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IMPLEMENTATION OF LEARNING MANAGEMENT SYSTEM (LMS) AT JUNIOR HIGH SCHOOL AND SENIOR HIGH SCHOOL IN SOUTH ACEH REGENCY

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ABSTRACT

A software program called a learning management system (LMS) offers virtual classes for both teachers and students. LMS can be installed on the school website and delivered to regional school networks. As a result, access to educational resources is made simpler for junior high and senior high school students and teachers. In each academic year, junior high and senior high schools provide a large number of classes, each with a wide range of subjects. A thorough understanding of LMS features is necessary to apply the learning that the LMS supports, allowing it to be used to support different classes and disciplines. In order for LMS to support several classes and subjects, this study suggests a plan for its deployment in junior high and senior high schools.

Keywords: Moodle, learning management system (LMS), multi-class setting

INTRODUCTION

Blended learning is one of the trends in education today Blended learning combines face-to-face teaching-learning processes with the use of online learning media. Online learning media is not only used to distribute material by teachers but is also used to carry out evaluation and communication. Thus, students can easily get teaching material from the teacher and it becomes

easy for the teacher to distribute the material and evaluate student learning outcomes. Management and implementation of online learning can be done using a software package called the Learning Management System (LMS). LMS has adequate features for implementing learning, such as uploading and downloading material in various formats from text to multimedia. In addition to supporting the implementation of learning, LMS has facilities for managing learning. These facilities are important for managing LMS users (students, teachers, and administrators), managing various LMS administrations such as backups and restore, as well as the management of subjects and their groupings. One example of an LMS that has this feature is Moodle (Waluyo 2021) . The use of LMS to support learning has been carried out in various schools, both at the middle and high school levels. Various studies have been conducted related to the implementation of LMS in several schools. For example (Harefa and Sumiyati 2020) ,conducted studies related to the application/implementation of LMS in Vocational High Schools. Meanwhile conducted a study on the implementation of LMS in junior high schools for certain subjects. Other studies show that LMS can be applied to middle and high schools (Arsika et al. 2019) Studies that have been conducted by (Putri, Laksitowening, and S 2015) , (Suwawi, Laksitowening, and Putri 2018) , (Xu, Chan, and Yilin 2020a) discuss how to implement Moodle in schools, but do not discuss how LMS can organize classes in junior and senior high schools which are generally in one academic year, has many classes. Information on how to organize classes in the LMS is important so that Junior High School and Senior High School can implement LMS in their respective schools. This article proposes a schematic for how to organize a large number of classes in an LMS, especially Moodle. Several related studies were presented at the outset, then followed by identifying the needs or methods of class organization in junior and senior high schools. Furthermore, the features of the Moodle LMS were proposed and adjusted to the needs of classes in junior and senior high schools.

Moodle is a popular LMS There are several studies that have implemented Moodle for junior high and high school levels. At the junior high school level, Moodle is implemented for junior high school learning, especially on the theme of the sun as an alternative energy source. Moodle which then from the results of this development carried out various evaluations. The result of this study is a web which is a Moodle LMS, used for learning junior high school students with specific themes (Harefa and Sumiyati 2020). A Learning Management System, also called a Learning Management Platform, is a web-based software program for the management, documentation, monitoring, reporting, administration and distribution of educational content, training programs, technical manuals, instructional video or digital library materials, and learning and development projects (Nugraha, Astawa, and Ardana 2019). The idea of Learning Management System comes from e-learning (Waluyo 2021). E-learning developed from the need for educational content and training

tools that are inexpensive, easy to access, easy to use, dynamic and collaborative (Arsika et al. 2019) . The e-learning platform provides the infrastructure - the Internet - in which learning takes place through various participation techniques (Xu, Chan, and Yilin 2020b). At a higher level (SMK and SMA), Moodle is implemented for learning in SMK In a study conducted by Hardyanto et al, Moodle was used together with Vicon (video conference) to support the learning process for SMK students with Software Engineering competency skills. The studies carried out resulted in a Moodle-based web, along with several test results such as LMS feasibility, learning outcomes, and student motivation (Xu et al. 2020a). In another study Moodle was applied to Vocational Schools for students who carry out Internships (Industrial Work Practices) related to repairing CD audio video signal reproduction devices (Setiawati 2019) . In addition to the Moodle-based web, this study presents the results of due diligence and the level of effectiveness of Moodle that has been implemented. Some of the studies that have been mentioned have not accommodated how the LMS can be applied as a whole to all classes, along with the organization of the classes,

Especially if the class has more than one class. This article proposes a scheme for organizing classes in Moodle which is expected to help middle and high schools in organizing classes when the Moodle LMS will be implemented for all existing classes.

