

## EMPLOYEE ACCEPTANCE AND SATISFACTION USING E-OFFICE BY HYBRID MODEL BASED ON TAM & ISSM

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**Abstract**—E-Office is an electronic mail application both web-based and mobile with the aim of making it easier for users to send, track, and archive letters. The implementation of E-Office applications within agencies certainly has pros and cons from users so it is necessary to do research to find out how users receive E-Office applications. To analyze user acceptance and satisfaction with E-Office applications, it is necessary to test the factors that influence users in utilizing applications. In this study, testing was carried out by combining two models, namely TAM (Technology Acceptance Model) and ISSM (Information System Success Model). The TAM is a widely used model to evaluate user acceptance of new technologies, while the ISSM was developed to analyze successes or failures in the application of information systems. The research method used is quantitative using questionnaire instruments, then the data is analyzed using the R-Square test. The data collected was 50 and then analyzed using SPSS. The user perception criterion shows a number of 0.740 so that the variables of information quality and system quality have a strong correlation with user perception. While both the criteria for perceived ease of use and user intention show a value above 0.75, which is 0.77 so that the variables of information quality and system quality have a very strong correlation with the perception of ease of use, and the variables of user perception and perception of ease of use have a very strong correlation also to user intentions in using E-Office applications.

**Keywords:** E-Office, ISSM, TAM.

**Intisari**—E-Office merupakan aplikasi surat elektronik baik yang berbasis web maupun mobile dengan tujuan memudahkan pengguna untuk mengirim, melacak, dan mengarsipkan surat. Penerapan aplikasi E-Office di dalam instansi tentu saja memiliki pro dan kontra dari pengguna

sehingga perlu dilakukan penelitian untuk mengetahui bagaimana pengguna menerima aplikasi E-Office. Untuk menganalisis penerimaan dan kepuasan pengguna terhadap aplikasi E-Office maka perlu dilakukan pengujian mengenai faktor-faktor yang mempengaruhi pengguna dalam pemanfaatan aplikasi. Dalam penelitian ini pengujian dilakukan dengan menggabungkan dua model, yaitu TAM (Technology Acceptance Model) dan ISSM (Information System Success Model). TAM merupakan model yang banyak digunakan untuk mengevaluasi penerimaan pengguna terhadap teknologi baru, sedangkan ISSM dikembangkan untuk menganalisis keberhasilan atau kegagalan dalam penerapan sistem informasi. Metode penelitian yang digunakan adalah kuantitatif dengan menggunakan instrumen kuesioner, kemudian data dianalisis dengan menggunakan uji R<sup>2</sup>. Data yang dikumpulkan adalah 50 dan kemudian dianalisis menggunakan SPSS. Hasil pengujian yang diperoleh adalah kriteria persepsi pengguna menunjukkan angka 0.740 sehingga variabel kualitas informasi dan kualitas sistem memiliki korelasi yang kuat terhadap persepsi pengguna. Sedangkan kriteria persepsi kemudahan penggunaan dan niat pengguna menunjukkan nilai diatas angka 0.75 yaitu 0.77 sehingga variabel kualitas informasi dan kualitas sistem memiliki korelasi yang sangat kuat terhadap persepsi kemudahan pengguna, dan variabel persepsi pengguna dan persepsi kemudahan penggunaan memiliki korelasi yang sangat kuat juga terhadap niat pengguna dalam menggunakan aplikasi E-Office.

**Kata Kunci:** E-Office, ISSM, TAM.

### INTRODUCTION

In a company there must be circulation of letters from one unit to another. Letters are circulated in various ways, such as sent manually, sent via e-mail, or even sent using applications like E-Office (Electronic Office). E-Office is an application service developed with the Paperless concept to minimize the use of paper in office administration, correspondence for every employee/official of an institution electronically, and at the same time, one of its features can allow the disposition and preparation of draft letters / service notes can be done by employees anywhere and anytime (Aropah, 2021).

Before technology developed, many companies and agencies were still doing manual mailing activities such as making letter numbers, filing, to the stage of sending letters. When creating a letter number, workers should look back at the previous letter number record before affixing the new letter number. This method is very inefficient and certainly takes a long time to carry out the capture process. In addition, manual mail will be an archive file that must be stored in a large warehouse and become an obstacle when searching for files.

