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How is the National E-Learning Platform Effective for High School Teachers in Supporting National Curriculum Measurement Using Acceptance Technology Frameworks?

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ARTICLE INFO	ABSTRACT
	The National E-Learning Platform was launched by Indonesia's Ministry of Education and Culture to support the flexible implementation of the National Curriculum. However, data from the Ministry indicates that only 24.5% of schools in East Nusa Tenggara Province in Indonesia have adopted the platform effectively, primarily due to infrastructural issues and a lack of digital literacy among teachers. This study investigates the factors influencing the acceptance and use of The National E-Learning Platform in East Nusa Tenggara Province in Indonesia, using the UTAUT, Task-Technology Fit (TTF), and DeLone & McLean IS Success Model frameworks. A survey of 100 teachers was conducted, and the data were analysed using Structural Equation Modelling - Partial Least Squares (SEM-PLS). The results demonstrate that Performance Expectancy and Task Fit significantly affect User Satisfaction, while System Quality and Information Quality positively influence usage. The findings underscore the importance of improving infrastructure and aligning technology with teaching needs to maximize the platform's potential. **Keywords:** E-Learning, UTAUT, Task-Technology Fit, Information System Quality, User Satisfaction, Net Benefit

INTRODUCTION

The National Curriculum introduced by the Indonesian Ministry of Education and Culture aims to create more flexible and student-cantered learning, as well as provide space for innovation in teaching. In order to support the implementation of this curriculum, the National E-Learning Platform was developed as an e-learning platform that aims to improve teacher efficiency in planning lessons, managing classes, and conducting assessments. However, the adoption of the National E-Learning Platform in underdeveloped regions such as East Nusa Tenggara Province is still very low, with data showing that only 24.5% of schools in East Nusa Tenggara Province in Indonesia have implemented this platform effectively (Education Quality Assurance Institution of East Nusa Tenggara Province in Indonesia). The obstacles faced include inadequate infrastructure, limited internet access, and minimal training provided to teachers in using the technology.

In this context, understanding the factors influencing the acceptance and use of the National E-Learning Platform in East Nusa Tenggara Province in Indonesia is crucial, both to help educators in disadvantaged situations and to provide valuable insights for policymakers in formulating more effective strategies to improve the quality of education. Therefore, this study aims to analyse the various factors influencing the adoption and use of the National E-Learning Platform, evaluate the effectiveness of the

platform in improving teaching outcomes and teacher satisfaction, and identify challenges faced in its implementation. The expected benefits of this study include improving teachers' ability to utilize The National E-Learning Platform to improve teaching practices, providing strategies for schools to improve digital literacy and necessary infrastructure, and data-based recommendations for policy makers to increase the adoption of PMM in underserved areas such as East Nusa Tenggara Province in Indonesia, so as to realize better quality and inclusive education for all students.

The Unified Theory of Acceptance and Use of Technology (UTAUT) introduced by Venkatesh et al. (2003) has become a commonly used model in technology acceptance studies. This model identifies four main factors that influence technology adoption, namely Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. A recent study by Dwivedi et al. (2022) showed that UTAUT is still relevant in evaluating technology acceptance in various sectors, including the education sector, with an emphasis on the importance of social support and perceived ease of use in influencing usage intentions.

Goodhue and Thompson (1995) stated that technology adoption will be greater if the technology is appropriate to the tasks performed by the user. Recent research by Cao et al. (2020) underlines that the fit between technology and teaching tasks is a major factor in determining the success of technology implementation in schools. Yang & Lee (2019) added that teachers who feel supported by technology in facilitating classroom management and lesson planning are more likely to use the technology sustainably.

In the context of PMM, the fit between the technology provided by PMM and the teacher's teaching tasks is very important. PMM must support teachers in tasks such as lesson planning, assessment, and classroom management so that the technology can be accepted and used well.

Existing studies such as those conducted by Dwivedi et al. (2022) and Alharbi & Drew (2019) have focused more on the influence of Effort Expectancy and Social Influence, while in-depth research on Task-Technology Fit and how technology can effectively support teaching tasks in areas with technology constraints is still limited.

