

Analysis of the Use and Acceptance of System Technology E-Training (SAE) Application System Using the Unified Theory of Acceptance and Use of Technology (UTAUT) & The Delone - Mclean Model at Pt Telkom Prima Cipta Certifia (TPCC)

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Abstract

The development of information technology has had a significant impact on various sectors, including training and certification. Digitalization in training management has become an urgent necessity, especially to improve the efficiency and effectiveness of the learning process. PT Telkom Prima Cipta Certifia (TPCC) developed the E-Training Application System (SAE) as a solution to support training and certification activities. However, challenges in the use of SAE, such as technical issues, system quality, and user acceptance, remain major concerns. Therefore, a deep understanding of the factors influencing the acceptance and use of this application is needed. This study aims to analyze the use and acceptance of the SAE technology at PT TPCC by employing the Unified Theory of Acceptance and Use of Technology (UTAUT) and the DeLone-McLean model. The variables examined include Performance Expectancy, Effort Expectancy, Social Influence, Information Quality, System Quality, Behavioral Intention, Use Behavior, and Facilitating Conditions. This quantitative research was conducted by distributing an in-depth questionnaire to 400 SAE users at PT TPCC. Data analysis was performed using AMOS to test the model and research hypotheses. The results of this study are expected to provide a deeper insight into the factors that influence the acceptance and use of SAE technology at TPCC. These findings can serve as a foundation for PT TPCC to develop more effective strategies for implementing and enhancing SAE, thereby improving the efficiency and effectiveness of training and certification processes. The research findings provide recommendations and improvement priorities. The top three priorities are system quality, behavioral intention, and use behavior

Keywords: E-Training Application System, UTAUT, DeLone-McLean Model, Technology Acceptance, Quantitative Research.

1. Introduction

The development of information technology has become one of the most important phenomena in the 21st century. Since the invention of the internet and computers, information technology has experienced rapid growth and had a huge impact on almost every aspect of human life. These developments have changed the way we work, communicate, and interact with our surroundings. Its use does not only limit itself to automation, but also results in integrated systems with accuracy, speed, and comprehensiveness, allowing business processes to run

efficiently, measurably, and flexibly. For example, in the Training Management change process, information technology is key in improving the process. (Marshal Hilman Faris, 2020).

In this research, SAE (E-Training Application System) as the object of research will be used. SAE PT TPCC is a training management application for participants and management managed by PT TPCC to meet the achievements of training implementation. Looking at the PT TPCC SAE roadmap, the use of PT TPCC SAE is approximately 25,000 active users. SAE application has a strategic role in supporting the increase in company revenue by integrating operational training management functions and repository documents and certificates from participants (Company Strategic Plan, 2023) with specially designed features, such as a reminder system to renew certifications, advanced training offers, and exclusive program promotions, SAE is expected to increase customer retention and turn trainees into recurring customers. This strategy not only improves operational efficiency but is also expected to contribute additional stable and sustainable revenue streams for the company.