Correspondence activities in an agency have their own urgency. It must be recognized that the management of the company or agency must pay attention to correspondence activities to support work to be easier and more efficient (Yudiana et al., 2021). Of course, this can be helped by the existence of E-Office applications. Even the use of eoffice is not only used in private agencies or companies, but also in government. The paperless philosophy is to use as little paper as possible and digitize documents. The benefits are increased productivity, cost-effective, efficient place and reduce environmental impact.

The implementation of the e-office system is expected to provide many benefits to increase the effectiveness of official correspondence activities (Izzati, 2020). The eoffice application is expected to make it easier for users to send letters from anywhere, to find out whether the letter has been read by the recipient of the letter, to find out whether the letter has been processed or not, to find out whether the letter was rejected or not, and so on. Not only employees, but leaders will also be helped after using the e-office.

Today many uses of technolomandey are made easier by mobile phones. E-Office can no longer only be operated using a laptop but also using a mobile phone. Workers can approve letters, reject letters, dispose of letters with just one click on the E-Office mobile application. During the implementation of e-office, there are several obstacles such as users or employees experiencing difficulties when operating e-office, so that the

correspondence process that should be done through e-office cannot be realized properly (Munzir & Wardany, 2022).

In this context, this study aims to know the acceptance of and satisfaction of workers using E-Office by hybrid model based on Technology Acceptance Model (TAM) & Information System Success Model (ISSM). According to DeLone and McLean, after reviewing TAM during the period 2010-2020, several models such as ISSM and UTAUT are the models that are most widely integrated with TAM models (Al-emran & Shaalan, 2021).

There are several theories of technology acceptance to determine how users receive and use new technologies, such as echnology acceptance model (TAM), task technology fit (TTF), theory of planned behavior (TPB), and unified theory of acceptance and use of technology (UTAUT) (Torku et al., 2021). To determine customer acceptance of information technology in various fields such as mobile commerce, online games, email, banking technology, medical technology, banking technology, etc., TAM has been validated as an active method (Bhardwaj & Bawa, 2021). In the study of adoption and acceptance of information systems and information technology, the Tam model is the most widely used and widely used model (Almaiah & Alismaiel, 2019). In addition, the TAM model is also a model that is widely used to evaluate user acceptance of new technologies (Zhou et al., 2019). To determine user behavior towards the adoption or use of technology is the main goal of this model (Mailizar et al., 2021).

On the other hand, ISSM models are used to see how the quality of an information system can affect users (Shivdas et al., 2020). The ISSM model was developed by DeLone and McLean to analyze success or failure in implementing information systems (Ayu Paramadini & Suzianti, 2021). ISSM is the most widely adapted framework to determine user satisfaction in using information systems. Initially, user satisfaction is only influenced by two factors, namely information quality and system quality, then service quality is added. The framework has been widely adopted to examine users' intention to adopt new technologies and behaviors. Many studies adopt IS success model to explain consumer satisfaction (Ma, 2021). After ten years this model was used to measure the use and success of information systems, DeLone and McLean update it. This model is formed by six factors but in this study only used 2 factors, namely system quality to technology effectiveness, information quality to measure system success.

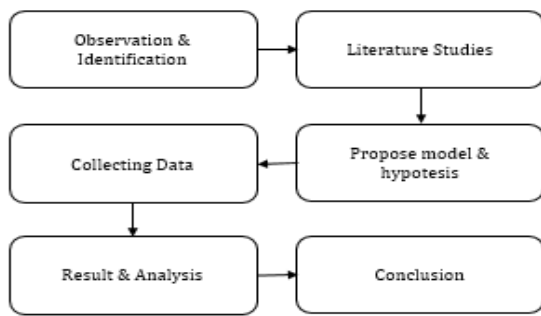
ISSM is a widely used model to measure the success of information systems, where this model explains the use and satisfaction of users both

individually and simultaneously influenced by the quality of information and the quality of the system (Adeyemi & Issa, 2020). Information quality is the quality of output that users can produce through information systems. The variables measured in information quality are accuracy, timeliness, completeness, relevance, and consistency. The quality of information has proven to be a prominent factor for knowing the success of the information system as a whole. While the quality of the system is the usefulness of the features owned by the system. The variables measured in system quality are flexibility, reliability, functionality, ease of use, data importance, integration, and quality (Alzahrani et al., 2019).

**MATERIALS AND METHODS**

**A. Research Model**

This research method is completed with the stages of activity in Figure 1.



