The Implementation of End User Computing Satisfaction and Delone & Mclean Model to Analyze User Satisfaction of M.TIX Application

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Abstract

This study aims to identify the elements that affect user satisfaction and the degree of user satisfaction with the online ticket application. This study makes use of the End User Computing Satisfaction (EUCS) model's development model, which includes three DeLone and McLean variables system quality, information quality, and service quality along with five EUCS model variables: content, accuracy, format, timeliness, and ease of use. The population of this study is made up of frequent users of Android-based online ticketing applications. Respondents were selected from as many as 175 respondents to be the research sample using the purposive sampling technique. Data analysis was carried out using the PLS-SEM approach with SmartPLS tools. The results showed that users were satisfied using the online ticket application, and out of eight hypotheses, two were rejected and 6 were accepted. So that the factors that influence user satisfaction in online ticket applications are accuracy, ease of use, timeliness, system quality, information quality, and service quality.

Keywords: User Satisfaction, Online Ticket Application, EUCS, Delone & Mclean, Service Quality.
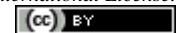
1. Introduction

The development of information technology is increasingly rapid, and the interaction between humans and computers is also increasing. The development of information technology makes it easier for humans to access up-to-date information quickly and precisely. Many benefits and solutions are offered by the use of information technology. Increasing effectiveness and efficiency and providing convenience to human activities such as communication, transactions, education, and entertainment are also impacts of this rapid development of information technology. To support the development of information technology, the internet is needed as the main means for its use [1]. The presence of information technology developments has transformed the industrial era into the digital era. The digital era has made many big changes that not only help make it easier for humans but also change lifestyles from one generation to the next. This has an impact on perspectives, ways of thinking, and the acceleration of neurons in the brain in responding to changes and advances in information technology. This big change also has an impact on companies that must be ready to face the rapidly developing digital era. Companies must be able to continue to adapt by providing services and convenience to customers who are always changing with the times or trends [2]. One of the fast-changing trends is in the field of entertainment, such as watching movies in cinemas. Deputy Minister of Tourism and Creative Economy (Wamenparekraf), Angela Tanoesoedibjo, said the number of moviegoers in 2022 had apparently recovered [3].

This allows cinema companies to be able to follow trends in society, one of which is that people who used to have to queue and buy tickets directly at the cinema can now buy tickets online through a movie ticket sales application in cinemas [4]. There are still many users who give low ratings for online movie ticket sales applications in cinemas. One application for selling movie tickets in online cinemas that has the lowest ratings among other applications for selling movie tickets in online cinemas is the m.tix application, with a rating percentage of 1 of 28%. This shows that there are still many application users who feel that the application has not met their expectations. m.tix is the official application of Cinema XXI (Cinema 21 and The Premiere), which provides online movie ticket purchases at cinemas [5]. There are various main features contained in the application, such as the playing feature showing films currently playing in theaters and also for ordering movie tickets you want to watch, upcoming features featuring films that will be shown in the near future, theater features featuring theaters from selected areas, and various types of theaters are selected until the theater closest to the user's location, then the

m.food feature, which is a food ordering application offered by XXI Café, and finally the my m.tix feature, which displays the user's personal information and settings, m-tix balance, e-vouchers, history of transactions made, contact us, and terms of services/disclaimer. In addition to the main features, there are also several additional features, such as Care for Protect, What's New (which contains the latest updates from the application), and the privacy policy [6].

The important thing for a company is user satisfaction with the developed application. The success of an application is also measured not only by how well it works or the information it produces but also by the satisfaction felt by the user. A successful information system or application is not only determined by how well it can be processed and produces good information but also by user satisfaction with the perceived performance of the system or application [7]. User satisfaction is a feeling that arises from comparing a product with user expectations; if the product fails or does not work according to user expectations, the user will feel dissatisfied. And conversely, if the product works according to user expectations, the user will be satisfied. If the product works beyond the user's expectations, the user will feel very satisfied and happy [8]. To measure user satisfaction, there are several evaluation models that can be used. Researchers will use a model in this study that builds on the DeLone and McLean model to produce the End User Computing Satisfaction (EUCS) model [9]. A model for measuring satisfaction levels is the End User Computing Satisfaction (EUCS) model. Based on five measuring variables content, accuracy, format (shape or appearance), ease of use, and timeliness the EUCS model assesses total user satisfaction in information systems with a stronger focus on end user satisfaction with technological features. Numerous studies have tested the reliability of this model, and the results have not varied noticeably. Research in Taiwan by McHaney states that the variables developed by the EUCS model for end-user applications are valid and reliable by studying the satisfaction of end-user applications from a computational perspective [10].

