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Utilizing The Edu-Panda Application To Improve Personnel And Academic Administration Services

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Abstract

Information and communication technology have influenced various aspects of life, including education. In the context of schools, using administration-based applications has become increasingly important to facilitate and enhance the efficiency of administrative processes. This abstract presents an overview of the utilization of the edu-Panda application in MAN 2 Kota Malang (a high school in Malang City) and its impact on the effectiveness of school administration management. This study aims to describe the implementation of an educational management information system (MIS) that includes utilizing management information systems and its implementation on administrative services at Madrasah Aliyah Negeri 2 Kota Malang. This research adopts a qualitative approach with a descriptive method. Data is collected through techniques such as interviews, observations, and documentation as supporting evidence. Data analysis is conducted using qualitative analysis techniques, including data collection, data reduction, data presentation, and conclusion. To ensure the validity of the data, the researcher employs triangulation techniques, including source triangulation and technique triangulation. The results of this study indicate that the planning of the edu-Panda application in Madrasah Aliyah Negeri 2 Kota Malang is based on the school's needs. After the system development is completed, a feasibility test is conducted before reaching the system installation phase. Thus, the system can operate according to its intended purpose. The implementation of the edu-Panda application in Madrasah Aliyah Negeri 2 Kota Malang can be used to track attendance, information, allowances, graduation, and matters related to personnel and academics. Based on the five dimensions of service quality used to assess and measure service quality in Madrasah

Aliyah Negeri 2 Kota Malang, namely Tangibles, Reliability, Responsiveness, Assurance, and Empathy, the services in Madrasah Aliyah Negeri 2 Kota Malang are considered good.

Keywords: Management Information System, edu-Panda, Staffing, Academic

Abstrak

Penggunaan teknologi informasi dan komunikasi telah mempengaruhi berbagai aspek kehidupan, termasuk dunia pendidikan. Dalam konteks sekolah, pemanfaatan aplikasi berbasis administrasi menjadi semakin penting untuk mempermudah dan meningkatkan efisiensi proses administratif. Abstrak ini menyajikan gambaran tentang pemanfaatan aplikasi edu-Panda yang ada di Madrasah Aliyah Negeri 2 Kota Malang dan dampaknya pada efektivitas pengelolaan administrasi sekolah. Penelitian ini bertujuan untuk mendeskripsikan penerapan sistem informasi manajemen (SIM) pendidikan yang meliputi pemanfaatan sistem informasi manajemen, serta mendeskripsikan implementasinya terhadap pelayanan administrasi di Madrasah Aliyah Negeri 2 Kota Malang. Penelitian ini menggunakan pendekatan kualitatif dengan metode deskriptif. Pengumpulan data dilakukan dengan teknik wawancara, observasi, dan dokumentasi sebagai penguat. Analisis data dilakukan dengan teknik analisis kualitatif yang meliputi pengumpulan data, reduksi data, penyajian data dan penarikan kesimpulan. Sedangkan untuk memeriksa keabsahan data, peneliti menggunakan teknik triangulasi yaitu triangulasi sumber dan triangulasi teknik. Hasil penelitian ini menunjukkan bahwa perencanaan aplikasi edu-Panda di Madrasah Aliyah Negeri 2 Kota Malang disusun berdasarkan kebutuhan dari sekolah. Setelah pembangunan sistem selesai, dilakukan uji kelayakan sebelum sampai pada tahap pemasangan sistem. Dengan demikian sistem dapat berjalan sesuai dengan tujuan. Implementasi aplikasi edu-Panda di Madrasah Aliyah Negeri 2 Kota Malang dapat digunakan untuk melacak kehadiran, informasi, tunjangan, kelulusan, dan hal-hal yang berkaitan dengan kepegawaian dan akademik. Berdasarkan lima dimensi kualitas pelayanan yang digunakan untuk melihat dan mengukur kualitas pelayanan di Madrasah Aliyah Negeri 2 Kota Malang yaitu Tangibel, Keandalan, Ketanggapan, Assurance, dan Empathy, pelayanan di Madrasah Aliyah Negeri 2 Kota Malang sudah baik.

Kata Kunci: Sistem Informasi Manajemen, edu-Panda, Kepegawaian, Akademik

Introduction

Management of Information and Communication Technology (ICT) Systems in this era of globalization is something that is needed by every government institution in the socio-political, economic, and educational fields. Therefore, education needs a tool to be able to make information a very useful tool in forming a much better education, one of which is a scientific

discipline, namely the Education Management Information System. In this case, it is also regulated in Law Number 11 of 2008 concerning Information and Electronic Transactions, it is stated that: National development is a continuous process that must always be responsive to various dynamics that occur in society; that the globalization of information has placed Indonesia as part of the world information society, necessitating the establishment of

regulations regarding the management of Information and Electronic Transactions at the national level so that the development of Information Technology can be carried out optimally, evenly and spread to all levels of society to make the nation's life smarter¹.

