A Pattern of Digital Interaction on E-Learning Based MOODLE in Primary Schools

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Abstract. Online learning during the COVID-19 pandemic has made teachers struggle to implement knowledge and included in carrying out assessments based on K13, where each evaluation is based on Basic Competence (KD). The research objective is to describe MOODLE software as an e-learning medium and its implementation in primary schools. The research informants are the head of the school, teachers, and online documents-data collection techniques with interviews, observations, and documentation. Data processing begins with data presentation, data display, and interpretation. The results of the study were found by the pattern of digital interaction e-learning based on MOODLE. Interaction of teachers with students via digital, and interaction between students also via digital.

Keywords: Digital Interaction; e-Learning Based MOODLE; Primary Schools

1 Introduction

Among the software that can be used in the implementation of e-learning is the Modular Object-Oriented Dynamic Environment (MOODLE) application [13]. Moodle is a Learning Management System (LMS) that can be used as one of the effective and efficient approaches in the learning process [14]. Some reasons why MOODLE is popular in various educational institutions [15], are: 1) free and open-source, it allows everyone to modify it freely depending on the needs of their respective institutions and this application can be obtained for free, 2) educational philosophy, MOODLE creates a practical experience based on science, which makes this application able to transform face to face learning into online learning [16]; [17], 3) MOODLE has a huge community network and always shares information [18], under the name of the organization www.moodle.org, 4) The size is relatively small, but MOODLE has extraordinary capabilities. The MOODLE size is only 17 MB for version 3.1 [19]. The software is equipped with interactive features, for example assignment, quiz, communication, collaboration, as well as key features that can upload a variety of formats of learning material [20].

Research that has already contributed to the study related to the use of MOODLE-based e-learning has found positive impacts on improved understanding of knowledge and skills [21]. Media developed using e-learning based on MOODLE can be used as one of the media learning [22]; [23]. The development of MOODLE-based e-learning can be done with a learning management system (LMS) online through MOODLE application software version 3.1 [20]. Features of the teaching materials are available in book format, single page, file folder, and URL [19]. The development of e-learning based on MOODLE can improve literacy in learning enrichment activities [24]. The results of this study generally examined MOODLE-based e-learning research more discussing the use of e-learning at the high school level, and very little

examining the use of e-learning at primary education level. In addition, research studies are dominated by the development of e-learning as a learning medium.

Starting from this question, then learning in the primary school in the district of Solok is organized through e-learning. The software used is e-learning based on MOODLE. This software is thought to be able to solve the problem of teachers in the implementation of learning. This research limits studies related to patterns of learning interaction and presentation of learning themes.

2 Method

This research was carried out in the SD State 03 Muaro Paneh. A picture of the use of e-learning MOODLE [29] in SD State 03 Muaro Paneh packaged in the form of qualitative research [30]; [31]. The informants in this study are the head of the school, teachers, and online documents. The data and information to be obtained from the informant is the interaction pattern of MOODLE-based e-learning and presentation of materials or themes. To facilitate the search for such data and information, data collection techniques such as interviews, observations, and document analysis are used [29]; [30]. After data and information are obtained, data analysis is carried out using the concepts proposed by Miles and Huberman, consisting of three analyses [30] are (1) data reduction, (2) data presentation (display), and (3) conclusion drawn.

3 Results and Discussion

This research is related to the activities of teachers and students in e-learning based learning based on MOODLE so that there is an interaction of learning between teachers and students.

a. Teacher Activity

The teachers' activities in e-learning based on MOODLE include the following four steps. (1) Please access via browser (Mozilla, chrome or opera) : rumbel.sdn03kkmp.sch.id, (2) Change the language to Indonesian, (3) Enter username and password and click in, and (4) Click: home site ----- choose the class taught
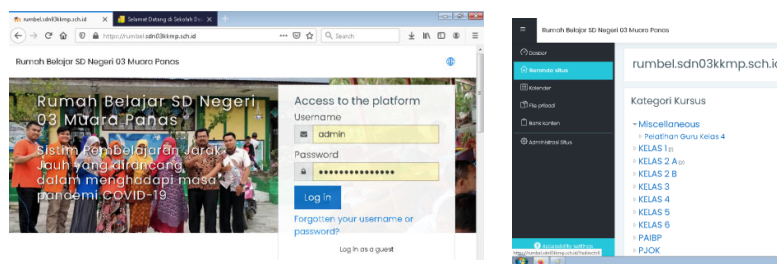

Fig. 1. The e-Learning Website MOODLE SD State 03 Muaro Paneh

Teachers' activities in e-learning based on MOODLE start with accessing through chrome or Mozilla with the address: rumbel.sdn03kkmp.sch.id. to facilitate the use of the application, change the language to Indonesian with the world ball click.

Then the school application page appears, teachers enter username, password, and log in. Once in the system, click the homepage of the site, then the teacher selects the class to be taught, starting from class 1 to class 6.