METHODS

This type of research is descriptive qualitative, namely research that describes a phenomenon that occurs in the educational environment related to the use of LMS in schools (Muflihun at el 2021) . The discussion in this study is as follows:

The method used to propose a Moodle LMS implementation scheme in organizing many classes is as follows:

1. Identification of classes and subjects in junior and senior high schools.
2. Identify the features for organizing courses in the Moodle LMS.
3. Preparation of an implementation scheme based on the grouping features in Moodle
4. Implementation of the scheme From the schemes that have been compiled and tested, then each scheme is described based on the results of the tests that have been carried out.

RESULTS AND DISCUSSIO

The systematic description of the results and discussion follows the stages of the method previously described. The following is an explanation of the activities carried out at each stage in the method previously described.

4.1 Identification of class administration and subjects in junior and senior high schools. Schools at the junior and senior high school levels basically have several classes at each level. For example, in junior high school, for class VII, there are classes VII-A, VII-B and so on, adjusting to the capacity of the junior high school. At the high school level, because students have been directed to their areas of interest such as science and social studies, the implementation of classes in high school is different from junior high school. Each area of interest has its own number of classes. For example, the science interest class consists ofIPA-I, IPA-II and so on. Likewise for other areas of interest. Each class at SMP and SMA has subjects for each grade level. Based on these needs, it is necessary to identify Moodle features that can adopt classroom management models in junior and senior high schools.

4.2 Identify the features for hosting courses in the Moodle LMS.

Moodle has several features for administering courses, such as grouping subjects into certain categories or sub-categories. A category can contain sub-categories and courses can be included. That is, several groups of courses can be grouped into categories.Every registered student can take courses available on Moodle, according to the class and course he or she takes. Registration of students taking courses can be done by the administrator or can be done independently by each student. A group of students can be grouped into large groups or certain groups in course administration. The following is a grouping of students

What you can do in Moodle:

1. Group

Groups can be used to group several users, either teachers or students. Groups can be used, for example, for assignment purposes in each subject.

2. Groupings A set of groups can be grouped in groupings. The purpose of the grouping feature is to make it easier for teachers to provide information to students.

3. Cohort In Moodle, cohorts are large groups created to make it easier for users to register courses/subjects. Based on information on the features available in Moodle, such as categories, sub- categories, courses/subjects, and grouping features, the next step is to develop an implementation scheme that can be used to organize many classes, which can be applied to the Moodle LMS.

4.3 Compilation of implementation schemes based on existing features in Moodle

The preparation of an implementation scheme can be done by mapping the multiple implementation needs of the Moodle features that have been discussed previously. At the junior high school level, subject requirements can be met using the course feature in Moodle. Then, a group of subjects can be put into a category, which is a representation of the class (VII, VIII and IX). To distinguish between groups of students in class VII-A, VII-B and so on, the group feature is used. This feature makes management easier, especially when students move on to the next class. In addition, the history of taking subjects by students is not deleted. At the senior high school level, class mapping, subjects and class groups are no different. However, there is a specialization feature at the high school level so that the area of interest is included in a class sub category or which is part of a class category. Table 1 is a summary table of the mapping of multi-class implementation needs for Moodle features.

Table 1. Table of mapping the need for multi-class implementation of Moodle features.