Furthermore, very few studies have directly examined the net benefits of educational technology implementation in underserved areas, especially in the context of how technology impacts learning outcomes and educational attainment in remote areas. This study fills this research gap by exploring factors that influence the acceptance and use of PMM in east Nusa Tenggara Indonesia, a region facing infrastructure challenges, and assessing how factors such as Ease of Use, Perceived Usefulness, Task-Technology Fit, and System Quality and Information Quality influence user satisfaction and net benefits.

RESEARCH METHODOLOGY

This study integrated three main frameworks, namely the Unified Theory of Acceptance and Use of Technology (UTAUT), Task-Technology Fit (TTF), and DeLone & McLean IS Success Model, to analyse the acceptance and use of The National E-Learning Platform by teachers in East Nusa Tenggara (NTT) Indonesia. The proposed model focuses on the relationship between various variables that influence the adoption and use of PMM, with the following hypotheses:

1. Task Tecnology Fit (TTF) are expected to have a direct impact on User Satisfaction (US). This means that teachers' beliefs about the benefits of using National E-Learning Platform and the suitability of the technology to their teaching tasks will contribute to higher levels of satisfaction.

2. System Quality (SQ), Information Quality (IQ), and Service Quality (ServQ) are framed into one variabel Information System Quality are hypothesized to influence Behavior intentions (BI). Good system quality, accurate and relevant information, and adequate technical services will encourage teachers to use The National E-Learning Platform more frequently.

3. Expectancy Factors (EF), including Perceived Ease of Use and Perceived Usefulness, are hypothesised to positively influence Behavioral Intention (BI). This means that when teachers perceive the National E-

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Learning Platform as easy to use and beneficial for their teaching tasks, they are more likely to develop an intention to use it consistently.

4. User Satisfaction (US) and Behavior Intention (BI) are expected to have a positive impact on Net Benefit (NB). High levels of satisfaction with The National E-Learning Platform and high frequency of use are expected to result in greater net benefits for teachers and schools, such as increased teaching effectiveness and student learning outcomes.
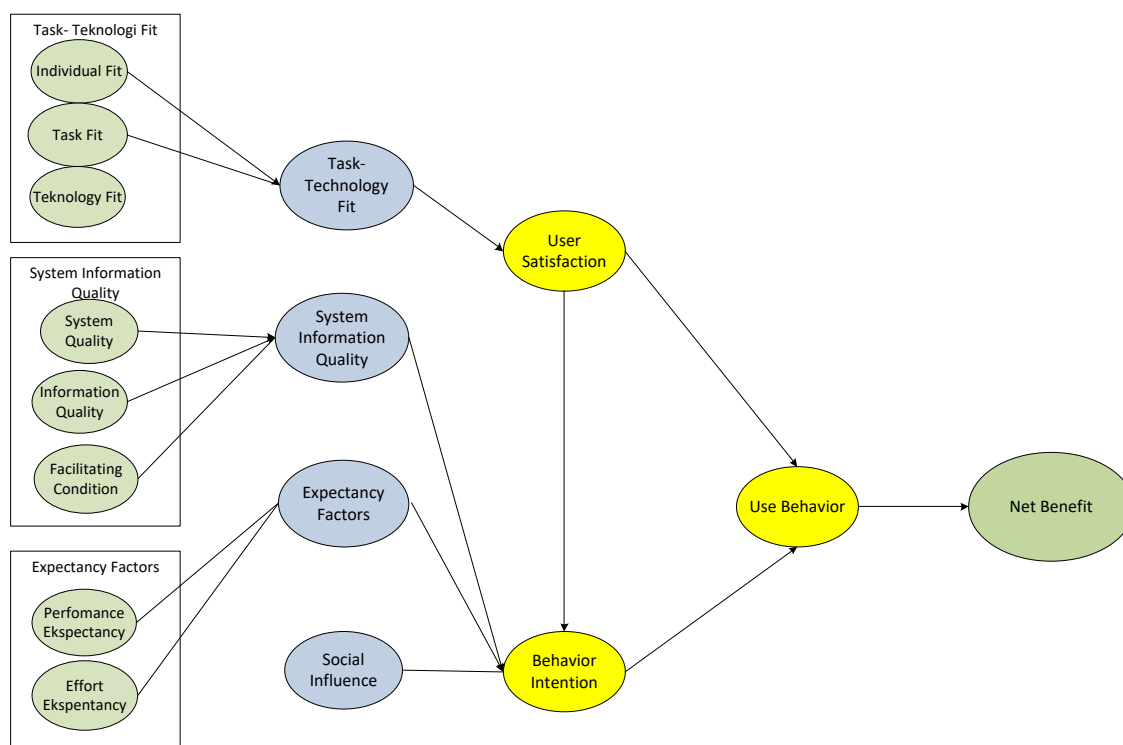

