Integrating EUCS and TAM to Evaluate DAPODIK User Satisfaction and Use in Central Lombok

Melyana Febrian[1], Khairul Imtihan[2], Sofiansyah Fadli[3]

[1,2]Department of Information Systems, STMIK Lombok, Praya, Central Lombok, Indonesia
[3]Department of Informatics Engineering, STMIK Lombok, Praya, Central Lombok, Indonesia.

Abstract. This study evaluates user satisfaction and post-adoption behavior toward the Data Pokok Pendidikan (DAPODIK) Information System by integrating the End-User Computing Satisfaction (EUCS) and Technology Acceptance Model (TAM) within a mandatory public education system context. Although DAPODIK has been nationally enforced and widely implemented in Indonesia, empirical evidence explaining how system quality translates into user satisfaction, technology acceptance, and actual use remains limited, particularly at the local government level. A quantitative survey-based approach was employed involving 255 active DAPODIK users in Central Lombok Regency, Indonesia, collected between December 2025 and January 2026 using a five-point Likert-scale questionnaire. Data were analyzed using PLS-SEM, encompassing measurement model evaluation, structural model assessment, hypothesis testing, and moderation analysis of digital literacy. The findings indicate that format, ease of use, and timeliness significantly influence user satisfaction, whereas content and accuracy do not show significant effects. User satisfaction has a strong positive effect on perceived usefulness and perceived ease of use, while behavioral intention significantly predicts actual system use. The moderation analysis further reveals that digital literacy strengthens the relationship between technology acceptance and users' attitudes toward system use. From a practical perspective, the results suggest that policymakers should prioritize interface format, usability simplification, and system responsiveness during data collection cycles to enhance user satisfaction and sustained system use.

Keywords: DAPODIK, User Satisfaction, Technology Acceptance, Educational Information Systems, Digital Literacy

1. INTRODUCTION

Digital transformation in the education sector has encouraged governments worldwide to adopt integrated information systems as core instruments for educational data management, policy planning, and evidence-based decision making [1], [2]. In Indonesia, the Data Pokok Pendidikan (DAPODIK) Information System represents a national, mandatory system used by all educational institutions to centrally manage data related to students, teachers, infrastructure, and educational financing. The strategic importance of DAPODIK lies in the fact that the quality of data generated by the system directly affects budget allocation policies, the distribution of educational assistance, and institutional performance evaluation at both regional and national levels [3].

Despite its widespread implementation, prior studies indicate that the success of public sector information systems is not determined solely by technological availability, but rather by the level of user satisfaction and acceptance among end users who operate the system on a continuous basis [4], [5]. In the context of mandatory systems, users often continue to use the system even when they experience dissatisfaction, resulting in a discrepancy between usage intensity and the actual quality of user experience [6], [7]. This condition underscores the importance of evaluating user satisfaction as a critical indicator of post-implementation success in educational information systems [8], [9].

Previous research on educational information system evaluation has predominantly employed single theoretical models, such as the End-User Computing Satisfaction (EUCS) model or the Technology Acceptance Model (TAM), to explain user perceptions and behaviors [10], [11], [12], [13]. The EUCS model emphasizes user satisfaction through dimensions of system and information quality, including content, accuracy, format, ease of use, and timeliness, and has therefore been widely applied in studies assessing satisfaction with educational applications and public digital services [14], [15], [16]. In contrast, TAM focuses on cognitive mechanisms underlying technology acceptance, particularly perceived usefulness and perceived ease of use, and their relationships with user attitudes, behavioral intentions, and actual system use [17], [18], [19], [20].

However, several studies have highlighted that reliance on a single model is insufficient to capture the complexity of user behavior in mandatory information systems,

particularly within the public education sector [21], [22], [23]. EUCS-based studies are effective in measuring operational satisfaction but provide limited explanatory power regarding how satisfaction translates into long-term attitudes and usage intentions [24]. Conversely, TAM-based research often assumes voluntary system usage, making it less sensitive to the behavioral dynamics of mandatory systems such as DAPODIK [25], [26].

Empirical studies focusing on DAPODIK in Indonesia remain largely dominated by technical or descriptive approaches, including service quality assessments, usability testing, and system audits, without comprehensively integrating user satisfaction and technology acceptance perspectives [27], [28]. Conceptual discussions addressing human resource factors and user competencies related to DAPODIK have also received limited empirical validation using integrated structural models [29], [30]. As a result, existing evidence on how system quality dimensions influence user satisfaction, acceptance, and actual system use remains fragmented and inconclusive [31], [32].

Based on the state-of-the-art review, it can be concluded that there is still a notable lack of research integrating EUCS and TAM within a unified conceptual framework to evaluate user satisfaction and behavioral outcomes in mandatory educational information systems, particularly at the local government level [7], [8]. Moreover, prior studies have rarely examined user satisfaction as a mediating construct that bridges system quality and technology acceptance, nor have they adequately explored its implications for actual system use in national educational information systems [33], [34].

Therefore, this study seeks to address these research gaps by proposing and empirically testing an integrative model that combines the End-User Computing Satisfaction (EUCS) and the Technology Acceptance Model (TAM) within the context of DAPODIK as a mandatory educational information system in Central Lombok Regency, Indonesia [10], [17]. Specifically, this study aims to examine how system quality (EUCS) influences user satisfaction and how user satisfaction subsequently affects perceived usefulness, perceived ease of use, behavioral intention to use, and actual system use of DAPODIK [11], [14]. Furthermore, this study investigates the downstream mechanisms of technology acceptance by assessing how perceived usefulness and perceived ease of use influence user attitudes toward system use, continuance intention, and actual use of DAPODIK in daily operational practices. The novelty of this research lies in its comprehensive

Vol. 8, No. 1, February 2026

I S I *Journal of*
Information Systems and Informatics

Published By
Asosiasi Doktor
Sistem Informasi Indonesia

structural mapping of the relationships among system quality, user satisfaction, and post-adoption behavior within a single integrated framework tailored to the characteristics of mandatory systems in the public education sector a context that remains underexplored in prior research [6], [7]. Consequently, this study is expected not only to advance the theoretical integration of EUCS and TAM in educational information systems research, but also to provide empirically grounded insights for policymakers and regional education administrators in formulating user-oriented strategies to enhance the effectiveness of DAPODIK implementation [3], [8].

In terms of scholarly and practical contributions, this study advances the literature on public-sector information systems in several important ways. First, it extends the theoretical integration of the End-User Computing Satisfaction (EUCS) and the Technology Acceptance Model (TAM) by explicitly positioning user satisfaction as a mediating mechanism that links system quality and technology acceptance in the context of a mandatory public education system, a setting that has received limited attention in prior research. Second, based on data collected from 255 active DAPODIK users at the local government level, this study provides context-specific empirical evidence on how critical system quality dimensions particularly format, ease of use, and timeliness shape user satisfaction and how behavioral intention translates into actual system use in mandatory digital reporting environments. Third, this research contributes methodologically by applying PLS-SEM with moderation analysis of digital literacy, enabling a more nuanced understanding of how users' digital capabilities condition technology acceptance and usage behavior in public-sector information systems. Finally, the findings offer practical insights for education authorities and system developers by identifying how interface design, usability, and system responsiveness should be prioritized to improve compliance, data quality, and the sustained use of DAPODIK.

2. METHODS

This study adopts a quantitative survey-based approach to evaluate user satisfaction and technology acceptance of the DAPODIK Information System as a mandatory educational information system implemented at the school level in Central Lombok Regency, Indonesia [1], [5]. The survey method was selected because it is effective in systematically capturing users' perceptions, attitudes, and experiences, while enabling the empirical

examination of relationships among latent constructs within a structural modeling framework [11], [17]. To analyze the causal relationships among the proposed constructs, this study employs Partial Least Squares–Structural Equation Modeling (PLS-SEM), which is particularly suitable for complex, prediction-oriented models involving multiple reflective indicators [35], [36], [37]. The proposed research model is illustrated in Figure 1.
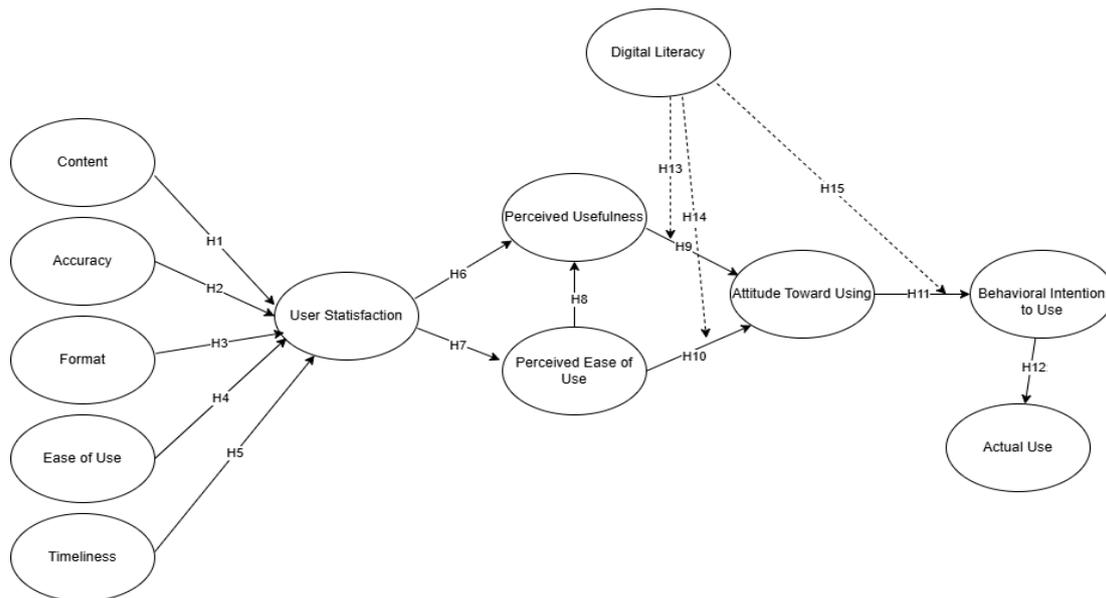

Figure 1. Research model

The research model was developed by integrating the End-User Computing Satisfaction (EUCS) framework and the Technology Acceptance Model (TAM) to address the limitations of single-model approaches, particularly in the context of mandatory information systems [10], [25]. The EUCS framework is employed to capture users' perceptions of information and system quality through five core dimensions, namely content, accuracy, format, ease of use, and timeliness. These dimensions have been widely validated as critical determinants of user satisfaction in various digital services and public-sector information systems [14], [15].

