# Berkala Ilmiah Bidang MIPA

# Evaluation of User Satisfaction and Loyalty of Sports News Portal Application Using Technology Acceptance Model

#### Article Info

#### Article history :

Received October 14, 2022 Revised September 20, 2024 Accepted September 23,2024 Published September 30, 2024

#### Keywords :

Model affects user behavior, partial least squares, structural equation modeling, quantitative descriptive

## Roy Inzaqhi Saputra<sup>1\*</sup>, Rama Haryamadha<sup>1</sup>, Ilyas Nuryasin<sup>1</sup>

<sup>1</sup>Informatics Study Program, Faculty of Engineering, Universitas Muhammadiyah Malang, Malang, Indonesia

**Abstract:** Current technological advances have created gaps in people's ability to obtain information quickly. It was as if the strenuous efforts of people wanting to know more about what had happened had broken down the information barrier. This research is included in the category of quantitative descriptive research. This research is focused on news portal application users. The sampling technique used in this study was random sampling, with a total sample of 100 participants. This research uses PLS data analysis technique with SEM approach model. The results showed that perceived ease of use affects mobile user satisfaction. Perceived usefullness affects mobile user satisfaction. Trust affects mobile user satisfaction. Convencience affects mobile user satisfaction. Security affects mobile user satisfaction. Perceived usefullness affects user loyalty. Trust affects user loyalty. Convencience affects user loyalty. Security affects user loyalty.

This is an open acces article under the <u>CC-BY</u> license.



This is an open access article distributed under the Creative Commons 4.0 Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. ©2024 by author.

#### **Corresponding** Author :

Roy Inzaqhi Saputra Informatics Study Program, Faculty of Engineering, University of Muhammadiyah Malang, Malang, Indonesia Email: <u>royinzaqhi21@webmail.umm.ac.id</u>

#### 1. Introduction

Current technological advances have created gaps in people's ability to obtain information quickly. It is as if the strenuous efforts of people wanting to know more about what happened have broken down the information barrier. Anyone, anywhere in the world, has access to information resources. As a result, people become more critical and pay attention to new knowledge. The rapid advancement of information technology has provided enormous benefits for the progress of human civilization. Communication activities that used to require advanced technology have been largely replaced by automated machines. The capacity of the human brain seems to have been transmitted in various fields of research and human activity by the working system of technological tools [1-2].

Released the results of a survey of Indonesian internet user profiles, which describes various statistical data about internet users in Indonesia, which is in table 1.2 below, such as the number of internet users in the lifestyle sector, where the use of social media is 87.13 percent higher than others, such as downloading music by 71.10 percent, downloading movies by 70.23 percent, entertainment news by 58.01 percent, reading stories by 57.13 percent, and games by 54.13 percent [3-4].

Taherdoost, (2018) stated that "Mobile devices are now increasingly sophisticated. This allows users to access news from the internet using just a cell phone." Many news supply companies now have their own news websites (news portals) where they deliver news information. For example detik.com and okezone.com. A news portal is a website that conveys material in the form of current events in society and is designed to appeal to the preferences of its users [1].

Users are willing to extend the duration of their stay on a website, according to [5]. The findings also reveal that everything new has an impact on consumers' desire to buy something [6]. Consumer behavior is the result of not fulfilling one's needs and desires, which causes tension and tension to become variables that direct people to act in order to achieve their goals. Tension will be reduced if the goal is achieved [7]. According to research conducted by Guo and Zhou (2018), all consumer behavior is goal-oriented; however, learning and cognitive processes will change consumer behavior [8].

Customer loyalty can be better understood if the factors that influence customer loyalty in the context under study are identified, and the context studied in this study is mobile e-commerce applications. Service quality, customer satisfaction, and brand trust are all factors that can predict consumer loyalty. Several studies have shown the relationship between service quality, satisfaction, trust, and client loyalty. Trust is built on a foundation of satisfaction (total pleasure) [9]. Customer satisfaction has an effect on brand trust, according to research conducted by [10]. Customer satisfaction affects brand trust, according to research conducted by Tahir Islam. While it was found that loyalty is influenced by trust [11]. However, this study has differences with previous studies, namely to determine user satisfaction and loyalty using an analysis of technology acceptance models.

