

## The Implementation of ICT-Based Management Information Systems in Improving the Effectiveness of Administrative Services

**Mohammad Ardhi**, Institut Agama Islam Negeri Bone, Indonesia\*

**Abdul Asis**, Institut Agama Islam Negeri Bone, Indonesia

**Muh. Bakri Alif**, Institut Agama Islam Negeri Bone, Indonesia

**Astuti**, Institut Agama Islam Negeri Bone, Indonesia

### Abstract

The need for information today is increasingly urgent in line with the currents of globalization that occur in all parts of the world. Implementation of a management information system based on information and communication technology is an absolute necessity and can provide a competitive advantage so that it becomes a high priority. In line with the development of science and technology, the demands of providing fast information are also increasing. The results of this study indicate that (1) a management information system can assist the administration of students in SMP Negeri 7 Watampone which is supported by adequate facilities and infrastructure and human resources that support administrative services (2) factors that support management information systems in Supporting student administration services is adequate school ICT equipment facilities, while the inhibiting factors are the down cycle and database maintenance (system renewal) during the data collection process. The implication of this research is that education personnel are expected to be required to be able to develop information systems to improve educational services by utilizing adequate technological innovations.

**Keywords:** Management Information Systems, ICT, Administrative Services

### \* Corresponding Author:

Mohammad Ardhi,

Institut Agama Islam Negeri Bone

Jln. Hos. Cokro Aminoto Kecamatan Tanete Riattang Barat, Kabupaten Bone, Sulawesi Selatan

Email: [mohammedardhi11@gmail.com](mailto:mohammedardhi11@gmail.com)

**Citation:** Ardhi, M., dkk., (2023). The Implementation of ICT-Based Management Information Systems in Improving the Effectiveness of Administrative Services. *DIDAKTIKA: Jurnal Kependidikan*, 17(1), 99 – 108.

<https://doi.org/10.30863/didaktika.v17i1.8864>

The article is published with Open Access at: <https://jurnal.iain-bone.ac.id/index.php/didaktika/>



Published by Fakultas Tarbiyah IAIN Bone. This work is licensed under the Creative Commons Attribution-NonCommercial- ShareAlike 4.0 International License.

## **INTRODUCTION**

The current need for information is increasingly urgent in line with the flow of globalization that occurs in all parts of the world. The implementation of the current information needs system is increasingly urgent in line with competition-based management information becoming an absolute necessity and can provide a competitive advantage so that it becomes a high priority (Hanifa Zakia, 2019). The use of management information systems in educational institutions is urgently needed, because in the face of global competition, educational institutions are required to provide information faster, more accurately, and more comfortably (Eti Rochaety, 2006). Among these needs is the provision of access to data and information obtained from the process of collecting, collecting, processing, holding, storing, and sending until the information is received by the decision-maker (Hisbanatro, Vico, 2014). The rapid advancement of science has changed the perspective and lifestyle of the community, including in the world of education. Improving educational work in the future requires an information system that supports the success of an institution so that it is able to compete in the global market (Ismail and Sinen, 2017).

Management information systems are a computer-based system that provides a variety of information for several users who have similar needs (Moekijat, 2005), information systems are also integrated between humans and machines that are able to provide information (Davis, 1984). Sarwono stated that the advancement and development of world civilization also affects its supporting tools, including communication technology which is used as a tool to process and transfer the needed information data tools, communication technology as well as the entry of new norms and values from the outside which in turn these new norms and values enter the environment of family and community life (Salito, tth). The purpose of implementing management information systems in educational institutions is to support the activities of the management function; planning, organizing, staffing, directing, evaluating, coordinating, and budgeting (Hani Handoko, 1999).

Talking about education, today the demands of education do not only give rise to quality based on the fulfillment of adequate standards as an answer to various demands. Quality is absolutely necessary but does not stop at quality. Therefore, in teaching and learning activities and administration, components such as high performance, efficiency,

effectiveness and productivity supported by ICT and solid values are a unit that must be neatly and beautifully integrated into the management system. This kind of management system is called a strength-based management system. Such a management system goes far beyond the demands of quality that can be perceived as the end point of education. Currently, ICT (Information Communication Technology) or commonly referred to as ICT (Information and Communication Technology) greatly affects all aspects of life and makes society more dynamic and becomes a very important part of educational and business organization/institutional/institutional activities. The use of ICT is not just a prestige or lifestyle of modern education management, but its presence also serves as a strengthening of governance, accountability and public image of the educational institution which leads to increased performance and quality of output (Husaini Usman, 2006).

