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Evaluating the MBG Monitoring Application in Indonesian Schools Using the DeLone & McLean Model

Yono Maulana[1*], Agus Rahayu[2], Lili Adi Wibowo[3], Prasetyo Harisandi[4], Geraldine B. Advincula[5], Dedi Prasetyo[6]
[1,2,3]Universitas Pendidikan Indonesia, Bandung, Indonesia
[4]Universitas Pelita Bangsa, Bekasi, Indonesia
[5]Southern Luzon State University, Lucba, Philippines
[6]Inspektorat Kepolisian Negara Republik Indonesia, Jakarta, Indonesia

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ABSTRACT

Objective: The Free Nutritious Meal Program (Program Makan Bergizi Gratis/MBG) is a strategic initiative by the Indonesian government aimed at enhancing the nutrition of school-age children, with application monitoring playing a key role in its effectiveness. This study assesses the success of the MBG implementation by empirically examining the impact of system quality, human resource (HR) training effectiveness, and strategic leadership support on system adoption and net benefits. Using the DeLone & McLean Information System Success Model (2003) as a theoretical framework. **Metode:** survey was conducted among MBG application users, including field officers and supervisors. Data were collected through a structured questionnaire measuring system quality, training effectiveness (based on Kirkpatrick's reaction, learning, and behavior levels), leadership support, system use, user satisfaction, and net benefits. Structural Equation Modeling (SEM) was employed for data analysis. **Result**: The results indicate that strategic leadership support significantly affects system use, while training effectiveness positively influences net benefits. **Novelty**: The study's novelty lies in integrating strategic management and user adoption perspectives within public sector digital initiatives in developing countries.

INTRODUCTION

One of the government's strategic programs, the Free Nutritious Meal Program (MBG), aims to improve the nutritional status of school children in Indonesia. The success of this program depends not only on the quality and availability of food but also on how well the program's monitoring and reporting system runs (Delvina Sari, 2025). In situations like this, using information technology such as the MBG application to help track and record daily reports becomes very important (Safira Armah & Rayyan Firdaus, 2024). This application is expected to improve the overall accountability, efficiency, and effectiveness of the program, in line with the general role of Management Information Systems (MIS) in improving business process efficiency and supporting performance control (Widyaningrum et al., 2024).

However, various problems often arise when implementing information technology, especially in the public sector (Fauzi et al., 2024). Therefore, a comprehensive strategic management approach is required to ensure that the use of MBG is in line with the main objectives of the program and government policies (Tarigan & Ambarita, 2021). To achieve organizational goals, strategic management involves various decisions and actions (Harisandi, Hurriyati, et al., 2023). Implementing MBG applications must be seen as an important part of the strategy to achieve MBG program goals, not just a technical project (Levinson et al., 1999; Rahmawati & Nugroho, 2018).

On the other hand, the Human Resources (HR) factor plays a crucial role (Azmy & Setiarini, 2023). The success of the MBG application is highly dependent on the readiness and competence of its users (Guruh Suksmono Aji & Iva Khoiril Mala, 2024), from field officers and supervisors to administrators at the regional and central levels (Bayu et al., 2013). Through practical training and development, Human Resources Education (Wira Kusuma, 2024) is key to ensuring users have the knowledge, skills, and attitudes necessary to make optimal use of the application (Safira Armah & Rayyan Firdaus, 2024). Without competent human resources, no matter how sophisticated an information system is, it will not provide maximum benefits (Apsari et al., 2023). Technology-based training, such as e-learning, can effectively reach a wide range of users (Harisandi et al., 2024).

Although there are many studies on the implementation of information systems (DeLone & McLean, 2003; Viriando & Sfenrianto, 2021) and training effectiveness (Harisandi & Nurjanah, 2022), Research that integrates strategic management, HR education, and evaluation of government nutrition program monitoring applications in Indonesia with national and international reputable journal standards is still limited (Sutrisno et al., 2024). By evaluating the success of MBG application implementation using the DeLone & McLean (D&M) model, this study aims to fill this gap (Ojo, 2017), which was modified to include the variables of System Quality, HR Training Effectiveness (Jun et al., 2019), and Strategic Leadership support as antecedents to System Use (Robertson & Barling, 2017), User Satisfaction, and Net Benefits (increased effectiveness of monitoring and quality of reporting) (Ikhsan, 2020).

A new study shows that synergy between system quality, management support, and human resource readiness is critical to successfully implementing information systems in the public sector. The study (Khairrunnisa & Yunanto, 2017) states that although the technical quality of the system is important, the success of the implementation is more determined by the strategic involvement of users through adequate training and consistent management support. In this regard, (Bock & Poole, 2013 Kurbani 2017) found that leadership support at the local level was a major factor that increased system adoption by field officers when social assistance programs were implemented in disadvantaged areas (Harisandi, Yahya, et al., 2023).

For now, research (Mendrofa & Hastuti, 2024) underlined that human resource education is important for strategic information technology planning, especially in large social programs such as school nutrition programs. They emphasized that only technical training is insufficient to improve monitoring effectiveness in the long term; training must build strategic understanding and an attitude of responsibility for system performance (Harisandi, Rabiatul Hariroh, et al., 2023). In this situation, (Khairrunnisa and Yunanto, 2017) confirm that the DeLone & McLean model can still be used to assess government applications. It is modified to include contextual aspects such as strategic leadership support and the effectiveness of user-needs-based training. These results provide a strong empirical basis for this study, which aims to develop a more holistic evaluation method for implementing MBG applications.

This study combines the DeLone & McLean information system success evaluation model with strategic management and HR development aspects. This occurs when the Free Nutritional Meal Program (MBG) Monitoring application is implemented in public elementary schools in Indonesia. Unlike prior studies that isolate technical or organizational aspects, this study provides a novel contribution by integrating system quality, HR development, and strategic leadership into a unified framework tailored to a national nutrition program. This study changes the DeLone & McLean model by adding

strategic leadership support variables and HR training effectiveness as the main factors for system success. This study also measures net benefits by increasing the effectiveness of HR training. This study not only expands the theoretical scope of the D&M model, but also provides practical contributions to formulating evidence-based policies to improve the governance of digital-based nutrition programs in educational settings using a multidimensional approach that includes elements of technology, human resources, and organizational strategy.

Building on the theoretical and contextual background discussed above, this study seeks to address the following key research questions to evaluate the success of MBG application implementation: first, it examines how the system quality of MBG applications - defined as ease of use, reliability, and functionality - affects user satisfaction and system usage. Second, it evaluates how the effectiveness of staff training, as measured by participant reactions, learning outcomes, and behavioral changes, contributes to successful implementation. Third, the study assessed the role of strategic leadership support, including commitment, resource allocation, and active involvement, in influencing application adoption. Fourth, the study analyzed how the combination of system usage and user satisfaction contributed to improving the effectiveness of MBG program monitoring and the quality of reporting (net benefits). Finally, it identifies the most dominant factors between strategic leadership and training effectiveness that significantly determine the successful implementation of MBG applications. Taken together, these themes provide a comprehensive framework for understanding the multidimensional drivers of digital system success in public sector programs. The objectives of this study are to:

1. Analyze the effect of MBG application system quality on the level of use and user satisfaction of MBG applications.
2. Analyze the effect of HR education/training effectiveness on the level of use and user satisfaction of MBG applications.
3. Analyze the effect of strategic leadership support on the level of use and user satisfaction of MBG applications.
4. Analyze the relationship between the level of use and user satisfaction of MBG applications with the effectiveness of program supervision and reporting quality (net benefits).
5. Identify the most significant factors (system quality, training effectiveness, leadership support) in determining the success of MBG application implementation.