The behavioral element of information technology adoption is very important to mention because the interaction between users and computers is a consequence of the influence of user perceptions, attitudes, and attachments as behavioral factors [12]. That the higher the amount of personalization, computer self-efficacy, and trust, the more users will believe that using information systems is more useful and convenient [13-14].

The purpose of this study is to see how the variables analyzed, such as customer satisfaction, customer loyalty, TAM, and user behavior, interact. The purpose of this study is to see how the model affects user happiness and loyalty in a sports news portal application how the technology acceptance model affects user behavior.

#### 2. Method

#### 2.1 Research Design

This research is included in the category of quantitative descriptive research. According to research procedures are essentially scientific characteristics to obtain data for certain purposes and uses [15].

#### 2.2 Population and Sample

This research is focused on news portal application users. The sampling technique used in this study was random sampling, with a total sample of 100 participants.

#### 2.3 Data Collection Technique

Descriptive research is research that uses observation, interviews, or questionnaires to assess the current status of the problems studied [16]. We collect data through surveys and other means to test

for hypotension or answer questions. The researcher will explain what actually happened about the current state that is being studied through this descriptive research.

#### 2.4 Data Analysis

Partial Least Squares were used to analyze the data in this investigation (PLS). PLS is a Structural Equation Modeling (SEM) equation model that uses a component or variance-based structural equation modeling approach. The purpose of PLS-SEM is to build or build a theory (prediction orientation). PLS is used to determine whether the latent variable has a relationship (prediction). Because it does not assume current data with a certain measurement scale and a small number of samples, PLS is a powerful analytical tool [17].

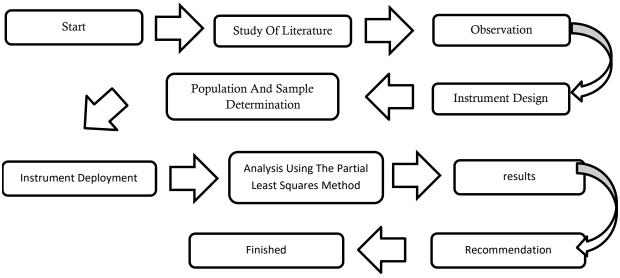


Figure 1. Research Flow

#### 3. Results and Discussion

#### 3.1 Perceived Ease of Use (X1) -> Mobile User Satisfaction (Y1)

Testing the hypothesis of perceived ease of use on mobile phone users' happiness resulted in a score (p = 0.189) with a p value of 0.001 (p 0.05) and a t statistic of 3.342 (p > 1.96) which indicates that perceived ease of use has a significant positive effect on the satisfaction of mobile phone users. This shows that the perception of simplicity of use has an impact on consumer happiness with mobile phones. A beautiful website display is one of the perceived enjoyment factors that will positively and greatly increase customer satisfaction in completing a purchase [18]. Site quality and website design offering a wide range of products at different costs can attract customers to visit. Consumer satisfaction can be increased by user enjoyment or pleasure in visiting the website directly [19-20].

#### 3.2 Perceived Usefulness (X2) -> Mobile User Satisfaction (Y1)

Testing the hypothesis of perceived usefulness on mobile phone users' happiness resulted in a score (p = 0.137) with a p value of 0.002 (p 0.05) and a t statistic of 3.093 (p > 1.96) indicating a substantial positive effect between the variables perceived usefulness on mobile phone user satisfaction. This means that the more utility perceived, the higher the client satisfaction with their mobile device. The findings of this study are in line with previous research Singh and Sinha (2020) found that the research findings, namely perceived usefulness, had a significant effect on customer satisfaction [21].