The application and development of ICT in education in Indonesia is one of the policies of the Ministry of National Education. The application of ICT in the development of education in the future is not just following global trends but is a strategic step in an effort to improve access and quality of services to the community. Internally, the institutional application and development of ICT is the backbone of the education governance system towards transparent and accountable good governance. Efficiency will be achieved through the use of ICT without having to damage human values. In fact, the ICT system developed must be able to raise human dignity and values by creating more quality and efficient public services, so that it can meet human needs in this global and competitive era.

The 7 Watampone State Junior High School is expected to anticipate educational programs and services that are able to compete and side by side with international schools and are reliable in facing the global era and meeting the demands of local and national development needs. In this case, the researcher will delve deeper into the SMP Negeri 7 Watampone school as the object of the research, on the grounds that SMP Negeri 7 Watampone has implemented an ICT-based information system but it is often an obstacle to its implementation, for example, employees who still choose manual input and rely on admins for data input, besides that there is still a lack of operator employees in charge of IT (information technology) to implement it so that when there is Problems with output and input or problems with technological devices still depend on non-employee technicians or are transferred by experts. Realizing the importance of information system practice

combined with the advancement of information technology developed in reliable information systems in improving the quality of education, so as to produce accurate, good, actual information that can be enjoyed by all users of educational services and make excellence in providing educational services.

## **METHOD**

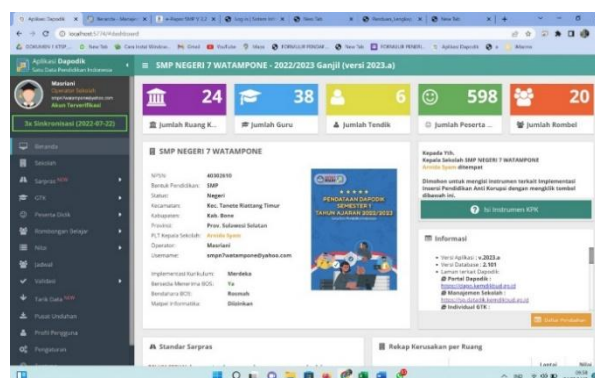
The type of method used in this study is a qualitative method, this method was chosen because it aims to determine how to find, collect and analyze data from the results of the research. This research was conducted on July 23, 2022 at SMP Negeri 7 Watampone. This type of research uses a descriptive qualitative method where the researcher uses the field research technique. Field research is research conducted using information obtained by the author at the research site. The subjects in the study are school operators, while the informants supporting the research are the principal, deputy principal for facilities and infrastructure, educators and education staff and students. Data was collected in the form of observations, documentation and interviews. Then the results are analyzed using data analysis techniques in the form of data collection, data reduction, data presentation and conclusion drawn.

## **RESULTS AND DISCUSSION**

### **Application of ICT-Based Management Information System**

Management The management information system understood by schools is a system oriented to information systems that attaches importance to data accuracy and accuracy of targets in obtaining various data and information needed by schools. Information needed such as infrastructure, financing, management, graduate competencies, assessments, content standards, educators and education personnel. The data processing system used here is DAPODIK which includes data on teachers, education personnel, student data, infrastructure data and so on which is quickly and validly submitted to relevant agencies such as to the Regency/City Education Office and to the Ministry of National Education.

Figure 1.0 DAPODIK Application SMPN 7 Watampone



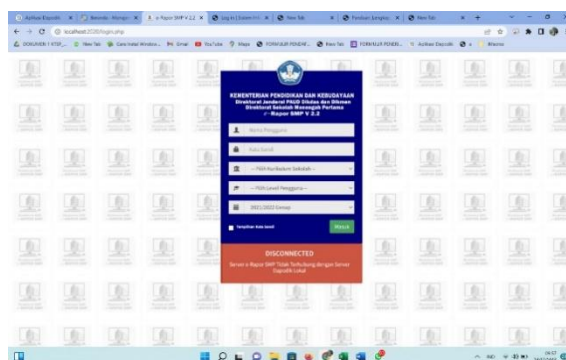
This application is accessed by schools through the participation of operators, the DAPODIK application can also be accessed by teachers, for example for the purpose of accessing personal data for example for input of curriculum vitae data, education history and other personal data online. The DAPODIK application provides various access ranging from teacher data needs, facilities and infrastructure, student data, and classroom groups.

