

Combining TAM-IS Success Model to Identify Key Factors Affecting Wimaya E-Learning: Menggabungkan Model Kesuksesan TAM-IS untuk Mengidentifikasi Faktor-Faktor Kunci yang Mempengaruhi E-Learning Wimaya

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General Background: E-learning has rapidly expanded worldwide due to the widespread accessibility of the Internet and the increasing availability of digital devices. As a web-based learning ecosystem, e-learning integrates multiple stakeholders, technologies, and processes to facilitate knowledge acquisition. **Specific Background:** Universities have increasingly adopted e-learning platforms to enhance learning experiences. However, the success of these implementations varies, necessitating a deeper understanding of the factors influencing their effectiveness. **Knowledge Gap:** While previous studies have explored the technical and pedagogical aspects of e-learning, limited research has examined the indirect effects of information and system quality on user behavior within university settings. **Aims:** This study aims to evaluate the success factors of the Spada Wimaya e-learning system in a university setting by assessing the relationships between system quality, information quality, perceived usefulness, perceived ease of use, behavioral intention, and actual system use. **Results:** The findings reveal that information and system quality indirectly influence behavioral intention and actual use through perceived usefulness and perceived ease of use. These results highlight the importance of user perceptions in determining the adoption and sustained utilization of e-learning platforms. **Novelty:** By adapting the research model from Presetyo et al. (2021), this study provides empirical evidence on the indirect mechanisms through which system and information quality affect user engagement in e-learning. **Implications:** The insights gained from this research can guide improvements in the Spada Wimaya e-learning system and serve as a reference for other universities aiming to enhance their digital learning environments.

Highlights:

- User Perception Matters - System and information quality impact usage through perceived usefulness and ease of use.
- Indirect Influence - Quality factors do not directly affect behavior but work through user perceptions.
- Scalability - The model can be applied to improve e-learning systems in other universities.

Keywords: E-Learning, Information System Model, Success Factors

Introduction

A web-based learning ecosystem called e-learning brings together many stakeholders, technology, and processes. Learning via e-learning approaches has spread quickly throughout the world as a result of the popularization and extension of access to the World Wide Web and greater availability of devices to access the Internet, such as smartphones, laptops, tablets, and PCs [1]

In order to increase the effectiveness of these systems, many researchers have worked to find e-learning success criteria. As a result, the quality of e-learning systems has attracted a lot of research interest (Ibrahim Youssef Alyoussef, 2023; Dimah Al-Fraihat*, Mike Joy, Ra'ed Masa'deh, Jane Sinclair, 2020; Wilmar Audye Cidrala,b,d , Tiago Oliveirab , Massimo Di Felicea , Manuela Apariciob,c,*, 2018; Duha Awad H. Elneel et al 2023; Liangfeng Qian, Shengli Deng, 2021; Amer Mutrik Sayaf, 2023; Ling-Ling Ung a,* , Jane Labadin b , Fitri Suraya Mohamad, 2022)

Since the demand for e-learning has increased, the education sector has been encouraged by the Internet's and technology's rapid development to adopt Internet-based learning materials from primary to higher education. In this context, the term "e-learning" refers to a concept in education that uses digital devices and technology to disseminate educational content and encourage distant learning [2]

The purpose of this study is to identify the variables that affect the extent to which the present Wimaya e-learning platform is received. To determine the causes and effects between the identified elements, the Extended Technology Acceptance Model (ETAM) and IS Success Model were combined. This study provides an understanding of the elements that affect the Spada Wimaya platform's loyalty at UPN Veteran Yogyakarta. A summary of the Spada Wimaya usage experience and recommendations for future enhancements can be provided based on the study's findings [3].

Literature Review and Hypothesis Development

Theory of Planned Behavior (TPB) is the theory underlying the Technology Acceptance Model (TAM) which aims to determine people's behavioral intentions to accept and use certain technologies determined by two constructs, namely ease of use and perceived benefits [4]

The quality of the Spada Wimaya platform influences the user experience. A key and important factor in determining the performance of information in an e-Learning environment is that the quality of Spada Wimaya's information is robust in the face of challenges. Learning objectives are strongly influenced by information, by looking at the relationship between information quality and perceived benefits. From this it can be concluded that in the Spada Wimaya user environment, the quality of information is essential to contribute to the perceived ease of use. Thus, we hypothesize that: [5]

H1: System quality has a significant direct influence on the perceived ease of use of Spada Wimaya.

Spada Wimaya platform being an interactive and useful platform for various people is the most powerful feature of other e-Learning platforms which also affects the consistency of users to keep using Spada Wimaya platform. Interesting and authentic features will increase the attractiveness of users to continue using the existing features intensively. Therefore, we hypothesize:

H2: Information quality has a significant direct influence on perceived usefulness.

Then, technology acceptance from this user aims to combine perceived ease and perceived usefulness. Perceived ease for users is when someone uses Spada Wimaya without burdensome effort. It also describes a person's behavior towards their interactions, which will serve as a

medium for actual system use. The experience of using Spada Wimaya for individuals will lead to behavioral intentions as a result of what the individual does [6].