Meanwhile, TAM is utilized to explain the mechanism of technology acceptance through key cognitive and behavioral constructs, including perceived usefulness, perceived ease of use, attitude toward using, behavioral intention to use, and actual use. TAM has been consistently applied in studies examining technology adoption and post-adoption behavior within educational and public service contexts [17], [18]. The primary

methodological contribution of this study lies in positioning user satisfaction as a mediating construct that links EUCS dimensions with the core cognitive constructs of TAM. This integration enables a more comprehensive explanation of how perceived system quality influences user satisfaction and, subsequently, shapes technology acceptance and actual system use in a mandatory usage environment [7], [8].

In addition, digital literacy is incorporated into the model as a moderating variable to examine whether users' ability to access, understand, and effectively utilize digital technologies strengthens the relationships between cognitive perceptions and attitudes toward system use. The inclusion of digital literacy reflects its growing relevance in the context of educational digital transformation, where variations in users' technological competencies may significantly influence acceptance and utilization of mandatory information systems [38], [39]

2.1.   Research Procedure

The initial stage of the study involved a comprehensive literature review to establish a robust conceptual foundation and to ensure that the constructs employed in the research were grounded in operational definitions that are consistent with prior studies [2], [22] At this stage, the selection of the End-User Computing Satisfaction (EUCS) framework and the Technology Acceptance Model (TAM) was driven by the need to integrate an operational user satisfaction evaluation perspective with a technology acceptance mechanism, particularly within the context of mandatory public-sector information systems [6], [10].

Subsequently, the conceptual model was developed by mapping the structural relationships between EUCS dimensions and user satisfaction, the influence of user satisfaction on perceived usefulness and perceived ease of use, and the extended TAM pathways leading to behavioral intention and actual system use. This model specification was designed to reflect the operational characteristics of DAPODIK usage, which is strongly influenced by cyclical administrative and reporting requirements within the education system [3].

The next stage focused on the development of the research instrument in the form of a structured questionnaire employing a five-point Likert scale, ranging from 1 (strongly

disagree) to 5 (strongly agree), to ensure consistent and easily interpretable measurement of users' perceptions across diverse roles within school organizations [35], [36], [40]. The EUCS measurement items were constructed based on the dimensions of content, accuracy, format, ease of use, and timeliness, while the TAM-related items captured perceived usefulness, perceived ease of use, attitude toward using, behavioral intention to use, and actual use. All items were contextually adapted to align with DAPODIK's operational terminology and usage environment to enhance content validity and respondent comprehension [10], [11].

In addition, digital literacy was measured to represent users' capabilities in operating digital devices, processing and understanding digital information, and adapting to new technologies. This construct was incorporated to account for variations in technology acceptance among users within the education sector, where differences in digital competencies may significantly influence perceptions, attitudes, and usage behavior toward mandatory information systems [39].

Data collection was conducted between December 2025 and January 2026 through the distribution of structured questionnaires to active users of the DAPODIK Information System in Central Lombok Regency, Indonesia [3]. Central Lombok Regency was deliberately selected as the research setting due to its strategic characteristics that reflect the broader conditions of educational information system implementation in Indonesia. As a region comprising a diverse mix of urban, semi-urban, and rural areas, Central Lombok represents varying levels of digital infrastructure availability, organizational capacity, and human resource readiness within public educational institutions. These characteristics make the region a relevant empirical context for examining user satisfaction and technology acceptance of a mandatory national information system such as DAPODIK, particularly in capturing the challenges faced by local governments and schools outside major metropolitan areas. Moreover, Central Lombok administers a large number of primary and secondary schools across different educational levels, ensuring a heterogeneous user base with diverse roles, responsibilities, and intensities of system usage, which strengthens the external validity and generalizability of the findings to other regions with similar socio-administrative profiles in Indonesia [3].

A purposive sampling technique was employed, with respondents selected based on the criterion that they were directly involved in DAPODIK-related activities, including data entry, updating, verification, and reporting at the school level. This sampling approach was adopted to ensure that all participants possessed sufficient hands-on experience with the system to provide informed and reliable evaluations of its quality, usability, and overall performance [27], [30]. As a result, the study captured perspectives from users who interact with DAPODIK as part of their routine administrative and instructional responsibilities, thereby enhancing the relevance of the collected data for post-implementation system evaluation.

A total of 255 valid responses were obtained and included in the final analysis. As summarized in Table 1, the respondent profile demonstrates a balanced gender distribution and is dominated by users within the productive working-age range, indicating active engagement with the system in daily school operations. In terms of educational background, the majority of respondents hold a bachelor's degree, followed by diploma and postgraduate qualifications, suggesting an adequate level of formal education to critically assess an information system's functionality and usefulness. The respondents represent key stakeholder roles within the school environment, including teachers, DAPODIK operators, administrative staff, vice principals for curriculum affairs, and principals, thereby capturing a comprehensive range of user perspectives across managerial, technical, and instructional functions [28].

Table 1. Demographic Profile of Respondents (N = 255)

Variable	Category	Frequency	Percentage (%)
Gender	Female	129	50.6
	Male	126	49.4
Age (Years)	< 20	9	3.9
	20–25	38	14.9
	26–30	74	29.0
	31–35	69	27.1
	36–40	42	16.5
	> 40	23	9.0

Variable	Category	Frequency	Percentage (%)
Highest Education Level	Senior High School or equivalent	36	14.1
	Diploma	26	10.2
	Bachelor's Degree (S1)	164	64.3
	Master's Degree (S2)	21	8.2
	Doctoral Degree (S3)	8	3.1
Occupation	Teacher	111	43.5
	DAPODIK Operator	54	21.2
	Administrative Staff	21	8.2
	Vice Principal (Curriculum)	10	3.9
	Principal	20	7.8
	Others	39	15.3
School Level	Elementary School (SD)	156	61.2
	Junior High School (SMP)	58	22.7
	Senior High/Vocational School (SMA/SMK)	41	16.1
Length of Service at School	< 1 year	37	14.5
	1–3 years	82	32.2
	4–6 years	80	31.4
	7–10 years	28	11.0
	> 10 years	28	11.0
Length of DAPODIK Use	< 1 year	50	19.6
	1–3 years	102	40.0
	4–6 years	61	23.9
	> 6 years	42	16.5
DAPODIK Usage Intensity	Daily	30	11.8
	2–3 times per week	42	16.5
	Once per week	72	28.2
	During data collection periods	93	36.5
	Rarely	18	7.1

Furthermore, the sample includes users from elementary, junior high, and senior high/vocational schools, reflecting the multi-level implementation of DAPODIK within Indonesia's education system. Most respondents reported more than one year of experience using DAPODIK, with varying levels of usage intensity ranging from daily use to periodic use during official data collection cycles. This distribution indicates that the data predominantly reflect post-adoption experiences rather than initial learning phases, making the findings particularly relevant for evaluating user satisfaction, acceptance, and actual system use in a mandatory operational context [6], [7]. Collectively, these characteristics confirm that the dataset provides a robust empirical foundation for analyzing the proposed integrated EUCS–TAM model and for drawing meaningful conclusions regarding the implementation of DAPODIK in public educational institutions.

2.2. Data Analysis Technique

Data analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) following a two-stage evaluation procedure, comprising the assessment of the measurement model and the assessment of the structural model [7], [35], [36]. The two-stage approach was adopted to ensure the adequacy of the measurement properties of the constructs prior to examining the hypothesized relationships among latent variables. In the measurement model evaluation, convergent validity was assessed by examining indicator outer loadings and the average variance extracted (AVE) values for each construct. Indicators with satisfactory loadings and AVE values exceeding the recommended threshold were considered to demonstrate adequate convergent validity. Construct reliability was evaluated using composite reliability and Cronbach's alpha to ensure internal consistency among the indicators measuring each latent construct [36], [40]. Discriminant validity was assessed using both the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT), thereby ensuring that each construct captured a distinct conceptual domain and that no substantial overlap existed among constructs [40].

