JIPI (Jurnal Ilmu Perpustakaan dan Informasi) Vol. 11 No. 2 Tahun 2026
ISSN (online): 2528-021X
Page: 572-586

EVALUATING THE EFFECTIVENESS OF A MANAGEMENT INFORMATION SYSTEM FOR VOCATIONAL EDUCATION AND TRAINING: A QUALITATIVE STUDY OF SIMBANGLIS IN INDONESIA

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Receive : 09 Oct 2026
Accepted : 05 Nov 2026
Published: 07 Nov 2026
DOI : 10.30829/jipi.v11i2.32161

Abstract
Digital transformation in public training institutions requires information systems that improve not only administrative efficiency but also service quality, transparency, and data-driven decision-making. This study examines the effectiveness of the Building and Electrical Management Information System (Simbanglis) in supporting education and training programs at the Center for the Development of Quality Assurance for Vocational Education in Building and Electrical Engineering (BBPPMPV BBL), Indonesia. A qualitative descriptive design was employed. Data were collected through in-depth interviews, direct observation, and document analysis involving 13 purposively selected informants comprising training participants, training committee members, the training-organizing team, system developers, and management representatives. The findings were analysed using the DeLone and McLean Information Systems Success Model, covering system quality, information quality, service quality, use, user satisfaction, and net benefits. The findings indicate that Simbanglis has become embedded in the training-management process by integrating registration, administration, learning support, evaluation, and certification. Users perceived the system as accessible, reliable, informative, and useful, while responsive technical assistance supported sustained use. Major benefits included faster administrative processes, reduced paper use, improved transparency, integrated participant records, and stronger support for managerial decision-making. However, peak-traffic slowdowns, dependence on particular technical personnel, internet connectivity, and infrastructure disruptions remain challenges. The study demonstrates that information-system effectiveness in public training institutions depends on the interaction between technological quality, organizational commitment, user support, and continuous system adaptation

Keywords: information system success; management information system; vocational education; training management; digital public service; DeLone and McLean; Simbanglis

INTRODUCTION

Digital transformation has increasingly changed how public and educational organizations manage information, deliver services, and make decisions. Management information systems (MIS) are no longer limited to administrative data processing; they have become organizational infrastructures that connect operational activities, users, information flows, and managerial decision-making. Within education and training institutions, information systems may support participant registration, program scheduling, learning administration, assessment, evaluation, certification, and institutional reporting. Their value, however, depends not merely on their availability but on whether the system produces reliable information, is consistently used, satisfies users, and generates measurable organizational benefits.

Evaluating information-system effectiveness therefore requires a multidimensional perspective. DeLone and McLean (1992) originally conceptualized information-system success as an interrelated set of dimensions and subsequently updated the model by emphasizing system quality, information quality, service quality, use, user satisfaction, and net benefits (DeLone & McLean, 2003). The model provides a useful framework because it moves assessment beyond technical functionality. A technically functioning platform cannot automatically be considered successful when users encounter poor-quality information, inadequate technical assistance, low acceptance, or limited organizational benefits. Conversely, sustained use and satisfaction may indicate that technical and organizational dimensions have become mutually reinforcing.

This perspective is particularly important in public-sector training organizations. Training management involves multiple actors and stages, often requiring large volumes of participant information, administrative documentation, assessment records, attendance data, and certification. Previous studies have suggested that information systems can improve processing speed, administrative efficiency, service delivery, and information accessibility in training, educational, and government settings (Abdullah & Baharuddin, 2020; Fauzia, 2024; Lubis, 2024; Suryanto, 2018). Studies applying the DeLone and McLean framework have also demonstrated its usefulness in assessing information systems in government and organizational contexts (Vatresia, 2022). Nevertheless, information-system success remains contextual because organizational mandates, technological capacity, user diversity, and patterns of implementation influence how benefits are ultimately produced.

The Center for the Development of Quality Assurance for Vocational Education in Building and Electrical Engineering (BBPPMPV BBL) provides an important case for examining this issue. As a public institution responsible for supporting vocational education quality and the competency development of educators and education personnel, the institution manages education and training programs involving extensive administrative and participant data. Prior to digital integration, training administration faced several recurring problems: delays in disseminating training information, errors in participant certificates, incomplete or lost participant records, repeated invitations to the same participants due to the absence of an integrated database, extensive paper consumption, and manual processing of training scores (Humaizi et al., 2024). These conditions affected administrative efficiency, process transparency, and the quality of participant services.