From the results of interviews with the operator, he said that the obstacle to the implementation of this application based on his experience is usually a lag or busy central server, because when the operator does synchronous access to data, most often it is only a down cycle, database maintenance (system update) and for the local problem it is only a problem of collecting files on students, namely when the operator does Verval students regarding automatic verification improvements and what is needed is Supporting files from students such as family cards, birth certificates and other personal data, all of them require a long process because not all students collect data at the right time, and even the time delay is up to more than a month just because of the collection of files. For network access, for example, using Wi-Fi is not too problematic and if it is indeed problematic, the solution is also for the operator to use the hotspot tethering ICT device so that input needs can be reached and accessed.

To facilitate access to the DAPODIK application, the operator transfers data to the ANBK (computer-based national assessment) server because this server is considered to have sufficient capacity, and access it online so that this DAPODIK application can be accessed on any device such as personal PC (personal computer) or personal smartphone devices. And this applies if there is approval from the school because each school has its

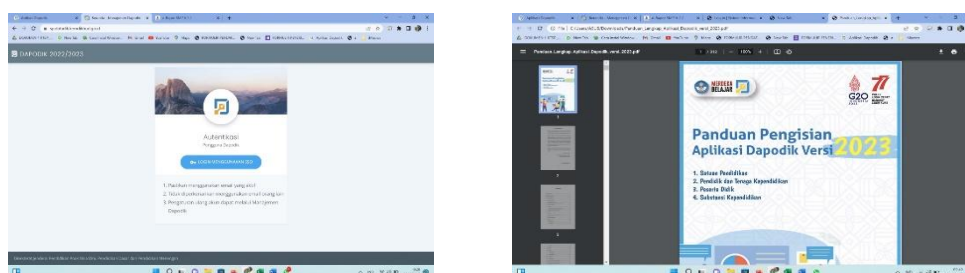
own private not to facilitate publicly. With this facility, teachers are given the convenience of accessing student score data input, for example filling out report cards through e-report cards. E-Rapor SMP as one of the assessment accountability instruments by educators that can help and facilitate educators' tasks in planning and implementing assessments and data are synchronized in DIAPODIK. In addition, diapodik has several options to be accessed for various purposes such as, the DIAPODIK portal, VervalSP, boss funds for scholarship and assistance funds, teacher professional allowances (certification), and input by school operators with certain requirements as a reference for receiving allowances.

Figure 2.0 Display of the e-Rapor Application log in



All data in the DIAPODIK application, especially for account access, is held by the operator as an admin, all existing users are created by the admin for the purpose of login access, therefore each account user has the right for the purpose of data input independently by being given special guidance, but there are also users who have difficulties and are used to rarely logging in, so cases like this are the operators who help to access the data input of the account user.

Figure 3.0 Diapodik login view and charging guide



From some of the information above, it shows that the implementation of the management information system is coordinated by school operators in the teaching, student affairs, infrastructure, and public relations sections. What is divided, for example, from student affairs, is that all students are input data starting from educational history data, family status, then all of that is entered into a dapodik system. There are several ICT devices that support the implementation of management information systems such as teacher and employee computers, laptops, LCD projectors, Wifi Routers, audio speakers and printers.

Figure 4.0 of the ICT rank supporting the SIM



This 7 Watampone State Junior High School where the principal as a top leader has a main role where he also provides services to students in terms of the use of information technology through the use of wifi or internet networks, students are directed to be able to manage hardware and software devices so that it is easier for students to access information, learn, expand horizons, and get to know information technology widely.

### **Administrative Services**

Quality In order to support the smooth teaching and learning process in school institutions, a section that supports these activities is needed, namely Administration. With the development of the era that is now better known as the era of globalization, the administrative function must be able to improve the quality of technology, especially information technology or better known as the computerized era. This is intended to make

work more effective and to provide better service. Therefore, every administrative staff is required to master the technology.