This was then strengthened by Minister of Education and Culture Regulation Number 46 of 2019 article 77 point d regarding the details of the tasks of work units within the Ministry of Education and Culture, namely "carrying out management and development of management information systems in the field of higher education"². Further explanation, we often encounter a process of obtaining data which is then formed into information using a network and then further developed into knowledge by the user on various occasions³. Knowledge itself has the authority to become the basis of a policy which is formed from the data itself, then becomes information, and finally becomes knowledge which is an integral part of the information system itself. Therefore, the implementation of an application-based management information system needs to be implemented in educational institutions, to simplify the administration system, services at schools, and decision-making.

Information plays a very important role in aspects of life. Whoever controls

information has more opportunities than those who don't. Optimal use of information can provide innovative ideas for development. Information and Communication Technology has a very complex role, one of which is as a tool to help humans overcome or resolve problems and daily activities or work. Ease of obtaining information and communicating is an advantage obtained from information and communication technology. The presence of technology is believed to be a tool that can change everything. We can see that the technological discoveries of genius scientists started with the aim of making human activities easier, such as the invention of the telephone which aims to make it easier for us to communicate with each other⁴.

Based on data obtained from the Central Bureau of Statistics of the Republic of Indonesia, over the last five years, the use of information and communication technology (ICT) in Indonesian households has grown rapidly. The proportion of the population using cell phones continues to grow, reaching 63.53% in 2019. (Widi 2023) The increase in cell phone use is followed by an increase in home computer ownership and internet access reaching 18.78% for computer ownership and 73.75% for access internet at home. Internet use also increased from 2015 to 2019, as evidenced by the

percentage of the population who had Internet access increasing from around 21.98% in 2015 to 47.69% in 2019. Compared to the previous year, the percentage of households that had a landline telephone was around 4.01% in 2015 and around 2.09% in 2019. In 2015, around 21.98% of the population aged 5 years and over had internet access in the last three months, increasing to 43.51% in 2019⁵.

The use of Information and Communication Technology (ICT) in Indonesia has experienced a growth of around 60.4%⁶. This indicates that the use of ICT systems is an interest that has begun to enter the mindset and needs of Indonesian society so knowledge is needed in managing ICT systems considering that many users, not only adults but also children aged 5 years, are already using them.

The Ministry of Education, Culture, Research, and Technology has four priority agendas that will be championed at the G20 event, namely: Universal Quality Education, Digital Technologies in Education, Solidarity, and Partnership, and The Future of Work Post-COVID-19. In the world of education, the use of Information and Communication Technology (ICT) systems cannot be separated from educational activities themselves. The development of the Information and Communication Technology (ICT) system is a new system

that is a shift from an analog system to a completely automatic one, which is then called digitalization. These two fields need each other⁷. In describing the relationship between these two aspects, management assesses education as a driving force for the education digitalization system, while the information system and education digitalization are determinants of educational performance.

Advances in communication technology, for example, the internet, have had a significant impact on the management industry, especially education management. With the presence of the internet, media content can be combined on one device. Previously separate media content, such as text, images, video, and sound can now be used on one device, regardless of time and place. Consumers also become active as they receive additional information and features on certain topics. For example, when looking for information about educational institutions, the world of education, etc. it can be reached via smartphone where consumers can view text, video, radio, music, and film information at once.

Digital is a complex and flexible method which makes it something main in human life. Meanwhile, digital theory is a concept of understanding the development of technology and science, from everything manual to automatic, and everything

complicated to concise. And now, the era of digital technology has begun. Everything is technology. Is this what is called the modern era, the era that scientists have predicted long ago? An era where all human activities are controlled by sophisticated technology.