In response, BBPPMPV BBL developed the Sistem Informasi Manajemen Bangunan dan Listrik (Simbanglis). Development began in 2021, followed by operational testing in 2022.

Unlike systems developed through external vendors, Simbanglis was designed internally by institutional personnel and adapted to the organization's own training-management requirements. Its functions cover the training cycle from program announcements, participant registration, and selection to attendance, learning assessment, evaluation, digital certification, participant databases, and post-training documentation. Different accounts are provided for participants, training committees, facilitators, the training-management team, and system administrators according to their organizational responsibilities.

This case differs from many previous studies that have concentrated on school information systems, internal administrative operators, or isolated aspects of education management. Simbanglis involves both internal organizational actors and external training participants and operates across planning, implementation, evaluation, and post-training administration. This end-to-end integration and internally developed character provide an opportunity to examine information-system success not simply as technology adoption but as a transformation in public training governance.

Accordingly, this study addresses the following question: How effective is Simbanglis in supporting the organization and delivery of education and training at BBPPMPV BBL when evaluated through the six dimensions of the DeLone and McLean Information Systems Success Model? The study additionally examines factors enabling or constraining effective implementation and considers how the system contributes to administrative efficiency, transparency, service quality, and data-informed decision-making.

The study contributes in two ways. First, it extends the application of the DeLone and McLean framework to an internally developed management information system operating across the full training cycle of a public vocational-education institution. Second, it demonstrates that digital-system effectiveness in this context is fundamentally socio-technical: system and information quality must be complemented by organizational commitment, technical assistance, user adaptation, and institutional use of data. This perspective is important for public organizations seeking to move from digitizing existing administrative tasks toward integrated and data-driven service governance.

RESEARCH METHOD

This study employed a qualitative descriptive design to examine how users and organizational actors experienced the implementation and effectiveness of Simbanglis. Qualitative inquiry was considered appropriate because the study sought to understand not only whether system functions were available but also how users perceived system quality, service support, administrative change, and organizational benefits within the natural context of training implementation (Creswell, 2013).

The research was conducted at BBPPMPV BBL, Indonesia. Simbanglis constituted the central unit of analysis because it had been institutionalized as a management platform supporting multiple stages of education and training. The qualitative design enabled the study to compare experiences among participants occupying different positions within the system, including service recipients, training administrators, system developers, and management representatives.

Participants were selected purposively on the basis of their direct knowledge of or involvement with Simbanglis. Thirteen informants participated in the study: six training participants, three training committee members, one member of the training-organizing team,

one member of the system-development team, and two management representatives. This composition enabled the study to capture both user-level and organizational perspectives.

Informant category	Number	Relevance
Training participants	6	Direct users receiving training services
Training committee	3	Administrative users managing training activities
Training-organizing team	1	Responsible for program management
System-development team	1	Technical and development perspective
Management representatives	2	Policy, budget, and organizational perspective
Total	13	

Data were collected through in-depth interviews, direct observation, and document analysis. Interviews explored users' experiences with accessibility, reliability, information accuracy, technical assistance, routine system use, satisfaction, and organizational benefits. Interviews with system developers and institutional management also examined system development, maintenance, policy support, and technical constraints.

Observation was used to examine the actual operation of Simbanglis during training administration and to identify conditions that might not be fully captured through interviews. Documentary evidence included institutional records, training documentation, system guidelines, technical documentation, participant records, and relevant organizational materials. These data sources enabled the researchers to compare participant accounts with observable practices and institutional documentation.

The analytical framework was based on the updated DeLone and McLean (2003) Information Systems Success Model. Six dimensions guided data organization: system quality, information quality, service quality, use, user satisfaction, and net benefits.

System quality included ease of use, reliability, response time, security, compatibility, and integration. Information quality concerned accuracy, completeness, relevance, comprehensibility, and timeliness. Service quality addressed technical support, responsiveness, user assistance, maintenance, and socialization. Use examined the extent to which Simbanglis was incorporated into training activities and routines. User satisfaction concerned perceived convenience, functionality, usefulness, and overall experience. Finally, net benefits addressed administrative efficiency, time and cost savings, transparency, service quality, organizational performance, and decision support (Ritonga et al., 2023).