RESEARCH METHOD

The proposed conceptual model and related hypotheses will be tested in this study, which is designed as a survey. The tool used in this study is a questionnaire created based on each variable's indicators, which has undergone an initial trial and expert validation process. Users of the MBG application, including field officers, school administrators, and regional supervisors, receive data through questionnaires distributed online and offline. To assess the relationship between variables, data analysis was carried out using SmartPLS 4 with stages of validity and reliability testing and testing of structural models such as path coefficients, R2, f2, and Q2.

This research obtained ethical clearance from the Indonesian Education University. All participants were informed of the purpose of the study and provided informed consent before participation, in accordance with research ethics guidelines. "The data collection was conducted between November 2024 and January 2025 in the

province of West Java. The data were gathered using online (via Google Forms or equivalent platform) and offline (paper-based) methods to ensure accessibility for all respondents who cannot be reached offline.

"The questionnaire was developed based on operational indicators for each construct, adapted from established literature. A pilot test involving 10 users was conducted to evaluate clarity, relevance, and timing. Additionally, the instrument underwent expert validation by three professionals in public health, information systems, and program evaluation. Based on their feedback, revisions were made to enhance content validity." strategic leadership. It is hypothesized that:

- System, information, and service quality influence user satisfaction and intention to use.
- HR training and strategic leadership positively moderate or influence satisfaction and system usage.
- User satisfaction and usage influence perceived net benefits (program effectiveness, data accuracy, and accountability improvement).

The analysis's results are used to discuss the role of HR training and strategic leadership in the successful implementation of the MBG application. This study also compares the results of previous studies (2023–2025). This study produces conclusions reinforcing the main findings, presenting theoretical and practical implications, and providing suggestions for MBG program managers. Several limitations were considered, such as the number of respondents and perception-based measurements.

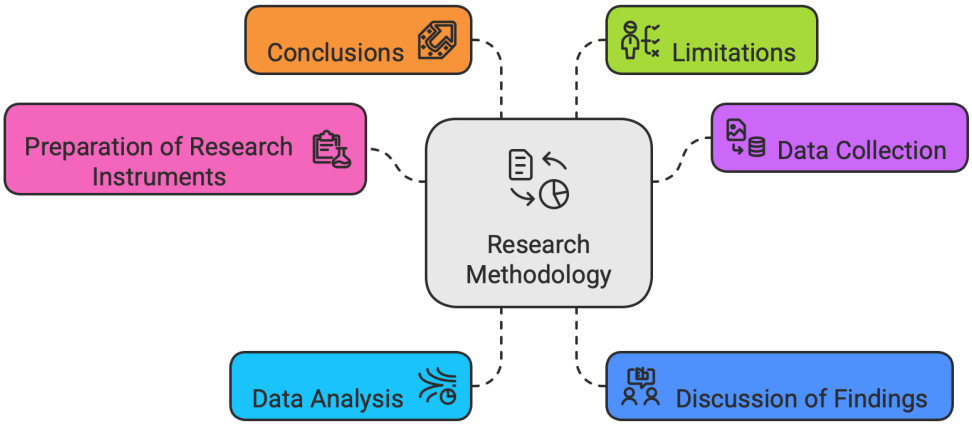

Figure 1. Research methodology

The research methodology comprises six interconnected stages that systematically guide the study from planning to conclusion. It begins with preparing research instruments, where questionnaires are developed and validated through expert review and pilot testing to ensure measurement reliability and validity. This is followed by data collection, which involves distributing the online and offline questionnaires to targeted respondents such as field officers, school administrators, and regional supervisors. The data analysis stage utilizes SmartPLS 4 to perform validity and reliability testing and structural model assessments, including path coefficients, R^2, f^2, and Q^2 values. Next, the discussion of findings interprets the results in light of existing theories and previous research, particularly focusing on the role of HR training and strategic leadership in implementing the MBG application. The study then presents conclusions thath ighlight key insights, theoretical contributions, and practical recommendations for MBG program managers. Finally, it acknowledges limitations, such as the relatively small sample size and the subjective nature of perception-based data, providing transparency

and direction for future research. These methodological choices ranging from ethical consideration, respondent census, instrument validation, and advanced statistical analysis—are aimed at ensuring the robustness and validity of the research findings, especially in evaluating the critical success factors of the MBG application within a public health context.

Population and Sample

The population of the study was all active users of the MBG monitoring application in the West Java Province, the Nutrition Fulfillment Service Unit (SPPG), which has been officially registered in the SPPG data to implement the SPPG responsible officer program. The sampling technique used the saturated census technique because it was carried out comprehensively to all SPPGs to ensure the representation of users from various levels and functions. Sample size 51 samples (Abdillah & Jogiyanto, 2015; Parengkuan et al., 2024). A total of 51 MBG application users, comprising field officers, school administrators, and regional supervisors, participated in this study. Due to the relatively limited number of users involved in the MBG program in the selected region, a census approach was adopted, targeting the entire population rather than sampling. This approach was chosen to maximize data accuracy and avoid sampling bias.

Variable Operationalization

The conceptual framework and indicators used from relevant literature—especially the D&M model, TAM/UTAUT, Kirkpatrick's model, and previous IS implementation studies—were used to operationalize and measure the research variables (Widyantoro Yuliatmojo & Arius Ayu Saputri, 2024)

Table 1. Variables, Definitions, Dimensions, and Indicators

Code	Indicator	Supporting References
QS1	Ease of Use	D&M, TAM/UTAUT, Case Study (Caroline & Nurhasana, 2023; Ojo, 2017; Purwanto, 2022)
QS2	Feature Compatibility	
QS3	System Flexibility	
QS4	Interface Design	
EP1	Satisfaction and Relevance of	Kirkpatrick, Case Study (Kirkpatrick & Kirkpatrick, 2022; Susanty, 2022)
EP2	Material	
EP3	Increased Knowledge and Skills	
EP4	Changes in Attitude and Motivation Post-Training Implementation	
DK1	Clarity of Vision and Data Utilization	Teory Manajemen, Case Study (Bayu et al., 2013; Delvina Sari, 2025)
DK2	Facilities and Technical Support	
DK3	Leadership Involvement and	
DK4	Responsiveness Motivation, Rewards, Problem Solving	
PS1	Frequency, duration	Quality System (Mendrofa & Hastuti, 2024; Schleicher et al., 2018)
PS2	Depth of feature usage	
PS3	MBG app features	
KP1	System Use	D&M, Case Study (Ojo, 2017; Widyantoro Yuliatmojo & Arius Ayu Saputri, 2024)
KP2	User Satisfaction	
KP3	Continuance Intention	
MB1	Improving Monitoring Effectiveness	D&M, Case Study (Khairrunnisa & Yunanto, 2017; Ojo, 2017)
MB2	Improving Reporting Quality	
MB3	User Work Efficiency and Impact	

Data Analysis Techniques

The data analysis technique in this study employs the Structural Equation Modeling (SEM) approach using software, allowing for simultaneous testing of the measurement and structural models. The analysis begins with the assessment of the measurement model, where the validity and reliability of the constructs are evaluated through Confirmatory Factor Analysis (CFA). Construct validity is assessed using the Average Variance Extracted (AVE), with a threshold of ≥ 0.50 to determine convergent validity. Reliability is assessed using Cronbach's Alpha and Composite Reliability (rho_a and rho_c), which should meet or exceed the threshold of 0.70 to be considered reliable (Hair et al., 2014, 2018). This step ensures that the questionnaire items accurately and consistently measure their respective latent constructs before further analysis is conducted.