The structural model evaluation involved testing the significance of the hypothesized path coefficients using a bootstrapping procedure. The magnitude of the structural relationships was further examined through effect size (f^2) analysis, which provides insights into the relative impact of each exogenous construct on the endogenous variables. In addition, potential multicollinearity issues were assessed using the variance

inflation factor (VIF), with acceptable values indicating that collinearity did not pose a threat to the stability of the model estimates [40]. The explanatory power of the model was evaluated using the coefficient of determination (R^2), which indicates the extent to which the endogenous constructs are explained by their respective antecedents within the structural model [40].

To examine the moderating effect of digital literacy, this study employed an interaction-term approach within the PLS-SEM framework. This procedure enabled the analysis of whether digital literacy strengthens or weakens the relationships between perceived usefulness and perceived ease of use and attitude toward using, as well as other specified relationships in accordance with the conceptual model [39]. All statistical results were interpreted based on both statistical significance, as indicated by t-values and p-values, and practical relevance, as reflected by effect sizes. This dual emphasis ensured that the findings provide not only theoretical support for the proposed hypotheses but also meaningful implications for the implementation and management of DAPODIK in school settings [8], [40].

2.3. Hypotheses Development

The success of information systems in the education sector is not solely determined by technological sophistication, but also by the extent to which the system satisfies users' needs and is accepted for sustained use in daily operational practices. This issue becomes particularly critical in the context of mandatory systems, such as the Indonesian Education Data System (DAPODIK), where users are required to interact with the system regardless of their level of satisfaction. Therefore, understanding the determinants of user satisfaction and the mechanisms of technology acceptance is essential to comprehensively explain post-adoption system usage behavior. To address this issue, the present study integrates the End-User Computing Satisfaction (EUCS) model and the Technology Acceptance Model (TAM).

1) Effects of EUCS Dimensions on User Satisfaction

The EUCS model posits that user satisfaction is shaped by users' evaluations of information quality and system quality experienced during system interaction [10]. The content dimension reflects the extent to which the information provided by the system is relevant, complete, and aligned with users' task requirements. In educational

information systems, high-quality content is essential because system outputs directly support administrative decisions and policy implementation. Prior studies have consistently shown that relevant and context-appropriate information positively influences user satisfaction in public sector information systems. Accordingly, the following hypothesis is proposed:

H1: Content has a positive effect on User Satisfaction.

Accuracy represents the degree to which the system generates precise, reliable, and consistent data. In the DAPODIK context, data inaccuracies may lead to significant consequences, including misallocation of educational funding and incorrect performance evaluations. Information quality theory suggests that higher data accuracy enhances users' trust and satisfaction with the system. Therefore, the following hypothesis is formulated:

H2: Accuracy has a positive effect on User Satisfaction.

The format dimension refers to how information is presented through the system interface, including clarity of layout, organization of data, and consistency of navigation. A well-designed interface reduces users' cognitive load and improves work efficiency. Empirical studies in educational and public information systems indicate that presentation quality plays a crucial role in shaping user satisfaction. Thus, the following hypothesis is proposed:

H3: Format has a positive effect on User Satisfaction.

Ease of use within the EUCS framework reflects users' perceptions of how easily the system can be learned and operated. In mandatory systems with diverse user backgrounds, perceived ease of use is particularly important to reduce resistance and operational difficulties. Systems that are easier to use are more likely to generate positive user experiences and satisfaction. Hence, the following hypothesis is advanced:

H4: Ease of Use has a positive effect on User Satisfaction.

Timeliness refers to the system's responsiveness, efficiency of input–output processes, and the extent to which information is updated regularly. In educational administrative systems that follow strict reporting cycles, delays can disrupt users' tasks and reduce

satisfaction. Prior research suggests that timely system performance contributes positively to user satisfaction. Accordingly, the following hypothesis is proposed:

H5: Timeliness has a positive effect on User Satisfaction.

2) The Role of User Satisfaction in the TAM Framework

In the integrated EUCS–TAM model, user satisfaction is positioned as a mediating construct linking system quality perceptions to technology acceptance mechanisms. Drawing on Expectation–Confirmation Theory and technology adoption literature, satisfying usage experiences are expected to reinforce users' perceptions of system usefulness and ease of use. Users who are satisfied with a system tend to perceive it as more beneficial in supporting their job performance. Therefore, the following hypothesis is formulated:

H6: User Satisfaction has a positive effect on Perceived Usefulness.

User satisfaction is also expected to influence perceived ease of use, as positive experiences can reduce perceived complexity and increase users' confidence in operating the system. Satisfied users are more likely to perceive the system as intuitive and manageable. Thus, the following hypothesis is proposed:

H7: User Satisfaction has a positive effect on Perceived Ease of Use.

Within the TAM framework, perceived ease of use not only directly influences users' attitudes but also indirectly affects perceived usefulness. Systems that are easier to use enable users to exploit system functionalities more effectively, thereby enhancing perceived benefits. Consequently, the following hypothesis is advanced:

H8: Perceived Ease of Use has a positive effect on Perceived Usefulness.

3) Technology Acceptance Mechanisms and Usage Behavior

According to TAM, perceived usefulness is a key determinant of users' attitudes toward using a system. When users believe that a system enhances job performance and productivity, they are more likely to develop favorable attitudes toward its use. Therefore, the following hypothesis is proposed:

H9: Perceived Usefulness has a positive effect on Attitude Toward Using.

Vol. 8, No. 1, February 2026

I S I *Journal of*
Information Systems and Informatics

Published By
Asosiasi Doktor
Sistem Informasi Indonesia

Perceived ease of use also influences users' attitudes, as systems that require less effort and are easy to operate tend to create more positive affective evaluations. In mandatory systems such as DAPODIK, ease of use is particularly important in shaping positive attitudes, even when system use is not voluntary. Accordingly, the following hypothesis is formulated:

H10: Perceived Ease of Use has a positive effect on Attitude Toward Using.

Attitude toward using reflects users' overall affective and cognitive evaluations of the system. A positive attitude is expected to strengthen users' intentions to continue using the system over time. Thus, the following hypothesis is proposed:

H11: Attitude Toward Using has a positive effect on Behavioral Intention to Use.

Behavioral intention is widely recognized as the most immediate predictor of actual system use. Although DAPODIK is a mandatory system, the intensity, consistency, and quality of system use are still influenced by users' intentions to utilize the system effectively. Therefore, the final hypothesis is formulated as follows:

H12: Behavioral Intention to Use has a positive effect on Actual Use.

4) The Moderating Role of Digital Literacy

Digital literacy plays an increasingly important role in shaping how users interact with and evaluate information systems, particularly in public-sector environments characterized by heterogeneous user capabilities. In the context of mandatory educational information systems such as DAPODIK, users are required to operate the system regardless of their digital proficiency. However, users with higher levels of digital literacy are more likely to understand system functionalities, interpret system outputs effectively, and leverage system features to support their tasks. Consequently, digital literacy is expected to condition the strength of technology acceptance mechanisms within the TAM framework. Specifically, users with higher digital literacy may perceive greater benefits from a system when they recognize how its functionalities contribute to task efficiency and performance. As a result, the positive effect of perceived usefulness on users' attitudes toward system use is expected to be stronger among users with higher digital literacy. Therefore, the following hypothesis is proposed:

H13 : Digital literacy moderates the relationship between perceived usefulness and attitude toward using, such that the relationship is stronger for users with higher levels of digital literacy.

In contrast, the effect of perceived ease of use on users' attitudes may be less dependent on digital literacy, particularly in mandatory systems where usability standards are designed to accommodate a wide range of user competencies. Nonetheless, differences in digital skills may still influence how ease of use translates into attitudinal responses. Accordingly, the following hypothesis is formulated:

H14 : Digital literacy moderates the relationship between perceived ease of use and attitude toward using.

5)   Extended Post-Adoption Mechanisms in Mandatory Systems

Beyond the core TAM relationships, understanding post-adoption behavior in mandatory systems requires attention to how attitudinal and experiential factors shape actual system use over time. In public-sector educational information systems such as DAPODIK, system use is formally required; however, the depth, consistency, and effectiveness of system use vary considerably across users. These variations indicate that post-adoption behavior is not solely driven by compliance, but also by users' psychological and experiential responses to the system.

User satisfaction, as a cumulative evaluation of prior system interactions, is expected to exert a direct influence on users' behavioral intention to use the system. Satisfied users are more likely to develop a willingness to engage with the system beyond minimal compliance, leading to more consistent and purposeful usage behavior. Therefore, the following hypothesis is proposed:

H15: User Satisfaction has a positive effect on Behavioral Intention to Use.

In addition to behavioral intention, user satisfaction may also directly influence actual system use in mandatory settings. When users perceive the system as meeting their needs and supporting their tasks effectively, they tend to interact with the system more intensively and accurately, even in the absence of voluntary choice. Thus, the following hypothesis is formulated:

H16: User Satisfaction has a positive effect on Actual Use.

Vol. 8, No. 1, February 2026

I S I Journal of
Information Systems and Informatics

Published By
Asosiasi Doktor
Sistem Informasi Indonesia

Finally, perceived usefulness may exert a direct effect on actual system use, particularly in operational environments where users rely on system outputs for reporting, decision-making, and compliance purposes. In the context of DAPODIK, users who recognize the system's contribution to improving work efficiency and data accuracy are more likely to engage in more frequent and effective system use. Accordingly, the following hypothesis is proposed:

H17: Perceived Usefulness has a positive effect on Actual Use.