The framework was used as an analytical lens rather than as a quantitative measurement instrument. Thus, the study did not calculate numerical scores for the six dimensions but interpreted how each dimension emerged across interview, observation, and documentary evidence.

Data analysis followed an interactive qualitative process comprising data reduction, data display, and conclusion drawing/verification. Interview and observational data were first reviewed and organized according to meaningful categories. The reduced data were then displayed according to the six DeLone-McLean dimensions and compared across informant groups. Conclusions were developed iteratively and checked against additional evidence.

Trustworthiness was supported through source triangulation and methodological triangulation. Statements made by training participants were compared with accounts from committee members, developers, and managers, while interview findings were cross-checked against observation and documentation.

Ethical procedures included obtaining participant consent before interviews, explaining the research purpose, protecting informant identities, maintaining confidentiality, and avoiding manipulation of data or findings.

RESULT AND DISCUSSION

System Quality: Accessibility, Integration, and Residual Technical Constraints

The findings indicate that users generally perceived Simbanglis as easy to understand and operate. Participants and administrators reported that menus were organized according to their respective needs, and the platform could be accessed through both computers and mobile devices. Training participants also received instructions and assistance during initial system use, reducing barriers for users with different levels of digital familiarity. These observations can be situated within research identifying usability and perceived ease of use as important conditions of technology acceptance (Davis, 1989; Nielsen, 1994; Wixom & Todd, 2005).

System integration constituted a particularly important aspect of quality. Previously fragmented administrative activities were incorporated into one platform, including registration, participant verification, attendance, pre- and post-tests, assessment, evaluation, administrative documentation, and certification. Different user accounts restricted functionality according to organizational roles, helping maintain operational control and data security. The importance of integrating technical capabilities with user requirements is also emphasized in multidimensional evaluations of information-system success (Iivari, 2005; Petter et al., 2008).

The system also employed differentiated access rights. Participants, committee members, facilitators, training-management staff, and system administrators could access only functions relevant to their respective responsibilities. This role-based structure reduced unauthorized access and supported centralized data management.

Reliability, however, was not absolute. Most users reported that the platform operated without major disruption during routine activities, but slower response times occurred when large numbers of prospective participants accessed the system simultaneously, particularly near registration deadlines. Network quality, electricity interruptions, and bandwidth limitations could also affect access. These findings indicate that Simbanglis had achieved functional reliability but continued to require infrastructure strengthening to manage high-demand periods. From a systems-evaluation perspective, response time and consistent functionality are relevant to the assessment of system quality and subsequent user perceptions (Rai et al., 2002; Petter et al., 2013).

Information Quality: More Accurate, Complete, and Timely Training Information

Simbanglis substantially changed how training information was produced and accessed. Training schedules, administrative requirements, learning materials, assessment results, participant information, and certificates became accessible within the same system. Participants therefore relied less on fragmented communication with individual committee members.

Information accuracy was strengthened because participant data were entered within the system and subsequently validated by administrators. This reduced problems previously

associated with incorrect certificates, repeated data entry, and inconsistent participant records. Information could also be updated more rapidly than under manual procedures, enabling users to access current training-related information.

The centralization of information was especially important because previous administrative arrangements had produced delays and data fragmentation. The findings therefore suggest that information quality contributed not only to user convenience but also to improved communication between the institution and training participants. This interpretation is consistent with prior studies connecting information quality with user satisfaction and organizational impacts (Seddon, 1997; Wang & Liao, 2008).

Service Quality: Technical Assistance as an Enabling Mechanism

Technical support played an important role in sustaining Simbanglis use. The system-development team provided assistance when users experienced technical problems, while training committees supported participants through socialization, technical guidance, written instructions, and direct assistance.

Users generally perceived responses to technical problems as relatively quick because communication between developers and training administrators occurred directly. Moreover, system development did not end with initial implementation. Features continued to be adjusted in response to organizational requirements and user feedback. The broader e-service literature similarly identifies responsiveness and service support as important aspects of users' digital experiences (Parasuraman et al., 2005; Zeithaml et al., 2002).

Nevertheless, the findings also exposed an organizational vulnerability: technical problem-solving remained partly dependent on particular personnel or persons in charge. When these individuals were unavailable, resolution could be delayed. This means that service quality was generally positive but had not yet developed into a fully institutionalized support structure independent of specific individuals. Comparable public-sector research highlights that sustained digital-service delivery also requires organizational capabilities beyond the technical platform (Mergel, 2019; Cordella & Tempini, 2015).