Along with the EUCS model, there is also the DeLone and McLean model, a success model introduced and created by William H. Delone and Ephraim R. McLean that offers a thorough framework for evaluating information system performance. This model is employed to assess the effectiveness of information systems by straightforward modeling, and it is regarded as being extremely valid by numerous studies [11]. William H. DeLone and Ephraim R. McLean updated and improved their model to measure the performance of information systems using six variables in 2003, taking into account the development of the role of information systems: system quality, information quality, service quality, use, user satisfaction, and net benefits. The majority of the factors make a significant contribution to the dependent variable. Previous studies have shown that the quality of information systems, specifically system quality, information quality, and service quality in the DeLone and McLean model, can measure user satisfaction. These findings are consistent with the quality of information systems having a significant positive impact on user satisfaction [12]. The three DeLone and McLean model variables of system quality, information quality, and service quality will be used in this study.

2. Research Methods

This study uses a quantitative approach. The data collection technique used is to conduct a survey using a questionnaire with several research instruments that are distributed online in the form of a Google Form to online ticket application users. The analysis was carried out using statistical analysis, namely conducting demographic analysis and analyzing the level of satisfaction of application users using Microsoft Excel 2019 software, and using the PLS-SEM approach based on the outer and inner models using Smart-PLS software version 3.2.9. After carrying out statistical analysis, the results obtained were interpreted, and conclusions were drawn. The population used in this study is made up of online ticket application users who use the Android platform. Based on data obtained from the Google Play Store, the number of users who have downloaded the application has reached more than 10 million. Sampling using the purposive sampling technique. The purposive sampling technique was used because it was able to provide accurate data in accordance with the research objectives, so that the selected samples were those who were truly related to the research. By using a purposive sampling technique, the criteria in this study are active users of applications that use the Android platform. For the minimum number of samples taken in this study, researchers will use sample calculations by multiplying 10 by the number of paths or relationships in this study. This research model was created by adopting previous research that developed the End-User Computing Satisfaction and DeLone and McLean models.

3. Results and Discussion

The results of the demographic analysis show that of the 175 respondents, the dominant female respondents were 107 with a percentage of 61%, followed by 68 male respondents with a percentage of 39%. This can happen because the distribution of questionnaires is done through social media, and according to data, women use social media more than men. Respondents with the largest age range, namely the age range of 21-26 years, were 64 respondents with a percentage of 37%, then respondents with an age range of 15-20 years were 29 respondents with a percentage of 17%, then respondents with an age range of 27-32 years were 24 respondents with a percentage of 14%, then respondents with an age range of 33-38 years were 20 respondents with a percentage of 11%, then

an age range of 39-44 were 12 respondents with a percentage of 7%, then an age range of 35-50 was 10 respondents with percentage of 6%, then respondents with an age range of 51-56 were 8 respondents with a percentage of 5%, and finally respondents with an age range of 57-62 were 4 respondents with a percentage of 2%. This is because, according to a survey conducted, generation Z, whose average age is 18–24 years old, is the generation that watches movies the most in theaters. This is also supported by other surveys that show market users are dominated by generation Z. Out of 175 respondents, 48 respondents with a percentage of 28% live in Jakarta, 41 respondents with a percentage of 23% live in Tangerang, 17 respondents with a percentage of 10% live in Depok, 15 Respondents with a percentage of 9% live in Bekasi, 11 respondents with a percentage of 6% live in South Tangerang and Bogor, 4 respondents with a percentage of 2% live in Yogyakarta, and 28 other respondents come from other cities with a percentage of 17%. From 175 respondents, 99 respondents with a percentage of 57% had used the application for less than 1 year, 42 respondents with a percentage of 24% had used the application for 1-2 years, and 34 other respondents with a percentage of 19% had used the application for more than 2 years. Out of 175 respondents, the number of respondents who were satisfied was 85 respondents with a percentage of 49%, followed by the number of respondents who felt very satisfied, as many as 42 respondents with a percentage of 24%, then the third number of users who felt quite satisfied were 33 respondents with a percentage of 19%, then users who felt unsatisfied were 11 respondents with a percentage of 6%, and finally the number of respondents who were dissatisfied was 4 respondents with a percentage of 2%.

According to the results of the measurement analysis of the user satisfaction level, the application's user satisfaction level with content is 4.30, indicating that the user is extremely satisfied with the content the application presents, and its user satisfaction level with accuracy is 4.06, indicating that the user is satisfied with the application's ability to provide accurate information. Then 4.12 indicates a level of user satisfaction with the format used by the application, indicating that users are happy with the format used by the program. Consequently, the application's degree of user satisfaction with ease of use is 4.23, indicating that users are extremely satisfied with the application's ease of use. then 4.22, which indicates that users are extremely satisfied with the program's timeliness, is the level of user satisfaction with timeliness for the application. Then the application user satisfaction with system quality score is 4.04, indicating that users are happy with the system's quality. Then the application's user satisfaction with information quality score is 4.21, indicating that users are extremely satisfied with the information the application provides. Last but not least, the application's degree of user satisfaction with service quality is 3.98, indicating that users are happy with the application's level of service quality.

