Technology Acceptance Model (TAM): An Analysis on User of Digital Statistic Platform (Lapangbola.com)

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ABSTRACT

Lapangbola is a start-up application that provides tournament management, including live core, team, and player statistics, for early childhood, amateur, and professional soccer. The Lapangbola application is influenced by several factors to produce accurate statistics and follow user needs. Currently, Lapangbola has a low number of application users, which is 60 people in 2 years. This is the main focus faced by Lapangbola because the small number of users will hinder the process of developing the Lapangbola application. To increase the number of users, Lapangbola needs to improve the ease and convenience of using the application; thus, it is necessary to make in-depth measurements of what factors influence the decision to use the application for Lapangbola users. The research method used was explanatory, with a total of 60 respondents using Lapangbola. Technical data analysis used the technology acceptance model (TAM). The results show that adjusted R squares 0.294 or 29% T value of Perceived ease of use on the attitude of 5.570, Perceived ease of use on Perceived ease of use has a value of 16.613, Attitude Intention to use has a value of 7.014. Therefore, these results indicate that the value of T is greater than the significance level of 5%, and it can be concluded that Perceived usefulness, Perceived ease of use, Attitude factor affect Intention to use in the Lapangbola Digital Statistics Application.

Keywords: Consumer Behavior, Technology Acceptance Model, Marketing, Digital Marketing, Social Media, Technopreneur.

1. INTRODUCTION

Lapangbola is a start-up application that provides tournament management, including livescore, team, and player statistics for early childhood, amateur, and professional soccer. Currently, Lapangbola has a low number of application users, which is 60 people in 2 years. This is the main focus faced by Lapangbola because the small number of users will hinder the process of developing the Lapangbola application.

Currently, Lapangbola has been focused on being the best digital statistics application in Indonesia. To achieve this desire, Lapangbola needs to identify what factors can influence users in using the Lapangbola application so that Lapangbola can find out these factors and improve application performance and get more users and the best digital statistics application in Indonesia.

This study needs to determine the factors affecting user acceptance in digital statistics on the Lapangbola application. The concept of this research uses the technology acceptance model (TAM). This model states that users will be more likely to use the system if it is easy to use and valuable [1].

1.1. Literature Review

Juliet Bugembe's Technology Acceptance Model (TAM) is an information system model that shows how users accept and use technology [2]. This model shows that when users are presented with new technology, several factors influence their decisions about how and

when they will use it, especially on Perceived Usefulness and Perceived Ease of Use, as well as their attitudes towards the use of the new information system. Based on the explanation above, it is necessary to determine the users' behavior in using Lapangbola's statistical features by utilizing the Technology Acceptance Model (TAM) theory.

There are four operational variables in this study, which are Perceived Usefulness, Perceived Ease of Use, Attitude, and Intention to Use using Partial Least Square) PLS [3].

2. METHODS

This study uses four variables from the TAM model: Perceived Usefulness, Perceived Ease of Use, Attitude, and Intention to Use [4], [5]. The framework of this research can be depicted in Figure 1.

Figure 1. The hypothesis of the technology acceptance model in the Lapangbola application

Based on the literature review, the hypotheses in this study are as follows:

1. H1: There is a significant effect of perceived usefulness on perceived ease of use in the Lapangbola digital statistics application.

2. H2: There is a significant effect of Perceived ease of use on attitude in the Lapangbola digital statistics application.

3. H3: There is a significant effect of Attitude on Intention to use in the Lapangbola digital statistics application.

The research method used is the descriptive exploratory method, which, in this study, analyzes the relationship between one variable and another, or where a variable can explain the relationship, test hypotheses, and make predictions.

The sampling technique in this study used quota sampling for users of the Lapangbola application, using as many as 60 respondents as users of the Lapangbola application.

The data processing application in this study uses SmartPLS. The data processing results then analyzed the relationship between the hypothesized variables, whether significant and accepted or rejected. Processing the data obtained using Partial Least Squares (PLS) is carried out to provide predictive measurements with non-parametric properties through convergent validity, where individual

reflective measures are correlated with loading values > 0.50.