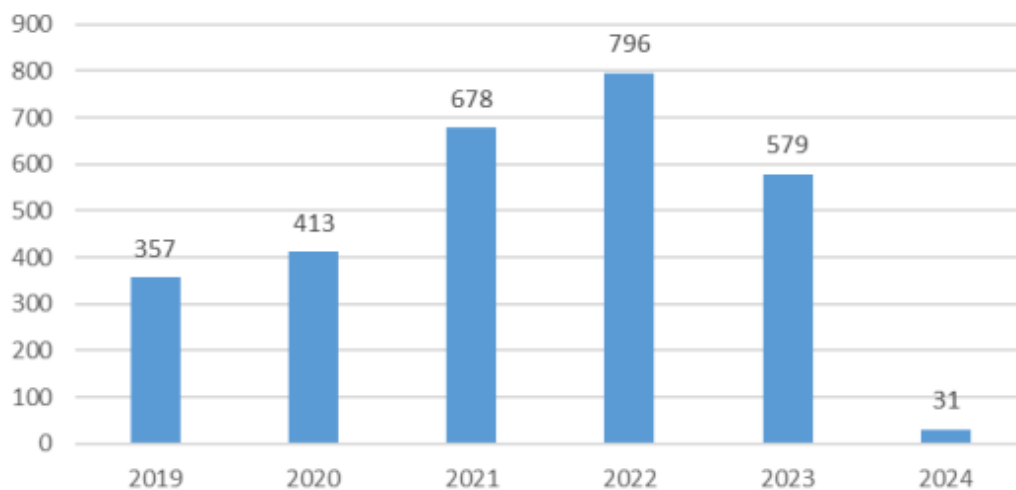


Fig. 1: Number of Certification Exam Participants

PT TPCC comes as one of the digital solutions to support the online training and certification process. This application plays an imperative part in confronting the challenges of the Covid-19 pandemic, which forces learning activities to shift from conventional models to online formats, but although SAE has succeeded in increasing the efficiency and operational reach of PT TPCC, there are still obstacles that affect the effectiveness of its use, such as server errors, log in difficulties, and internet connection disruptions. In addition, the need for feature development such as face recognition, helpdesk, certification notification is an important input from users to improve application functionality. Seeing the fluctuation in the number of certification exam participants and the decline in company revenue, this study aims to analyze the role of the SAE application in supporting the increase in the number of training and certification participants, as well as identifying development strategies that can strengthen SAE's contribution to company revenue in the future.

This UTAUT theory is used to analyze how system acceptance of innovation in an organization, whereas the Delone and McLean Demonstrate is utilized to analyze the framework. UTAUT has four constructs or independent variables including Performance Expectancy, Effort Expectancy, and Social Influence. While the Delone and McLean Model

has three constructions or independent variables including Information Quality, System Quality and Facilitating Conditions.

2. Literature Review

2.1 Strategic Management

According to Certo in (Nazarudin, 2018: 3) defines that strategic management is an analysis, decisions, and actions that companies can take to create and maintain competitive advantage, which is made by the leadership and implemented by all levels to achieve goals.

2.2 SAE (E-Training Application System)

SAE is an application used to manage training and certification data, as well as employee data, including participant biodata, participant attendance, certificates, and employee attendance owned by PT Telkom Prima Cipta Certifia. Through this SAE application, it can facilitate the Management and Recording of Training and Certification Administration, make it easier for prospective participants to carry out the Registration Process and access training data, help expand the scope of PT Telkom Prima Cipta Certifia business, and facilitate direct management of curriculum and learning media.

2.3 Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT may be an innovation acknowledgment hypothesis utilized to distinguish inspirations for utilizing innovation, one of which is to encourage work develops (Muhammad Awaluddin, annisa maharani, 2022). The Unified Theory of Acceptance and Use of Technology (UTAUT) model developed by Venkatesh (Model et al., 2023) may be a proposed unified model based on observational considers, 2023) could be a proposition for a bound together show based on observational considers of 8 primary models related to data innovation appropriation inquire about that combine TRA, TAM, MM, TPB, CTAM-TPB, MPCU, IDT and SCT into 4 primary factors, specifically execution anticipation, exertion hope, social impact and encouraging conditions as behavioral purposeful or utilize behavior and 4 mediator factors, to be specific sex, age, encounter and voluntariness of utilize as variables that can impact intrigued in tolerating and utilizing data innovation.

3. Research Methodology

This research embraces investigate conducted by (Wut & Lee, 2022; Darmawan & Pasaribu, 2024) using the UTAUT model and adds the external variables “System Quality” and “Information Quality” from the D and M models. Because these two variables may be related to behavioral intentions through perceived usefulness and satisfaction measuring the victory of Delone and McLean data frameworks on innovation acknowledgment.