Source : (Research Results, 2024)  
 Figure 1. Research Model

Observation involves direct observation of the way E-Office applications are used in daily practice in the work environment. Some things that need to be observed include how to use the E-Office application by employees, the extent to which the E-Office application helps in improving the efficiency of work processes, and how employees respond to the eOffice system. Then Identification is done to identify the advantages of E-Office implementation, namely what benefits users get from using eOffice. The literature study refers to the collection and analysis of previously published information on implementation, benefits, and trends related to the use of E-Office application, TAM, and ISSM.

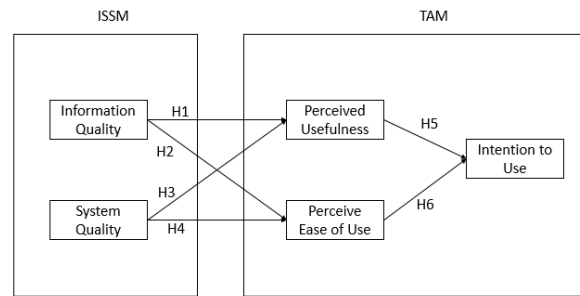
The next stage is to propose models and hypotheses. The proposed model is a visual or conceptual representation of the relationship between the variables studied in the study, while the hypothesis is a statement formulated to be tested in the study. The data collection stage used is through questionnaires to collect information

from respondents so that an understanding of user perceptions, experiences, and needs of E-Office application is obtained.

Analysis and results are important stages in research that require a deep understanding of the data that has been collected. The initial stage in the analysis is to process raw data that has been collected from the study, conduct data descriptions, conduct statistical analysis to test research hypotheses and answer the research questions posed, interpret the results to conclude research findings, then present the results of the analysis. The last stage is the conclusion, which is a summary of the main findings, implications, and assessment of the research objectives that have been achieved.

**B. Propose Model and Hypoteses**

The study explores user acceptance and satisfaction for using E-Office applications by combining TAM and ISSM, and incorporates information quality and system quality as external variables. The research method used is quantitative with R2 test analysis techniques. The questionnaire is distributed to E-Office Application users, then analyzed with SPSS. The research model is shown in Figure 2.



Source : (Research Results, 2024)  
 Figure 2. Proposed Model

In Figure 2 shows the research model in this study. Information quality refers to the reliability, completeness, accuracy, timeliness, and correlation of data generated by information systems. This causes the quality of information can affect perceived usefulness and perceive ease of use. In addition, system quality refers to the features of the system that produce information. The quality of the system has an influence on perceived usefulness and positively affects the perceive ease of use thus affecting the user's willingness to use the system.

This research uses the TAM as a basis, adding information quality and system quality as external variables. The following hypotheses are proposed.

H1: The information quality of E-Office will positively influence on user's perceive usefulness

H2: The information quality of E-Office will positively influence on user's easy of use  
 H3: The sytem quality of E-Office will positively influence on user's perceive usefulness  
 H4: The sytem quality of E-Office will positively influence on user's easy of use  
 H5: User's perceived usefulness regarding the E-Office will positively influence on their intention to use the system  
 H6: User's easy of use regarding the E-Office will positively influence on their intention to use the system.

### C. Questionnaire Design and Decriptive Statistic

This study explores the user's intention to use E-Office by using questionnaire. The questionnaire is created in Form Office platform. The questionnaire is divided into 6 dimensions and has 20 questions. The data collection technique is carried out by distributing questionnaires via email and whatsapp platform to the workers who use E-Office application.

All items are measured using a 5-point Likert-type scale (1 = strongly disagree, and 5 = strongly agree). The number of correspondents who filled out the questionnaire was 50. The majority of the respondents were mail operator that is equal to 61%, followed by structural officials by 22%, then secretaries by 16%.

Table 1 shows the survey questions and the average value. The average value of each question exceeds 3.5 which indicates that users have good feedback on the E-Office application.

