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SIM-RS Success Factors Based on DeLone and McLean Theory at Hermina OPI Jakabaring Hospital

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ABSTRACT
The information technology system is a technology used to process data, including processing, obtaining, compiling, storing, and manipulating data in various ways to produce quality information, namely information that is relevant, accurate, and timely, which is used in personal, business, and government purposes and is strategic information for decision making. Information systems with technological support are one of the systems that play a significant role in organizational success. The purpose of this study was to determine the success factors of the management information system (SIM-RS) at Hermina OPI Jakabaring Hospital based on the DeLone and McLean theory, which consists of six variables, namely system quality, information quality, service quality, use, user satisfaction and benefits. This research was conducted at Hermina OPI Jakabaring Hospital with a sample of 48 hospital employees who use SIM-RS. The results obtained from this study were based on the system quality variable, which stated that as many as 48% of employees stated SIM-RS quality. Information quality variables as much as 54% of respondents stated that SIM-RS was qualified. As many as 79% of respondents stated that they were satisfied with the service quality variable of SIM-RS. The use variable as many as 43% of respondents stated that SIM-RS was often used. As for the user satisfaction variable, as many as 94% of respondents stated that SIM-RS was of high quality. The benefit variable was that as many as 56% of respondents stated that SIM-RS was useful.

Introduction

Hospitals carry out several types of services, including medical services, medical support services, treatment services, rehabilitation services, prevention and improvement of health (Ikhwan & Halid, 2022), as a place of medical education and or training and as a place for research and development of science and technology in the health sector as well as to avoid risks and health problems (Halid & Maryam, 2016), so that it is necessary to implement health in the hospital environment by health requirements (Supriyatin & Sulistyowati, 2012). In the era of globalization, information systems with technology support are one of the systems that play a big role in the success of an organization. This is because an information technology system can help various organizational work run effectively and efficiently (Saputra, 2017). Likewise, a hospital, especially in the Medical

Record Installation, needs an information system to support its operational activities; namely, every hospital is obliged to organize a Hospital Management Information System (SIM-RS) (Hendra, 2022). SIM-RS is a communication information technology system that processes and integrates the entire flow of hospital service processes in the form of a network of coordination, reporting, and administrative procedures to obtain information appropriately and accurately and is part of the Health Information System (SIK) (Chen et al., 2021; Soraya et al., 2019).

Meanwhile, in accordance with the provisions, each hospital is required to record and report according to hospital management activities in the form of SIM-RS aiming to improve efficiency, effectiveness, professionalism, performance, as well as access and hospital services. Every hospital must manage and develop SIM-RS (Nugroho & Ali, 2022; Sari et al., 2023). To determine the extent of the effectiveness of an information system, success must be measured. The method that is usually used is the Delone & McLean method. DeLone & McLean is a method that has 6 evaluation variables, namely: information quality, system quality, service quality, use, user satisfaction, and net benefit. The DeLone and McLean method will be used as a model to measure the success of SIM-RS at Hermina OPI Jakabaring Hospital.

This research aims to measure the success of SIM-RS at Hermina OPI Jakabaring Hospital and identify factors that support or hinder its use. The practical benefit of this research is that it will assist the hospital in improving its operational quality through a comprehensive evaluation of SIM-RS effectiveness.

With this model, it is hoped that the components that support or hinder the use of SIM-RS can be known so that in the future, it is expected to be an evaluation material for improvement. Along with technological advances, Hermina OPI Jakabaring Hospital implemented SIM-RS starting in mid-2021. SIM-RS in medical record installations and other installations are integrated; only their use is adjusted to the needs of the installation. From the results of the observations made, there has never been a thorough evaluation of the success of SIM-RS in this study using a questionnaire sheet. Data analysis in the study uses univariate analysis in the form of frequency distribution for each variable from the research results.

Materials and Methods

Research Approach

This study uses a qualitative descriptive approach. The researcher will conduct direct observations in the field and conduct in-depth interviews with PKH beneficiaries in Sumber Urip Village. In addition, analysis will be carried out on secondary data obtained from local government reports related to the implementation of this program.

Research Subject

The subject of the study was 112 Heads of Families (KK) who received the benefits of the Family Hope Program (PKH) from a total of 875 families in Sumber Urip Village. Subjects are selected purposively based on their involvement in the PKH program.

Data Collection Techniques

- **Interviews:** Interviews are conducted with PKH beneficiaries to find out their perceptions of the program's impact on their well-being.