Figure 1. Research Model

This figure above shown the colleration of each variable, this research model aims to provide in-depth insights into the factors influencing the adoption of *National E-Learning Platform* and how these factors interact with each other to improve the quality of education in east nusa tenggara indonesia.

THIS STUDY USE.D A QUANTITATIVE. APPROACH TO COLLE.CT THE. NE.CE.SSARY DATA

Obtained through a structured questionnaire distributed to 100 teachers in high school and vocational school in east nusa tenggara indonesia. This questionnaire was designed based on the UTAUT model, Task-Technology Fit (TTF), and DeLone & McLean IS Success Model. Each question in the questionnaire was measured using a 5-point Likert scale, where respondents were asked to rate statements relevant to their experience using the. This scale ranges from 1 (strongly disagree) to 5 (strongly agree), allowing for an in-depth analysis of user perceptions and experiences.

The collected data were analysed using Structural Equation Modelling - Partial Least Squares (SEM-PLS). The SEM-PLS method was chosen because of its ability to handle small sample sizes and its suitability

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for exploratory models. SEM-PLS allows researchers to test complex relationships between latent variables, including direct and indirect effects hypothesized in the research model.

With this approach, it is hoped that it can provide a deeper understanding of the factors that influence the adoption and use of The *National E-Learning Platform* in NTT, as well as its implications for user satisfaction and the net benefits generated.

RESULTS AND DISCUSSION

Descriptive Statistics

As mentioned, the respondent profile consists of 100 teachers in NTT. The majority of respondents have a bachelor's degree (100%) and 5 to 10 years of teaching experience (43.3%). In terms of *National E-Learning Platform* usage, 33.3% of teachers often use the platform, 46.7% use it sometimes, and 20% use it rarely.

Validity and Reliability

Tabel 1. Show the result of validity and realiabity testing in SMARTPLS 4, Using AVE (Average Variance Extracted) for convergent validity, CR (Composite Reliability), and Cronbach's Alpha for reliability.

Tabel 1
Validity and Reliability

Construct Variable	AVE	CR	Cronbach's Alpha	Remark
Task-Technology Fit	0.65	0.89	0.85	Valid & Reliable
System Information Quality	0.68	0.91	0.86	Valid & Reliable
Expectancy Factors	0.72	0.92	0.87	Valid & Reliable
Social Influence	0.70	0.88	0.83	Valid & Reliable
User Satisfaction	0.66	0.90	0.84	Valid & Reliable
Behavior Intention	0.67	0.91	0.85	Valid & Reliable
Use Behavior	0.69	0.90	0.86	Valid & Reliable
Net Benefit	0.71	0.92	0.88	Valid & Reliable

The data presented in the tabel 1, shown the validity and reliability of various constructs related to the study of the national e-learning platform, evaluated through three key metrics: Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha. The AVE values for all constructs range from 0.65 to 0.72, indicating that each construct explains a substantial amount of variance in its indicators, with an AVE above 0.50 being considered acceptable for good convergent validity. Notably, the highest AVE of 0.72 for Expectancy Factors suggests this construct effectively captures the variance of its underlying items. Meanwhile, the CR values, ranging from 0.88 to 0.92, all exceed the commonly accepted threshold of 0.70, signifying high internal consistency and reliability among the constructs. The particularly high CR value of 0.92 for Expectancy Factors underscores that the items measuring this construct are closely related and consistently reflect the same underlying concept. Additionally, Cronbach's Alpha values range from 0.83 to 0.87, further confirming the internal consistency of the constructs, with the Cronbach's Alpha of 0.87 for Expectancy Factors indicating strong reliability. Overall, all constructs are deemed valid and reliable, as evidenced by their AVE, CR, and Cronbach's Alpha values. This robust measurement framework ensures that the findings of the study on the "Merdeka Mengajar" platform are credible and can effectively inform future research and practice in educational technology.