3. RESULTS AND DISCUSSION

3.1. Measurement Model

The measurement model evaluation was conducted to ensure that all latent constructs in the proposed research model were measured with adequate validity and reliability prior to testing the structural relationships. Following the established guidelines for Partial Least Squares–Structural Equation Modeling (PLS-SEM), the assessment focused on convergent validity, construct reliability, and discriminant validity as fundamental prerequisites for model adequacy [35], [36], [40]. The results of the measurement model evaluation are summarized in Table 2 through Table 5 and visually illustrated in Figure 2.

1) Convergent Validity and Indicator Quality

Convergent validity was first assessed by examining the outer loadings of each indicator on its respective latent construct. As reported in Table 2, all measurement indicators exhibit outer loading values exceeding the recommended threshold of 0.70, indicating strong associations between the indicators and their underlying constructs. This result confirms that the indicators adequately represent their intended constructs across all dimensions of the End-User Computing Satisfaction (EUCS) model, including Content, Accuracy, Format, Ease of Use, and Timeliness, as well as User Satisfaction, Digital Literacy, and the Technology Acceptance Model (TAM) constructs.

Table 2. Measurement Model Evaluation

Construct	Indicator Code	Measurement Item	Outer Loadings
Content (CNT)	CNT1	The information provided by the system meets users' needs	0.815

Construct	Indicator Code	Measurement Item	Outer Loadings
	CNT2	The system provides complete information	0.844
	CNT3	The information is easy to understand	0.785
	CNT4	The information is relevant to users' tasks	0.796
	CNT5	The information fits the users' work context	0.798
Accuracy (ACC)	ACC1	The data generated by the system are accurate	0.842
	ACC2	The data are highly precise with minimal errors	0.829
	ACC3	The system output meets quality standards	0.875
	ACC4	The system produces reliable information	0.893
	ACC5	The data in the system are consistent	0.827
Format (FMT)	FMT1	The system interface is clear and easy to read	0.736
	FMT2	The data presentation is well organized	0.866
	FMT3	The system layout supports task completion	0.839
	FMT4	The use of colors and symbols is easy to understand	0.833
	FMT5	The system navigation is consistent	0.868
Ease of Use (EOU)	EOU1	The system is easy to learn	0.791
	EOU2	The system is easy to operate	0.804
	EOU3	Users can quickly adapt to the system	0.850
	EOU4	System functions are easy to locate	0.822
	EOU5	The system requires minimal mental effort	0.807
Timeliness (TML)	TML1	Information is obtained in a timely manner	0.811
	TML2	The system responds quickly	0.822
	TML3	Input–output processes are efficient	0.843
	TML4	Data are regularly updated	0.883
	TML5	The system supports operational time requirements	0.829
User Satisfaction (USF)	USF1	Overall satisfaction with the system	0.759
	USF2	The system meets users' expectations	0.851
	USF3	Users feel comfortable using the system	0.812
	USF4	The system improves user productivity	0.876
	USF5	The overall user experience is satisfying	0.818

| Construct	Indicator Code	Measurement Item	Outer Loadings
Digital Literacy (DL)	DL1	Ability to use digital devices	0.843
	DL2	Ability to process and understand digital information	0.776
	DL3	Ability to operate digital-based applications	0.817
	DL4	Ability to solve technology-related problems	0.837
	DL5	Ability to adapt to new technologies	0.847
Perceived Ease of Use (PEOU)	PEOU1	The system is easy to understand	0.818
	PEOU2	The system is easy to use	0.797
	PEOU3	Interaction with the system is uncomplicated	0.734
	PEOU4	The system is easy to learn	0.849
	PEOU5	Operating the system requires little effort	0.806
Perceived Usefulness (PU)	PU1	The system improves job performance	0.845
	PU2	The system increases productivity	0.859
	PU3	The system enhances work effectiveness	0.872
	PU4	The system helps complete tasks more quickly	0.894
	PU5	The system provides tangible benefits for work	0.861
Attitude Toward Using (ATU)	ATU1	Using the system is a good idea	0.880
	ATU2	The system makes work better	0.863
	ATU3	Users enjoy using the system	0.835
	ATU4	Using the system provides a positive experience	0.848
Behavioral Intention to Use (BIU)	BIU1	Intention to continue using the system	0.881
	BIU2	Intention to integrate the system into work activities	0.901
	BIU3	Willingness to recommend the system to others	0.912
	BIU4	Commitment to regularly use the system	0.806
	BIU5	Readiness to use the system in the long term	0.903
Actual Use (AU)	AU1	Frequency of system use	0.789
	AU2	Duration of system use	0.874
	AU3	Level of feature utilization	0.897
	AU4	User dependence on the system	0.835
	AU5	Consistency of system use	0.848
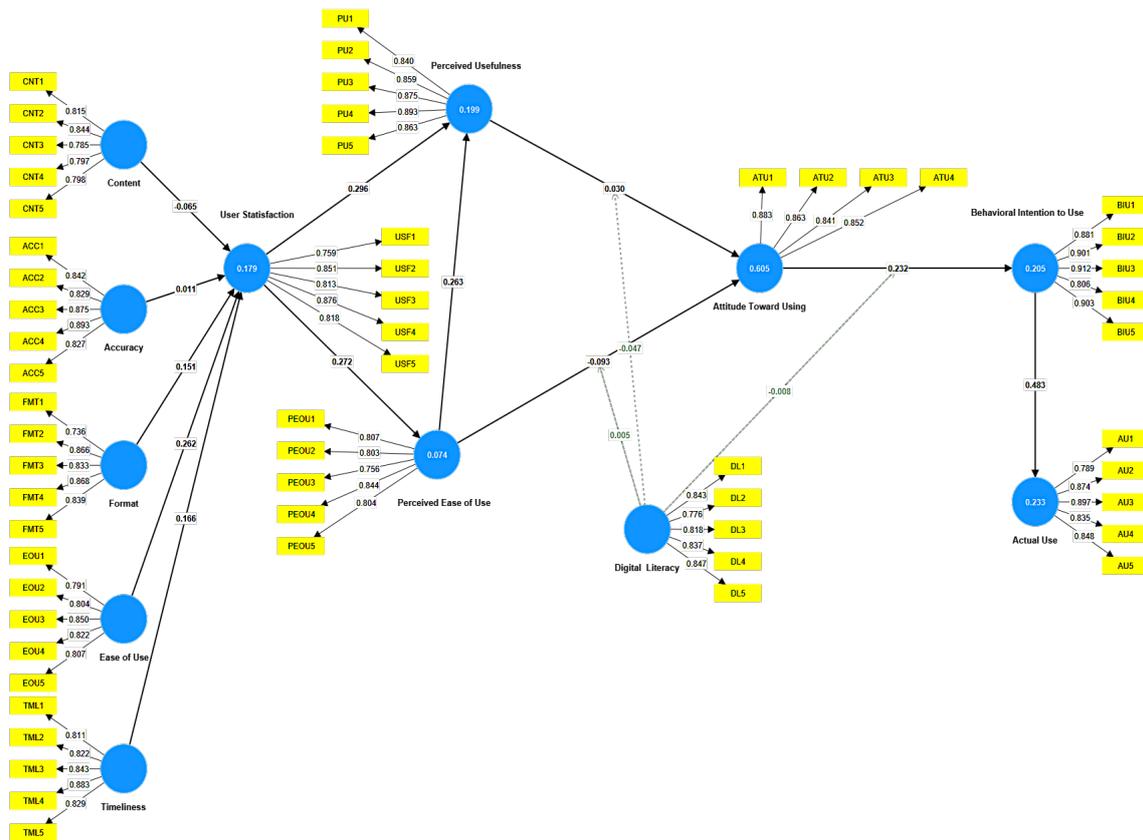
Figure 2. Result model

Notably, indicators associated with Perceived Usefulness, Behavioral Intention to Use, and Actual Use demonstrate particularly high outer loading values, suggesting that users' perceptions of usefulness, intention to continue using the system, and actual system usage are robustly captured in the context of the mandatory DAPODIK system. These indicator loadings are also clearly depicted in Figure 2, which shows that no indicator exhibits a weak contribution to its corresponding construct. Consequently, all indicators were retained for further analysis.

In addition to outer loadings, convergent validity was further evaluated using the Average Variance Extracted (AVE). As presented in Table 3, the AVE values for all constructs exceed the minimum recommended threshold of 0.50, indicating that each construct explains more than half of the variance of its indicators. This finding provides strong evidence that the constructs possess satisfactory convergent validity and adequately capture the theoretical concepts underlying the integrated EUCS–TAM framework.

2) Construct Reliability

Construct reliability was assessed using Cronbach's Alpha, rho_A, and Composite Reliability (CR). As shown in Table 3, all constructs demonstrate reliability coefficients well above the recommended cutoff value of 0.70, indicating a high level of internal consistency among the indicators. The consistency between Cronbach's Alpha and Composite Reliability values further supports the robustness of the measurement instruments used in this study.