- **Observation:** The researcher made direct observations on the socio-economic conditions of PKH recipients in Sumber Urip Village.
- **Documentation:** Data related to the implementation of PKH, such as reports or documents from local governments, will be used as a secondary source of data.

Data Analysis Techniques

The data collected will be analyzed qualitatively using thematic analysis methods. The analysis steps include data collection, reduction, presentation, and conclusion drawing.

Results and Discussions

The number of samples studied was 48 hospital employees who operated SIMRS. This study uses the DeLone & McLean theory, which has 6 variables: system quality, information quality, service quality, use, user satisfaction, and benefit. The researcher conducted research using a questionnaire to obtain the information needed. In contrast, the researcher needed to find out the perception of medical record officers in the SIM-RS section about their experience when using SIM-RS in services.

1. System Quality

System quality is the quality of an information system's combination of hardware and software. Focusing on system performance refers to how well the information system's hardware and software capabilities, policies, and procedures meet user needs.

Table 1. Frequency Distribution System Quality

System Quality	Frequency
Very High Quality	25
	2
Quality	23
	8
Not Qualify	0
Very Unqualified	0

The data in Table 1 shows research data in the form of data based on system quality variables. The data above shows that as many as 52% of employees stated that the SIM-RS at Hermina OPI Jakabaring Hospital, based on the system quality variable, was very high quality, and 48% stated that it was of high quality.

2. Information Quality

Information Quality is the output of the user's use of the information system. This variable describes the quality of information.

Table 2. Frequency Distribution of Information Quality

Information Quality	Frequency	%
Very High Quality	22	46
Quality	26	54
Not Qualify	0	0
Very Unqualified	0	0

The data in Table 2 shows that the research data is based on information quality variables. The data above shows that as many as 46% of employees stated that the driver's license at Hermina OPI Jakabaring Hospital, based on the variable information quality, was very high quality, and 54% stated that it was of high quality.

3. Service Quality

Service quality is a service that users get from information system developers. Services can take the form of information system updates and responses from developers if the information system experiences problems.

Table 3. Service Quality Frequency Distribution

Service quality	Frequency
Very High Quality	6
	2
Quality	36
	9
Not Qualify	0
Very Unqualified	0

The data in Table 3 shows research data in the form of data based on service quality variables. The data above shows that as many as 12% of medical employees stated that the driver's licenses at Hermina OPI Jakabaring Hospital based on the Service quality variable were of very high quality, and 79% stated that they were of high quality.

4. Use

Use refers to how often users use the information system.

Table 4. Use Frequency Distribution

Use	Frequency	%
Always	43	90
Often	5	10
Rarely	0	0
Never	0	0

The data in Table 4 shows research data in the form of data based on use variables. The data above shows that as many as 90% of employees stated that SIM-RS at Hermina OPI Jakabaring Hospital, based on the use variable, was always used, and the other 10% stated that it was used frequently.

5. User Satisfaction

User Satisfaction is the response and feedback that users generate after using the information system.

Table 5. User Satisfaction Frequency Distribution

User Satisfaction	Frequency	%
Very Satisfied	3	6
Satisfied	45	94
Not Satisfied	0	0
Very Dissatisfied	0	0

The data in Table 5 shows research data based on user satisfaction variables. The data above shows that as many as 94% of employees stated that SIMRS at Hermina OPI Jakabaring Hospital was satisfied based on the User Satisfaction variable, and another 6% were very satisfied.

6. Benefit

Benefits are net benefits that impact the use of information systems.

Table 6. Benefit Frequency Distribution

Benefit	Frequency	
Very Helpful	21	4
Helpful	27	6
Not Helpful	0	
Very Not Helpful	0	