Based on Nur Rahmi Sonia's research findings, IAIN Ponorogo students wrote a paper entitled "Implementation of the Education Management Information System (Simdik) in Improving the Quality of Education at Madrasah Aliyah Negeri 2 Ponorogo". This research explains that the implementation of the education management information system at MAN 2 Ponorogo takes the form of activating the SIMPATIKA application, namely the Ministry of Religion's information system for educators demonstrating e-learning applications, the BNI eduPATROL application, unique mark instructor and student applications, and online applications (PPDB) for student confirmation. Several things help or harm the implementation of SIMDIK at MAN 2 Ponorogo. The technical weaknesses of the application and student barriers make it difficult for students to participate in the learning process.⁸

Asna Ahmad's research entitled "Utilization of the Computer Digitization System in the Gorontalo Regional Library" produces the following conclusions: 1) National Library operational guidelines refer

to the SOP for the Gorontalo Regional Library in using the computer digitization system. 2) The main program application used when using the PC digitization framework at the Gorontalo Regional Library uses PDF. 3) The impact of implementing the computer digitization program is to improve the function of the library, especially simplifying the process of borrowing books and promoting visitors to library services, and the JPG application currently utilizes the SLIMS program, namely the Senayan Library Management System. Looking at these findings, it can be assumed that the use of the PC digitization framework for the Gorontalo Regency Regional Library already has good work technique standards and application programs that collaborate with library managers⁹.

Based on the explanation above, in facing educational transformation in the 5.0 era, many Madrasahs are currently still lagging in utilizing systems to improve personnel and academic administration services. Optimal use of information can provide innovative ideas for the development of the Madrasah. So in this case, the researcher is interested in the management information system at Madrasah Aliyah Negeri 2 Kota Malang because several other madrasahs rarely use applications made by the madrasahs

themselves to support their main activities, namely activities that improve personnel and academic administration services. In this case, the researcher will discuss planning the Edu-Panda application, implementing the Edu-Panda application to improve personnel and academic administration services, as well as evaluating the Edu-Panda application to improve personnel and academic administration services.

Method

The research method used in this research is a qualitative method with a descriptive design, namely research that provides a careful description of certain individuals or groups regarding the circumstances that occurred ¹⁰. Research methods for studying natural conditions (as opposed to experiments), where the researcher is the primary vehicle, and the data collection techniques are triangulation (joint), inductive, and qualitative data analysis, findings emphasize meaning over-generalizations ¹¹. In this case, the research location regarding the use of the Edu-Panda application for personnel and academic administration services is at MAN 2 Kota Malang, including planning, implementation, and evaluation. Informants or key persons as sources are the Principal, Chair of P3TIM (Center for the Study and Development of Madrasah Information Technology), Educational Staff, Admin, teachers, and

students who can provide accurate information.

Data collection techniques use interviews, observation, and documentation. Testing the validity of the data uses a data credibility test, namely testing the trustworthiness of research data by (1) re-examining the data collection tools; (2) re-examine the report results obtained through interviews; and (3) checking using the triangulation method, namely triangulation of data sources and techniques. The data analysis technique uses qualitative descriptive analysis techniques which include data reduction, data presentation, and conclusion¹².

Results and Discussion

Edu-Panda Application Planning

Utilization of information technology is an effort to improve technological tools such as computers, laptops, cellphones, printing equipment, and LCD projectors in carrying out processes to support learning and administration in educational institutions through the help of applications. Based on changing times which continue to develop, the use of information technology in the world of education. Therefore, in the current era, the digitalization of information technology has become part of a primary need.

Information technology not only functions as a capture but also functions as a processor, which means that the data received can be used as information. This means that data can be changed to other forms, can be reduced, added, and can be duplicated. Bagaskoro in his book explains that information technology functions as a capture of facts related to science¹³.

The findings of research conducted by researchers regarding planning for implementing Edu-Panda. In MAN 2 Kota Malang, planning for implementing Edu-Panda is based on school needs. This is by Tata Sutabri's system life cycle theory, which includes requirements, system development, system installation, system operation, and system obsolescence. The person responsible for the school implementing the data framework creates a framework based on these requirements so that the framework achieves the specified objectives. After system construction is complete, a feasibility test is carried out before proceeding to the installation stage. This prevents any problems that may arise during its implementation. As a result, the system can perform its intended function¹⁴.

As an institution under the Ministry of Religion, MAN 2 Kota Malang has implemented madrasa management using a Management Information System to current technological developments. To realize

MAN 2 Kota Malang as a superior madrasah that always strives to realize the hopes of the government and society through a series of activities and work programs oriented towards improving the quality and competitiveness of graduates who have moral character. One of them is implementing a management information system to achieve quality education. As stated by the principal of MAN 2 Kota Malang, stated that to keep up with today's modern times, Madrasahs need to plan completely digitalized services and the importance of maintaining religious moderation which has become the policy of the Minister of Religion as well as tolerance in the environment by always establishing communication and cooperation with madrasa community. The edu-Panda application aims to build a digital-based ecosystem and service platform, administrative governance system, and management of educational institutions to simplify and speed up services on one easy-to-use platform.