Teachers' activities in e-learning begin with the provision of devices including MOODLE software. This program is a learning medium that must be filled by the teacher with a set of learning materials. Teachers first create teaching materials in the form of pdf or Microsoft PowerPoint or the form of recordings. Subsequently, the materials are uploaded into the MOODLE system. When learning begins, the teacher only guides the student on the material already inserted into the system, and the student performs interaction activities according to the instructions of the teacher in the MOODLE system.

Good learning interactions can create interactive, inspiring, fun, challenging, and motivating learning [32]. Through MOODLE teachers can interact with students in a network, which sounds, images, or even visual audio. The materials presented in the MOODLE, can be inspiring for the students so that the students are motivated to delve into the themes presented in learning. Students who succeed in the learning process are rewarded verbally in the form of speech or digital reward symbols. The reward for learning is fun. Teachers in presenting inspiring material either in the form of writing or video is expected to be a challenge for students to bring up other models or other information that are more innovative.

Standard learning process as described above, with e-learning MOODLE can be realized. Explore the features available in the MOODLE software learning interaction between teachers and learners can be organized in the form of digital interaction. E-learning MOODLE can present learning that is interactive, inspiring, fun, challenging and motivating learners in learning.

b. Students Activity

Creating students' activity in MOODLE-based e-learning can be done with seven steps are: (1) Please access via browser (Mozilla, chrome or opera) : rumbel.sdn03kkmp.sch.id. (2) Enter the user (BP) and password (123456) and then click On/Login. (2) Click the picture of the world to change the language. (3) Click: The following course. (4) Click: Teaching 1. (5) If there is an error like this then the video cannot be played. Change the language to English again. (6) Click on the video and then click on Continue. (7) Out of the system (Log Out): Click the arrow end image at the top right and click the log out.
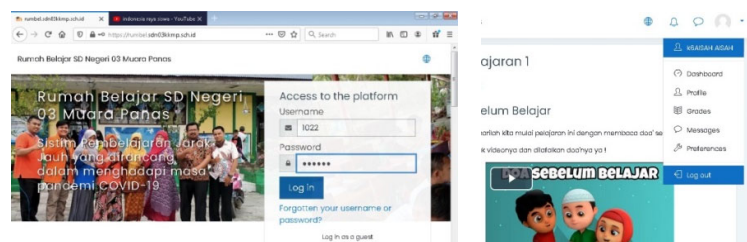

Fig. 3. On The front of The page is the theme.

Students' activity in MOODLE-based e-learning begins with accessing chrome and Mozilla, then entering the address: rumbel.sdn03kkmp.sch.id. after opening the school's website, entering a username, password, and log in. Then click the world image to change the language.

After the language is changed, click: the course is followed, several learning options will appear, such as learning 1. If one of them is selected, there will be several learning activities, which can be videos, quizzes, or other tasks.

This MOODLE-based e-learning presents a theme-shaped learning menu in the system. Teachers and students interact in the MOODLE system. Learning activities are already programmed in the system so that students can learn independently according to the learning instructions already programmed in the MOODLE. This pattern of interaction is called the pattern of digital learning interaction. Teachers interact with students via digital and students interact with teachers via digital. The participants also interact with other students via digital. A picture of this interaction can be seen in the following image 7.
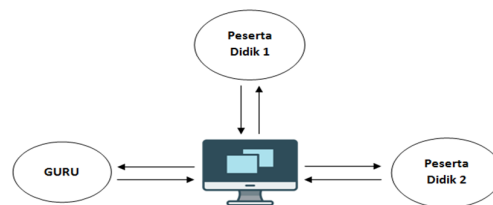

Fig. 4. The Digital Learning Interaction

The interaction between teachers and learners in MOODLE requires teachers to present materials online, explain how to do something, even plan a learning project. Using this system, teachers are engaged before learning, to plan material devices, whether in the form of narratives, quizzes, assignments, videos, or other visual audio media.

This model is simple and practical to use anywhere and anytime. During this time, the teacher complains about learning that should not be face to face, while the material to be delivered is quite solid, plus the need for material enrichment. With the presence of e-learning based on MOODLE, this teacher feels helped. The teachers were very enthusiastic about using this MOODLE. During this time, the learning carried out is difficult to synchronize between the basic competencies in the learning program. In addition, it is also difficult to conduct systematic learning by following the sequence of basic competencies present in the learning program, including assessment. With the existence of MOODLE, the learning device of the teacher in the form of RPP has been taught in it, the need for the use of learning media has also been helped by MOODLE, even up to the evaluation of learning, has also been taught in the system.

4   Conclusion

Discovered a model of interactive digital e-learning based on MOODLE. Interaction of teachers with students in learning via digital, and interaction between students also via digital. This interaction pattern occurs in online learning using e-learning. Digital learning interaction, between teachers and students through MOODLE, and between students also through MOODLE. Support for the implementation of media software MOODLE. The implementation of e-learning learning can reduce the negative impact of the use of digitalized media on the learners, improve learning motivation, creativity, and independence.

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