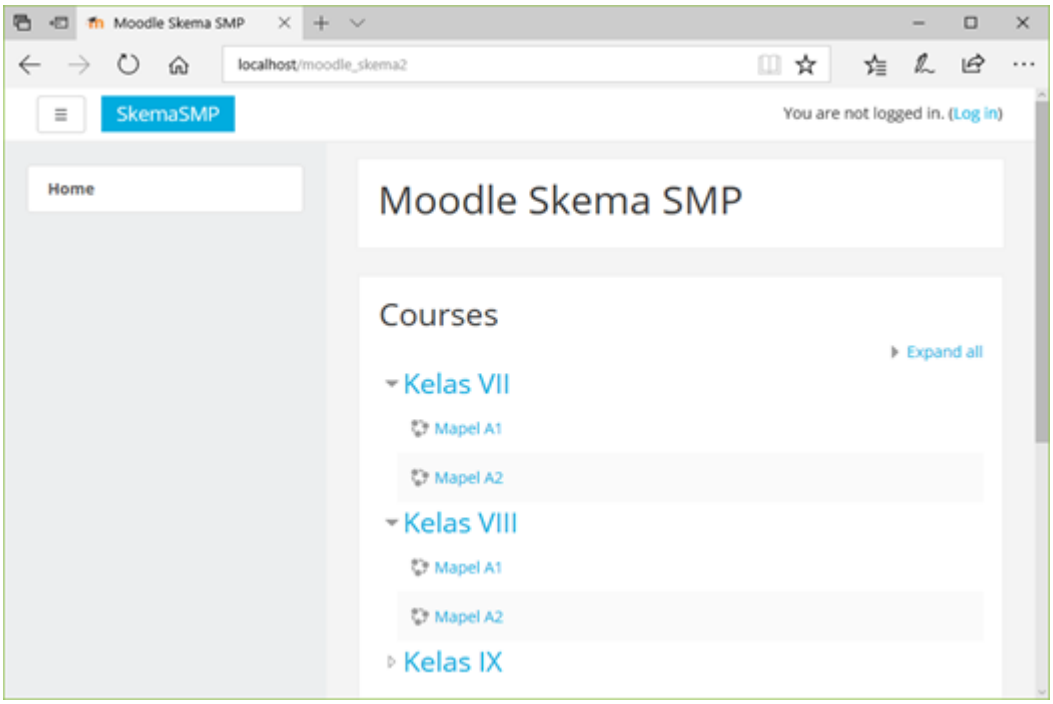
level	Need	Moodle Feature
JUNIOR HIGH SCHOOL	Class	Category
	Subjects	Courses
	Class Group	Group
SENIOR HIGH SCHOOL	Class	Category
	Areas of Interest	Sub Category (Class)
	Subjects	Courses
	Class Group	Group

The next step is to apply the mapping of Table 1 to Moodle. This implementation is used to demonstrate that the proposed concept is applicable to Moodle.

4.4 Schematic Implementation

At this stage, the scheme generated in step 4.3 is implemented in Moodle version 3.2. Figure 1 is the application of the multi-class scheme at SMP. There are 3 classes namely class VII, VIII, and IX, where each class has a subject. Each class utilizes the category and subject features as courses in Moodle. Each subject will contain a group of students in groups such as group VII-A, VII-B and so on. Figure 2 shows the group settings in a subject.

Figure 1. The implementation of the multi-class Moodle scheme in Junior High School.



