

Application of Education Management Information System in the Learning Process at SMP Muhammadiyah Weleri

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ABSTRACT

Researchers choose the type of qualitative research. To obtain data the author made observations, interviews, documentation, and data validity, namely triangulation. The results of this study include: (1). The implementation of the management information system at SMP Muhammadiyah Weleri has been well implemented which uses data management applications, namely deposits and information technology in supporting the learning process of providing educational services by facilitating learning practices using technological infrastructure, such as learning facilities by integrating computers with wifi. (2). The implementation of the learning process at SMP Muhammadiyah Weleri is before carrying out the learning process must go through three stages, namely the first planning stage. At this stage make an effective day analysis and learning program analysis, make an annual program, compile a syllabus, compile lesson plans, and make learning assessments. Secondly, the implementation stage. At this stage what needs to be done is the aspect of approach in learning, aspects of strategy and tactics in learning, and aspects of methods and techniques in learning. Learning media used in the learning process are print media (books), images, LCDs, and computers. Third, is the evaluation stage. At this stage, it is evaluated, namely learning knowledge that is tested by writing, oral, and exam question lists. Learning evaluation skills are evaluated by practice exams, and task analysis is evaluated by educators themselves. And the form of the test given to the student must remain within the standard of requirements. (3). Factors that support the existence of a management information system are the existence of a despotic system that collects data on educator data and student data. So it can be concluded that management information systems are very supportive in the world of education, especially in the learning process in junior high school.

INTRODUCTION

Good management or management in an educational institution is absolute for the survival of the institution. One of the important things that can maintain and even develop an educational institution is the proper management of information systems (Helmawati, 2015: 1). Advances in information science and technology have greatly changed the way of views and lifestyle of the Indonesian people carrying out their activities, including in the world of education.

Improving educational performance in the future requires information systems and information technology that not only function as a means of support, but more as the main weapon to support the success of the world of education so that it can compete in the global market. The education system has sought to effect fundamental changes, for example through three forms of government policy. First, increase the provision of compulsory education from 6 to 9 years. Second, directing education to be more relevant to industrial developments, with information technology, or have linkages and suitability. Third, encourage secondary school education to prepare more skilled personnel so that graduates do not view higher education as the only choice for the future (Ety Rochaety, 2006: vii).

One of the factors in creating a learning environment conducive to the viewing and hearing environment (audio-visual) which in this case can be created by utilizing information technology. So, it can be concluded that to make it easier for students to learn, one of them is by using media. The main component needed to produce an effective and quality education management information system is the availability of information technology used by human resources who can operate it.

The internal and external environment is always developing and dynamic so it creates opportunities or obstacles to growth for educational institutions. The cause is a decision made by management. Education management has the task of making decisions, but this task is a crisis aspect that demands the managerial ability to integrate and develop relevant elements into the overall situation of the educational institution.

In carrying out its duties, management will be faced with limited time, risks that may threaten the stability of educational institutions and decisions taken must be communicated to the implementing party (operational officers), such as educators and educators. To face environmental obstacles and challenges and the ability to make decisions, education management requires the right strategy so that educational goals can be achieved optimally.

In general, when someone talks about management information systems, what is illustrated is a system created to carry out data processing that will be utilized by an organization. Utilization here can mean support for routine tasks, evaluation of organizational performance, or for decision-making by the organization. Now when someone hears the term management information system, it is also common for them to imagine a computer system. The core understanding of conventional management information systems is of course contained in systematic works such as recording agendas, archives, communication among organizational managers, presenting information for decision-making, and so on (Tata Sutabri, 2005: 89).

Based on initial observations at the research site, it was found that this formal educational institution has a management information system, to respond to all changes and developments that occur in its environment, especially in the field of education and its role in the learning process. One of the reasons for implementing a management information system is to facilitate the teaching and learning process in schools because judging from the conditions of providing teaching materials or textbooks are very lacking, educators take advantage of existing information technology to get teaching materials by downloading them on the internet to facilitate the teaching and learning process.