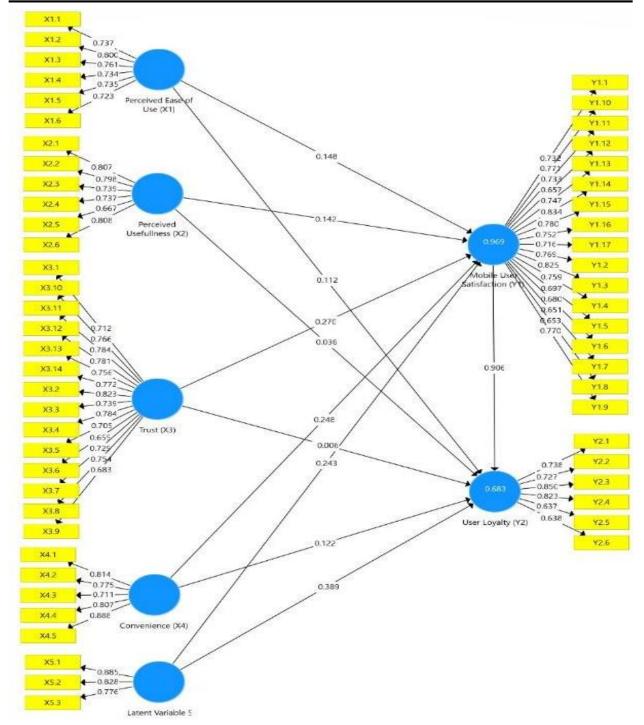


Figure 2. Dimension Table of Mobile User Satisfaction Indicators

Table 1. Hypothesis Test						
	Original	inal T Statistics				
	Sample (O)	( O/STDEV )	Values			
Convenience (X4) -> Mobile User	0.222	4.851	0.000			
Satisfaction (Y1)						
Convenience (X4) -> User Loyalty (Y2)	0.288	2.836	0.005			
Latent Variable 5 -> Mobile User	0.229	6,324	0.000			
Satisfaction (Y1)						
Latent Variable 5 -> User Loyalty (Y2)	0.287	3.374	0.001			
Mobile User Satisfaction (Y1) -> User	1.521	7.081	0.000			
Loyalty (Y2)						
Perceived Ease of Use (X1) -> Mobile User	0.189	3.342	0.001			
Satisfaction (Y1)						
Perceived Ease of Use (X1) -> User Loyalty	0.019	0.159	0.874			
(Y2)						
Perceived Usefulness (X2) -> Mobile User	0.137	3.093	0.002			
Satisfaction (Y1)						
Perceived Usefulness (X2) -> User Loyalty	0.206	2.150	0.032			
(Y2)						
Trust (X3) -> Mobile User Satisfaction (Y1)	0.277	5,820	0.000			
Trust (X3) -> User Loyalty (Y2)	0.260	2,563	0.011			

### 3.3 Trust (X3) -> Mobile User Satisfaction (Y1)

The results of testing the trust hypothesis on the happiness of mobile phone users resulted in a score (p = 0.277) with a p value of 0.000 (p 0.05) and a t statistic of 5.820 (p> 1.96) indicating that the trust variable has a significant positive effect. on mobile user satisfaction. The greater the trust in the sports news mobile application, the higher the satisfaction of mobile users. Positive word of mouth, advertisements, and other forms of communication can help a person gain trust in a company. This will have a good impact on his opinion of the company [22-23]. As a result, having trust in the company will result in a positive attitude and increased satisfaction. In the service industry, Trust is very important, especially when technology is mostly used to engage with clients. Trust and customer satisfaction have a substantial positive relationship [24].

#### 3.4 Convenience (X4) -> Mobile User Satisfaction (Y1)

The results of testing the convenience hypothesis on the happiness of mobile phone users resulted in a score (p = 0.222) with a p value of 0.000 (p 0.05) and a t statistic of 4.851 (p > 1.96) indicating that the convenience factor had a significant positive effect. on mobile user satisfaction. The more convenient the sports news portal application, the more satisfied mobile users will be. Consumer perception of comfort is a significant factor. Because consumers are hesitant to use a service they believe will require a lot of their time and effort [25]. Consumers are looking for convenient and efficient services. From the description above, it can be concluded that convenience is a measure of how much time and effort users have to spend to use a service.