Subsequently, the structural model is evaluated to test the hypothesized relationships among latent variables (H1–H9). This involves analyzing path coefficients, t-statistics, and p-values to determine the significance and strength of the causal relationships proposed in the model. The model's goodness-of-fit is also considered to ensure that the proposed theoretical model adequately represents the observed data. By integrating CFA and SEM, this study provides a comprehensive and statistically rigorous approach to validating both the measurement instruments and the conceptual framework used to assess the success of the MBG application implementation, offering robust empirical evidence for policy and practice in the public education sector.

Descriptive Statistics

Based on data from 50 respondents, the gender distribution shows that most respondents are male at 71.1%, while females are only 28.9%. This shows the dominance of male respondents in this study. In terms of education level, most respondents came from a Bachelor's degree (S1) education level, with a total of 35 people, or 70% of the total respondents. Then, there were seven respondents (14%) who had Diploma 3 (D3) education, five respondents (10%) from high school level, three respondents (6%) had Master's degree (S2), and only one respondent (2%) had Master's degree (S3). This distribution indicates that most respondents are at a higher education level, especially at the Bachelor's degree level, which is relevant to the research context and can support their understanding of the contents of the questionnaire and improve the quality of the data obtained.

SEM PLS Analysis

In this study, PLS-SEM analysis will be conducted using SmartPLS software to examine the causal relationships between latent variables within the proposed research model. This technique is appropriate for predictive and theory development purposes, especially in evaluating complex models such as implementing the MBG (Makan Bergizi Gratis) monitoring application in Indonesian public elementary schools. The analysis process involves two main stages: outer model testing and inner model testing.

RESULTS AND DISCUSSION

Results

Convergent Validity

Average score, standard deviation, and distribution of answers for each indicator and research variable. Based on the outer loading test results, all indicators in each construct have values above 0.70 (Huit et al., 2018). This shows that all indicators meet the

convergent validity requirements and can be used further in testing the structural model. Therefore, no indicators need to be eliminated from the model. Overall, the results of this outer loadings test indicate that the indicators used in the research model are valid and reliable in measuring the appropriate latent constructs. This provides confidence that the constructs measured are of good quality and can be used for further analysis.

Table 2. Outer Loading Values of research indocators

Variable	Indikator	Outer Loading	Validity
System Quality	QS1	0.891	Valid
(X1)	QS2	0.871	Valid
	QS3	0.847	Valid
	QS4	8.875	Valid
Training Effectiveness	EP1	0.824	Valid
(X2)	EP2	0.813	Valid
	EP3	0.797	Valid
	EP4	0.751	Valid
Strategic Leadership	DK1	0.859	Valid
Support	DK2	0.869	Valid
(X3)	DK3	0.815	Valid
	DK4	0.840	Valid
System Usage	PS1	0.857	Valid
(Z1)	PS2	0.873	Valid
	PS3	0.879	Valid
User Satisfaction	KP1	0.858	Valid
(Z2)	KP2	0.917	Valid
	KP3	0.907	Valid
Net Benefits	MB1	0.890	Valid
(Y)	MB2	0.887	Valid

Composite Reliability (CR).

Each construct in the research model has very good reliability and is very good if the ideal value is more than 0.7. This indicates the internal consistency of the construct. Composite Reliability is a measure of the level of internal consistency of the indicators used to evaluate the latent construct. The generally accepted value for the Composite Reliability test is above 0.70, which indicates that all constructs in your research model have a high level of reliability. The Composite Reliability test value should be above 0.80 and even approach or exceed 0.90. This indicates that the indicators used to evaluate each construct consistently use the same concept. So, the measurement instrument is reliable and of good quality and supports the validity of the study.

Table 3. Composite Reliability

Variable	Cronbach's alpha	Composite reliability	AVE)	Validity
System Quality	0.894	0.926	0.758	Valid
Training Effectiveness	0.810	0.874	0.635	Valid
Strategic Leadership Support	0.905	0.929	0.725	Valid
System Usage	0.848	0.908	0.767	Valid
User Satisfaction	0.874	0.923	0.800	Valid
Net Benefits	0.733	0.882	0.789	Valid

Inner Model Evaluation

The results of the inner model in the figure show the structural relationship between latent variables in the study using the Partial Least Squares (PLS) approach. The R^2 value of the PS (System Perception) variable of 0.706 indicates that around 70.6% of the variability in system perception can be explained by strategic leadership (QS), HR training (EP), and policy support (DK). The KP (User Performance) variable has an R^2 of 0.853, indicating a strong influence of system perception, training, and policy support on improving user performance. Meanwhile, the MB (Perceived Benefits) variable has an R^2 of 0.696, indicating that almost 70% of the variation in perceived benefits can be explained by user performance.