From the explanation above, it is known how important management information systems are in the smooth learning process. For this reason, the author feels interested in researching the Application of Management Information Systems in the Smooth Learning Process at SMP Muhammadiyah Weleri.

METHODS

The approach in this study uses a descriptive qualitative approach. Research data were obtained in the form of narratives, detailed stories, and expressions from informants. The location of this research is SMP Muhammadiyah Weleri. The informants in this study were the principal and 3 teachers. The research instruments used to collect data are observation guidelines and interviews. Researchers act as key instruments or main research tools, which means that researchers must be able to reveal the application of educational management information systems in the learning process at SMP Muhammadiyah Weleri.

RESULTS AND DISCUSSION

Application of Management Information System

Management information systems are part of management science. All management functions be it planning, organizing, leading / actuating, and controlling (controlling) are needed for the success of activities in an organization, including in the field of education. One of the successes when carrying out the management function is supported by an information system that can provide the information needed by processors (leaders of the institution). According to him, the informant stated that: A management information system is an information system-oriented system that emphasizes data accuracy and target accuracy in obtaining various data and information needed by schools. Information needed such as infrastructure, financing, management, graduate competency, assessment, content standards, educators, and education staff. The data management system used here is DAPODIK which includes data on educators, education staff, student data, data on facilities and infrastructure, (Tueno, 2020), etc. which are quickly and validly submitted to agencies such as the district/city Education Office, as well as to national ministries.

Dapodik is a system of data collection and management of micro educational data online and in real time. There are main types of data managed in the diasporic system, including school data, student data, educator data, employee data, and school staff. Dapodik aims to create a database so that integrated education data governance can be created and produce representative data to meet the needs of ministries and other stakeholders. And the next goal is to support the increase in efficiency, effectiveness, and synergy of basic data collection activities integrated with one data collection system. To implement the management information system at SMP Muhammadiyah Weleri has three parts to process data, namely, the data collection section, the data processing section, and the data storage section.

Data Collection Section

The data collected is in the form of internal data and external data. Internal data is data that comes from within the organization while external data is data that comes from outside the organization, but there is still a relationship with organizational development. Internal data can be obtained from all work units in the organization, namely from Wakasek, including Wakasek for teaching, student affairs, infrastructure, and public relations. This means that functional areas and various work units within the organization can be sources of data. While external data can be obtained from the surrounding environment. External data collection should be tailored to the conditions and needs of the organization.

As explained by the informant: "In data collection must plan data, set goals, types of data and time of data collection to secure data. Data can be taken from all work units in the organization, namely, from the wakasek of student affairs, teaching, facilities, infrastructure, and finance so that each unit that has representatives will support the effectiveness of data collection to be processed into information that is useful for information users. For example, the student section includes student history data, gender, people's backgrounds old, and so on while the teaching part includes the creation of annual programs, semesters, and device Learning that will be carried out in one semester, the finance section includes financial planning, financial implementation (receipts and expenditures), while the infrastructure section includes the procurement of infrastructure facilities, and coordinates the utilization of school infrastructure."

In this case, the informant stated that: "In data collection, there are still errors or obstacles obtained when the desired data is immediately collected, from the work unit is late in providing its data. So when data is inputted, sometimes we can send it."

So, it can be said that data can be obtained from various sources in various forms. Data is obtained from facts that are in the field. Data that has a certain meaning for the development of the organization, then the data is clarified and compiled into information. Data collection can be said to run well and normally if all components in the school or all work units are on time in providing data and work together to achieve organizational goals.

Data Processing Section

To carry out data processing, of course, has a procedure, as explained by Mrs. Dwi Puji Rahayu, the Principal said: "In processing data by following a certain rare series so that the data is converted into more useful information using computer devices then inputted through the data manager, namely deposit. With a data processing system through Dapodics, the management of school data history, students, educators, and school employees is easier to integrate and store centrally and can be accessed easily within certain limits via the internet. In addition, the data update process can be done directly online and in real-time by utilizing an internet connection." In processing data with established procedures, one must ensure that these procedures are free from errors, including a. Connection of supporting equipment to check code detection, b. Ensure that the processor used does not contain errors, c. Checking the compatibility of previous programs with new programs used, d. Availability of procedures.