From Optional Technology to Institutional Work Infrastructure

Simbanglis was used throughout the training-management cycle, including planning, participant registration, administrative verification, implementation, learning activities, assessment, evaluation, reporting, and certification. Its use had become routine for both participants and internal administrators.

An important finding is that use was reinforced institutionally. Organizational policy required Simbanglis to be used in training administration, making the platform part of the institution's main business process rather than an optional technological supplement. High use therefore reflected both functional utility and organizational commitment. The distinction between institutional requirements and voluntary technology acceptance is relevant to established adoption research (Venkatesh et al., 2003; Teo et al., 2008).

Routine use also generated familiarity. Participants and committee members who initially required assistance gradually became accustomed to system functions. The system consequently became embedded in the operational workflow of training activities rather than remaining a separate technological intervention. Research on educational systems likewise suggests that repeated interaction, quality perceptions, and satisfaction need to be interpreted together rather than as isolated outcomes (Cidral et al., 2018; Aparicio et al., 2016).

User Satisfaction: Reducing Administrative Burden

Most users expressed positive perceptions of Simbanglis. Participants reported that registration, administrative submission, evaluation, information retrieval, and certificate access were easier than under the previous arrangements. Committee members experienced reduced administrative workloads because attendance, assessment recapitulation, participant information, and reporting could be handled digitally.

Satisfaction therefore appeared closely related to the system's practical ability to reduce repetitive work and administrative errors. The shift from manual to integrated processes also improved the overall user experience because information could be accessed without repeatedly contacting administrative personnel. This task-oriented interpretation accords with work differentiating satisfaction with a system from beliefs about its usefulness in practice (Wixom & Todd, 2005; Al-Fraihat et al., 2020).

Importantly, users did not simply report satisfaction with the interface. Satisfaction was linked to improvements in completing actual tasks. This distinction suggests that the value of the system was perceived primarily through its contribution to work processes and service delivery. The importance of perceived value in explaining user experience is further recognized in technology-acceptance studies (Davis, 1989; Venkatesh et al., 2012).

Net Benefits: From Administrative Digitalization to Data-Driven Governance

The strongest evidence of Simbanglis effectiveness emerged in the net-benefits dimension. At the operational level, the system reduced manual administration, accelerated data processing, automated several forms of assessment recapitulation, and supported electronic certification. Digital attendance and integrated records also reduced dependence on printed documents.

Paper reduction had financial and environmental implications. Institutional actors reported that reducing printed attendance sheets, learning materials, administrative records, and certificates generated resource savings. These efficiencies could be redirected toward other training needs. In digital-government research, operational efficiency is often considered alongside broader institutional and public-value outcomes (Bannister & Connolly, 2014; Dunleavy et al., 2006).

At the service level, participants gained faster access to information, materials, administrative processes, evaluation, and certificates. At the governance level, Simbanglis increased transparency because participant selection, attendance, scores, evaluations, and certification were recorded within an integrated system. Role-based access also strengthened accountability by limiting data access according to user responsibilities.

A particularly important organizational benefit was the development of an integrated participant database. Management could review previous participation, reduce repeated selection of the same individuals, map training targets, monitor program achievement, and use historical data for planning future training. Thus, Simbanglis evolved beyond an administrative tool into an informational resource for management and decision-making. The relevance of integrated information for management and public-service governance has been emphasized in digital-government scholarship (Gil-Garcia et al., 2018; Janowski, 2015).

Supporting and Inhibiting Factors

Several organizational conditions supported effective implementation. First, management commitment was reflected in institutional policy requiring Simbanglis use and

supporting server and system maintenance. Second, socialization, technical guidance, manuals, and direct user assistance facilitated adaptation. Third, continuous feature development kept the platform aligned with changing organizational requirements. Finally, the close fit between system functions and the training workflow encouraged sustained use. Research on public-sector transformation likewise emphasizes the organizational and strategic dimensions of adopting digital systems (Mergel et al., 2019; Vial, 2019).

Three major constraints were identified. Technical support still depended heavily on particular personnel; external infrastructure conditions such as internet connectivity and electricity could interrupt access; and increased simultaneous access could reduce system performance. These findings demonstrate that sustainable information-system effectiveness depends on institutional capacity as much as software functionality. The need for mature governance and infrastructure is also reflected in international digital-government policy frameworks (Organisation for Economic Co-operation and Development [OECD], 2014, 2020).