Table 3. Construct Reliability and Convergent Validity

Variabel	CA	(rho_a)	(rho_c)	(AVE)
Accuracy	0.907	0.913	0.931	0.728
Actual Use	0.903	0.906	0.928	0.721
Attitude Toward Using	0.883	0.883	0.919	0.740
Behavioral Intention to Use	0.928	0.934	0.946	0.777
Content	0.868	0.875	0.904	0.653
Digital Literacy	0.882	0.891	0.914	0.680
Ease of Use	0.874	0.877	0.908	0.664
Format	0.887	0.900	0.917	0.689
Perceived Ease of Use	0.864	0.891	0.900	0.643
Perceived Usefulness	0.917	0.918	0.938	0.750
Timeliness	0.894	0.898	0.922	0.702
User Satisfaction	0.882	0.887	0.914	0.680

Keterangan : CA = Cronbach's alpha; rho_a = Composite reliability;

rho_c = Composite reliability; AVE = Average variance extracted

The key TAM constructs, including Perceived Usefulness, Behavioral Intention to Use, and Actual Use, exhibit particularly strong reliability values, reflecting stable and consistent measurement of technology acceptance and usage behavior in the DAPODIK context. Similarly, the EUCS dimensions and User Satisfaction also demonstrate satisfactory reliability, confirming that users' evaluations of system quality and satisfaction are measured consistently across different respondent groups.

3)   Discriminant Validity Based on the Fornell–Larcker Criterion

Discriminant validity was examined to ensure that each construct in the model is empirically distinct from the others. Table 4 presents the discriminant validity assessment using the Fornell–Larcker criterion, where the square root of each construct's AVE is compared with its correlations with other constructs.

Table 4. Discriminant Validity – Fornell Larcker Criterio

Variabel	ACC	AU	ATU	BIU	CNT	DL	EOU	FMT	PEOU	PU	TML	USF
ACC	0.853											
AU	-0.007	0.849										
ATU	-0.052	0.473	0.860									
BIU	-0.052	0.483	0.425	0.882								
CNT	0.717	-0.022	-0.027	-0.053	0.808							
DL	-0.003	0.469	0.772	0.428	0.003	0.824						
EOU	0.743	0.019	-0.072	-0.028	0.773	0.006	0.815					
FMT	0.346	0.006	-0.051	0.041	0.376	0.004	0.410	0.830				
PEOU	0.172	0.135	-0.046	0.048	0.217	0.044	0.252	0.266	0.802			
PU	0.275	0.032	0.030	0.023	0.393	0.039	0.335	0.348	0.344	0.866		
TML	0.373	-0.021	-0.044	0.030	0.450	-0.002	0.453	0.429	0.202	0.342	0.838	
USF	0.274	0.058	-0.047	0.063	0.277	0.029	0.357	0.309	0.276	0.368	0.325	0.824

Note(s): Content (CNT); Accuracy (ACC); Format (FMT); Ease of Use (EOU); Timeliness (TML); User Satisfaction (USF); Digital Literacy (DL); Perceived Ease of Use (PEOU); Perceived Usefulness (PU); Attitude Toward Using (ATU); Behavioral Intention to Use (BIU); Actual Use (AU).
Attitude Toward Using (ATU); Behavioral Intention to Use (BIU); Actual Use (AU).

The results indicate that, for all constructs, the square root of AVE (diagonal values) is greater than the corresponding inter-construct correlations. This finding confirms that each construct shares more variance with its own indicators than with other constructs in the model, thereby demonstrating adequate discriminant validity. Importantly, conceptually related constructs such as User Satisfaction, Perceived Ease of Use, and Perceived Usefulness remain empirically distinguishable, despite their theoretical interconnections within the integrated EUCS–TAM framework.

4) Discriminant Validity Based on the HTMT Criterion

To complement the Fornell–Larcker assessment, discriminant validity was further evaluated using the Heterotrait–Monotrait Ratio (HTMT), which is considered a more sensitive criterion for detecting discriminant validity issues in complex models. The HTMT results are reported in Table 5.

Table 5. Discriminant Validity Assessment (HTMT Criterion)

Variabel	ACC	AU	ATU	BIU	CNT	DL	EOU	FMT	PEOU	PU	TML	USF	DL x PEOU	DL x PU	DL x ATU
ACC															
AU	0.041														
ATU	0.061	0.526													
BIU	0.072	0.522	0.469												
CNT	0.806	0.050	0.056	0.065											
DL	0.037	0.518	0.862	0.469	0.047										
EOU	0.833	0.046	0.087	0.049	0.892	0.065									
FMT	0.380	0.062	0.073	0.066	0.427	0.068	0.464								
PEOU	0.192	0.144	0.065	0.058	0.246	0.074	0.284	0.306							
PU	0.299	0.055	0.048	0.051	0.443	0.091	0.373	0.382	0.378						
TML	0.409	0.054	0.058	0.063	0.510	0.074	0.513	0.479	0.228	0.379					
USF	0.303	0.080	0.078	0.070	0.309	0.060	0.401	0.342	0.299	0.402	0.360				
DLxPEOU	0.037	0.035	0.076	0.075	0.029	0.089	0.043	0.030	0.161	0.084	0.030	0.044			
DLxPU	0.031	0.201	0.168	0.069	0.093	0.158	0.078	0.068	0.086	0.053	0.036	0.051	0.162		
DLxATU	0.123	0.256	0.326	0.167	0.094	0.334	0.151	0.075	0.051	0.107	0.108	0.071	0.243	0.122	

Note(s): Content (CNT); Accuracy (ACC); Format (FMT); Ease of Use (EOU); Timeliness (TML); User Satisfaction (USF); Digital Literacy (DL); Perceived Ease of Use (PEOU); Perceived Usefulness (PU) Attitude Toward Using (ATU); Behavioral Intention to Use (BIU); Actual Use (AU).

All HTMT values fall below the recommended thresholds of 0.85 and 0.90, indicating that discriminant validity is well established across all constructs. This result applies not only to the main constructs but also to the interaction terms representing the moderating effects of Digital Literacy. The absence of HTMT values exceeding the threshold suggests that there is no problematic overlap between constructs, and that the moderation constructs are empirically distinct from their corresponding main effects.

Overall, the measurement model evaluation demonstrates that all constructs and indicators employed in this study satisfy the recommended criteria for convergent validity, construct reliability, and discriminant validity. The combined evidence from Table

2 through Table 5 and the visual representation in Figure 2 confirms that the measurement model is robust and suitable for subsequent structural model analysis and hypothesis testing. With the adequacy of the measurement model firmly established, the analysis can proceed to the evaluation of the structural model to examine the hypothesized relationships within the integrated EUCS–TAM framework in the context of the mandatory DAPODIK system.

3.2. Structural Model

The structural model evaluation was conducted to assess the predictive capability of the proposed research model and to test the hypothesized causal relationships among the latent constructs. This evaluation involved examining the coefficient of determination (R^2), predictive relevance (Q^2), path coefficient significance, effect sizes (f^2), and multicollinearity diagnostics, as reported in Table 6 and Table 7.

1) Structural Model Quality and Predictive Relevance

The results presented in Table 6 indicate that the structural model demonstrates an acceptable level of explanatory power across all endogenous constructs. Attitude Toward Using exhibits the highest coefficient of determination (R^2 = 0.605; adjusted R^2 = 0.597), suggesting that more than 60% of the variance in users' attitudes toward DAPODIK can be explained by its antecedent constructs. This finding reflects a strong explanatory capability at the attitudinal level, which is critical in understanding user behavior within a mandatory system context.

Table 6. Structural Model Quality and Predictive Relevance

Variabel	R^2	R^2 adjusted	Q^2	T values	P values
Actual Use	0.233	0.230	0.163	4.062	0.000
Attitude Toward Using	0.605	0.597	0.439	11.332	0.000
Behavioral Intention to Use	0.205	0.196	0.155	2.763	0.006
Perceived Ease of Use	0.076	0.072	0.044	1.779	0.075
Perceived Usefulness	0.135	0.132	0.096	2.280	0.023
User Satisfaction	0.179	0.163	0.112	2.672	0.008

Note(s): R^2 = Variance explained; Adjusted R^2 = Adjusted coefficient of determination; Q^2 = Predictive relevance (Stone–Geisser criterion).

The construct Actual Use shows an R² value of 0.233, indicating that approximately 23.3% of the variance in actual system usage is explained by Behavioral Intention to Use. Although this value is moderate, it is considered acceptable in studies of public-sector information systems, where actual usage is often influenced by institutional regulations and administrative obligations beyond individual perceptions. Furthermore, User Satisfaction records an R² value of 0.179, implying that the EUCS dimensions collectively explain nearly 18% of the variance in satisfaction. Perceived Usefulness and Perceived Ease *of Use* show R² values of 0.135 and 0.076, respectively, indicating that satisfaction contributes meaningfully though not dominantly to the formation of cognitive perceptions in the TAM framework under mandatory conditions.

In terms of predictive relevance, all endogenous constructs exhibit positive Q² values, as shown in Table 6, confirming that the model possesses adequate predictive relevance according to the Stone–Geisser criterion. The highest Q² value is observed for *Attitude Toward Using* (Q² = 0.439), followed by *Actual Use* (Q² = 0.163) and *User Satisfaction* (Q² = 0.112). These results indicate that the model is not only explanatory but also capable of predicting user-related outcomes in the DAPODIK system context.

2) Hypothesis Testing and Structural Relationships

The hypothesis testing results obtained through the bootstrapping procedure are summarized in Table 7. Of the twelve proposed hypotheses, nine are empirically supported, while three are not supported.