To prevent errors from occurring, it is necessary to provide preventive procedures that provide information about the correct procedures to operators in data processing. In this case, the informant said that: "In processing data must also be done continuously because, with the development of time, it will automatically also experience changes in data to anticipate changes in data in data processing units must always update data by reality."

Along with the development of time, automatically the facts that occur also develop. This affects the data needed. To anticipate changes in data that occur every time, data processing units must follow and update data according to reality, because this will affect the information received by managers (principals and their representatives) and will have a major impact on the development of the organization. Thus it can be concluded that data processing is carried out directly online and in real-time by utilizing an internet connection and data processing must be carried out continuously and continuously where the data processing unit must follow and update the data by reality because this will affect the information received by managers (principals and their representatives) and will have a major impact on the development of the organization.

Data Storage Section

Data storage is very necessary because its main purpose is data security. If management levels require data, both data in the form of raw materials and data that has been processed, then data can be retrieved and used according to the needs of managers (principals and their representatives). Information storage is very important because not all information owned is used today but according to needs. According to Dwi Puji Rahayu that: "To maintain the validity of school, student, educator and employee data, in the diasporic system, a special numbering system is applied that functions as a single identity that is valid for life on a national scale. The numbering system is the main key for the security of data from the despotic system. So there are three subprograms in diasporic, namely, NPSN (National School Principal Number), NISN (National Student Identification Number), and NIGN (National Parent Number)."

The national student identification number (NISN) is a single, lifelong student identification code that distinguishes one student from another. The application of student identification codes in each school in the diasporic system can be maintained validity. National school principal number (NPSN) is a single school identifier code valid for as long as the school is active. This latest code is prepared to replace (NSS-School Statistics Number) which is considered consistent and very range to changes in Indonesia's region/region. NPSN all numbers demean the number of 10 digits so that it is easy to memorize or write down. The National Teacher Identification Number (NIGN) is a teacher/employee identifier code that is valid for life. The application of the teacher/employee identifier code that applies nationally, so that teacher/employee data on the diasporic system is maintained validity.

In its implementation, through diasporic data processing, schools are given the responsibility of collecting data on students, schools, and teachers/employees and operating the despotic system that has been provided, and reporting the results of their respective work. To maintain the sustainability of valid student, school, teacher, and employee data on deposit, it is necessary to optimize the use of NISN, NPSN, and NIGN as one of the main requirements in the implementation

of activity programs at the Ministry of Education, including School Operational Assistance (BOS), Exam Numbers at school or national level, education statistics, and teacher certificates.

In this case Muh. Firman Suradi stated that: "Information storage activities are very important to ensure security, cost-effective, and easy to find and retrieve if needed at any time. In addition to human memory, information storage can be done on tools such as hard drives, flash drives, and so on." So, it can be concluded that information that has been collected and processed properly needs to be stored as well as possible considering information as one of the strategic resources in the organization, then the application of the code is carried out to maintain the validity of the data.

To run an organization, of course, mandate and responsibility are given to someone so that an organization runs following the stages that have been planned before. In this case, Afni Mardhiyah stated that: "The one who acts as the executor of the management information system is the vice principal consisting of four personnel such as Wakasek for teaching, student affairs, facilities and infrastructure, and public relations.

Things that are shared, for example, from students, namely from all students, data are inputted, starting from educational history data, family status, then all of it is entered in a diasporic system coordinated by school operators." So it can be concluded that the one who acts as the head of the management information system is the principal, as well as the person in charge, and who acts as the executor of the management information system, is the vice principal consisting of four personnel such as the wakasek of teaching, student affairs, infrastructure, and public relations. In the world of education, the use and management of education management information systems cannot be separated from educational activities themselves. These two fields need each other because management considers education as a driver of education management information systems as well as educational information systems as determinants of the education management process.