3. RESULTS AND DISCUSSION

3.1. SmartPLS 3 Output Results

1. Based on data processing using SmartPLS software, a model like the one in Figure 2 is obtained, and the value is > 0.50, which means that all have a significant effect.
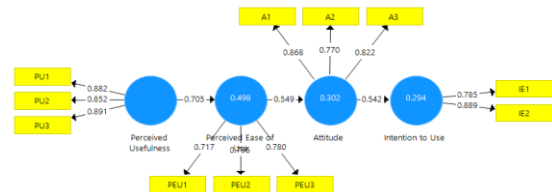
Figure 2. SmartPLS Data Processing

2. In the Discriminant Validity calculation results, the Fornell-Lacker results are obtained, which can be seen in Table 1.

Table 1. Discriminant Validity

	Attitude	Intention to Use	Perceived Ease of Use	Perceived Usefulness
Attitude	0.821			
Intention to Use	0.542	0.839		
Perceived Ease of Use	0.549	0.598	0.765	
Perceived Usefulness	0.550	0.558	0.705	0.875

3. From the Average Variance Extracted (AVE) value from Table 2, it can be seen that a value of more than 0.05 or 5% is obtained, which means that all the data used are valid and can be used as research data.

Table 2. Average Variance Extracted (AVE)

	Composite reliability	Average Variance Extracted (AVE)
Attitude	0.861	0.674
Intention to Use	0.825	0.704
Perceived Ease of Use	0.809	0.586
Perceived Usefulness	0.907	0.766

4. The P-value / Path Coefficient shows the number 0.000 or less than 0.05 or 5%, which means that all the variables used have a significant effect on the use of the Lapangbola digital statistics application.

Tabel 3. Path Analysis

	T Statistic (| O/STDEV |)	P Values
Attitude -> Intention to Use	7.014	0.000
Perceived Ease of Use -> Attitude	5.570	0.000
Perceived usefulness -> Perceived Ease of Use	16.613	0.000

4. CONCLUSIONS

Based on the calculations and data processing using the SmartPLS software above, it can be concluded that:

1. Perceived Usefulness on Perceived ease of use has a significant result of 0.705, so the Perceived Usefulness factor significantly affects Perceived ease of use in the Lapangbola digital statistical application.

2. The effect of Perceived ease of use on attitude shows a significant result of 0.549, so the Perceived ease of use factor significantly affects attitude in the Lapangbola digital statistical application.

3. The Effect of Attitude on Intention to use has a significant result that is equal to 0.542, so the Attitude factor has a significant effect on Intention to use in the Lapangbola digital statistics application.

The results showed no insignificant factors, while the other variables had significant results for users of the Lapangbola digital statistics application. However, overall, the test results produced by adjusted R squares are 0.294 or 29% with a T value of Perceived ease of use on the attitude of 5.570, Perceived ease of use on Perceived ease of use has a value of 16.613, Attitude Intention to use has a value of 7.014. Therefore, these results indicate that the T value is greater than the 5% significance level, and it can be concluded that Perceived usefulness, Perceived ease of use, Attitude factor affect Intention to use in the Lapangbola Digital Statistics Application.

REFERENCES

[1] C. C. Chang, C. F. Yan, and J. S. Tseng, "Perceived convenience in an extended technology acceptance model: Mobile technology and English learning for college students," *Australas. J. Educ. Technol.*, vol. 28, no. 5, pp. 809–826, Jul. 2012, doi: 10.14742/AJET.818.

[2] J. Bugembe, "Perceived usefulness, perceived ease of use, attitudeand actual usage of a new financial management system:a case study of uganda national examinations board," Makerere University, 2010.

[3] W. W. Chin and G. Marcoulides, "The Partial Least Squares Approach to Structural Equation Modeling," *Adv. Hosp. Leis.*, vol. 8, no. 2, 1998, Accessed: May 31, 2022. [Online]. Available: https://www.researchgate.net/publication/3117660 05_The_Partial_Least_Squares_Approach_to_Stru ctural_Equation_Modeling.

[4] P. Pavlou, "Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model ," *Int. J. Electron. Commer.*, vol. 7, no. 3, pp. 101–134, 2003, Accessed: May 31, 2022. [Online]. Available: https://www.researchgate.net/publication/2347754 93_Consumer_Acceptance_of_Electronic_Comme rce_Integrating_Trust_and_Risk_with_the_Techno logy_Acceptance_Model.

[5] N. Fiyah, N. A. Mayangky, S. Hadianti, and D. Riana, "analisis technology acceptance model pada aplikasi platform perdagangan elektronik di kalangan mahasiswa," *J. Tek. Inform.*, vol. 12, no. 1, pp. 59–68, Jun. 2019, doi: 10.15408/JTI.V12I1.10507.