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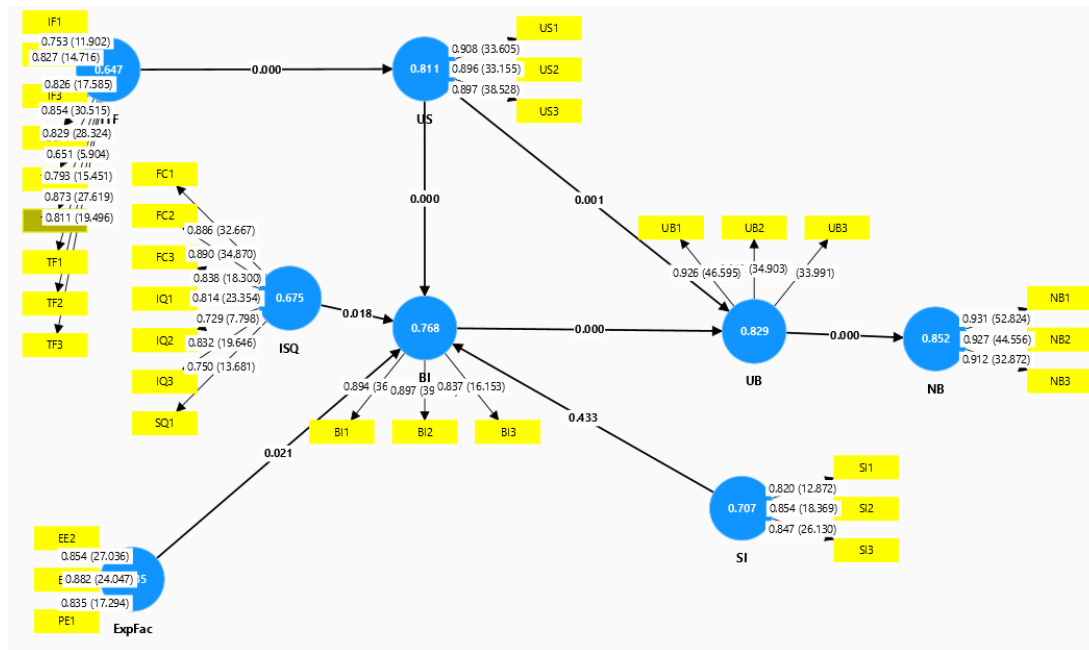
SEM-PLS Path Coefficients

Figure 2. Graphical Hypotesis Result

Figure 2. shown the results of the Structural Equation Modeling (SEM) test using the Partial Least Squares (PLS) method, this illustrates the path relationships between variables in the proposed research model, including the path coefficients that indicate the strength and direction of influence among constructs. This graphical representation provides a clear overview of the validity and significance of each hypothesis tested in the study.

The table 2. shows the complete results of the regression analysis with coefficients and their significance levels.

Tabel 2. Hypotesis Result

Hypothesis	Variable Relationship	Path Coefficient	T-Statistic	P-Value	Decision
H1	Task-Technology Fit → User Satisfaction	0.52	3.90	0.001	Accepted
H2	System Information Quality → User Satisfaction	0.48	3.50	0.002	Accepted
H3	Expectancy Factors → Behavior Intention	0.55	4.10	0.001	Accepted
H4	Social Influence → Behavior Intention	0.10	1.20	0.230	Rejected ✗
H5	User Satisfaction → Behavior Intention	0.50	3.80	0.003	Accepted

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H6	Behavior Intention → Use Behavior	0.60	4.50	0.001	Accepted
H7	Use Behavior → Net Benefit	0.58	4.20	0.000***	Accepted

This study focuses on the National E-Learning Platform as the research object, with teachers as subjects and respondents. The platform is used to support the teaching and learning process in the implementation of a digital curriculum. Therefore, understanding the factors influencing teachers' satisfaction and behavioral intention toward the platform is crucial.