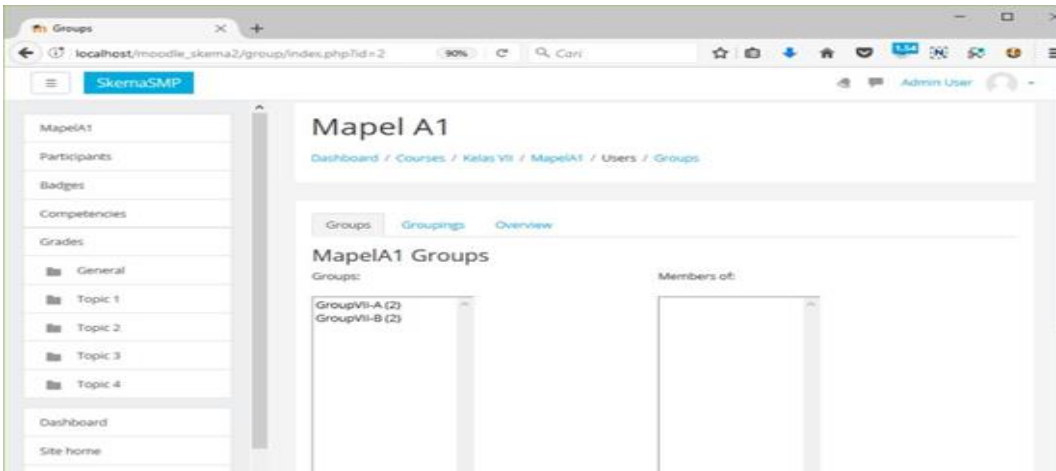


Figure 2. Group Settings on Subjects

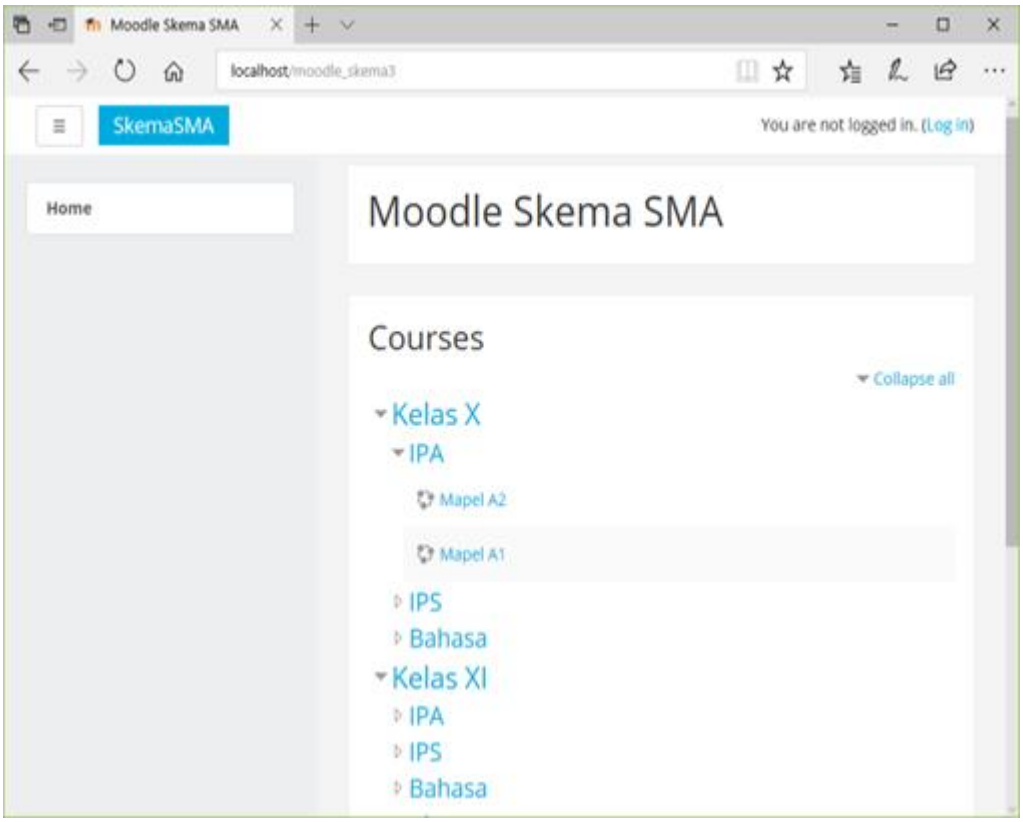


Figure 3. The implementation of the multi-class Moodle scheme in Senior High School

Figure 3 is an image of the implementation of the Moodle scheme for many classes in Senior High School. In this implementation, there are sub-categories of interest areas for each class, and within them are subjects. Then, class division arrangements such as IPA-1, IPA-2, and so on are

carried out using the group facility in Moodle. The use of categories for classes in which there are areas of interest can be done in Senior High School and is expected to facilitate the organization of many classes in the LMS for Senior High School.

CONCLUSION

LMS can be used to implement online learning for middle and high schools which have many classes. The implementation, in the Moodle LMS feature, uses the category feature to divide classes, courses to form subjects and groups to divide students into smaller classes. Especially for the application for SMA, it is necessary to make sub-categories to accommodate areas of interest so that classes can be organized based on existing areas of interest.

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