Table 1. Survey Questions and Average Value

Dimension	Survey Questions	Average Value
Information Quality (IQ)	IQ1: I think the information provided by the E-Office application is accurate and reliable	4.28
	IQ2: I think the information provided by the E-Office application is complete and informative	4.18
	IQ3: I think that the E-Office application can display the letter I'm looking for quickly and instantly	4.06
	IQ4: Overall, I am satisfied with the quality of information from this E-Office application	4.08
System Quality (SQ)	SQ1: I think that this E-Office application is sufficient and can meet my needs	4.06

Dimension	Survey Questions	Average Value
Perceived Ease of Use (PEOU)	SQ2: I think that this E-Office application allows me to operate features easily	3.96
	SQ3: I think that the response time for this E-Office application is fast	4.16
	SQ4: I think that the architecture of the E-Office application system is logical	4.06
	PEOU1: I think I can easily operate this E-Office application	4.16
Perceived of Usefulness (PU)	PEOU2: I can quickly learn how to operate this E-Office application	4.20
	PEOU3: I think the operating interface of this E-Office application is easy and straightforward	4.04
	PEOU4: Overall, I think this E-Office application is easy to use	4.20
	PU1: I think using this E-Office application can help me find the letter I need	4.20
Intention to Use (IU)	PU2: I think using this E-Office application can improve work efficiency	4.14
	PU3: Overall, I think using this E-Office application is useful	4.18
	IU1: I will give priority to use this E-Office application to send letters	4.32
	IU2: I think using this E-Office application to do correspondence is the right choice	4.18
	IU3: I will increase my frequency of using this E-Office application	4.04
	IU4: I will continue to use this E-Office application in the future	4.22

Source : (Research Results, 2024)

## RESULTS AND DISCUSSION

It is known that the value of N = 50 ,consist of 22% managerialis and 88% mail operators. The data is tested using SPSS software for testing validity and reability. This study assessed the convergent validity and discriminant validity of the constructs. When the factor loading is greater than

0.5, then it can be stated confirming convergent validity. Table 1 shows the result of the convergent validity test using Factor Loading.

Table 1. Convergent Validity Test with Factor Loading

Indicators	Factor Loading	Description	
Information Quality (IQ)	IQ1	0.847	Accepted
	IQ2	0.804	Accepted
	IQ3	0.935	Accepted
	IQ4	0.926	Accepted
System Quality (SQ)	SQ1	0.780	Accepted
	SQ2	0.849	Accepted
	SQ3	0.804	Accepted
	SQ4	0.832	Accepted
Perceived Ease of Use (PEOU)	PEOU1	0.880	Accepted
	PEOU2	0.767	Accepted
	PEOU3	0.846	Accepted
	PEOU4	0.856	Accepted
Perceived of Usefulness (PU)	PU1	0.888	Accepted
	PU2	0.829	Accepted
	PU3	0.855	Accepted
	IU1	0.835	Accepted
Intention to Use (IU)	IU2	0.884	Accepted
	IU3	0.831	Accepted
	IU4	0.875	Accepted

Source : (Research Results, 2024)

In Table 1 it can be seen that all factor loading values exceed 0.5 where the smallest value is 0.767 owned by indicator PEOU2 and the largest value is 0.935 owned by indicator IQ3. From the results of these calculations, there are no indicators that have been removed, so there is no need to recalculate.

Table 2. Convergent Validity Test with AVE

Indicators	AVE	Description
Information Quality (IQ)	77,39%	Accepted
System Quality (SQ)	66.70%	Accepted
Perceived Ease of Use (PEOU)	70.25%	Accepted
Perceived of Usefulness (PU)	73.59%	Accepted
Intention to Use (IU)	73.37%	Accepted

Source : (Research Results, 2024)

When testing convergent validity, it can be measured based on the Average Variance Extracted (AVE). An indicator can be declared to meet convergent validity and have a high level of validity when the Average Variance Extracted (AVE) value is > 0.50. In Table 2 it can be seen that each indicator in the research variables have an AVE

value of more than 50%. Therefore, it can be concluded that all research variables have good convergent validity or data can be declared valid.

Table 3. Reliability Analysis with Component Realibility

Indicators	Component Reability	Description
Information Quality (IQ)	0,931	Accepted
System Quality (SQ)	0,888	Accepted
Perceived Ease of Use (PEOU)	0,904	Accepted
Perceived of Usefulness (PU)	0,893	Accepted
Intention to Use (IU)	0,916	Accepted

Source : (Research Results, 2024)

Reliability tests are carried out to prove the accuracy, consistency, and accuracy of instruments in measuring constructs. To be able to have high reliability or can be declared reliable and stable if the value of component realibility must be greater than 0.70. In Table 3 it can be seen that all indicators have component reability value of more than 0.7. It shows that all research variables have a high reliability value.