# 3.5 Security-> Mobile User Satisfaction (Y1)

The findings of the evaluation of the security hypothesis on mobile phone user satisfaction resulted in a score (p = 0.229) with a p value of 0.000 (p0.05) and a t statistic of 6.324 (p > 1.96) which indicated that the security factor had a substantial positive effect on mobile phone user satisfaction. The higher the security of the news portal application, the higher the customer's happiness with their mobile

device. Security and privacy are elements that organizations must pay attention to because they are very vital for consumers [26]. This is so that by protecting customer security and privacy, consumers will feel safe and protected when using Mandiri Mobile services. As a result, users will continue to use independent mobile banking services because they trust the services provided. In service, there is trust.

# 3.6 Perceived Ease of Use (X1) -> User Loyalty (Y2)

The results of the evaluation of the hypothesis of perceived ease of use on user loyalty obtained a score (p = 0.019), with a p value of 0.874 (p 0.05) and a t statistic of 0.159 (p > 1.96) indicating no significant positive effect. Influence between variables perceived ease of use and user loyalty. This indicates that an increase in perceived ease of use has no impact on user commitment to the sports news portal application. This study contradicts the findings of a 2020 study Sarkar and Chauhan, which found a substantial positive relationship between perceived ease of use and customer loyalty in Ghanaian banking [27].

# 3.7 Perceived Usefulness (X2) -> User Loyalty (Y2)

The results of testing the perceived usefulness hypothesis on user loyalty get a score (p = 0.206) with p values of 0.032 (p < 0.05) and a t statistic of 2.150 (p > 1.96) indicating that there is a significant positive effect between perceived usefulness variables on user loyalty. The better the perceived usefulness of the news portal application, this will have an impact on the loyalty of application users. Perceived usefulness serves as a determinant that has a strong influence on the formation of user satisfaction regarding mobile application services and user loyalty which is felt to be in accordance with the user's personality. This finding empirically proves the importance of perceived usefulness that is felt by a person showing that mobile phone application users can feel how useful and in accordance with the characteristics of the mobile application service they like on several aspects of perception that are formed. Perceived usefulness is one of the keys to forming satisfaction and loyalty [28].

# 3.8 Trust (X3) -> User Loyalty (Y2)

The results of testing the trust hypothesis on user loyalty get a score (p = 0.260) with p values of 0.011 (p < 0.05) and a t statistic of 2.563 (p > 1.96) indicating that there is a significant positive effect between the trust variables on user loyalty. The better consumer confidence in the news portal application, the better the loyalty given by customers. If the user trusts the service he uses, the user will have a strong intention to continue using the service [29].

# 3.9 Convenience (X4) -> User Loyalty (Y2)

The findings of testing the convenience hypothesis on user loyalty resulted in a score (p = 0.288) with a p value of 0.005 (p 0.05) and a t statistic of 2.836 (p > 1.96) indicating that the convenience factor has a substantial positive effect on user loyalty. Customer loyalty will be higher if the news portal application is more convenient. According to previous research Jenneboer and Herrando (2022), service convenience has a good and quite large impact on customer loyalty [30]. Customers believe that news portal applications should provide good convenience to their customers by providing convenient services. So that the customer's decision to be loyal is influenced by the convenience of service.

# 3.10 Security -> User Loyalty (Y2)

The results of the evaluation of the security hypothesis on user loyalty produced a score (p = 0.287) with a p value of 0.001 (p 0.05) and a t statistic of 3.374 (p > 1.96) which indicates that the security factor has a substantial positive effect on user loyalty. User loyalty will increase along with the increased security provided by the news portal application. The news portal application will maintain the confidentiality of users' personal data, maintain data security when using, and not sell users'

personal information to third parties, encouraging users' trust in internet banking. As a result, user loyalty to the application will develop [31].

#### 3.11 Mobile User Satisfaction (Y1) -> User Loyalty (Y2)

The results of testing the hypothesis of mobile user satisfaction on user loyalty get a score (p = 1.521) with p values of 0.000 (p < 0.05) and t statistics of 7.081 (p > 1.96) indicating that there is a significant positive effect between the variable mobile user satisfaction on user loyalty. The better the customer's mobile user satisfaction, it will also increase customer loyalty. If the customer is satisfied, the customer will recommend this news portal application to friends or relatives, this is part of customer loyalty and a form of customer satisfaction [32].