Management information systems play a very important role in the world of education, especially in the teaching and learning process. As explained, as Head of Administration. Here is the explanation: "By implementing a management information system in schools, it can be used as one of the bases in improving the quality of education where in providing opportunities for teachers and school administrators to improve the quality of communication and coaching to students. Students also further develop their personality and knowledge. For example, the use of technology by facilitating learning practices by combining computers with the use of wifi or internet networks. So, when the teaching and learning process will create an effective atmosphere, they can easily do assignments, in the teaching and learning process is not boring, students are more active and enthusiastic about learning."

Based on all the informant statements above, researchers can conclude that the application of management information systems in educational institutions is needed, because in the face of global competition educational institutions are required to provide faster, more accurate, and more comfortable information which is part of the quality of service, so that it will become a competitive advantage.

Implementation of the Learning Process

The following researchers explain the implementation of the learning process at SMP Muhammadiyah Weleri. But before we discuss further the implementation of the learning process at SMP Muhammadiyah Weleri, here is a little explanation about the learning process. The learning process is the process of interaction between students and educators and learning resources in a learning environment which includes educators and students who exchange information. Educators play a very important role in helping the development of students to realize their life goals optimally. Educators in the learning process have a very important role no matter how great the progress of science and technology, the role of educators is still needed.

To carry out the learning process, it has three stages in the learning process, namely: the planning stage, the implementation stage, and the evaluation stage.

Planning Phase

Good planning activities always start from a mature plan. Careful planning shows optimal results in learning. Planning is the process of preparing something that is carried out to achieve predetermined goals. In this case, before carrying out the learning process at SMP Muhammadiyah Weleri, you must first have a plan/preparation. As explained by Mrs. Ratna Kemalahayati Wakasek for Curriculum in her interview said that: "Before carrying out the learning process, you must have readiness, namely: first, effective day analysis and learning program analysis. To start the activity of preparing learning programs, teachers need to make an effective day analysis for one semester.

From the results of the effective day analysis, it is known that the number of effective days and holidays each week or every month makes it easier to prepare a learning program for one semester. The basis for making an effective day analysis is the educational calendar and the general calendar. Based on the analysis of effective days, an analysis of learning programs can be compiled. Second, create an annual program, and a semester program. What is meant by the annual program is that the preparation of learning programs during the academic year is intended so that the integrity and continuity of learning programs or learning topics carried out in two semesters are maintained. Semester program, that is, the preparation of semester programs is based on the results of effective day analysis and annual learning programs. Third, Compile the Syllabus.

What is meant by syllabus is the elaboration of competency standards, basic competencies to be achieved, and the points and descriptions of material that students need to learn to achieve competency standards and basic competencies. Fourth, prepare a Learning Process Plan (RPP). RPP is prepared by the teacher before carrying out the learning process. RPP is special and conditional, where each school is not the same condition of students and the infrastructure of learning resources.

Therefore, the preparation of RPP is based on the syllabus and learning conditions so that learning activities can take place as expected. Fifth, Learning Assessment. What is meant by learning assessment is the process that must be carried out by teachers in a series of learning activities. The principles of assessment include valid, competency-oriented education, fairness, objectivity, openness, and sustainability." In this case, Mrs. Mur Sutami also explained that: "Before conducting learning, educators first convey the objectives and indicators to be achieved at each learning meeting, using information technology and learning media, namely in the form of computers and LCDs."

So, it can be concluded that before carrying out the learning process first prepare everything needed in the learning process such as analyzing effective days and analyzing learning programs, making annual programs and semester programs, compiling syllabi, compiling lesson plans, and making learning assessments. Then before delivering the material/information first convey the learning objectives and learning indicators to be achieved.

Implementation Phase

This stage is the implementation stage or planning stage of the planning design that has been made by the teacher. In this stage, teachers conduct teaching and learning interactions through the application of various learning methods and technique strategies, as well as the use of a set of media. As explained by Mrs. Ratna Kemalahayati that: "In the learning implementation stage, there are several things that need to be considered by teachers, namely, first, the Aspect of Approach in Learning. This approach is in the form of an information processing learning approach, which helps students to process information obtained by an individual learning approach, that is, helps students develop personally to be more productive in situations and environments.