Table 7. Structural Model Results and Hypothesis Testing

Hypothesis/ Relationships	β	T-value	P-values	f²	VIF	Supported
H1: CNN -> USF	-0.065	0.617	0.537	0.002	2.886	No
H2: ACC -> USF	0.011	0.142	0.887	0.000	2.520	No
H3: FMT -> USF	0.151	2.327	0.020	0.021	1.326	Yes
H4: EOU -> USF	0.262	2.281	0.023	0.026	3.175	Yes
H5: TML -> USF	0.166	2.144	0.032	0.024	1.415	Yes
H6: USF -> PU	0.368	4.624	0.000	0.157	1.000	Yes
H7: USF -> PEOU	0.276	3.702	0.000	0.082	1.000	Yes
H8: PEOU -> PU	0.263	3.618	0.000	0.080	1.080	Yes

Hypothesis/ Relationships	β	T-value	P-values	f²	VIF	Supported
H9: PU -> ATU	0.031	0.774	0.439	0.002	1.136	No
H10: PEOU -> ATU	-0.094	2.306	0.021	0.019	1.158	Yes
H11: ATU -> BIU	0.232	2.351	0.019	0.027	2.502	Yes
H12: BIU -> AU	0.483	8.201	0.000	0.304	1.000	Yes

Note(s): Content (CNT); Accuracy (ACC); Format (FMT); Ease of Use (EOU); Timeliness (TML); User Satisfaction (USF); Digital Literacy (DL); Perceived Ease of Use (PEOU); Perceived Usefulness (PU); Attitude Toward Using (ATU); Behavioral Intention to Use (BIU); Actual Use (AU).

With respect to the EUCS dimensions influencing User Satisfaction, Format (H3), Ease of Use (H4), and Timeliness (H5) show positive and statistically significant effects. These findings suggest that the clarity of system presentation, operational simplicity, and timely information delivery are critical determinants of user satisfaction with DAPODIK. In contrast, Content (H1) and Accuracy (H2) do not exhibit significant effects on satisfaction. This result reflects the characteristics of mandatory systems, where accurate and complete data are perceived as baseline requirements rather than differentiating factors influencing satisfaction. The relationships between User Satisfaction and TAM constructs are consistently significant. User Satisfaction has a positive effect on Perceived Usefulness (H6) and Perceived Ease of Use (H7), with moderate to strong effect sizes (f^2 = 0.157 and 0.082, respectively). These findings confirm the mediating role of satisfaction in linking system quality perceptions to users' cognitive evaluations of the system.

Further analysis reveals that Perceived Ease of Use significantly influences Perceived Usefulness (H8), indicating that a system perceived as easy to operate is more likely to be regarded as useful. However, the direct relationship between Perceived Usefulness and Attitude Toward Using (H9) is not significant. This suggests that perceived usefulness alone is insufficient to shape users' attitudes in a mandatory system environment. Conversely, Perceived Ease of Use exerts a significant influence on Attitude Toward Using (H10), although the effect size is relatively small and the coefficient is negative. This finding highlights a unique dynamic in mandatory systems, where usability considerations may affect attitudes independently of instrumental benefits.

In the final stages of the TAM pathway, Attitude Toward Using significantly affects Behavioral Intention to Use (H11), and Behavioral Intention to Use emerges as the strongest predictor of Actual Use (H12), with the highest path coefficient (β = 0.483) and a large effect size (f^2 = 0.304). These results confirm that, even in a mandatory system such as DAPODIK, users' behavioral intentions remain a crucial determinant of actual system usage intensity and consistency. These findings confirm that digital literacy plays a selective moderating role in the DAPODIK acceptance process, particularly by amplifying the effect of perceived usefulness on users' attitudinal responses to the system.

3)   Multicollinearity Assessment

All Variance Inflation Factor (VIF) values reported in Table 7 are below the recommended threshold of 5, indicating the absence of multicollinearity issues among predictor constructs. This confirms that the estimated path coefficients are reliable and not biased by excessive intercorrelations among independent variables.

3.3.   Discussion

This study set out to examine user satisfaction and post-adoption behavior toward the DAPODIK information system by integrating the End-User Computing Satisfaction (EUCS) framework and the Technology Acceptance Model (TAM) within the context of a mandatory public-sector educational system. The findings provide several important theoretical insights into how system quality, satisfaction, cognitive perceptions, and behavioral outcomes interact under compulsory usage conditions, particularly in decentralized education systems such as those found in Indonesia.

1)   EUCS Dimensions and User Satisfaction

The results indicate that not all EUCS dimensions exert a significant influence on User Satisfaction. Specifically, Format, Ease of Use, and Timeliness significantly enhance user satisfaction, whereas Content and Accuracy do not. This pattern reflects a recurring phenomenon in mandatory information systems, where users tend to perceive data completeness and accuracy as baseline obligations rather than value-adding features. In systems such as DAPODIK, where data accuracy is institutionally enforced and externally audited, users may take accurate content for granted, thereby diminishing its role in shaping satisfaction.

These findings are consistent with prior studies in public-sector and educational systems, which report that usability-related attributes and operational efficiency often outweigh informational attributes in determining satisfaction [8], [10]. The significant role of Format suggests that clear layout, structured presentation, and intuitive navigation are particularly salient for users who must interact with the system repeatedly under administrative pressure. Likewise, Timeliness emerges as a critical factor, reflecting the cyclical and deadline-driven nature of educational data reporting. When systems support timely data entry and rapid response, users are more likely to perceive the system as supportive rather than burdensome.

Conversely, the non-significant effects of Content and Accuracy align with findings from studies on mandatory systems in education and government, which argue that these dimensions function as "hygiene factors" rather than motivational drivers of satisfaction [6], [7]. This insight reinforces the need to reinterpret EUCS dimensions when applied to compulsory systems, as their relative importance may differ substantially from voluntary usage contexts.

2)   The Mediating Role of User Satisfaction

One of the key theoretical contributions of this study lies in demonstrating the mediating role of User Satisfaction between EUCS dimensions and TAM constructs. The results show that satisfaction significantly influences both Perceived Usefulness and Perceived Ease of Use, supporting the notion that affective evaluations formed through system experience precede and shape cognitive judgments.

This finding extends traditional TAM assumptions, which often treat Perceived Usefulness and Perceived Ease of Use as antecedents rather than outcomes of satisfaction. In mandatory systems, however, users frequently form perceptions of usefulness and ease after repeated exposure and operational experience, making satisfaction a critical intermediary construct. This result corroborates prior empirical evidence suggesting that post-adoption satisfaction plays a central role in shaping users' ongoing perceptions and evaluations of institutional systems [7], [17].

3) Interrelationships among TAM Constructs

The structural relationships among TAM variables reveal both expected and context-specific dynamics. The positive effect of Perceived Ease of Use on Perceived Usefulness confirms the robustness of the TAM logic, indicating that systems perceived as easier to use are more likely to be regarded as beneficial. This relationship remains stable even under mandatory usage conditions, consistent with earlier findings in educational and public-sector systems [18].

However, the non-significant relationship between Perceived Usefulness and Attitude Toward Using represents a notable deviation from classical TAM assumptions. This result suggests that, in mandatory systems such as DAPODIK, users' attitudes are not primarily shaped by instrumental benefits. Instead, attitudes may be influenced more strongly by experiential and usability-related factors. This interpretation is supported by the significant effect of Perceived Ease of Use on Attitude Toward Using, indicating that how comfortably users can operate the system has a greater impact on their attitudinal responses than perceived performance gains.

Such findings align with recent critiques of TAM in compulsory settings, which argue that perceived usefulness loses explanatory power when system adoption is enforced by policy rather than choice [25], [26]. In these contexts, ease of interaction becomes a key determinant of users' emotional and attitudinal responses, as it directly affects daily workload and stress levels.

4) Behavioral Intention and Actual Use

The final stages of the model demonstrate that Attitude Toward Using significantly predicts Behavioral Intention to Use, which in turn strongly influences Actual Use. Notably, Behavioral Intention to Use emerges as the strongest predictor of actual system usage, even in a mandatory environment. This finding underscores that compulsion alone does not guarantee meaningful or consistent use; rather, users' internal intentions remain a decisive factor in shaping actual engagement levels.

This result reinforces prior evidence suggesting that, in public-sector systems, intention serves as a proxy for usage quality rather than mere compliance [21]. Users with stronger intentions are more likely to engage more frequently, utilize system features more fully,

and comply with data quality standards, thereby enhancing the overall effectiveness of the system.

3.4. Theoretical Implications

This study provides substantial theoretical contributions to the Information Systems (IS) literature, particularly at the intersection of user satisfaction, technology acceptance, and the dynamics of mandatory public-sector information systems. First, the findings reinforce the argument that technology acceptance models originally developed in voluntary contexts do not necessarily operate in the same way when applied to systems enforced by regulation. This is most evident in the non-significant relationship between *perceived usefulness* and *attitude toward using*. In the classical Technology Acceptance Model (TAM), perceived usefulness is typically a dominant antecedent of attitude and behavioral intention. However, in the context of DAPODIK, system usefulness appears to be taken for granted due to its compulsory nature. Users may acknowledge its functional benefits without necessarily developing a positive attitude toward its use. Theoretically, this suggests that in mandatory systems, attitude formation is more sensitive to experiential factors such as operational burden, interface friction, and system responsiveness than to instrumental benefit calculations alone. This finding extends the theoretical discourse on the boundary conditions of TAM, particularly within public-sector and educational information systems.