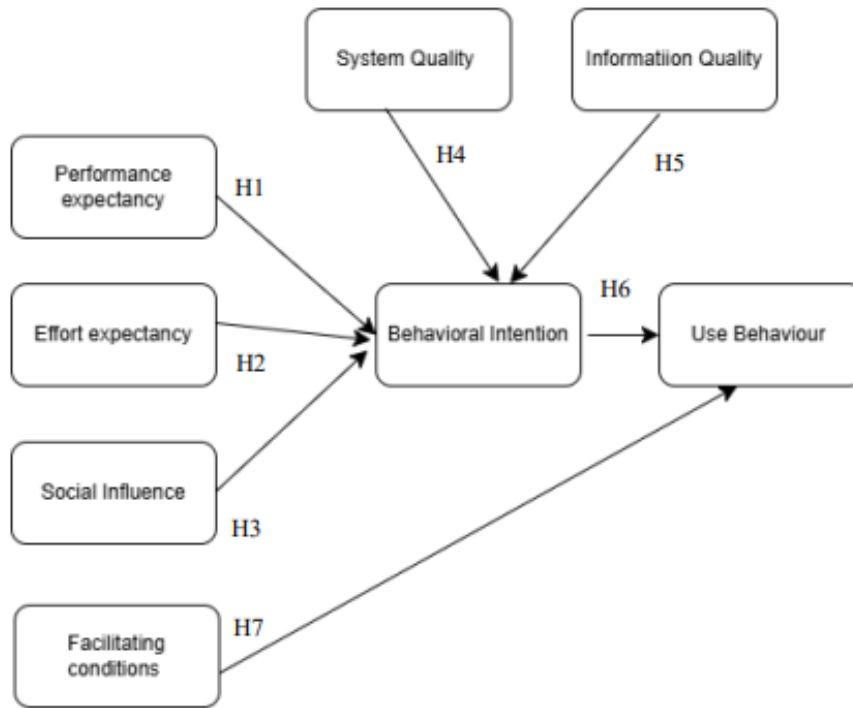


Fig. 2: Conceptual Framework

Based on the research approach, researchers take a deductive approach that aims to validate data by making observations. The strategy utilized in this investigate is quantitative strategy, quantitative inquire about strategy may be a investigate strategy that tries to form an precise estimation of information, behavior, opinion or attitude which is broadly utilized in different ponders since of its appropriateness for testing a show or a speculation (Indrawati, 2015: 184).

Table 1: Operational Variable

Variable	Indicators	Statements
Performance Expectancy (PE)	Make it easy users	Make it easy for users to using the SAE application
	Improve Effectiveness	Using SAE allows me to complete the activity efficiently.
	Increase Interest	Using SAE can increase interest in organizing training.
	Expectation of results	SAE can help me in providing / complete the process training administration process with easily.
Effort Expectancy (EE)	Ease of use	SAE is easy to use or operate.
		Learning how to using SAE is easy for me.
	Expectation of results	It is easy for me to become proficient in using the SAE application
	Social factors	In general Organizers have

		influenced Participants to continue to use the Application SAE
		Participants have used SAE well.
Behavioural Intention (BI)	Usage Needs	SAE application fulfils the needs of organizing training
	Expectation of results	Feeling the benefits positive benefits of using SAE application
Information Quality (IQ)	Data Accuracy	Information generated SAE is accurate.
	Completeness of Data	Information generated SAE Application complete.
		The SAE application generates the information needed by its users.
Up to date	SAE application provides up to date information.	
System Quality (SQ)	System security	SAE application has good security system, so that users feel safe in using it.
	Assurance	SAE system administrator willing to help me when I need help
	Time to Respond	Respond quickly to requests users of sample issuance training certificate
	Error Recovery	Fast error recovery process fast error recovery process when the SAE system system experiences a system failure (error).
	Convenience of Access	SAE application is easy to learn by new users (new users).
User Behavior (UB)	Usage time	The degree to which users feel happy to using the SAE application
	Usage Frequency	Users already used the app many times.
	Usage Variety	SAE application users do not only access during implementation of training take place
Facilitating Conditions	Perceived Behavioral Control	SAE application is compatible with the device/device that I use
	Facilitating Conditions	App usage facility SAE is always updated according to with the needs of training and certification
	Compatibilty	SAE application is always updated in accordance with the needs of training and certification

The type of research scale used in this study is an ordinal scale The questionnaire is prepared based on items related to the variables. Which will be studied, using a Likert measurement

scale. Likert scale is a measurement model in the form of a questionnaire and will be answered by respondents in the form of weighted values / scores.

4. Results and Discussion

Results are the main part of scientific articles and include final results as many as 400 respondents who filled out the questionnaire, all of whom were SAE users. Based on SAE user ownership, the majority of respondents use SAE as a participant, namely 381 respondents (95.25%) while those who use SAE as employees are 19 respondents (4.75%). From this information it can be seen that the larger part of respondents are Preparing and Certification Members at TPCC.

The descriptive analysis results of this study show the following: the performance expectancy variable achieved an average score of 90% (very good), effort expectancy scored 89% (very good), social influence scored 90% (very good), behavioral intention scored 90% (very good), information quality scored 90% (very good), service quality scored 90% (very good), use behavior scored 90% (very good), and facilitating condition scored 90% (very good).

In conducting hypothesis testing and correlation matrices, structural equation modeling (SEM) analysis is carried out which is useful in determining the hypothesis value in each variable in the study.