Second, Aspects of Strategy and Tactics in Learning. Learning strategy is the learning action carried out by the teacher which is considered strategic to actualize the learning process. Related to the execution of the strategy are learning tactics. Learning tactics are related to technical actions to execute strategies. To implement the strategy, technical tips are needed, so that the strategic value of every activity carried out by teachers, and students in the classroom can be realized. Third, Aspects of Methods and Techniques in Learning. Methods are part of several strategic actions that concern how, how learning interactions are carried out. The methods used in the learning process are lectures, discussions, group work, simulations, and so on. And the learning media used are, print media (books), images, LCDs and computers."

This was also explained by Mrs. Nurul Anjani: "To develop the potential of students, students create learning groups directed directly by subject teachers using learning media in the form of computers and LCDs, students look for the material they need then discuss it or solve problems that are not understood with other group friends." Educators must also be able to understand and provide solutions to all difficulties faced by students in the learning process.

For this reason, educators are required to know their students, as explained by Mrs. Mur Sutami: "If students have difficulties in learning, then subject teachers guide students by using learning media to explain lessons and practice so that students easily understand what the educator explains." So it can be concluded that in the implementation stage of the learning process, that is, using aspects of the approach, using aspects of strategies and tactics in the learning process, using methods and techniques in the learning process. The methods used in the learning process are lectures, discussions, groups, simulations, and so on. The media used in the learning process are print media (books), images, LCDs, and computers.

Evaluation Phase

At the evaluation stage, the teacher's activity is to assess the learning process that has been carried out. Evaluation is a tool to measure the achievement of goals. With evaluation, the quantity and quality of learning objectives can be measured. In this case, explained by Mr. Ary Prabowo, that: "Evaluation of learning knowledge can be done by written exams, oral, and exam list questions. Evaluation of learning skills can be done by practice exams, skill analysis, and task analysis as well as evaluation by learners themselves.

Attitude learning evaluation can be done with attitude fill lists, attitude checklists tailored to program objectives, and differential semantic scales." Mrs. Nurul Anjani also explained that: "Whatever form of test is given to students, it must still be following standard requirements, namely the test must: Have Validity, that is, measure or assess what you want to measure or assess, especially regarding basic competencies and standard materials that have been studied. Have reliability, that is, the determination of the results obtained by students if tested again with the same test. The implementation of the evaluation must be efficient and practical."

So it can be concluded that in carrying out the evaluation stage, what needs to be evaluated by educators is learning knowledge that is tested by writing, oral, and a list of exam questions. Evaluation of learned skills evaluated by practice exams, and analysis of tasks evaluated by educators themselves. And the form of tests given to students must still be with standard requirements. The existence of information technology is very helpful in the implementation of the teaching and learning process.

Make it easier for educators to convey information, and make it easier to find teaching materials. As explained by Mrs. Nurul Anjani that: "Information technology is very supportive in the teaching and learning process because it helps educators convey information using learning media such as LCD and computers, information technology also helps educators and students in finding teaching materials to facilitate the teaching and learning process."

So, it can be concluded that the implementation of the learning process is the interaction of students with educators and learning resources in a learning environment which includes educators and students who exchange information using learning media in the form of print media (books), images, LCDs, computers, and so on. And utilize information technology to convey information and find teaching materials to facilitate the learning process.

CONCLUSION

Based on the data collected and explained in the previous section, researchers can conclude that, the application of management information systems is very important in educational institutions. Where using data processing applications, namely deposits and information technology in supporting the learning process provides educational services by facilitating learning practices using technological infrastructure, such as learning facilities by integrating computers. The implementation of the learning process before carrying out the learning process must go through three stages, namely, first, the planning stage. Second, is the implementation stage. Third, is the evaluation stage. In this stage, what is evaluated is learning knowledge that is tested by writing,

oral, and a list of exam questions. Evaluation of learning skills evaluated by practice exams, and analysis of tasks self-evaluated by educators. And the form of the test given to students must still be with standard requirements.

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