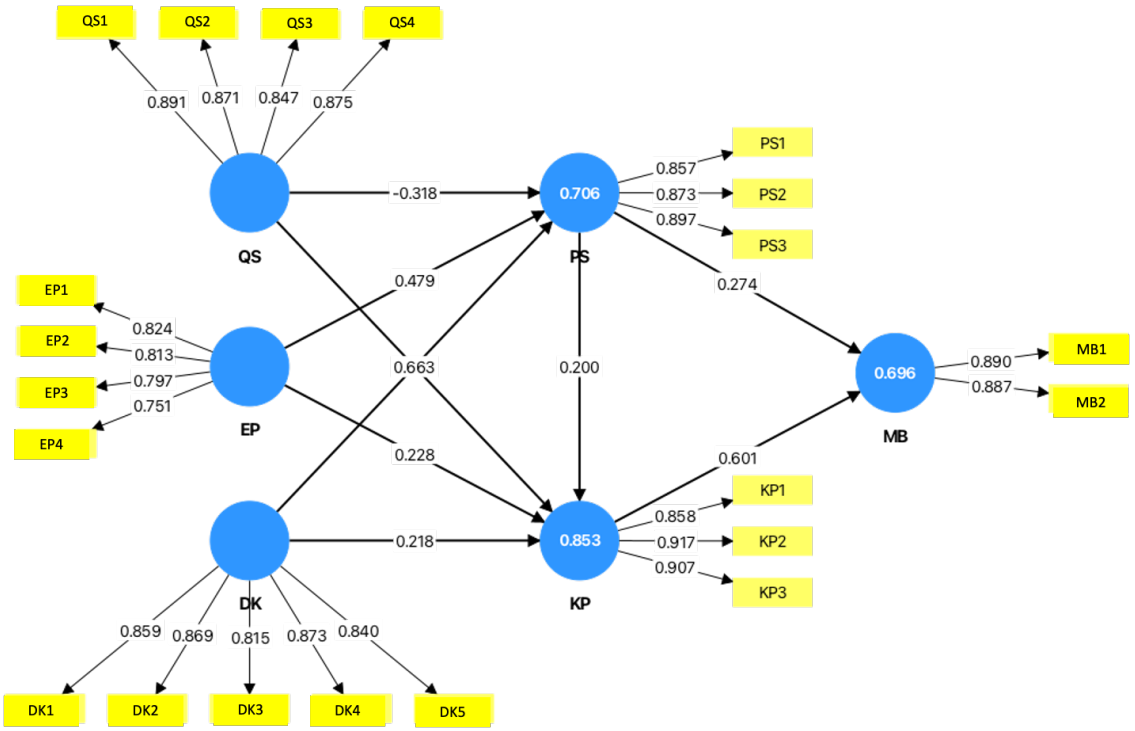

Figure 2. Bootstrapping results with t-statistics

The bootstrapping results in Figure 2 of the model show Path coefficients indicate the strength and direction of the relationship between variables. Training (EP) has a significant positive effect on system perception (0.663), user performance (0.228), and benefits (0.200). Policy support (DK) has a positive effect on system perception (0.218) and performance (0.218). Interestingly, strategic leadership (QS) shows a negative effect on system perception (-0.318), which needs further exploration. System perception positively affects user performance (0.601), and user performance significantly affects perceived benefits (0.696). These findings confirm that training and policy support play an important role in improving system perception and user performance, which ultimately increases the benefits of implementing MBG applications.

Discriminant Validity

Based on the Fornell-Larcker criterion, not all constructs in this model demonstrate adequate discriminant validity. Specifically, Leadership Support (DK) shows a stronger correlation with Training Effectiveness (EP) and User Satisfaction (KP) than with its own AVE square root, indicating overlapping conceptual boundaries. Similarly, Training Effectiveness (EP) has stronger correlations with multiple constructs—DK, KP, MB (Net Benefit), and QS (System Quality)—suggesting that users perceive training not as a

separate domain but as closely intertwined with leadership and system performance. While Service Quality (KP), Net Benefit (MB), and Student Perception (PS) meet the Fornell-Larcker threshold, the conceptual blending of DK and EP underscores a potential lack of clarity in distinguishing leadership support from practice training.

This result has significant educational implications. It suggests that educational stakeholders, such as school administrators and teachers, may perceive leadership initiatives and training programs as part of a single, integrated effort rather than separate functions. Therefore, in implementing a digital monitoring system like MBG, clear role definitions and structured communication are crucial to help educators distinguish between strategic leadership and operational training interventions. Furthermore, this overlap may imply a need to revise the instrument to better capture the unique contributions of each construct in educational settings. From a practical standpoint, the strong interrelationships highlight that successful educational monitoring systems require a holistic approach, where leadership, training, system quality, and user satisfaction must be improved concurrently to maximize academic outcomes.

Table 4. Discriminant Validity

	DK	EP	KP	MB	PS	QS
DK	0.851					
EP	0.871	0.797				
KP	0.872	0.883	0.894			
MB	0.800	0.835	0.817	0.888		
PS	0.817	0.777	0.785	0.747	0.876	
QS	0.829	0.879	0.864	0.857	0.653	0.871

Path Coefficient Test

The results of the path coefficient test show the relationship between variables in the research model tested using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. First, Strategic Leadership Support (DK) has a positive effect on User Satisfaction (KP), with a coefficient of 0.218, and on System Usage (PS), with a fairly strong coefficient of 0.663, indicating that strategic leadership greatly determines how much users use the system. Training Effectiveness (EP) also has a positive effect on User Satisfaction (0.228) and System Usage (0.479), indicating that good training will increase satisfaction and intensity of system use. Furthermore, User Satisfaction (KP) strongly affects Net Benefits (MB) with a coefficient of 0.601, meaning that the more satisfied users are with the system, the greater the net benefits they feel.

Meanwhile, System Usage (PS) positively contributes to User Satisfaction (0.200) and also Net Benefit (0.274), although with a lower influence strength compared to the direct influence from KP to MB. Finally, System Quality (KS) positively influences User Satisfaction (0.352). However, it negatively influences System Usage (-0.318), indicating that even though the system is considered high quality, it does not necessarily increase its use—possibly due to other factors such as complexity or resistance to change. These findings suggest that leadership and training are key in driving system use and user satisfaction, resulting in net benefits from system implementation.

Table 5. Path Coefficients

Path	Path coefficients
DK -> KP	0,218
DK -> PS	0,663
EP -> KP	0,228

Path	Path coefficients
EP -> PS	0,479
KP -> MB	0,601
PS -> KP	0,200
PS -> MB	0,274
QS -> KP	0,352
QS -> PS	-0,318

R-Square and F-Square Test

The R-squared values obtained in this study provide strong evidence of the model's explanatory power. A particularly high R^2 value of 0.853 for User Satisfaction (KP) implies that the predictor variables in the model explain 85.3% of the variance in user satisfaction. This has practical significance in educational settings—it suggests that the factors included in the model (e.g., leadership support, training effectiveness, system quality) are highly relevant in shaping users' satisfaction with the MBG monitoring system. Educational program managers can, therefore, focus their efforts on these key factors with confidence, knowing that improvements in these areas are highly likely to enhance user satisfaction.

Meanwhile, the R^2 values for Net Benefits (MB) and System Usage (PS), at 0.696 and 0.706, respectively, are also considered strong. These values indicate that the model can explain nearly 70% of the variance in both constructs, which is substantial in social science research. From a practical standpoint, this means that the design and implementation of the MBG system are sufficiently grounded in variables that influence perceived benefits and actual system use. In other words, the MBG program provides measurable benefits and fosters user engagement—both crucial for the sustainability and impact of educational monitoring systems.

Thus, the high R^2 values reflect that the MBG system's success depends heavily on factors within managerial control, such as training quality, leadership support, and system design. Program managers and policymakers can leverage this insight to allocate resources more effectively and refine intervention strategies, ensuring that implementation efforts yield optimal educational outcomes.

Table 6. Uji R Square

Variable	R-square
User Satisfaction	0,853
Net Benefits	0,696
System Usage	0,706

The f-square analysis reveals the strength of each predictor's contribution to its associated outcome, providing practical insights into which variables matter most in enhancing the MBG application's impact. The highest f^2 value is observed in the path KP → MB (0.456), indicating a large effect size. This suggests that improvements in Training Quality (KP)will substantially impact enhancing Net Benefits (MB). In practice, this means investments in high-quality training programs—such as well-structured content, hands-on learning, and continuous support—are likely to yield significant returns in the form of better user experiences and organizational benefits from the MBG system.

Meanwhile, the path DK → PS (0.334) shows a moderate-to-large effect, signifying that Leadership Support (DK)plays a meaningful role in influencing System Usage (PS). This highlights the importance of strategic leadership commitment, motivation, and

active involvement in promoting system adoption, particularly among field implementers such as teachers and administrators.

Other paths, such as QS → KP (0.166) and EP → PS (0.128), show moderate effects, implying that student quality and training effectiveness modestly contribute to training quality and system use, respectively. These relationships point to user readiness and competence's indirect but important role in successfully implementing technology-based educational systems.

In contrast, paths like DK → KP (0.054) and EP → KP (0.051) reflect small effect sizes, suggesting that while these factors do influence the outcomes, their impact is less critical. Therefore, they may not require as much resource prioritization as high-impact variables, though they still matter in holistic system development. Overall, these findings help prioritize resource allocation and guide managerial focus—emphasizing training quality and leadership support as leverage points to maximize the success of MBG system deployment in educational contexts.