Table 4. Reliability Analysis with Cronbach's Alpha

Indicators	Cronbach's Alpha	Description
Information Quality (IQ)	0.936	Accepted
System Quality (SQ)	0.887	Accepted
Perceived Ease of Use (PEOU)	0.927	Accepted
Perceived of Usefulness (PU)	0.907	Accepted
Intention to Use (IU)	0.927	Accepted

Source : (Research Results, 2024)

In Table 4 it can be seen that all indicators have cronbach's alpha value of more than 0.7. The smallest CR value is 0.887 owned by indicator SQ and the largest CR value is 0.936 owned by indicator IQ.

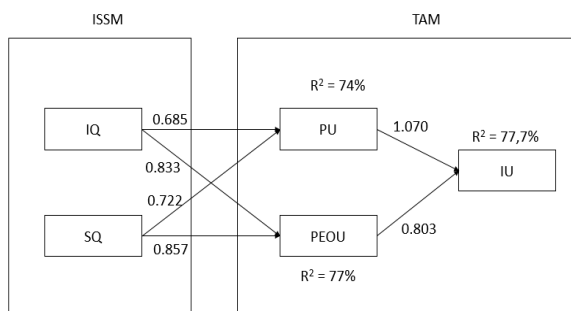
After all variables and criteria meet the standards, then the next step is to conduct a hypothesis test. The first thing to do is to find the value of R-Square.

Table 5. R-Square Test

Indicators	R-Square
Perceived of Usefulness (PU)	0.740
Perceived Ease of Use (PEOU)	0.770
Intention to Use (IU)	0.777

Source : (Research Results, 2024)

Based on Table 5 it can be seen that the one with the highest R-Square value is IU which is 0.777 or 77.7%. This means that the ability of independent variables, namely PU and PEOU variables to explain dependent variables IU is 77.7% and the remaining 22.3% is explained by other variables that are not discussed in this study. While the PU variable and PEOU variable are both influenced by IQ and SQ variables. The independent variables IQ and SQ affect the PU bound variable by 74%, while the independent variables IQ and SQ affect the PEOU dependent variable by 77%.



Source : (Research Results, 2024)

Figure 3. Structural Equation Modeling

In Figure 3 can be seen the path of the analysis results. The explanatory power of Perceive Usefulness (PU) is 74%, the explanatory power of Perceive Ease of Use (PEOU) is 77%, and the explanatory power Intention to Use (IU) is 77.7%. IQ to PU shows a value of  $\beta=0.685$  and  $p<0.05$  so that H1 that is the information quality of E-Office will positively influence on user's perceive usefulness is acceptable. And IQ to PEOU shows a value of  $\beta=0.833$  and  $p<0.05$  so that H2 that is he information quality of E-Office will positively influence on user's easy of use is acceptable.

On the other hand, SQ to PU shows a value of  $\beta=0.722$  and  $p<0.05$  so that H3 that is the system quality of E-Office will positively influence on user's perceive usefulness, is acceptable. And SQ to PEOU shows a value of  $\beta=0.857$  and  $p<0.05$  so that H4 that is the system quality of E-Office will positively influence on user's easy of use is acceptable. Meanwhile, the PU to IU shows a value of  $\beta=1.070$  and  $p<0.05$  so that H5 that is user's easy

of use regarding the E-Office, will positively influence on their intention to use the system is acceptable. And PEOU to IU shows values  $\beta=0.803$  and  $p<0.05$  so that H6 that is user's easy of use regarding the E-Office will positively influence on their intention to use the system is acceptable.

## CONCLUSION

The results of this study show that E-Office Applications have a good impact on its users. Procurement of E-Office in an agency can increase the efficiency of mail delivery and save time in tracking the status of letters. Each dimension in the research model proposed in this study has an explanatory power higher than 50%, namely perceive usefulness: 74%, Perceive Ease of Use: 77%, and Intention to Use: 77.7%. Thus the research model can be used as a reference for further research.

Information quality and system quality have a positive influence on perceive usefulness and perceive ease of use. This is indicated when users are satisfied with the quality of information in E-Office applications so that users feel the ease of finding information quickly and accurately through E-Office applications. Meanwhile, system quality also has a good effect that is E-Office applications allow users to operate features easily and the response time is fast.

Furthermore, perceive usefulness and perceive ease of use have a positive influence on intention to use. E-Office applications can help users to find mail and improve user performance so that users can prioritize using E-Office applications to send mail. In addition, the ease of use of E-Office applications makes users feel easy to operate the application so that it can affect the frequency of use of the application. Overall, the user stated that he would continue to use E-Office application in the future.

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