This was also explained by the chairman of P3TIM that the Information System at MAN 2 Kota Malang now uses an application created by the institution itself called edu-Panda. Edu-Panda is a multi-purpose application that can make it easier for MAN 2 Kota Malang employees and students in the attendance process and

administrative matters. Through this edu-Panda application service, you can help and manage data related to stakeholders in MAN 2 Kota Malang, including those related to personnel, academics, etc. This was also explained by the chairman of P3TIM that the Information System in MAN 2 Kota Malang is now using an application created by the institution itself called edu-Panda. Edu-Panda is a multi-purpose application that can make it easier for MAN 2 Kota Malang employees and students in the attendance process and administrative matters. Through this edu-Panda application service, you can help and manage data related to stakeholders in MAN 2 Kota Malang, including those related to personnel, academics, and so on.

Planning according to Sondang P. Siagian in Hasibuan is the entire process of thinking and determining carefully the things that will be done in the future to achieve the goals that have been set ¹⁵. Planning can be interpreted as an effort to plan an activity or activities to be carried out to achieve a predetermined goal ¹⁶. Thus, planning is a careful and planned formulation made by an organizational group of various aspects and activities, including the use of existing and possible resources. Therefore, a plan is the result of decision making which is very vital in management.

The results of the research that researchers obtained in the field, MAN 2 Kota Malang in the use of the edu-Panda application MAN 2 Kota Malang used planning which began with forming a team. This team consists of a chairman and other staff members according to their fields. The planning for Edu-Panda itself has been around for a long time, from what was originally Sispanda, namely web-based GTK attendance only, then turned into an Edu-Panda application, namely an application that has been integrated with other fields such as human resources, academics, student affairs, finance, and so on. The plan for the edu-Panda application itself was when there was a change in the chairman of P3TIM around 2016. The development of the edu-Panda application itself has been going on for 2 years.

Apart from that, the plan also discussed the development of the edu-Panda application which will later develop, such as SIAKAD, where the menu in edu-Panda is not only attendance and information but also many menus such as personnel, curriculum, finance, facilities, and infrastructure, PTSP, BK, UKS, student affairs, etc. as well as adding a menu for e-learning in terms of learning to simplify and speed up its implementation.

Implementation of the edu-Panda Application

Implementation is the process of carrying out everything that has been planned and prepared in advance to achieve the goals that have been set. To achieve its goals, the organization requires management assistance in various special activities that suit the needs of MAN 2 Kota Malang. Zulkifli Amsyah emphasized that planning, setting goals, and elaborating goals are components of management. Organizing is the process of placing employees in groups based on their roles and responsibilities so that they can achieve their goals. Carrying out instructions, tasks, and directions is action. Management checks to ensure whether implementation has been carried out according to design, the level of progress achieved, and arrangements that have not brought progress, as well as making adjustments to the implementation carried out by the poor by the plan¹⁷.

The use of Management Information Systems (SIM) in the education sector, especially in schools, is very useful because it can make it easier for schools to manage the collected data¹⁸. George M. Scot in Nurul defines MIS as a collection of information system interactions that serve operational and managerial requirements¹⁹. Meanwhile, Sabandi pointed out that the increasingly widespread application of science and technology can improve the quality of learning²⁰.

The results of research that has been carried out regarding the implementation of the edu-Panda application in MAN 2 Kota Malang, namely in terms of data management, MAN 2 Kota Malang requires data or information from various school components so that education can be carried out effectively and efficiently and school goals can be achieved. By implementing a management information system, MAN 2 Kota Malang also continues to innovate educational services. One of them is launching a digital application service for Android which will later be developed for iOS to facilitate communication between madrasahs and parents and guardians of students. Madrasah boards work closely with this data framework, making administration, organization, and data easier. The edu-Panda application pre-programmed and installed on Android phones, is all that current students, alumni, and parents/guardians need to download. GTK is supported by this application. The arrangement is so that guardians and student supervisors can effectively and successfully monitor their children's progress at the madrasah.

Additionally, the edu-Panda app can be used to track attendance. The one currently available is only made for GTK MAN 2 Kota Malang. This makes it easier

for personnel to submit a summary of hours in and out to the committee that decides salaries. There is also the presence of students for further guidance so that parents and guardians of students do not need to worry about whether their children have entered or returned from school because everything can be monitored via the edu-Panda application. The application works when GTK visits the school. So participation in MAN 2 Kota Malang is currently not done manually but using a computerized system. In filling in the attendance/participation of educators, MAN 2 Kota Malang currently uses a computerized system which can make it easier to create reports regarding educator participation, because the application is now connected to a PC. Fingerprints will be used to direct teachers to attendance if there is a maintenance system.