Table 7. Uji f Square

Path	f-square
DK -> KP	0,054
DK -> PS	0,334
EP -> KP	0,051
EP -> PS	0,128
KP-> MB	0,456
PS -> KP	0,080
PS -> MB	0,095
QS -> KP	0,166
QS -> PS	0,073

Direct Effects

Based on the results in Table 7 (Direct Effects):

- H1: Strategic Leadership Support (DK) has a significant effect on User Satisfaction (KP) → *Hypothesis not supported*. The p-value (0.405) is greater than 0.05, indicating that strategic leadership support does not significantly influence user satisfaction. This suggests that user satisfaction may depend more on operational or user-centred factors than strategic leadership.
- H2: Strategic Leadership Support (DK) has a significant effect on System Usage (PS) → *Hypothesis supported*. This relationship is statistically significant, with a coefficient of 0.663 and a p-value of 0.007. It confirms that strong leadership positively drives system utilization, possibly through motivation, resource allocation, or directive power.
- H3: Training Effectiveness (EP) has a significant effect on User Satisfaction (KP) → *Hypothesis not supported*. The p-value (0.204) is above the 0.05 threshold. Although training is expected to increase satisfaction, the insignificant result may reflect a gap between training content and user needs or expectations.
- H4: Training Effectiveness (EP) has a significant effect on System Usage (PS) → *Hypothesis not supported*. With a p-value of 0.092, the effect is not statistically significant at the 0.05 level. Despite a positive coefficient, the training does not seem effective enough to stimulate system usage.
- H5: User Satisfaction (KP) has a significant effect on Net Benefits (MB) → *Hypothesis supported*. This relationship is strongly significant (p = 0.000) and

indicates that higher satisfaction levels significantly improve the perceived benefits of the system. It underscores the importance of user experience in achieving organizational value from the system.

- H6: System Usage (PS) has a significant effect on User Satisfaction (KP) → *Hypothesis not supported*. Although the relationship is close to significance (p = 0.057), it does not meet the 0.05 threshold. This suggests that mere system usage does not automatically translate to satisfaction, which might depend on the quality or relevance of use.
- H7: System Usage (PS) has a significant effect on Net Benefits (MB) → *Hypothesis not supported*. With a p-value of 0.093, this relationship is not statistically significant. It implies that frequent system use may not lead to higher benefits unless supported by effective utilization and meaningful output.
- H8: System Quality (QS) has a significant effect on User Satisfaction (KP) → *Hypothesis not supported*. The p-value (0.124) indicates no significant influence. Even though system quality is important, factors like user support or content relevance may play a more critical role in shaping satisfaction.
- H9: System Quality (QS) has a significant effect on System Usage (PS) → *Hypothesis not supported*. The relationship is insignificant (p = 0.139) and negatively directed (β = -0.318), suggesting that better system quality does not necessarily encourage more usage. This could signal usability issues or misalignment with user expectations.

Table 8. Dirrect effect

Path	Path Coefficients (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Conclution
DK -> KP	0.218	0.159	0.262	0.833	0.405	NOT Accepted
DK -> PS	0.663	0.650	0.244	2.712	0.007	Accepted
EP -> KP	0.228	0.249	0.180	1.271	0.204	NOT Accepted
EP -> PS	0.479	0.508	0.285	1.684	0.092	NOT Accepted
KP -> MB	0.601	0.609	0.156	3.853	0.000	Accepted
PS -> KP	0.200	0.197	0.105	1.900	0.057	NOT Accepted
PS -> MB	0.274	0.270	0.163	1.682	0.093	NOT Accepted
QS -> KP	0.352	0.394	0.229	1.540	0.124	NOT Accepted
QS -> PS	-0.318	-0.329	0.215	1.480	0.139	NOT Accepted

Discussion

The results of the path coefficients test in this study examine the relationship between variables in implementing the Free Nutritional Meal Program (MBG) Monitoring application in public elementary schools in Indonesia. Overall, these results emphasize the importance of strategic leadership support in encouraging system use, as well as the role of user satisfaction in generating net benefits from information systems. Although training and system quality are important, their direct influence on system satisfaction and use may be influenced by other factors such as system design, ease of use, and technical support. These findings align with the DeLone and McLean information system success model, which emphasizes the complex interactions between various factors in determining the success of information systems.

The Influence of Strategic Leadership Support (SLP) on User Satisfaction (KP)
This relationship is insignificant, according to the path coefficient of 0.218 and p-value of 0.405. This result indicates that, although strategic leadership support is important for implementing information systems, its direct effect on user satisfaction is not strong enough. This is in accordance with the findings (Fitria Yuniarti et al., 2021), which show that user satisfaction with non-communicable disease surveillance information systems is not always significantly influenced by system quality. Education policy needs to emphasize that although strategic support from leaders is important institutionally, the satisfaction of system users (teachers, administrative personnel, students) is more determined by their direct experience of the system. Therefore, policies should encourage bottom-up approaches, such as the active involvement of users in the design of school/madrasah information systems, rather than relying solely on leadership direction.

The Influence of Strategic Leadership (SLC) support on System Use (PS)
This relationship is considered significant, with a coefficient of 0.663 and a p-value of 0.007. This indicates that support from leadership strategies positively impacts user system use. According to the study, leaders who support the implementation of technology can increase system adoption by employees (Bawan et al., 2022; Fracini & Suhari, 2024; Putri Haykal et al., 2023; Ruslan, 2022), who found that user satisfaction is greatly influenced by system and service quality, which can impact system usage. This finding reinforces that tangible support from the leadership of educational institutions is crucial to drive the adoption of information systems. It is recommended that education policy make digital transformation training mandatory for school leaders, so that they have the vision, skills and commitment to facilitate systems-based change.

The Influence of Training Effectiveness (EP) on User Satisfaction (KP)
This relationship is insignificant, with a coefficient of 0.228 and a p-value of 0.204. Although training is important for improving user competence, these results indicate that training alone is insufficient to significantly improve user satisfaction (Angelina Layongan et al., 2022). This may be due to other factors, such as system quality or technical support being more dominant in influencing user satisfaction. Formal, one-way training may not be sufficient to improve user satisfaction. Therefore, training programs should be redesigned to be need-based training with a participatory and contextual approach, accompanied by follow-up (coaching or mentoring) to ensure effectiveness.

The Influence of Training Effectiveness (EP) on System Use (PS)
This relationship appears to be significant at the 95% confidence level, with a coefficient of 0.479 and a p-value of 0.092. This suggests that training effectiveness can increase system usage, but this study has not found statistical significance. The study conducted by Ruslan (2022) supports this finding by emphasizing the importance of training to improve the use of ERP systems. Although not statistically significant, the near-significant value indicates the great potential of training in encouraging system usage. Therefore, education policy should allocate sufficient budget and time for regular and tiered training, especially in the initial phase of implementing a new system in schools.

The Influence of User Satisfaction (KP) on Net Benefits (MB)
A highly significant relationship is indicated by a coefficient of 0.601 and a p-value of 0.000. This indicates that user satisfaction significantly impacts the net benefits derived from system use, such as operational efficiency and improved service quality. This

finding is consistent with DeLone and McLean's success model for information systems (Fitria Yuniarti et al., 2021; Khairrunnisa & Yunanto, 2017), which states that user satisfaction is the main factor determining the value of a clean information system. Education policy should make user satisfaction a key indicator of successful information system implementation. This means that it is not enough to evaluate the success of the system from a usage or technical perspective, but also from the user experience, through periodic satisfaction surveys and user feedback mechanisms.