The findings demonstrate that Simbanglis has improved the effectiveness of training management through enhanced system quality, information quality, and service quality. Its accessible interface, integrated administrative functions, and role-based access facilitate registration, verification, attendance, assessment, evaluation, and certification within a centralized platform. More accurate, complete, and timely information reduces administrative errors and improves communication between participants and training administrators. Technical assistance and continuous system development further support user adaptation and satisfaction. Moreover, institutional policies requiring Simbanglis use have transformed the platform from an optional digital application into an essential component of organizational workflows. User satisfaction is primarily associated with simplified procedures, reduced repetitive tasks, and more efficient access to training services.

The implementation of Simbanglis also generates organizational benefits, including improved operational efficiency, reduced paper consumption, greater administrative transparency, and strengthened data-driven decision-making. Its integrated participant database enables management to monitor training participation, evaluate program achievements, and develop more informed training plans. These benefits are supported by management commitment, technical guidance, continuous system improvement, and alignment between platform functions and organizational needs. Nevertheless, several challenges remain, particularly dependence on specific technical personnel, unstable internet and electricity infrastructure, and slower system performance during periods of high user demand. Overall, the findings indicate that the effectiveness and sustainability of Simbanglis depend not only on technological functionality but also on institutional support, infrastructure reliability, and the development of sustainable technical support mechanisms.

DISCUSSION

This study demonstrates that the effectiveness of Simbanglis cannot be understood solely in terms of whether the application technically functions. Rather, the findings illustrate the interdependence proposed by the DeLone and McLean (2003) model. System quality and information quality create the technical and informational conditions for use, while service quality supports users when those conditions are disrupted. Repeated use increases familiarity and contributes to satisfaction, and sustained use combined with satisfaction generates

organizational benefits. Earlier syntheses and empirical evaluations similarly treat information-system success as a multidimensional phenomenon (Petter et al., 2008; Wang & Liao, 2008).

The findings reinforce a central principle of the DeLone and McLean framework: information-system success consists of multiple interacting dimensions rather than a single technological outcome. Simbanglis was perceived as effective because the system was sufficiently accessible, reliable, and integrated; because it generated information users considered useful and timely; and because technical and organizational support was available. This interaction is consistent with theoretical refinements that distinguish technology use, perceived usefulness, and organizational outcomes (Seddon, 1997; Rai et al., 2002).

This finding is consistent with previous research suggesting that management information systems can improve educational administration and service efficiency when technology is aligned with organizational activities (Abdullah & Baharuddin, 2020; Fauzia, 2024; Suryanto, 2018). However, the present study extends this discussion by showing how such alignment occurs across an entire training-management cycle rather than within one administrative function. Parallel evidence from educational technology links information, system, and support quality with perceived benefits, although the present study concerns administrative training management rather than classroom learning (Al-Fraihat et al., 2020; Cidral et al., 2018; Cidral et al., 2020).

The internally developed nature of Simbanglis appears to have facilitated functional alignment. Because development was undertaken within the institution, features could be modified according to the needs of participants, committees, facilitators, and training managers. This illustrates the value of contextual system design. At the same time, internal development produced a potential vulnerability: technical knowledge remained concentrated among a limited number of personnel. Thus, organizational ownership can simultaneously support contextual adaptability and create key-person dependency. In the public sector, scholarship on digital-service teams and organizational change similarly indicates that local design capacity can improve responsiveness while requiring deliberate governance arrangements (Cordella & Tempini, 2015; Mergel, 2019).

One analytically important finding concerns the high level of Simbanglis use. DeLone and McLean (2003) position use as an important dimension of success, but the meaning of high use differs when system use is mandatory. At BBPPMPV BBL, organizational policy made Simbanglis part of the standard training process. High use therefore cannot be interpreted simply as voluntary acceptance.

The findings nonetheless suggest that institutional mandate alone does not explain continued acceptance. Users also reported convenience, reduced workloads, accessible information, and positive experiences. User satisfaction and net benefits consequently provide stronger evidence of successful institutionalization than frequency of use alone. The interaction among mandatory use, positive user perceptions, and observable organizational benefits indicates that Simbanglis has moved beyond formal compliance toward integration into everyday organizational practice (Ritonga et al., 2024).