The data in Table 6 shows research data in the form of data based on benefit variables. The data above shows that as many as 44% of employees stated that SIM-RS at Hermina OPI Jakabaring Hospital was very useful, and 56% was useful. Based on the research, 52% of employees stated that SIM-RS at Hermina OPI Jakabaring Hospital was very high quality based on system quality variables. In previous research, out of 92 respondents, it was found that most respondents felt that the information quality of SIM-RS was good, namely 55 respondents or 59.8%. These results indicate that SIM-RS at Hermina OPI Jakabaring Hospital has been integrated, is flexible in making changes related to user needs, and can accelerate access to services. Its security is guaranteed, and medical record officers are made easier by the SIM-RS at Hermina OPI Jakabaring Hospital to do their work. The quality of information systems shows that if information system users feel that using the system is easy, users do not need much effort to use it, so they will have more time to do other things that are likely to improve their overall performance (Ningsih & Adhi, 2020). Based on research conducted, 54% of employees stated that SIM-RS at Hermina OPI Jakabaring Hospital is based on quality information quality variables. Of the 92 respondents, it is known that most respondents feel that information quality is good, namely 63 respondents or 68.5%. These results indicate that SIM-RS at Hermina OPI Jakabaring Hospital has met the success indicators of information quality, which can produce complete information so that it helps officers in decision-making; the information produced is relevant to the needs of employees at Hermina OPI Jakabaring Hospital, the information produced is accurate, and the information produced is timely. The higher the quality of information an information system produces, the more user satisfaction will increase (Asriati, 2020).

Based on the research conducted, 79% of employees stated that SIM-RS at Hermina OPI Jakabaring Hospital was of high quality in the frequency distribution of service quality. Of the 92 respondents, it is known that most of them felt that the quality of SIM-RS information was good, namely 55 respondents (59.8%). The results show that the SIM RS at Hermina OPI Jakabaring Hospital has met the success indicators of the service quality variable. Namely, the technician is able to guarantee the smooth use of SIM-RS at Hermina OPI Jakabaring Hospital. Indicators of success of information quality are the completeness of the information produced by the information system, the information system being applied to user needs, and the information produced is accurate. Service quality is able to influence interest in using SIM-RS because users feel it facilitates their use. Because SIM-RS employees provide physical evidence in assisting services and will show work performance for service delivery (Medika, 2017). Based on the research conducted, 90% of employees stated that SIM-RS at Hermina OPI Jakabaring Hospital was of high quality in the frequency distribution of use. Of the 92 respondents, it is known that most of them felt that the information quality of SIM-RS was good, namely 59 respondents (64.1%). These results indicate that SIM-RS has met the success indicators of the use variable, namely, SIM-RS is used every time performing services at Hermina OPI Jakabaring Hospital. Use success refers to how often the information system is used. The higher the number of users using SIM-RS, the higher the level of satisfaction because the more often and longer users use SIM-RS, the more happy and satisfied they are with SIM-RS (Ningsih et al., 2022). Based on research on user satisfaction frequency distribution, 94% of medical record officers are very satisfied with the use and services of SIM-RS at Hermina OPI Jakabaring Hospital. Of the 92 respondents, it is known that most of them felt that the information quality of SIM-RS was good, namely 70 respondents (76.1%). These results indicate that SIM-RS has met the success indicators of the user satisfaction variable. SIM-RS is efficient and effective when used, and officers get satisfaction from using SIM-RS in their services. Indicators of the success of user satisfaction are efficiency in helping users work and the effectiveness of information systems in meeting user needs can increase user satisfaction with these information systems. Users feel facilitated in using because SIM-RS employees provide physical evidence in assisting services and will show work performance as a basis for compensating for what has been done. User satisfaction will arise (Hariyanti & Susilo, 2015). Based on research conducted on the frequency distribution of benefits, 56% of employees feel that SIM-RS at Hermina OPI Jakabaring Hospital is useful. Of the 92 respondents, it is known that most of them felt that the information quality of SIM-RS was good, namely 62 respondents (67.4%). These results show that SIM-RS fulfills the success indicators of the benefit variable, namely, the performance of SIM-RS affects the quality of medical record officer performance, increases officer productivity, is efficient and effective because it can complete work in a fast time, is able to reduce operational costs and hospital expenses and the information generated can be used for decision and policy-making. Benefits include the impact of the existence and use of information systems on the quality of user performance both individually and organizationally, including productivity, increased knowledge, and reduced length of time spent searching for information (Aini et al., 2022).

Conclusion

The quality of SIM-RS application implementation based on system quality shows very high quality, information quality, and service quality shows quality. Based on the use category always used, user satisfaction shows satisfaction, and based on benefits, it shows usefulness. As practical

recommendations, hospital management should provide more structured training for employees to improve their understanding of SIM-RS and maximize its benefits. Additionally, it is recommended that periodic evaluations of the system be conducted to ensure that SIM-RS continues to meet evolving operational needs and to enhance the integration between SIM-RS and other existing systems in the hospital to improve information flow and provide more comprehensive services.

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