#### 3.12 R-Square

The R-Square method is used to determine how much the endogenous variable is influenced by other variables. The R-Aquare value is calculated based on data analysis carried out with the smartPLS application, as shown in the table below

Table 2. Results of R-Square Analysis				
	R Square	R Square Adjusted		
Mobile User Satisfaction (Y1)		0.969	0.968	
User Loyalty (Y2)		0.683	0.662	

The score in the table shows that Perceived Ease of Use, Perceived Usefulness, Trust, Convenience, and Security affect mobile phone user satisfaction by 96.9%, while the rest is influenced by other variables not explored in this study. Perceived Ease of Use, Perceived Usefulness, Trust, Convenience, and Security affect user loyalty by 68.3 percent, while the rest is influenced by other variables not explored in this study.

# 4. Conclusion

This conclusion is drawn based on the variables analyzed, such as customer satisfaction, customer loyalty, and user behavior. This research is focused on news portal application users, where the sampling technique used is random sampling, with a total sample of 100 participants. This research uses PLS data analysis technique with SEM approach model. Based on the results of the research above, it can be concluded that perceived ease of use, perceived usefulness, convenience, and security affect mobile user satisfaction. The user loyalty attribute is influenced by perceived usefulness, trust, convenience, and security, but not for perceived ease of use.

#### References

- [1] Taherdoost, H. (2018). Development of an adoption model to assess user acceptance of e-service technology: E-Service Technology Acceptance Model. *Behaviour & Information Technology*, *37*(2), 173-197.
- [2] Sandhu, K. (2008). *E-services acceptance model (e-sam)* (pp. 224-229). Springer Netherlands.
- [3] Mouhcine, H. B. (2021). *The Role of User Satisfaction in Continuance Intention to Use Chatbots within the Technology Acceptance Model (TAM)* (Master's thesis, Marmara Universitesi (Turkey)).
- [4] Rafique, H., Almagrabi, A. O., Shamim, A., Anwar, F., & Bashir, A. K. (2020). Investigating the acceptance of mobile library applications with an extended technology acceptance model (TAM). *Computers & Education*, *145*, 103732.

- [5] Hacker, J., Vom Brocke, J., Handali, J., Otto, M., & Schneider, J. (2020). Virtually in this together–how web-conferencing systems enabled a new virtual togetherness during the COVID-19 crisis. *European Journal of Information Systems*, *29*(5), 563-584.
- [6] de Freitas Netto, S. V., Sobral, M. F. F., Ribeiro, A. R. B., & Soares, G. R. D. L. (2020). Concepts and forms of greenwashing: A systematic review. *Environmental Sciences Europe*, *32*, 1-12.
- [7] Cocchiara, R. A., Peruzzo, M., Mannocci, A., Ottolenghi, L., Villari, P., Polimeni, A., ... & La Torre, G. (2019). The use of yoga to manage stress and burnout in healthcare workers: a systematic review. *Journal of clinical medicine*, *8*(3), 284.
- [8] Guo, Z., Zhou, K., Zhang, C., Lu, X., Chen, W., & Yang, S. (2018). Residential electricity consumption behavior: Influencing factors, related theories and intervention strategies. *Renewable and Sustainable Energy Reviews*, *81*, 399-412.
- [9] Chen, C. C., Hsiao, K. L., & Li, W. C. (2020). Exploring the determinants of usage continuance willingness for location-based apps: A case study of bicycle-based exercise apps. *Journal of Retailing and Consumer Services*, 55, 102097.
- [10] Zijian, D. (2020). *The Factors of Experiential Value and Technology Acceptance Effects on Customer Satisfaction on Online Fitness Apps Users' Continuance Intention to Use in Guangxi, China* (Doctoral dissertation, University of the Thai Chamber of Commerce (UTCC)).
- [11] Islam, T., Islam, R., Pitafi, A. H., Xiaobei, L., Rehmani, M., Irfan, M., & Mubarak, M. S. (2021). The impact of corporate social responsibility on customer loyalty: The mediating role of corporate reputation, customer satisfaction, and trust. *Sustainable Production and Consumption*, 25, 123-135.
- [12] Kim, J., Chang, Y., Chong, A. Y. L., & Park, M. C. (2019). Do perceived use contexts influence usage behavior? An instrument development of perceived use context. *Information & Management*, 56(7), 103155.
- [13] Kim, M. S., & Kim, S. (2018). Factors influencing willingness to provide personal information for personalized recommendations. *Computers in Human Behavior*, *88*, 143-152.
- [14] Jomnonkwao, S., Wisutwattanasak, P., & Ratanavaraha, V. (2021). Factors influencing willingness to pay for accident risk reduction among personal car drivers in Thailand. *PLoS one*, 16(11), e0260666.
- [15] Nardi, P. M. (2018). Doing survey research: A guide to quantitative methods. Routledge.
- [16] Leavy, P. (2022). *Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches.* Guilford Publications.
- [17] Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook* (p. 197). Springer Nature.
- [18] Duarte, P., e Silva, S. C., & Ferreira, M. B. (2018). How convenient is it? Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM. *Journal of Retailing and Consumer Services*, 44, 161-169.
- [19] Kumar, V., & Ayodeji, O. G. (2021). E-retail factors for customer activation and retention: An empirical study from Indian e-commerce customers. *Journal of Retailing and Consumer Services*, 59, 102399.
- [20] Xu, X., Munson, C. L., & Zeng, S. (2017). The impact of e-service offerings on the demand of online customers. *International Journal of Production Economics*, 184, 231-244.
- [21] Singh, N., & Sinha, N. (2020). How perceived trust mediates merchant's intention to use a mobile wallet technology. *Journal of retailing and consumer services*, *52*, 101894.
- [22] Gildin, S. Z. (2022). Understanding the power of word-of-mouth. *RAM. Revista de Administração Mackenzie*, *4*, 92-106.