The Influence of System Usage (PS) on User Satisfaction (KP)

This relationship is not significant at the 95% confidence level, but is almost significant at the p level of 0.057, with a coefficient of 0.200. This suggests that user satisfaction may increase with increased system usage, although this impact is not significant in this situation. Studies conducted by (Firdaus et al., 2024; Khairrunnisa & Yunanto, 2017) shows that user satisfaction increases due to the ease of use of the system, which can be attributed to the intensity of system use. The more users use the system, the more likely they are to be satisfied-if the system is easy to use and relevant. It is therefore important for education system developers to ensure that the system interface is simple, user-friendly and tailored to the needs of field users, especially teachers and education personnel.

The Influence of System Use (PS) on Net Benefits (MB)

This relationship is insignificant at the 95% confidence level, although it has a coefficient of 0.274 and a p-value of 0.093. This indicates that the implementation of the system has the potential to increase net benefits, but the impact is not significant enough for this study (Khairrunnisa & Yunanto, 2017). Other factors, such as data quality or technical support being more dominant in determining net benefits, may cause this. The use of the system may not yield tangible benefits if it is not supported by data quality and technical support. Therefore, policies should integrate technical assistance, data validation and strict operational SOPs to ensure that the use of the system actually results in efficiency and improved quality of education services.

The Influence of System Quality (KS) on User Satisfaction (KP)

This relationship is not significant, according to the coefficient of 0.352 and p-value of 0.124. Although system quality is very important, this finding suggests that system quality in this situation is not enough to increase user satisfaction. The study by (Lawita (2024 Qoryah et al., 2024) found that system quality strongly influences user satisfaction, suggesting that user context and features can influence this relationship. The high technical quality of the system does not guarantee satisfied users, especially if the system is not relevant to the context or needs of users. Education policy should encourage a system design process based on user experience research so that the features provided actually solve the problems faced by users.

The Influence of System Quality (KS) on System Usage (PS)

A non-significant negative relationship is indicated by a coefficient of -0.318 and a p-value of 0.139. This indicates that improving system quality does not always result in better usage; in some situations, it may even decrease usage if the system is too complex or does not meet user needs. This suggests that a system design that is easy to use and meets user needs is essential to encourage system adoption and usage (Prayanthi et al., 2020). A system that is too complex or high-featured can actually reduce the desire to use it. Therefore, the design of educational information systems should maintain the "fit-for-

purpose" principle, i.e. be functional enough, simple, and focus on the primary needs of users. Often, "less is more" is more effective than a sophisticated but complex system.

CONCLUSION

Fundamental Finding: This study evaluates the successful implementation of the Free Nutritious Meal Program (MBG) Monitoring application in the public education sector using the DeLone & McLean Information Systems Success Model approach developed through strategic management and human resource development perspectives. The main findings show that strategic leadership support (DK) has a significant effect on system usage (PS) and training effectiveness (EP) has a positive impact on net benefits (MB). This finding confirms that the adoption and success of digital systems in schools depend not only on technical quality, but is largely determined by the active role of leadership and behavior change-oriented user development strategies. In contrast, technical system quality and training have not been shown to have a strong direct influence on user satisfaction or system usage in the absence of adequate leadership intervention.
Implication: Strengthening school leadership: Schools and education offices need to actively involve principals and other leaders in supporting technology adoption, not only as symbols, but also in monitoring, evaluating, and modeling the use of MBG applications. Behavior Change Oriented Training: Training programs should focus not only on the technical aspects, but also on developing habits of using the system and understanding its benefits for students and teachers, so that training has a real impact on results. Increased User Engagement: Continuous engagement strategies such as digital mentoring, reward systems for active use, and feedback forums from teachers and staff are needed to improve user experience and satisfaction. Integration of the System into the School Work Culture: MBG applications should be part of the daily work process and not run separately from the school's managerial and educational activities.
Limitation: The study was limited to a specific region and institution, so the results cannot be generalized nationally. The study also only evaluated users' perceptions of the benefits of the system, without measuring the actual impact on students' nutritional status or the improvement of the education process. In addition, the cross-sectional nature of the quantitative approach does not allow for in-depth examination of cause-and-effect relationships.
Future Research: Longitudinal Study: A longitudinal study is recommended to evaluate the real impact of MBG application on students' nutritional outcomes and learning achievement. Cross-Region and Context Studies: Expanding the study to different regions or between countries that have similar digital service programs will help in identifying best practices and contextual adaptations. Qualitative and Interdisciplinary Approaches: In-depth interview or observation-based studies can explore dimensions of user experience and behavioral barriers. Collaboration between the fields of education, public health and information technology will enrich the framework for evaluating digital public systems in schools.

REFERENCES

Abdillah, W., & Jogiyanto. (2015). *artial Least Square (PLS) Alternatif SEM dalam Penelitian Bisnis*. Andi Offset.

Angelina Layongan, C., Nangoi, G., & Kalalo, M. (2022). The Influence of System Quality and Information Quality Software SAP on User Satisfaction at PT PLN (Persero) Customer Service Implementation Unit (UP3) Kotamobagu. *Jurnal LPPM Bidang EkoSosBudKum (Ekonomi, Sosial, Budaya, Dan Hukum)*, *5*(2), 309–322.

Apsari, R. D., Widhiyani, N. L. S., & Rasmini, N. K. (2023). The Influence of Accounting Information System Quality and Perceived Usefulness on Accounting Information System (AIS) User Satisfaction (Case Study at the Head Office of the Bali Regional Development Bank). *European Journal of Business and Management Research*, *8*(4), 59–63. https://doi.org/10.24018/ejbmr.2023.8.4.2059

Azmy, A., & Setiarini, N. Y. (2023). Kirkpatrick Model as Evaluation Training Program for Assessor: Case Study of Government Employee. *International Journal of Management, Accounting and Economics*, *10*(9), 2383–2126. https://doi.org/10.5281/zenodo.10115328

Bawan, S. B. D., Setyanto, A., & Kurniawan, M. P. (2022). Pengaruh Kualitas Sistem, Kualitas Informasi dan Kualitas Layanan Terhadap Kepuasan Pengguna Sistem Informasi Akademik Sekolah Tinggi Agama Kristen Protestan Negeri (STAKPN) Sentani. *Buletin Poltanesa*, *23*(2). https://doi.org/10.51967/tanesa.v23i2.1857

Bayu, A., Dan, S., & Muhimmah, I. (2013). Evaluasi Faktor-Faktor Kesuksesan Implementasi Sistem Informasi manajemen Rumah Sakit di PKU Muhammadiyah Sruweng dengan Menggunakan Metode Hot-Fit. In *Seminar Nasional Informatika Medis (SNIMed) IV*. Magister Teknik Informatika.