Second, this research advances the understanding of the End-User Computing Satisfaction (EUCS) model by demonstrating that not all information quality dimensions function as significant determinants of satisfaction in compliance-oriented public systems. The non-significant effects of *content* and *accuracy* indicate that these dimensions act as *hygiene factors*. When inadequate, they trigger dissatisfaction; when adequate, they do not necessarily enhance satisfaction because they are perceived as minimum standards. From a theoretical standpoint, this implies that EUCS dimensions should be interpreted contextually. The relative importance of each dimension may shift depending on system characteristics (mandatory versus voluntary), usage objectives (compliance versus value creation), and operational pressures (such as deadline-driven administrative cycles). Consequently, this study contributes to user satisfaction theory by suggesting that the influence structure of EUCS dimensions is not universal but contingent upon institutional and organizational configurations.

Third, the study highlights the central role of *user satisfaction* as a mediating construct linking system quality (EUCS) and cognitive evaluations within TAM, namely *perceived usefulness* and *perceived ease of use*. Positioning satisfaction as a mediator offers an important theoretical contribution, as it moves beyond the linear logic often found in technology adoption research. In post-adoption and routine-use contexts, satisfaction represents the accumulation of user experiences over time, which subsequently reshapes users' cognitive evaluations of the system. Conceptually, this reinforces the view that satisfaction in post-adoption settings is not merely an outcome variable but a psychological mechanism that restructures users' perceptions and acceptance of technology.

Fourth, the significant influence of *perceived ease of use* on both *perceived usefulness* and *attitude toward using* demonstrates the dual role of ease of use as a cognitive and affective driver. Ease of use not only enhances the perceived instrumental value of the system but also directly shapes users' emotional responses. In mandatory systems, ease of use is not simply a design attribute; it is a critical determinant of workload and administrative pressure. Theoretically, this finding supports the argument that usability and user experience (UX) constructs play a pivotal role in explaining acceptance and continuance of public-sector information systems, even when users have limited discretion over system adoption.

Fifth, the strong relationship between *behavioral intention to use* and *actual use* indicates that, despite the mandatory nature of the system, variations in actual usage are still influenced by users' internal intentions. This is theoretically important because it highlights the distinction between formal compliance and *meaningful use*. Mandatory usage does not automatically translate into consistent, intensive, or effective utilization. This finding enriches post-adoption literature by emphasizing the need to distinguish between nominal usage and qualitative dimensions of use, such as frequency, consistency, and depth of feature utilization.

3.5. Practical Implications

The practical implications of this study are highly relevant for policymakers, regional education authorities, and system developers involved in the management and evolution of DAPODIK. First, the findings clearly indicate that improvement strategies should

prioritize dimensions that significantly influence user satisfaction, namely *format*, *ease of use*, and *timeliness*. Enhancements in interface design, such as improved layout readability, consistent navigation, and clearer visual hierarchy, as well as simplification of data-entry workflows, can substantially reduce user burden. In practice, this may involve standardizing user interface design across system modules, strengthening data search and retrieval functions, and providing contextual help features to minimize users' cognitive effort.

Second, the strong role of *timeliness* underscores the importance of system performance indicators such as response time, access stability, processing efficiency, and update reliability. Given that DAPODIK reporting activities are periodic and closely tied to administrative deadlines, even minor performance disruptions can generate disproportionate dissatisfaction. Therefore, system administrators should implement effective load management strategies during peak reporting periods, provide transparent service status notifications, and establish rapid recovery protocols in the event of system failures. Aligning system maintenance and updates with the academic and administrative calendar is also critical to avoid disruptions during critical reporting phases.

Third, the non-significant effects of *content* and *accuracy* do not imply that these aspects are unimportant; rather, they suggest that these dimensions are perceived as baseline requirements. As such, organizations should not limit their quality improvement efforts to ensuring accurate and complete data alone but should aim to move beyond compliance toward user-centered efficiency. Automated validation mechanisms, real-time error detection, and consistency checks can strengthen data accuracy while minimizing additional workload for users. When designed appropriately, data quality assurance processes can coexist with, rather than detract from, user satisfaction.

Fourth, the mediating role of user satisfaction highlights that initiatives aimed at improving user acceptance should begin with tangible improvements in everyday system experiences. Training programs, policy communication, and change management efforts will be more effective when accompanied by improvements in usability and system reliability. If users encounter persistent operational friction, messages emphasizing the system's benefits are unlikely to translate into positive attitudes or stronger usage

intentions. Consequently, effective change management in mandatory systems must integrate technical enhancements, UX improvements, and responsive user support.

Fifth, the strong linkage between *behavioral intention* and *actual use* suggests that fostering positive usage intentions remains important even in mandatory contexts. Within schools, positive intentions can be cultivated by reducing administrative burden, clarifying operational benefits such as reporting automation and data integration, and ensuring timely technical assistance. Strengthening *attitude toward using* requires creating positive user experiences through intuitive interfaces, stable system performance, and accessible support channels.

Sixth, variations in users' digital literacy levels imply the need for differentiated support strategies. Not all school personnel possess the same level of digital competence in operating applications or resolving technical issues. Accordingly, regional governments and schools should implement tiered capacity-building initiatives, including basic training for new users, advanced workshops for system operators, and targeted guidance for school leaders and administrative staff. Microlearning approaches, such as short instructional videos and step-by-step practical guides, may be more effective than one-off, generalized training sessions.

Seventh, the findings provide a robust empirical basis for formulating regional policies to enhance the quality of DAPODIK implementation. Education authorities can define performance indicators that extend beyond data submission accuracy to include user satisfaction levels, system stability during peak periods, and the effectiveness of technical support services. At the school level, internal standard operating procedures (SOPs) can be developed to distribute data management responsibilities more evenly, thereby preventing excessive reliance on individual operators and reducing user resistance.

Finally, for system developers, this study underscores the necessity of adopting a user-centered approach in the continuous development of DAPODIK. Regular usability evaluations, user experience testing, and the involvement of diverse user groups teachers, operators, administrative staff, and school leaders are essential to ensure that system updates enhance functionality while simultaneously reducing operational friction.

In the long term, improvements in usability and system responsiveness will strengthen user satisfaction, acceptance, and sustained use, ultimately supporting the quality and reliability of national education data as a foundation for evidence-based policymaking.

4.   CONCLUSION

This study provides a comprehensive evaluation of user satisfaction and acceptance of the DAPODIK information system by integrating the End-User Computing Satisfaction (EUCS) model and the Technology Acceptance Model (TAM) within the context of a mandatory public education system. The findings demonstrate that user satisfaction plays a pivotal mediating role between system quality dimensions and technology acceptance mechanisms, confirming that post-adoption behavior in mandatory systems is shaped more by users' operational experiences than by perceived instrumental benefits alone. Specifically, format, ease of use, and timeliness emerge as critical determinants of satisfaction, while content and accuracy function as baseline requirements that do not significantly enhance satisfaction once minimum standards are met. The results further reveal that perceived ease of use remains a central driver influencing perceived usefulness and user attitudes, whereas perceived usefulness does not directly translate into positive attitudes in a compulsory usage context. Behavioral intention is shown to be a strong predictor of actual system use, highlighting that meaningful utilization extends beyond formal compliance. By situating the analysis in Lombok Tengah Regency, this research offers empirical evidence from a region that reflects diverse institutional capacities and digital readiness levels commonly found across Indonesia, thereby enhancing the relevance and transferability of the findings. Overall, this study contributes theoretically by extending EUCS–TAM integration to mandatory educational information systems and practically by providing evidence-based insights to guide user-centered system improvement and policy formulation. The research impact lies in supporting the development of more usable, responsive, and sustainable national education data systems that strengthen data quality, administrative efficiency, and evidence-based decision-making in the education sector.

REFERENCES

[1]   M. A. Camilleri, "Evaluating service quality and performance of higher education institutions: a systematic review and a post-COVID-19 outlook," *International Journal of Quality and Service Sciences*, vol. 13, no. 2, pp. 268–281, 2021.

[2]   M. Al-Kofahi, H. Hassan, and R. Mohamad, "DeLone and McLean information systems success model: a literature review," *Int. J. Bus. Inf. Syst.*, vol. 48, no. 4, pp. 452–481, 2025.

[3]   N. A. Yasin and F. E. Elsalina, "Optimizing the Use of the Dapodik Application in School Data Synchronization to Improve the Efficiency of Education Management," *Insights: Journal of Primary Education Research*, vol. 2, no. 1, pp. 90–100, 2025.

[4]   M. Hamdan and N. Al-Hajri, "The effect of information systems success factors on user satisfaction in accounting information systems," *Management Science Letters*, vol. 11, no. 7, pp. 2045–2052, 2021.

[5]   E. Elazzaoui and S. Lamari, "Delone and McLean information systems success model in the public sector: A systematic review," *Journal Of Social Science and Organization Management*, vol. 3, no. 1, pp. 133–156, 2022.

[6]   Y. M. M. Kilani, "The moderating role of innovation valance between adoption and actual use of e-government services: an extension of DeLone and McLean information success model," *International Journal of Business Innovation and Research*, vol. 26, no. 3, pp. 273–295, 2021.