H3: User interaction has a significant direct influence on perceived ease of use.

Perceived ease of use is defined as "the extent to which a person believes that using a particular system will be easy" [7], this reflects that effort is a limited resource for people who will allocate it to various activities. What matters most to users is how much effort they put into using the system. Usability is a concept that has received attention in terms of user satisfaction of information systems, e-commerce, and e-learning. All things being equal, easy-to-use systems increase intention to use, whereas harder-to-use systems do not [8]. Given the obvious argument that individual effort is a scarce resource, each individual must be prepared to allocate more opportunities than they are capable of. Thus, a system that requires less effort is considered better than a system that requires greater effort [9].

H4: Perceived ease of use significantly influences the perceived usefulness of the Spada Wimaya platform.

Today's technology has a very wide range of uses. This model introduces the concepts of perceived usefulness (PU) and perceived ease of use (PEU) to measure users' intention to use technology. According to Zheng and Li, TAM shows that these two variables (PU and PEU) influence students' attitudes toward using new applications, systems, or technologies. Therefore, students' attitudes affect their usage intentions. According to Mohammadi (2015), perceived usefulness is described as an important element of intention, as it convinces users to adopt more advanced and user-friendly technologies. Therefore, the greater the benefits the Spada Wimaya platform receives, the more effective the intention to use it will be [10].

H5: Perceived ease of use has a significant direct influence on user behavioral intention

Attitude Toward Using in TAM is conceptualized as an attitude towards using a system in the form of acceptance or rejection when someone uses technology in their work [11]. The attitude factor is one of the aspects that influence individual behavior. A person's attitude consists of cognitive, affective, and behavioral components. If students have accepted the Spada Wimaya system first, especially understanding the usefulness of this system, students will find it easy to use this system.

H6: Perceived usefulness has a significant direct influence on user behavior intention.

User behavior intention is defined as a motivational factor that influences a person to do or not do a behavior in the future. Furthermore, according to Botero et al, behavioral intention has a positive effect on actual use. This relationship has been proven in research on technology in education. Someone will be satisfied using the system if he feels that the system is easy to use and will increase his productivity, which is reflected in the actual use conditions [12].

H7: Behavioral intention has a significant direct effect on actual use.

Methods

Surveys were used to collect the data. The questionnaire has gone through a pre-test process before being tested on the research subject to ensure that the questions can be understood by undergraduate students in accounting programs. Data collection uses an online form that has been designed according to research needs. Participants took approximately 15 minutes to fill in. The number of respondents in this study was 200 accounting students. These accounting students are active students with a minimum use of spada wimaya for more than 1 year. Participants answered 7 Likert scales, 1- strongly disagree to 7 points strongly agree. The questionnaire consists of demographic respondents and sections that contain the items of the question under study [13].

Result and Discussion

Figure 1.

H1 was accepted, namely the e-learning system is easy to use. Teaching and learning materials such as the use of multimedia will provide benefits in the learning process [14]. P-Values worth 0.000 indicate that the first hypothesis of system quality on ease of use is accepted.

H2 was accepted. The results showed a p value of 0.000 means that information quality has a significant direct influence on perceived usefulness.

H3 was accepted, with a P-Values value of 0.000, which shows a calendar feature that is easily connected to google calendar which can make it easier to create a learning time line.

H4 was accepted, hypothesis four shows that there is the use of 2 languages that help adjust learning, shown by P-Values of 0.000.

H5 was accepted, the P-Values value is 0.001 which means the fifth hypothesis provides users to build their own schedule.

H6 was rejected, because the results showed a P-Values value of 0.134, the satisfaction of using the system was not based on users who felt that the system was easy to use and would increase their productivity.

H7 was accepted, the seventh hypothesis shows that Spada provides accurate information updates from lecturers which can also be seen in the P-Values value, namely, 0.000

Figure 2.

There are some advantages of spada wimaya: (1) Easy to access, easy to understand, practical and efficient, (2) The appearance is simple, attractive, very friendly and clean, (3) There is a calendar that can be connected to google calendar, (4) Can be accessed in 2 languages, (5) Can create a study plan, (6) The division of each course is very neat, structured and organized, (7) Provides accurate information updates from lecturers, (8) Can see a list of classmates [15].

There are some disadvantages of spada wimaya: (1) There is no notification feature about classes, attendance schedules, assignments, and deadlines for submitting assignments in Spada Wimaya.

(2) There is no dark mode so students' eyes are easily tired when looking at a white laptop screen, (3) The file size limit that can be uploaded is only 2 MB.

Conclusion

The powerful features of an e-learning systems help students and lecture untuk berinteraksi dalam proses pembelajaran. The user interface is where a person controls a technology or system. Selain fitur, reduction of the waiting and response time juga menjadi bagian penting dalam user interface.

The existence of spada wimaya is still needed for the future even though it is not a pandemic era

but improvements and development of systems and features are needed so that they remain relevant to continue to be used in the future.

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