Bock, D., & Poole, S. M. (2013). *Branding in Higher Education: A Strategic Perspective*. https://www.researchgate.net/publication/306375304

Caroline, A. N., & Nurhasana. (2023). Analisis Pemanfaatan Sikda Generik di UPTD Puskesmas Dalam Meningkatkan Efektivitas RME di Puskesmas Rapak Mahang. *Jurnal Pengabdian Kepada Masyarakat Nusantara (JPkMN)*, *5*(3), 3233–3241. https://doi.org/http://doi.org/10.55338/jpkmn.v5i3.3459

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*, *19*(4), 9–30. https://doi.org/10.1080/07421222.2003.11045748

Delvina Sari, P. (2025). Efektivitas Program Pelatihan dan Pengembangan SDM di PT Unilever Indonesia dalam Mendukung Kinerja Organisasi. *Jurnal Penelitian Ilmu-Ilmu Sosial*, *2*(6). https://doi.org/10.5281/zenodo.14634508

Fauzi, M. R., Saimi, S., & Fathoni, F. (2024). Tantangan dan Solusi Administrasi Kesehatan di Era Digital (Tinjauan Literature Review atas Implementasi Teknologi). *AL-MIKRAJ Jurnal Studi Islam Dan Humaniora (E-ISSN 2745-4584)*, *5*(01), 1093–1103. https://doi.org/10.37680/almikraj.v5i01.6219

Firdaus, R., Sartika, D., & Nurhasanah. (2024). Pengaruh Kualitas Sistem Informasi Kualitas Informasi dan Kualitas Layanan terhadap Kepuasan Pengguna Sistem Kepabean. *Syntax Literate: Jurnal Ilmiah Indonesia*, *9*(10), 5681–5692. https://doi.org/http://dx.doi.org/10.36418/syntax-literate.v9i10

Fitria Yuniarti, I., Novrikasari, & Misnaniarti. (2021). Pengaruh Kualitas Sistem, Kualitas Informasi, Kualitas Pelayanan pada Kepuasan Pengguna dan Dampaknya pada Manfaat Bersih (Penelitian terhadap Sistem Informasi Surveilans Penyakit Tidak Menular di Kota Palembang). *Jurnal Epidemiologi Kesehatan Komunitas*, *1*(6), 161–180. https://doi.org/10.14710/jekk.v6i1.8003

Fracini, R. S., & Suhari, Y. (2024). *Pengaruh Kualitas Sistem, Kualitas Informasi dan Kualitas Layanan Terhadap Kepuasan Pengguna SILALAPBAJA*. *17*(1), 176–187. https://doi.org/10.51903/elkom.v17i1.1763

Guruh Suksmono Aji, & Iva Khoiril Mala. (2024). Meningkatkan Kualitas SDM Untuk Mencapai Keunggulan Kompetitif Perusahaan di Era Digital: Tren, Inovasi, dan Tantangan. *Jurnal Manajemen Dan Ekonomi Kreatif*, *2*(3), 01–17. https://doi.org/10.59024/jumek.v2i3.357

Hair, J. F., Black, W. C., Babin, J. B., & Anderson, R. E. (2018). *Multivariate Data Analysis* (8th Edition 7th ed).

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. In *European Business Review* (Vol. 26, Issue 2, pp. 106–121). Emerald Group Publishing Ltd. https://doi.org/10.1108/EBR-10-2013-0128

Harisandi, P., Hurriyati, R., & Dirgantari, P. D. (2023). Influence of Brand Equity on Electronic-Word of Mouth Mediated by Brand Love on Shopee E-commerce. *International Journal of Multidisciplinary Approach Research and Science*, *2*(01), 83–98. https://doi.org/10.59653/ijmars.v2i01.357

Harisandi, P., Nurhidayah, R., Yusriani, S., Yuningsih, N., Tikaromah, O., & Sarjaya, S. (2024). Transforming Student into Entrepreneurs: The Role of Entrepreneurship Education and E-Commerce. *Finansha: Journal of Sharia Financial Management*, *5*(2). https://doi.org/10.15575/fjsfm.v5i2.40685

Harisandi, P., & Nurjanah, R. (2022). *Pelatihan Budidaya Magot dan Potensi Pasar di Indonesia Dengan Pemasaran Online di Desa jatireja - Cikarang*. https://jurnal.pelitabangsa.ac.id/index.php/jabmas

Harisandi, P., Rabiatul Hariroh, F. M., & Zed, E. Z. (2023). Media Sosial, Pendidikan Kewirausahaan Berdampak terhadap Minat Berusaha Dimensi oleh Inovasi Mahasiswa di Cikarang. *Jurnal Pendidikan Dan Kewirausahaan*, *11*(3), 784–802. https://doi.org/10.47668/pkwu.v11i3.852

Harisandi, P., Yahya, A., Risqiani, R., & Purwanto, P. (2023). Peran Harga dan Citra Merek dalam Mediasi Pengaruh E-Word to Mouth terhadap Keputusan Pembelian melalui Aplikasi TikTok. *MUKADIMAH: Jurnal Pendidikan, Sejarah, Dan Ilmu-Ilmu Sosial*, *7*(2), 277–285. https://doi.org/10.30743/mkd.v7i2.7232

Huit, G. T. M., Hair, J. F., Proksch, D., Sarstedt, M., Pinkwart, A., & Ringle, C. M. (2018). Addressing endogeneity in international marketing applications of partial least squares structural equation modeling. *Journal of International Marketing*, *26*(3), 1–21. https://doi.org/10.1509/jim.17.0151

Ikhsan, K. (2020). Technology Acceptance Model, Social Influence and Perceived Risk in Using Mobile Applications: Empirical Evidence in Online Transportation in Indonesia. *Jurnal Dinamika Manajemen*, *11*(2), 127–138. https://doi.org/10.15294/jdm.v11i2.23309

Jun, J., Park, H., & Cho, I. (2019). Study on initial adoption of advanced driver assistance system: integrated model of PMT and UTAUT 2. *Total Quality Management and Business Excellence*, *30*(sup1), S83–S97. https://doi.org/10.1080/14783363.2019.1665820

Khairrunnisa, U., & Yunanto, M. (2017). Pengaruh Kualitas Sistem terhadap Kepuasan Pengguna dan Manfaat Bersih pada Implementasi E-Faktur: Validasi Model Kesuksesan Sistem Informasi Delone dan Mclean. *Jurnal Ekonomi Bisnis*, *22*(3), 229–241.

Kirkpatrick, J., & Kirkpatrick, W. K. (2022). *An Introduction to The New World Kirkpatrick ® Model*. kirkpatrickpartners.com. https://doi.org/10.1007/s42979-023-01730-3

Kurbani, A. (2017). Pengaruh Kualitas Layanan Akademik dan Fasilitas Pendidikan terhadap Kepuasan Mahasiswa Kuliah pada Universitas PGRI Palembang. *Jurnal Media Wahana Ekonomika*, *13*(4), 22–35. https://doi.org/DOI:10.31851/jmwe.v13i4.2701

Lestari, T. A., & Lawita, N. F. (2024). Pengaruh Kualita Sistem, Kualitas Informasi, Kualitas Layanan Terhadap Penggunaan dan Kepuasan Pengguna. *Simposium*

Nasional Akuntansi Vokasi (SNAV), *12*(1). https://ocs.polije.ac.id/index.php/psnav/article/view/8

Levinson, F. J., Rogers, B. L., Hicks, K. M., Schaetzel, T., Troy, L., & Young, C. (1999). Monitoring and evaluation of nutrition programs in developing countries. In *Nutrition Reviews* (Vol. 57, Issue 5 I, pp. 157–164). International Life Sciences Institute. https://doi.org/10.1111/j.1753-4887.1999.tb01797.x

Mendrofa, M., & Hastuti, S. (2024). The Effect of System Quality and Information Quality on System User Satisfaction Accounting Information. *Equity: Jurnal Akuntansi*, *5*(1). https://doi.org/10.46821/equity.v5i1.510