The results obtained show that the overall level of user satisfaction is at a level of satisfaction with an average of 4.14, which means that the user is satisfied with the application as a whole. Based on the results of the analysis of the measurement model (outer model) that has been carried out, the overall results obtained at each stage of the testing have fulfilled the terms and conditions of the test. In the first stage, the individual item reliability test results for all the indicators tested showed an outer loading value above 0.7. Then, in the second stage, an internal consistency reliability test was carried out, which showed the results of the composite reliability value, which was above the threshold of 0.7. The third stage is the stage for testing the average variance extracted (AVE) value. The results of the test at this stage are quite good because it has exceeded the minimum AVE value of 0.5. The last stage is discriminant validity; the results shown at this stage are in accordance with the terms and conditions of the test.

Based on the findings of the structural model analysis (inner model), it can be concluded that the content variable has a negligible impact on user satisfaction, with an effect size value of 0.011 and a relative impact value of 0.003 respectively. This is because the content variable has a strong coefficient of determination on the dependent variable, user satisfaction, which is equal to 0.648. With a t-test value of 1.435 and an insignificant path coefficient value of -0.089, the CON → US hypothesis is rejected. This indicates that there is no discernible impact of the variable content (CON) on user happiness. This demonstrates that the application's content has no bearing on and a strong correlation with user satisfaction, indicating that the information system's content has no bearing on application user pleasure. The findings of this study are consistent with those of earlier studies, according to which user happiness is unaffected by content. This is also in line with the widespread belief among users that content has little bearing on user pleasure because some of the content supplied by applications, such as movies that are now playing, movie synopses, or movie trailers, can be accessed online or on social media.

Based on the analysis's findings, it can be inferred that the accuracy variable has a negligible impact on user happiness, producing an effect size value of 0.031 with a strong coefficient of determination on the dependent variable, user satisfaction, equal to 0.648. The association between the accuracy and user satisfaction variables has a relatively minor influence, which is also true for the relative impact value of 0.008, which indicates the same thing. However, the ACC → US hypothesis is accepted with a t-test value of 2,283 and a significant path coefficient value of 0,148. This indicates that user satisfaction is significantly positively impacted by the accuracy variable (ACC). This demonstrates that the correctness of the system in handling user input and creating output has a positive influence and a substantial relationship to user satisfaction, demonstrating that the accuracy of the information system influences application user satisfaction. The findings of this study are consistent with other

research, which indicates that user happiness is influenced by the correctness of information systems. The user expects that the information shown is accurate and does not present wrong information to the user, which is consistent with the general user impression that the information system's accuracy influences user pleasure. When buying tickets online, buyers currently receive reliable information and information errors are minimal, such as broadcast time information and seat availability.

According to the analysis's findings, the format variable has a negligible impact on user happiness, producing an effect size value of 0.003 with a strong coefficient of determination on the dependent variable, user satisfaction, of 0.648. Additionally, the relative impact value of 0.000 indicates that there is little relationship between format factors and user happiness. The FOR → US hypothesis is disproved by a t-test value of 0.637 and an unimpressive path coefficient value of -0.047. This indicates that there is no discernible impact of the format variable (FOR) on user satisfaction. This demonstrates that the information system's display has no bearing on and a strong correlation with user satisfaction, indicating that the information system's display has no bearing on how well an application is used. The findings of this study do not support earlier research, which found that user happiness is influenced by the system's aesthetics. The user feels that the display or user interface is not too significant as long as the application can meet user demands, which is also consistent with the overall user opinion that the appearance does not affect user happiness.

According to the analysis's findings, the relationship between the variables of ease of use and user satisfaction has a relatively small impact, as evidenced by the strong coefficient of determination on the dependent variable user satisfaction, which equals 0.648, which results in an effect size value of 0.026 and a relative impact value of 0.008 for the ease-of-use variable. However, the EOU → US hypothesis is accepted with a t-test value of 2.214 and a significant path coefficient value of 0.167. This indicates that user satisfaction is significantly positively impacted by the variable ease of use (EOU). This demonstrates that user comfort when entering, processing, and retrieving the information needed to use information systems has a favorable influence and a significant relationship to user satisfaction, demonstrating that application user satisfaction is influenced by user ease when accessing information systems. The findings of this study contradict earlier research that claimed user ease had no bearing on user pleasure. This is in line with the widespread belief among users that an application's usability has an impact on user happiness. Users currently believe that the application is user-friendly when in use, and if an issue does occur, a notification is displayed.

