form of words and language selection [19] (Szajnfarber & Gralla, 2017). This special and natural research context refers to researchers using various natural methods [20] (Busetto et al., 2020).

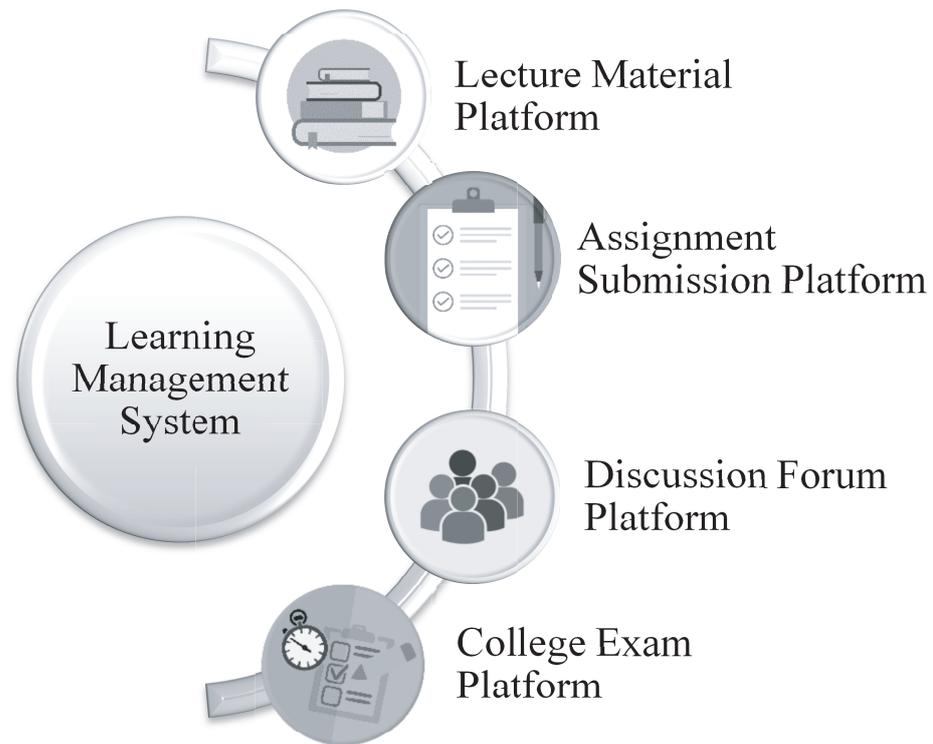
### 3. RESULTS AND DISCUSSION

The learning management system used for the development of higher education organizations in the faculty of computer science, Universitas Brawijaya is ELING. The following are some of the findings from research on the productivity of learning management systems can be seen in Figure 1.

#### 3.1. Learning management system as a lecture material platform

ELING productivity as a learning management system is closely related to the creation of web-based online lecture materials and is often used also to manage other learning activities that have been made so well in accordance with the course material taught by the teacher. The use of a learning management system can reduce most of the operational costs related to the content of lecture materials such as the cost of subject matter that is made into print can be minimized [21] (AlJarrah et al., 2018). The lecture material content attached to the learning management system can be accessed for free by students, whenever and wherever they are [22] (Reimann et al., 2019).

Every week or even every day, students must also get regular and continuous updates of lecture material content from the beginning of the semester to the end of the semester, so that it is very easy for students to manage their time well [23] (Khaerunnisa et al., 2019). Teachers can make learning content more interactive and



**Figure 1:** Productivity of Learning Management System.

fun for students, because the learning management system has provided or provided interesting features that can be explored by itself [24] (Bhadri & Patil, 2022). Of course, the guidelines for creating the content of the lecture material are also neatly available, so that teachers can learn in advance what elements are available in the learning management system [25] (Theresiawati et al., 2020).

### **3.2. Learning management system as assignment submission platform**

The productivity of ELING which is a platform and a place for students to collect their entire assignments or homework in a structured manner according to the assignment collection schedule that has been given by the teacher. Indirectly, this can foster the character of independence in students, because all activities must be carried out and accessed independently by students in accordance with their own study schedule arrangements [26] (Habib et al., 2021). The learning management system greatly affects the organizational development process specifically, when compared to the face-to-face assignment which is deemed less effective and efficient because of the absence of modern technology or system intervention in it [27] (Zaaruka & Mosha, 2019).

ELING also allows teachers to categorize students' assignments as a whole. The usefulness of the learning management system owned by the faculty of computer science has a great impact on students and subject teachers. Basically, this place for submitting coursework is able to train students' discipline when the teacher has given certain directions and regulations related to their respective subject areas according to their level of education [28] (Azmi Murad et al., 2022). The user interface in a learning management system that is easy to use will be very influential and help students to process their learning activities, when compared to a learning management system that is difficult to apply [29] (Stalljohann, 2011).

### **3.3. Learning management system as a discussion forum platform**

ELING is an online discussion forum platform that cannot be seen by all students and their classmates in the same room for the organizational development process, especially in the field of learning. The productivity of the learning management system as an online discussion platform is widely seen as a valuable tool in interacting with students and their interactions with learning materials that have been delivered by teachers [30] (Shida et al., 2019). The strategies in this management system to carry out online discussions are varied and there are no limitations on the platform, so students can use it comfortably together with their classmates [31] (Naskar et al., 2021).

The productivity of these online discussion forums has shown that there are forums that are systematic and full of interactions that can affect class dynamics and learning activities through new and modern things [32] (Loncar et al., 2014). In this learning management system it is also possible to encourage student participation and the emergence of peer-to-peer dialogue, which makes it easier for students to develop coherent arguments and apply appropriate comments to the context of learning related courses [33] (Chacon-Rivas & Garita, 2014). Therefore, teachers no longer need to worry about the discussion room for students to be able to sharpen and explore the material that has been delivered in real time [34] (Darvin et al., 2021).

### **3.4. Learning management system as a college exam platform**

ELING can be used for the productivity of exam activities that take place online using a learning management system, where all of that there are already a variety of exam options that can be created and made according to college courses. The learning management system has various options such as multiple choice exam questions,

essays, false and true, puzzles, and so on. Organizational development in relation to the learning management system can provide the latest experience for students when they are working on mid-semester exam questions, end-semester exams and quizzes [35] (Mansor et al., 2020).

A learning management system that provides a college exam platform like this will make higher education institutions no longer need to spend exam fees for test stationery such as exam question sheets, answer sheets, and others [36] (Rombaoa, 2019). Therefore, lecture exams conducted on online platforms such as learning management systems are increasingly popular and in demand by teachers or students, because of the ease with which the exam process takes place [37] (Songkram et al., 2021). The intelligence of the learning management system can create a learning experience and can be personalized by each user by providing a special format according to their needs [38] (Almoeather, 2020).

## 4. CONCLUSION

In the context of developing an educational organization for the faculty of computer science in the form of a learning management system which is often referred to as ELING at Brawijaya University, it is quickly adopted and applied to the maximum extent possible as a medium for reforming the quality of learning and teaching. ELING productivity in higher education can lead to an increase in the learning and teaching experience, which is directly felt by students and educators. ELING is also considered a very powerful tool to be able to bridge communication between educators and students in real time. The productivity of ELING can be seen from its functions and uses, such as lecture material media, a platform for collecting student assignments or homework, becoming an interactive discussion forum, and media facilities to be able to exams and share information related to lectures at universities.

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