- [23] Chu, S. C., & Kim, J. (2020). The current state of knowledge on electronic word-of-mouth in advertising research. *Electronic Word of Mouth as a Promotional Technique*, 1-13.
- [24] Uzir, M. U. H., Al Halbusi, H., Thurasamy, R., Hock, R. L. T., Aljaberi, M. A., Hasan, N., & Hamid, M. (2021). The effects of service quality, perceived value and trust in home delivery service personnel on customer satisfaction: Evidence from a developing country. *Journal of Retailing and Consumer Services*, 63, 102721.
- [25] Song, M., Xing, X., Duan, Y., Cohen, J., & Mou, J. (2022). Will artificial intelligence replace human customer service? The impact of communication quality and privacy risks on adoption intention. *Journal of Retailing and Consumer Services*, *66*, 102900.
- [26] Santos, V., Ramos, P., Sousa, B., Almeida, N., & Valeri, M. (2022). Factors influencing touristic consumer behaviour. *Journal of Organizational Change Management*, *35*(3), 409-429.
- [27] Sarkar, S., Chauhan, S., & Khare, A. (2020). A meta-analysis of antecedents and consequences of trust in mobile commerce. *International Journal of Information Management*, *50*, 286-301.
- [28] Wilson, N., Alvita, M., & Wibisono, J. (2021). The effect of perceived ease of use and perceived security toward satisfaction and repurchase intention. *Jurnal Muara Ilmu Ekonomi dan Bisnis*, *5*(1), 145-159.
- [29] Gildin, S. Z. (2022). Understanding the power of word-of-mouth. *RAM. Revista de Administração Mackenzie*, *4*, 92-106.
- [30] Jenneboer, L., Herrando, C., & Constantinides, E. (2022). The impact of chatbots on customer loyalty: A systematic literature review. *Journal of theoretical and applied electronic commerce research*, *17*(1), 212-229.
- [31] Trager, J., Kalová, L., Pagany, R., & Dorner, W. (2021). Warning apps for road safety: A technological and economical perspective for autonomous driving-the warning task in the transition from human driver to automated driving. *International Journal of Human-Computer Interaction*, *37*(4), 363-377.
- [32] Ali, F., Kim, W. G., Li, J., & Jeon, H. M. (2018). Make it delightful: Customers' experience, satisfaction and loyalty in Malaysian theme parks. *Journal of destination marketing & management*, 7, 1-11.