Based on the analysis's findings, it can be inferred that the timeliness variable has a negligible impact on user satisfaction, producing an effect size value of 0.023 with a strong coefficient of determination on the dependent variable, user satisfaction, equal to 0.648. Additionally, the user satisfaction link between timeliness variables has a relatively little impact, as indicated by the relative impact value of 0.008. However, the TIM → US hypothesis is accepted with a t-test value of 1,972 and a significant path coefficient value of 0,139. This indicates that the timeliness (TIM) variable significantly improves customer happiness. This demonstrates that the timeliness of the system in supplying information has a favorable influence and a substantial relationship to user satisfaction, demonstrating that the timeliness given by the information system has an impact on application user satisfaction. The findings of this study are consistent with other research, which indicates that user happiness is influenced by timeliness. This is also in accordance with the widespread user notion that application responsiveness has an impact on user happiness since people anticipate receiving information promptly when they need it. Currently, users of the program may rapidly find out information about theater locations, films playing in each theater, showtimes, available seats, and other details as needed.

Based on the analysis's findings, it can be concluded that the relationship between system quality variables and user satisfaction is relatively insignificant, with a strong coefficient of determination on the dependent variable, user satisfaction, equal to 0.648, producing an effect size value of 0.034, indicating a small effect of the system quality variable on user satisfaction. However, the SQ →US hypothesis is accepted with a t-test value of 2.203 and a significant path coefficient value of 0.156. This indicates that user happiness is significantly positively impacted by the variable system quality (SQ). This demonstrates that system quality based on system performance, including hardware capabilities, software, policies, and procedures offered by the information system, has a favorable influence and a significant relationship to user satisfaction, demonstrating that system quality offered by the information system influences application user satisfaction. The findings of this study contradict earlier research that claimed system quality had no bearing on user happiness. This is also consistent with the widespread user opinion that system quality has an impact on user happiness and that users want a system that operates at its peak efficiency and responds quickly to their requests. Currently, users hardly ever encounter application failures, and programs respond quickly to user requests.

Based on the analysis's findings, it can be concluded that the information quality variable has a negligible impact on user happiness, producing an effect size value of 0.054 with a strong coefficient of determination on the dependent variable, user satisfaction, which is equal to 0.648. Additionally, the association between information quality characteristics and user satisfaction has a relatively little impact, as indicated by the relative impact value of 0.020. The IQ → US hypothesis is accepted, nevertheless, with a t-test value of 2,673 and a significant path

coefficient value of 0,222. This indicates that user happiness is significantly positively impacted by the variable information quality (IQ). This demonstrates that the quality of information provided by the information system has a favorable influence and a substantial relationship to user satisfaction, demonstrating that the quality of information provided by the information system influences application user satisfaction. The findings of this study contradict earlier research that claimed user happiness is unaffected by the quality of the information. This is also in line with how people generally perceive the relationship between information quality and user pleasure. Users anticipate high-quality content that meets their demands. At the moment, the program gives consumers the information they need.

According to the analysis's findings, the service quality variable has a negligible impact on user happiness, producing an effect size value of 0.011 with a strong coefficient of determination on the dependent variable, user satisfaction, equal to 0.648. Additionally, the association between service quality characteristics and user happiness has a relatively little impact, as evidenced by the relative impact value of 0.033. However, the SERVQ → US hypothesis is accepted with a t-test result of 2,896 and a significant path coefficient value of 0,274. As a result, user happiness is significantly positively impacted by variable service quality (SERVQ). This demonstrates that the information system's service quality meets users' expectations, has a positive impact on user satisfaction, and is significantly related to it. As a result, application user satisfaction is influenced by the information system's service quality. The findings of this study are consistent with other research, which indicates that user happiness is influenced by service quality. This is also in line with the common perspective of users, who believe that service quality has an impact on user satisfaction and anticipate prompt and suitable responses from applications when they encounter issues. Users now believe that the program responds quickly to their concerns and issues.

4. Conclusion

Users were generally satisfied with the online ticket application, according to the findings of the study that measured user satisfaction levels. According to the findings of the analysis, six of the eight accepted hypotheses accuracy, usability, timeliness, system quality, information quality, and service quality are known to have a significant positive impact on user satisfaction with the application. Based on the findings of the research, it is known that 2 of the 8 hypotheses are disproved, specifically that the variables for Content and Format have no bearing on user satisfaction. According to the study's findings, maintaining user satisfaction while using the application requires maintaining or improving accuracy, usability, timeliness, system quality, information quality, and service quality. It is advised that more study be done to analyze user satisfaction with applications using alternative models, such as the Expectation Confirmation Model (ECM), or designing new ones. It is recommended not to ignore the 2 variables that were rejected in this study, namely content and format variables, because even though they do not affect user satisfaction, they may affect other variables. It is recommended for application developers to increase the speed of responding to user wishes, improve the accuracy of the information provided, modify the application to make it easier for users to use it, and add several features so that they can serve users well.

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