School operators are in charge of data collection that in data collection must plan data, set goals, data types and data collection times to data security. Data can be taken from all work units in the organization, namely from the vice president of student affairs, teaching, infrastructure and finance so that each work unit that has representatives will support the effectiveness of data collection to be processed into useful information for information users. For example, Dapodik aims to produce representative data and information to meet the needs of ministries and other stakeholders as well as to support the improvement of efficiency, effectiveness, and synergy in basic data collection activities that are integrated in one data collection system. In addition to using Dapodik, student administration is also done manually as school bookkeeping data in the form of hard copies.

### **Data Storage Section**

The data storage section is tasked with storing data or related to school archives, making it easier to find and retrieve raw or processed data when the data is needed. Therefore, it can be concluded that the use of information technology as a data storage tool is very necessary because it aims to maintain data security and minimize storage costs. In addition, information storage is also very important because not all information is used now but when needed.

### **CONCLUSION**

Based on the analysis of the research results that have been presented in the previous discussion, the researcher draws the conclusion that SMPN 7 Watampone is quite good in implementing a management information system in supporting student administrative services, therefore it can be concluded that the application of a management information system in supporting student administrative services is very important in educational institutions. to gain a competitive advantage with other educational institutions. SMPN 7 Watampone uses Dapodik 183 as a support tool for student administration which is directly supervised by the central ministry of education and culture. Dapodik contains complete data on the students themselves, parents, data collection of educators and education personnel, data collection of student mutations, study groups, subjects, outstanding students, and data

collection of students who receive the Smart Indonesia Card. In addition, with the support of facilities and infrastructure that support the implementation of SIM such as the provision of stable internet access (Wi-Fi), SMPN 7 Watampone can provide good educational services by utilizing the technology and facilities that have been provided.

Related to the obstacles to the implementation of information systems, especially in the use of the DIAPODIK application based on the operator's work experience, it is usually a lag or busy central server, because when the operator has synchronous access to data, most often only server maintenance and for local constraints it is only a problem of collecting files on students, namely when the operator does Verval students regarding automatic verification improvements. In order for the implementation of the information system to run well, the readiness of resources to integrate the use of ICT ranks. There are several ICT devices that support the implementation of management information systems such as teacher and employee computers, laptops, LCD projectors, Wifi Routers, audio speakers and printers.

The author realizes that there are still shortcomings in our journal, therefore suggestions and criticisms are needed by readers. It is also hoped that this journal will be useful for readers and can be used as reading material and reference in making other written works, and for that reason hopefully in the future SMPN 7 Watampone can implement an information system that is advanced, superior, and competitive to become a good applied technology development institution.

## **REFERENCE**

- Eti Rochaety, dkk. *Sistem Informasi Manajemen*. Jakarta: Bumi Aksara, 2006.
- Gordon B. Davis. *Kerangka Dasar Sistem Informasi Manajemen*, Bag II. Jakarta: Pustaka Binaman Pressindo, 1984.
- Hani Handoko. *Manajemen*. Yogyakarta: Bpfe-Yogyakarta, 1999.
- Hanifa Zakia. "Pemanfaatan Sistem Informasi Manajemen Sebagai Strategi Dalam Menjalinkan Kerjasama Sekolah Dengan Wali Murid Di Sekolah Menengah Pertama Negeri 1 Talamu." *Jurnal Bahana Manajemen Pendidikan*, 8(1) (2019).
- Hisbanatro, Dan Vico, Y. *Sistem Informasi Manajemen Pendidikan*. Yogyakarta: Graha Ilmu, 2014.
- Husaini Usman. *Manajemen: Teori, Praktek dan Riset Pendidikan*. Jakarta: Bumi Aksara,

2006.

Ibnu Syamsi. *Pengambilan Keputusan dan Sistem Informasi*. Jakarta: Bumi Aksara, 1995.

Ismail, La Ode. Dan Sinen, Ristati. “Penerapan Sistem Informasi Manajemen Pendidikan Dalam Proses Pembelajaran Di Smp Negeri 21 Makassar.” *Jurnal Idaarah: Manajemen Pendidikan*, 1(2) (2017).

Moekijat. *Pengantar Sistem Informasi Manajemen*. Bandung: Cv, Mandar Maju, 2005.

Sarlito W. Sarwono. *Psikologi Remaja*. Jakarta: Raja Grafindo, N.D.