This has both positive and negative impacts resulting from the edu-Panda application. The positive impacts include making work easier and faster, making document archiving more efficient, practical, and effective, making public publications better and simpler, making manual tasks digital, and many more. The bad consequence is that it harms eye health because it has a lot of radiation. Regarding the type of assessment in implementing the edu-Panda application at MAN 2 Kota

Malang, it will be assessed assuming there are protests or objections from partners at MAN 2 Kota Malang from GTK, students, alumni, student guardians, and guests. This effort was carried out by MAN 2 Kota Malang to make it easier for stakeholders and the public to access school information by improving the quality of services, administration, and other aspects. MAN 2 Kota Malang shows that it is the leading madrasah in digitalization in madrasahs by implementing a management information system in the form of the edu-Panda application.

Evaluation Of The Edu-Panda Application On The Quality Of Personnel And Academic Administration Services

The English word “evaluation” is the origin of the term “evaluation.”²¹ Edwin Wand and Gerald W. Brown in Arifin say that evaluation is a way to find out how valuable something is²². According to this view, educational evaluation can be understood as an action or procedure to determine everything related to education or a particular field²³.

The action of an evaluator regarding an event or events is called evaluation. This action aims to give meaning to the incident so that it can be processed further ²⁴ This activity is completed based on objectivity

and respect. This is planned so that the results obtained can provide satisfaction for all parties. The program evaluation process aims to determine the level of success of the planned activities.

Management Information Systems (SIM) are very helpful in the field of education and play an important role in the world of education because of their role as management information systems (SIM), such as in MAN 2 Kota Malang which utilizes an edu-Panda-based digitalization system. The input, process, and output aspects of implementing the edu-Panda application can help MAN 2 Kota Malang implement a school management information system to improve the quality of educational services. The implementation of the edu-Panda application in the personnel and academic fields at MAN 2 Kota Malang contributes to increasing management effectiveness and efficiency. Every stakeholder in MAN 2 Kota Malang carries out management procedures every day, which are then entered into the edu-Panda application for general access.

The aim of edu-panda at MAN 2 Kota Malang is to provide the best possible service to stakeholders at MAN 2 Kota Malang. It is hoped that with the implementation of this help system, users no longer need to travel to various places to handle problems and can even get

everything from one place for help. We want to improve the edu-Panda application reasonably because the existence of the edu-Panda application must be improved, especially in terms of improvements and workmanship. This is done to accommodate various stakeholder interests and become the main reference in providing academic administration services. Types of services that can be obtained through edu-Panda include student information, school schedules, student report cards, student graduations, etc.

In this case, administrative services at MAN 2 Kota Malang become more reliable because this application can make the process and results of administrative services easier, faster, and more accurate. Then, at MAN 2 Kota Malang, the edu-Panda Application Guarantee increased customer confidence in administrative services. Concerns in running the edu-Panda application greatly influence the level of concern, because the menu provided is considered valuable in gathering the official needs of partners at MAN 2 Kota Malang. Apart from that, there is physical evidence in the form of a neat, attractive layout and a clean and comfortable administration space in the edu-Panda application, both of which have a positive impact on administrative services.

Conclusion

Planning for the edu-Panda application at MAN 2 Kota Malang is based on school needs. The person responsible for the school management information system builds a system that suits the needs to achieve the stated goals. After the system development is complete, a feasibility test is carried out before installing the system to avoid obstacles in implementation. The initial planning steps for the edu-Panda application include identification of needs, application design, plan development, testing and quality assurance, implementation and training, maintenance and support, and evaluation.

The implementation of the edu-Panda application at MAN 2 Kota Malang follows the Plan, Do, Evaluation cycle which is important in application management. The Planning Stage (Plan) involves identifying goals, planning actions, and identifying risks. The Implementation (Do) stage includes plan implementation, data collection, and process implementation. The Evaluation Stage involves measurement, analysis, quality evaluation, and identification of improvements. Through the Plan stage, the organization plans steps to achieve its goals. The Do stage enables the implementation of the plan with the collection of relevant data. The Evaluation stage allows analysis of results,

evaluation of quality, and identification of necessary improvements.

Service at MAN 2 Kota Malang is assessed as good based on five dimensions of service quality: Tangible, Reliability, Responsiveness, Assurance, and Empathy. However, several indicators from the service dimension, such as care or maintenance, still show unsatisfactory results. Therefore, to encourage mutually beneficial relationships between clients and service providers, it is important for customer-oriented public services to continuously improve their quality.

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