This distinction is significant for public-sector information systems. Public organizations often introduce platforms through formal policy rather than individual user choice. Evaluating success therefore requires attention to whether obligatory use is accompanied by satisfaction, task improvement, and organizational benefits. A system may achieve high usage because it is mandated while still producing frustration or inefficiency. The Simbanglis case shows a more positive pattern, although continued user feedback remains necessary. Established technology-

acceptance models caution that observed use should be interpreted in light of behavioral, social, and facilitating conditions rather than treated as equivalent to success (Venkatesh et al., 2003, 2012).

The net benefits identified in this study extend beyond faster administration. Reduced paper use, automated data processing, integrated certificates, and simplified participant administration represent first-order efficiency benefits. More strategically, however, Simbanglis changed the informational basis of training governance.

The integrated participant database allowed managers to identify training histories, prevent unnecessary repeated participation, map program targets, and support future planning. This demonstrates a transition from digital administration toward data-informed management. In public administration terms, the value of an information system is therefore not limited to converting paper processes into electronic ones. Greater value emerges when accumulated digital data are transformed into organizational knowledge that supports allocation, evaluation, accountability, and policy decisions. This distinction between the digitization of procedures and strategic institutional transformation parallels research on digital-era governance and public-sector data use (Dunleavy et al., 2006; Gil-Garcia et al., 2018; Vial, 2019).

Transparency is another important contribution. Prior to system integration, participant selection and administrative data were vulnerable to fragmentation and perceptions of inconsistency. Centralized participant records and traceable processes improve the institutional capacity to account for who participates, how training is administered, and how results are recorded. The findings therefore connect information-system success with broader public-service values such as transparency and accountability. Such benefits fit public-value perspectives stressing accountability and trust in digital service provision (Bannister & Connolly, 2014; Teo et al., 2008).

The findings also highlight the often-underestimated role of service quality. Technical assistance, user socialization, manuals, and direct guidance were essential, particularly because system users possessed different levels of digital competence. This supports DeLone and McLean's (2003) decision to include service quality in the updated success model. Research on electronic service quality and educational platforms similarly identifies support quality and responsiveness as important contributors to users' experiences (Parasuraman et al., 2005; Zeithaml et al., 2002; Al-Fraihat et al., 2020).

Technical support should therefore be understood as an organizational capability rather than merely a response to system failure. User assistance reduces the gap between technical system availability and meaningful system use. In the Simbanglis case, such assistance enabled users to navigate a system that covers many administrative processes.

However, dependence on individual technical personnel represents a sustainability risk. An internationally relevant implication from this case is that digital transformation requires institutionalized support mechanisms. A formal helpdesk, documented escalation procedures, shared technical knowledge, staff succession, and systematic incident documentation can prevent system sustainability from depending on particular individuals. From a managerial standpoint, this recommendation is aligned with the emphasis on institutional arrangements, continuity, and implementation capacity in e-government studies (Heeks, 2006; Mergel, 2019).
The results indicate that Simbanglis should not be viewed as a completed digital product. Periods of heavy simultaneous access continue to challenge system performance, while network and electricity conditions remain external constraints. The next stage of development therefore requires both technical and organizational strengthening.

Future development should expand server and network capacity, develop a more formal helpdesk, increase the number and competence of technical personnel, collect user feedback systematically, and integrate Simbanglis with other relevant information systems. Strengthening analytical functions through dashboards and business-intelligence capabilities would also allow management to monitor participant distribution, training history, program performance, and achievement of institutional targets more effectively.

These recommendations indicate a transition from system implementation to system maturity. At the implementation stage, the primary concern is whether the platform functions and whether users can adopt it. At a more mature stage, attention shifts toward resilience, interoperability, analytics, cybersecurity, support governance, and continuous improvement. This transition is particularly relevant for public institutions because long-term information-system value depends on sustainability beyond initial innovation. Models of digital-government development emphasize the progression toward contextualized, coordinated, and strategically managed digital services (Janowski, 2015; OECD, 2020).

Theoretically, the study supports the applicability of the DeLone and McLean model to qualitative evaluation of a public-sector training-management system. Rather than measuring each dimension statistically, qualitative evidence reveals how users and organizational actors understand the relationships among system quality, information quality, service support, use, satisfaction, and benefits. The value of context-sensitive assessment and the distinct treatment of usage and benefits are also supported by previous conceptual and empirical examinations of IS success (Iivari, 2005; Petter et al., 2013; Seddon, 1997).