[7]   W. M. Tessema and N. Cavus, "Determining information system end-user satisfaction and continuance intension with a unified modeling approach," *Sci. Rep.*, vol. 14, no. 1, p. 6882, 2024.

[8]   A. J. Desmal, S. Hamid, M. K. Othman, and A. Zolait, "A user satisfaction model for mobile government services: a literature review," *PeerJ Comput. Sci.*, vol. 8, pp. e1074–e1074, 2022.

[9]   T. Widyaningrum, Q. Sholihah, and B. S. Haryono, "The Delone and McLean information system success model: Investigating user satisfaction in learning management system," *Journal of Education Technology*, vol. 8, no. 1, pp. 86–94, 2024.

[10]   A. Padalia and T. Natsir, "End-User Computing Satisfaction (EUCS) Model: Implementation of Learning Management System (LMS) on Students Satisfaction at Universities," *International Journal of Environment, Engineering and Education*, vol. 4, no. 3, pp. 100–107, 2022.

[11]   J.-H. Han and H. J. Sa, "Acceptance of and satisfaction with online educational classes through the technology acceptance model (TAM): The COVID-19 situation in Korea," *Asia Pacific Education Review*, vol. 23, no. 3, pp. 403–415, 2022.

[12]   A. Aman, K. Imtihan, and M. Rodi, "Evaluating User Satisfaction and Public Engagement in Local Government Social Media," *International Journal of Engineering, Science and Information Technology*, vol. 5, no. 3, pp. 235–248, Jun. 2025, doi: 10.52088/ijesty.v5i3.905.

[13]   K. Imtihan, Mardi, and M. Rodi, "The Impact of Visual Quality and User Interface Responsiveness on Student Satisfaction in Academic Information Systems (AIS)," *Pakistan Journal of Life and Social Sciences (PJLSS)*, vol. 22, no. 2, pp. 19896–19906, 2024, doi: 10.57239/PJLSS-2024-22.2.001455.

[14]   R. A. Azdy and H. K. Putra, "Analysis of the Level of Satisfaction of Darwinbox Application Users at PT Nippon Indosari Corpindo Tbk Using the End User Computing Satisfaction (EUCS) Method," *International Journal of Multidisciplinary Sciences and Arts*, vol. 2, no. 2, pp. 13–20, 2023.

[15]   A. Nurdin and M. Lubis, "User Satisfaction Analysis of Academic Information System Using End-User Computing Satisfaction (EUCS)," *Acceleration, Quantum, Information Technology and Algorithm Journal*, vol. 1, no. 2, pp. 37–51, 2024.

[16]   W. Bagye, K. Imtihan, and M. Ashari, "Evaluating User Readiness for IoT-Based Smart Home Adoption: A PLS-SEM and IPMA Study Integrating TAM and Technological Readiness Model in the Context of NTB, Indonesia," *Applied Information System and Management (AISM)*, vol. 8, no. 2, pp. 323–332, 2025.

[17]   D. Marikyan, S. Papagiannidis, and G. Stewart, "Technology acceptance research: Meta-analysis," *J. Inf. Sci.*, pp. 01655515231191177–01655515231191177, 2023.

[18]   E. Unal and A. M. Uzun, "Understanding university students' behavioral intention to use Edmodo through the lens of an extended technology acceptance model," *British Journal of Educational Technology*, vol. 52, no. 2, pp. 619–637, 2021.

[19]   R. Adyaputra, K. Imtihan, and M. Saleh, "Assessing User Satisfaction of Local Government Websites Through ISO 25010 and Technology Acceptance Model (TAM): A SmartPLS and IPMA-Based Study in Lombok Tengah," *In Journal of Information and Organizational Sciences*, vol. 49, no. 2, pp. 291–312, 2025, doi: 10.31341/jios.49.2.8.

[20] L. Handayani, K. Imtihan, and H. Asyari, "Analyzing User Satisfaction with Government Websites Through the EUCS and TAM Models," *Jambura Journal of Electrical and Electronics Engineering*, vol. 7, no. 2, pp. 167–176, 2025.

[21] M. Iqbal and M. Rafiq, "RETRACTED: DeLone and McLean's reformulated information systems success model: a systematic review of available literature in public sector (2011-2022)," *Global Knowledge, Memory and Communication*, vol. 74, no. 3–4, pp. 1320–1335, 2025.

[22] N. Pushparaj, V. J. Sivakumar, M. Natarajan, and A. Bhuvaneskumar, "Two decades of DeLone and Mclean IS success model: a scientometrics analysis," *Qual. Quant.*, vol. 57, no. 3, pp. 2469–2491, 2023.

[23] H. Karuniawan, L. Mutawalli, and K. Imtihan, "Evaluating Digital Readiness and Teachers' Perceptions of a Digital Based Performance Appraisal System in Secondary Schools," *Journal of Information Systems and Informatics*, vol. 7, no. 3, pp. 2617–2635, 2025.

[24] A. B. Pratomo, M. A. K. Harahap, T. Oswari, P. M. Akhirianto, and A. Widarman, "The application of end user computing satisfaction (EUCS) to analyze the satisfaction of mypertamina user," *Jurnal Sistim Informasi dan Teknologi*, pp. 78–83, 2023.

[25] A. V Martín-García, R. Redolat, and S. Pinazo-Hernandis, "Factors influencing intention to technological use in older adults. The TAM model aplication," *Res. Aging*, vol. 44, no. 7–8, pp. 573–588, 2022.

[26] S. Zaineldeen and L. Hongbo, "Evaluate student satisfaction of student information system utilising technology acceptance model and trust in China," *Revista Romaneasca pentru Educatie Multidimensionala*, vol. 13, no. 4, pp. 283–309, 2021.

[27] G. D. P. Aryono, S. Auliana, B. R. S. Permana, R. Arief, and M. Azis, "Audit of the Basic Education Data Application Information System (Dapodik) Juhut 1 State Primary School," *ARRUS Journal of Engineering and Technology*, vol. 4, no. 1, pp. 37–45, 2024.

[28] R. Novendra, N. Jalinus, W. Waskito, A. Afriansyah, and A. Rasfira, "User satisfaction analysis of service quality of Dapodik applications (educational data) using Servqual method," *J. Appl. Eng. Technol. Sci*, vol. 3, no. 2, pp. 190–194, 2022.

[29] E. Arribe, N. C. Nawi, and S. A. Zainuddin, "Human competency effect on the usage of government school information system 'DAPODIK' in Pekanbaru City: a conceptual paper," in *Finance, Accounting and Law in the Digital Age: The Impact of Technology and Innovation in the Financial Services Sector*, Springer, 2023, pp. 401–406.

[30] S. Sudarno, H. Safitri, A. T. Junaedi, A. R. Tanjung, and M. B. Hutahuruk, "Effect of Leadership Style, Work Discipline, and Competency on Job Satisfaction and Performance of Dapodik Operator Employees in Bengkalis District," in *International Conference on Business Management and Accounting*, 2023, pp. 385–400.

[31] C. M. Gibran, C. W. Budiyanto, and R. A. Yuana, "Application of the Delone and mclean information system success model to evaluate the success of web-based system adoption-A literature review," in *AIP Conference Proceedings*, AIP Publishing LLC, 2023, p. 80035.

[32] P. Saba *et al*, "The DeLone and McLean Information Systems Success Model: What is the Future Evolution for Its Foundations, Components, and Applications?," *Communications of the Association for Information Systems*, vol. 57, no. 1, p. 52, 2025.

[33] M. Iqbal, M. Rafiq, and S. H. Soroya, "Examining predictors of digital library use: an application of the information system success model," *The Electronic Library*, vol. 40, no. 4, pp. 359–375, 2022.

[34] I. Kurniawan, Y. T. Ardianto, and S. Hidayatullah, "The effect of the information system quality, service quality, and user satisfaction on academic information system user loyalty," *International Journal of Scientific and Technology Research*, vol. 10, no. 5, pp. 350–355, 2021.

[35] J. Hair and A. Alamer, "Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example," *Research Methods in Applied Linguistics*, vol. 1, no. 3, p. 100027, 2022, doi: 10.1016/j.rmal.2022.100027.

[36] J. F. Hair Jr *et al*, "An introduction to structural equation modeling," *Partial least squares structural equation modeling (PLS-SEM) using R: a workbook*, pp. 1–29, 2021, doi: 10.1007/978-3-030-80519-7_1.

[37] J. F. Hair, C. M. Ringle, S. P. Gudergan, A. Fischer, C. Nitzl, and C. Menictas, "Partial least squares structural equation modeling-based discrete choice modeling: an illustration in modeling retailer choice," *Business Research*, vol. 12, no. 1, pp. 115–142, 2019.

[38] X. An *et al*, "Modeling English teachers' behavioral intention to use artificial intelligence in middle schools," *Educ. Inf. Technol. (Dordr)*, vol. 28, no. 5, pp. 5187–5208, 2023.

[39]   H. M. Alzoubi, "Factors affecting ChatGPT use in education employing TAM: A Jordanian universities' perspective," *International Journal of Data and Network Science*, vol. 8, no. 3, pp. 1599–1606, 2024.

[40]   J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," Jan. 14, 2019, *Emerald Group Publishing Ltd.* doi: 10.1108/EBR-11-2018-0203.