Ojo, A. I. (2017). Validation of the delone and mclean information systems success model. *Healthcare Informatics Research*, *23*(1), 60–66. https://doi.org/10.4258/hir.2017.23.1.60

Parengkuan, B. A., Bernarto, I., Wuisan, D. S. S., Palupi, Y. C., & Tahulending, J. M. F. (2024). Factors associated with patient satisfaction and behavioral intention by using the partial least squares structural equation modeling (PLS-SEM). *Holistik Jurnal Kesehatan*, *18*(3), 369–376. https://doi.org/10.33024/hjk.v18i3.139

Prayanthi, I., Lompoliu, E., & Klabat, R. L. (2020). The Effect of System Quality, Information Quality and Perceived Usefuless on Accounting Information System User Satisfaction. *Klabat Accounting Review*, *1*(2), 1–11. https://doi.org/10.60090/kar.v1i2.475.1-11

Purwanto, A. (2022). WHAT IS THE ROLE OF CUSTOMER BEHAVIOR FOR ELECTRONIC E-COMMERCE AND MODERN MARKET VISIT INTENTION ? *JOURNAL OF INFORMATION SYSTEMS AND MANAGEMENT*, *01*(06). https://jisma.org

Putri Haykal, A., Febrilia, I., & Arvinta Monoarfa, T. (2023). Pengaruh Kualitas Sistem, Kualitas Informasi, dan Kualitas Layanan terhadap Loyalitas Konsumen yang dimediasi oleh Kepuasan Konsumen dalam Berbelanja Online. *Jurnal Bisnis, Manajemen, Dan Keuangan*, *4*(1). https://doi.org/https://doi.org/10.21009/jbmk.0401.02

Qoryah, W., Sulhan, M., & Fazizah, A. (2024). Pengaruh Kualitas Informasi, Kualitas Sistem, Kualitas Layanan pada Aplikasi BRIMO. *EKOMA : Jurnal Ekonomi, Manajemen, Akuntansi*, *4*(1), 1414–1424. https://doi.org/10.56799/ekoma.v4i1.5461

Rahmawati, M. D., & Nugroho, E. (2018). *Faktor-Faktor yang Mempengaruhi Keberhasilan Implementasi SIMPUS di Puskesmas Kabupaten Sragen*. *3*(1), 81–94. https://doi.org/10.22146/jisph.33146

Robertson, J. L., & Barling, J. (2017). Contrasting the nature and effects of environmentally specific and general transformational leadership. *… & Organization Development Journal*. https://doi.org/10.1108/LODJ-05-2015-0100

Ruslan, R. (2022). Analisis Pengaruh Kualitas Sistem, Kualitas Informasi, Kualitas Layanan Dan Perceived Usefulness Terhadap Kepuasan Pengguna Dan Kinerja Karyawan Pada Sistem Enterprise Resource Planning (Erp) Mobiz di PT. Nusa Mandiri Utama. *Nusa Mandiri Utama, Syntax Idea*, *4*(1). https://doi.org/10.36418/syntax-idea.v4i3.1797

Safira Armah, & Rayyan Firdaus. (2024). Konsep Dan Penerapan Sistem Informasi Manajemen. *Jurnal Inovasi Manajemen, Kewirausahaan, Bisnis Dan Digital*, *1*(3), 50–56. https://doi.org/10.61132/jimakebidi.v1i3.192

Schleicher, D. J., Baumann, H. M., & ... (2018). Putting the System Into Performance Management Systems: A Review and Agenda for Performance Management Research. *Journal of …*. https://doi.org/10.1177/0149206318755303

Susanty, Y. (2022). Evaluasi Program Pengembangan Kompetensi Berdasarkan Model Evaluasi Kirkpatrick Level 1 dan Level 2. *Jurnal Administrasi Publik*, *18*(2), 172–191. https://doi.org/10.52316/jap.v18i2.111

Sutrisno, E., Silitonga, M. S., Yusuf, R. R., & Nugroho, A. A. (2024). Digital Divided: How Indonesian Public Service Affected? *JPPI (Jurnal Penelitian Pendidikan Indonesia)*, *10*(3). https://doi.org/10.29210/020244613

Tarigan, W. J., & Ambarita, I. M. (2021). PENERAPAN MANAJEMEN STRATEGI DALAM MENGHADAPI PERSAINGAN PASAR (Studi Kasus Pada Telkomsel Cabang Pematangsiantar). *Jurnal Ilmiah AccUsi*, *3*(1), 28–39. https://doi.org/10.36985/accusi.v3i1.491

Viriando, Y. F., & Sfenrianto. (2021). Using Delone & Mclean information system success model to evaluate the success of online platform. *Journal of System and Management Sciences*, *11*(2), 182–198. https://doi.org/10.33168/JSMS.2021.0212

Widyaningrum, T., Sholihah, Q., & Haryono, B. S. (2024). The Delone and McLean Information System Success Model: Investigating User Satisfaction in Learning Management System. *Journal of Education Technology*, *8*(1), 86–94. https://doi.org/10.23887/jet.v8i1.71080

Widyantoro Yuliatmojo, & Arius Ayu Saputri. (2024). Implementasi Sistem Informasi Laman Sinta Dalam Meningkatkan Manajemen Publikasi Ilmiah. *Jurnal Riset Rumpun Ilmu Sosial, Politik Dan Humaniora*, *3*(1), 172–184. https://doi.org/10.55606/jurrish.v3i1.2383

Wira Kusuma, G. (2024). Implementasi Sistem Informasi Manajemen untuk Optimalisasi Proses Rekrutmen dan Seleksi Sumber Daya Manusia. *Jurnal Ilmiah Mahasiswa Akuntansi) Universitas Pendidikan Ganesha*, *15*(03). https://doi.org/10.23887/jimat.v15i03.86156

*** Yono Maulana (Corresponding Author)**
Faculty of Business Economics Education, Universitas Pendidikan Indonesia
Jl. Dr. Setiabudi No.229, Isola, Kec. Sukasari, Kota Bandung, Jawa Barat 40154, Indonesia
Email: yonomaulana@upi.edu

Agus Rahayu
Faculty of Business Economics Education, Universitas Pendidikan Indonesia
Jl. Dr. Setiabudi No.229, Isola, Kec. Sukasari, Kota Bandung, Jawa Barat 40154, Indonesia
Email: agusrahayu@upi.edu

Lili Adi Wibowo
Faculty of Business Economics Education, Universitas Pendidikan Indonesia
Jl. Dr. Setiabudi No.229, Isola, Kec. Sukasari, Kota Bandung, Jawa Barat 40154, Indonesia
Email: liliadiwibowo@upi.edu

Prasetyo Harisandi
Faculty of Economics Business, Universitas Pelita Bangsa
Jl. Inspeksi Kalimalang No.9, Cibatu, Cikarang Sel., Kabupaten Bekasi, Jawa Barat 17530
Email: prasetyoharisandi@pelitabangsa.ac.id

Geraldine B, Advincula
Department of Hospitality Management, Southern Luzon State University
Lucban - Tayabas Rd, Lucban, 4328 Quezon, Filipina
Email: gadvincula@slsu.edu.ph

Dedi Prasetyo
Inspektorat Kepolisian Negara Republik Indonesia (IRWASUM POLRI)
Jalan Trunojoyo No. 3, Kebayoran Baru, Jakarta Selatan. DKI Jakarta
Email: dediprasetyo@polri.go.id