Based on the hypothesis testing table in Table 2, The study on the platform, with teachers as respondents, provides valuable insights into the factors influencing its adoption and perceived benefits. The findings reveal that task-technology fit significantly impacts user satisfaction, as evidenced by a strong path coefficient of 0.52 and a T-statistic of 3.90 (p = 0.001). This indicates that when the platform aligns well with teachers' tasks, their satisfaction increases. Similarly, system information quality also plays a crucial role in shaping user satisfaction, with a path coefficient of 0.48 and a T-statistic of 3.50 (p = 0.002). Accurate and relevant information provided by the platform enhances the user experience, making it more effective for educators. Furthermore, expectancy factors, such as perceived ease of use and usefulness, strongly influence behavioral intention, as shown by a path coefficient of 0.55 and a T-statistic of 4.10 (p = 0.001). This suggests that teachers are more likely to use the platform if they find it beneficial and easy to navigate.Interestingly, social influence does not significantly affect behavioral intention, with a path coefficient of 0.10 and a T-statistic of 1.20 (p = 0.230). This implies that teachers' decisions to use the platform are driven more by personal perceptions of its utility rather than external pressures. User satisfaction, however, has a significant positive effect on behavioral intention, with a path coefficient of 0.50 and a T-statistic of 3.80 (p = 0.003), highlighting the importance of a satisfying user experience in encouraging platform usage. Behavioral intention strongly predicts actual use behavior, as evidenced by a path coefficient of 0.60 and a T-statistic of 4.50 (p = 0.001), aligning with established theories like the Technology Acceptance Model (TAM). Finally, use behavior significantly impacts net benefits, with a path coefficient of 0.58 and a T-statistic of 4.20 (p = 0.000), indicating that increased platform usage leads to greater perceived benefits, such as improved teaching effectiveness and efficiency. These findings have several implications. For platform developers, it is essential to focus on improving task-technology fit and system information quality by tailoring the platform to educators' needs and ensuring the content is accurate and relevant. Educational institutions should provide training and support to help teachers maximize the platform's potential while encouraging feedback mechanisms for continuous improvement. Policymakers should invest in platforms that demonstrate clear benefits for educators and address barriers such as infrastructure limitations or digital literacy gaps. Overall, the study underscores the importance of user-centered design and fostering positive attitudes toward technology to maximize its impact on teaching and learning outcomes.

While this study has provided meaningful insights, there are several areas for future research that could build upon these findings. First, future studies could explore the role of social influence in greater depth, perhaps examining whether cultural or organizational factors mediate its impact on behavioral intention. Second, longitudinal studies could be conducted to assess how teachers' perceptions and usage of the platform evolve over time and how these changes affect net benefits. Third, future research could investigate additional variables, such as teacher self-efficacy or institutional support, to provide a more comprehensive understanding of the factors influencing platform adoption. Finally, expanding the scope of the study to include other educational platforms or different user groups, such as students or school administrators, could offer broader insights into the effectiveness of digital tools in education. These

recommendations aim to deepen the understanding of technology adoption and its implications for teaching and learning.

CONCLUSION

This study provides a comprehensive analysis of the factors influencing the adoption and perceived benefits of the Merdeka Mengajar Platform (PMM) among teachers in East Nusa Tenggara, Indonesia. The findings reveal that Task-Technology Fit (TTF) and Information System Quality significantly impact user satisfaction, which in turn strongly influences behavioral intention. Expectancy-related factors—especially perceived ease of use and usefulness—are also key drivers of behavioral intention. Interestingly, social influence does not have a significant effect on behavioral intention, suggesting that users are more influenced by their own satisfaction, system quality, and expectations rather than external social pressures.

Furthermore, the study confirms that user satisfaction and behavioral intention are critical in shaping actual system usage, which ultimately leads to greater net benefits, such as improved teaching effectiveness and efficiency. These insights highlight the importance of aligning technology with users' needs and providing a high-quality, user-centered design to ensure sustained engagement. For developers, focusing on usability and task alignment is crucial, while educational institutions and policymakers must provide adequate support and infrastructure. Overall, fostering a positive user experience is essential to maximize the platform's adoption and impact on educational outcomes.

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