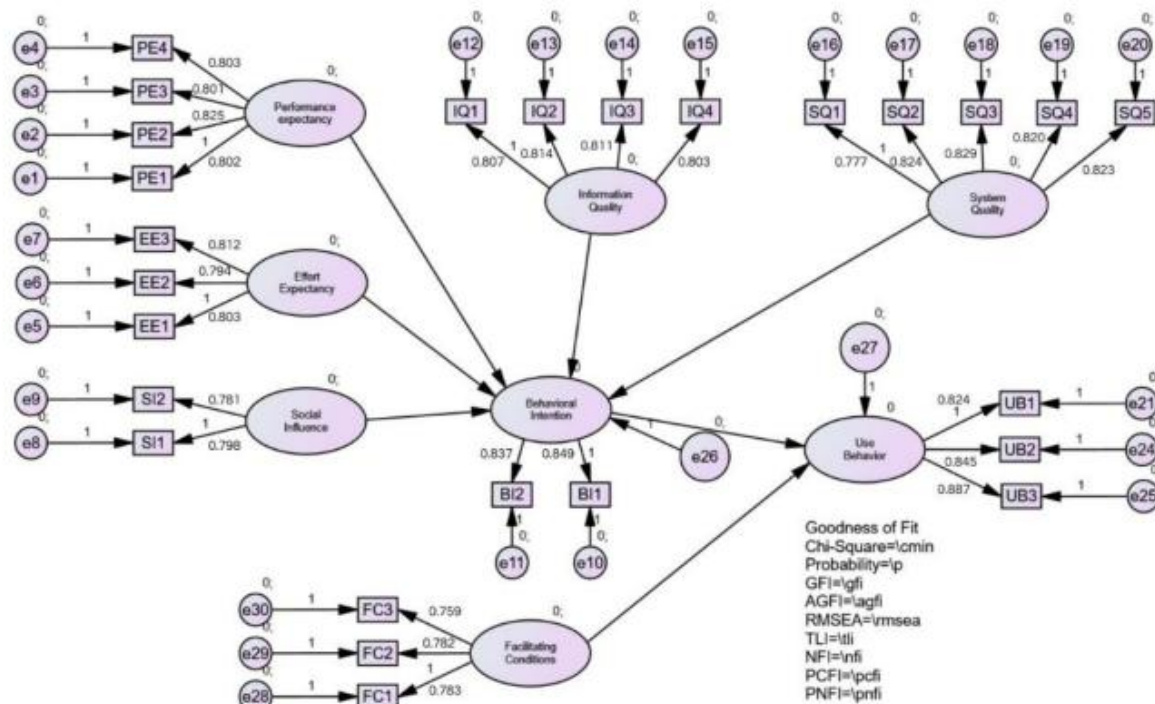


Fig. 3: Outer Model

Goodness of Fit
Chi-Square=3294,842
Probability=,000
GFI=,557
AGFI=,467
RMSEA=,168
TLI=,623
NFI=,643
PCFI=,595
PNFI=,579

Fig. 3: Inner Model

Based on the results of the goodness-of-fit analysis, it was found that only PNFI and PCFI had values sufficiently greater than 0.5 (Hair, Black, Babin, & Anderson, 2019). A model can be considered fit if at least one parameter meets the fit model conditions (Haryono & Wardoyo, 2013). Therefore, the analytical model presented has been proven to be a fit model.

The improvement priorities identified in this study are as follows:

1. System Quality to Behavioral Intention

The strongest influence was found in the relationship between System Quality and Behavioral Intention, with the highest outer model (SQ3) scoring 0.829, indicating a strong correlation. This highlights the critical importance of enhancing system quality to boost user intentions. A key recommendation is to provide rapid responses to user requests, such as the issuance of certificates.

2. Behavioral Intention to Use Behavior

The strongest influence was also observed in the relationship between Behavioral Intention and Use Behavior, with the highest outer model (BI1) scoring 0.849, which is considered excellent. This underscores the importance of increasing user intention to promote the use of the SAE Application. A primary recommendation is to ensure that the SAE Application effectively meets the needs of training programs.

The depiction of the analysis model in the AMOS application is drawn by following the framework, where performance expectancy, effort expectancy, and social influence have an influence on behavioral intention. In addition, it is also added that information quality and system quality have an influence on behavioral intention. Finally, behavioral intention has a positive influence on use behavior.

5. Conclusion

Respondents rated the SAE application positively: effective, easy to use, complete data, smooth access on various devices, responsive technical support, and encouraging active use for training needs. Performance Expectancy, Effort Expectancy, and Social Influence variables significantly affect the Behavioral Intention of SAE application users. The Execution Hope variable contains a positive impact on the Behavioral Deliberate of the SAE application. Behavioral Intention affects Use Behavior and mediates between variables such as

Performance Expectancy, Effort Expectancy, Social Influence, System Quality, and Information Quality, encouraging the use of SAE applications. Facilitating Condition variables have no effect on Use Behavior of SAE applications.

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