The study also suggests that in institutionally mandated systems, organizational commitment should be treated as an important contextual condition surrounding the six dimensions. Management policy supported routine use, resource allocation, maintenance, and continued development. Although organizational commitment is not one of the original six success dimensions, it influenced how these dimensions operated in practice. Organizational conditions are especially important in the wider literature on public-sector digital transformation (Mergel et al., 2019; OECD, 2014).

Practically, institutions developing comparable systems should avoid treating digitalization as software procurement alone. Effective implementation requires a platform aligned with work processes, reliable data governance, differentiated access rights, user training, responsive technical support, systematic feedback, adequate infrastructure, and managerial commitment to use accumulated data in decision-making.

The study has several limitations. It examines a single institution and relies primarily on qualitative accounts and institutional documentation. Consequently, it does not provide statistical estimates of relationships among the DeLone-McLean dimensions or objective before-and-after measurements of processing time, cost reduction, or system performance. The institutional requirement to use Simbanglis may also influence user perceptions and usage patterns. Future studies should combine qualitative findings with system-log analysis, user surveys, objective performance measures, cost-efficiency analysis, and cross-institutional comparisons. Longitudinal research could further examine whether current satisfaction and organizational benefits are sustained as user numbers and system complexity increase. A multiple-case approach and additional quantitative evidence could strengthen external comparison and analytic generalization in future research (Yin, 2018).

The findings demonstrate that Simbanglis effectiveness reflects the interdependence of the six dimensions of the DeLone and McLean (2003) Information Systems Success Model:

system quality, information quality, service quality, system use, user satisfaction, and net benefits. Its integrated functions, accessible information, and technical support contributed to improved training administration and positive user experiences. However, because Simbanglis use was institutionally mandated, high usage alone cannot be considered evidence of success. User satisfaction, reduced administrative workloads, and organizational benefits provide stronger indications of effective implementation. Beyond operational efficiency, Simbanglis supported transparency, accountability, and data-informed decision-making through centralized participant records and integrated training information. These findings suggest that organizational commitment plays an important contextual role in strengthening information-system effectiveness, particularly within public-sector institutions.

CONCLUSION

This study examined the effectiveness of Simbanglis in supporting vocational education and training management at BBPPMPV BBL using the six dimensions of the DeLone and McLean Information Systems Success Model. The findings indicate that Simbanglis has become an integral component of the institution's training-management process rather than merely an administrative application. Its relatively accessible and integrated system architecture, useful and timely information, responsive user assistance, routine organizational use, positive user experiences, and tangible organizational benefits collectively indicate effective implementation.

The most significant contribution of Simbanglis lies in its ability to connect operational digitalization with organizational governance. The system reduces repetitive manual administration and paper use while simultaneously strengthening transparency, participant-data integration, service delivery, and data-informed decision-making. Nevertheless, effectiveness remains conditional on organizational and infrastructural capacity. Peak-traffic performance, dependence on particular technical personnel, network reliability, and continued feature development require further attention.

The findings demonstrate that successful digital transformation in public training institutions depends on alignment among technology, information, people, organizational policy, and service support. Future development should therefore prioritize infrastructure resilience, institutionalized technical support, systematic user feedback, interoperability, data analytics, and human-resource capacity. Through these improvements, management information systems such as Simbanglis can evolve from administrative tools into strategic infrastructures for transparent, efficient, and evidence-informed public training governance

SUGGESTION

Future improvements should prioritize server scalability during registration peaks, a documented technical-support workflow, routine user feedback, stronger connectivity resilience, and wider access to analytics for training planning. Further studies may test the qualitative findings across comparable institutions using system logs, user surveys, and objective administrative performance indicators

THANK YOU-NOTE

The authors sincerely thank the management of BBPPMPV BBL, the Simbanglis development and training-administration teams, and the training participants who shared their time, experiences, and perspectives during the interviews, observations, and documentation

process. Their cooperation provided valuable insights into the use and organizational implications of Simbanglis. The authors also appreciate the institutional support that facilitated access to relevant information and research activities. All interpretations and conclusions presented in this article remain the responsibility of the authors

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