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Determining the Factor Influence Users' Satisfaction on the UnityHub Web-Based Systems Using Regression Analysis

Norazah Umar[1], Rozita Kadar[2], Nurhafizah Ahmad[3] and, Jamal Othman[4], Nursakirah Ab Rahman Muton[5]

[1,2,3,4]Jabatan Sains Komputer & Matematik (JSKM), Universiti Teknologi MARA Cawangan Pulau Pinang, Malaysia, [5]Pusat Pengajian Sains Komputer, Universiti Sains Malaysia, Pulau Pinang, Malaysia

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Abstract

The COVID-19 pandemic has changed the global landscape including in the higher education institutions. The pandemic disease caused the Ministry of Education (MoE) Malaysia to enforce all universities and colleges to hold the face-to-face classes. The new norms have shifted the way classes are conducted. With the combination of hybrid and face-to-face class, it allows students to adapt new methods of learning approaches while maintaining communication with their lecturers. The challenge is to identify the best approach to gather students and lecturers on a single platform so that effective communication can be optimised with continuous sharing of information and further actions. The main objective of this study is to effectively bring students and lecturers together on a single platform so that they can engage in virtual synchronous interaction while developing robust teaching in an efficient teaching and learning process. Therefore, this study proposed an effective approach with the aim of gathering students and lecturers at one communication platform. A web-based system called UnityHub was developed to overcome the communication breakdown between lecturers and students. UnityHub web-based system contains the list of subjects as well as the respective lecturers who teach the subjects based on the group formation by Academic Affairs Division, starting from the Pre-Diploma, Diploma, Bachelor until Master levels. This platform is accessible by all students and lecturers anywhere and anytime through their mobile communication technology devices. The survey was conducted among Universiti Teknologi MARA Penang branch students to determine their satisfaction with the system. The results of the correlation analysis revealed a robust and positive association between perceived usefulness (PE) and perceived ease of use (PEOU) in relation to satisfaction in using UnityHub. Meanwhile the findings from the regression analysis provide a significant impact that satisfaction in using UnityHub is influenced by perceived usefulness and perceived ease of use.

Keywords: Web-Based System, Communication Platform, User Satisfaction, Information System, Regression Technique.

Introduction

Communication is important as the foundation of all human interactions, relationships and as a key to building understanding. Communication is an essential activity that allows to share ideas and connect among them. Clear and open communication enables people to express their needs, desires, and helps to avoid misunderstandings. It is the process of transferring information from one person to another and effective communication occurs if the exchange of ideas, thoughts, knowledge and information from the sender in a way that fulfils the purpose and is understood by the recipient.

The education sector needs to be studied, as communication between educators and students can enhance the learning experience and create a positive learning environment. Communication in education is very important, especially communication between lecturers and students. This is because it can improve the positive learning experience among students with effective information sharing methods. Effective communication is a process of exchanging ideas, thoughts, knowledge and information in such a way as to fulfill the purpose or intent in the best possible way.

Online communication refers to the exchange of information, ideas, and messages through electronic channels, such as the internet, social media, email, and instant messaging. One of the primary advantages of online communication is its speed and convenience. With just a few clicks, people can connect with each other from anywhere in the world. Online communication tools like email and instant messaging have become integral to the way people conduct business and stay in touch with friends and family. Social media platforms like Facebook, Twitter, and Instagram have also transformed the way people interact with each other, creating new opportunities for socializing, networking, and activism.

Communicating with students in an online environment requires a little more thought and planning than communicating with students in the traditional environment because the online environment lacks body language. When interacting in an online class, instructors do not have the advantage of using body language to help their students communicate. Knowledge of communication weaknesses within online environments can help them decide how to establish timely and appropriate communications, and how to interact effectively with their online students.

Face-to-face learning classes has changed drastically to online learning during COVID-19 spread around the world and created a pandemic situation and this forced lecturers to keep up with current technology. The same applies to the relationship between teachers and students, which is limited to online platforms only. Teachers strive to create valuable learning experiences for students to help students maintain relationships throughout the course and encourage student engagement in the online classroom. Therefore, the objectives of this study are:

i. To ascertain the correlation between students' satisfaction in utilizing UnityHub to perceived usefulness (PE) and perceived ease of use (PEOU).
ii. To identify the percentage of variability in students' satisfaction in using UnityHub that can be influenced by PE and PEOU

And this study aims to answer the following research questions:
i. What is the correlation between students' satisfaction in utilizing UnityHub and their perceptions of its usefulness (PE) and perceived ease of use (PEOU)?
ii. What percentage of variability in students' satisfaction in using UnityHub can be attributed to perceived usefulness (PE) and (PEOU)?

In the next section, this paper explores past studies discussing the issues related to online communication followed by a section containing a detailed explanation of the web-based system development called UnityHub. Then, the paper presents the research methodology which involves the analysis and result of the study as well as the discussion of the findings. Finally, conclusions are drawn in the final section.

Related Work

The effectiveness or the success of the information system mainly depends on the users' satisfactions (Kalenkash et all, 2020). Although the user's satisfaction is difficult to define but it considered the main indicator of system success. According to the research conducted by Kalenkash and team members, they found that there are seven dimensions that influenced the user satisfaction such as information quality, system quality, vendor support quality, system use, perceived usefulness, user characteristics and organizational structure & management. If all the factors or dimensions are considered, the information systems that have been developed are likely higher user satisfaction. Nevertheless, the information and system quality are the utmost important factors as compared to the other dimensions.

To make sure that the system is successfully developed with higher user satisfaction, the developer must seriously conduct the system analysis & design, system development and adopting the system with proper plan (Aggelidis & Chatzoglou, 2012). The team has discovered that the current study aimed to categorize different dimensions and related factors that have been considered which influencing users' satisfaction in information systems.

According to the research conducted by Buchan et. Al. (2009), the information quality has various attributes that can be considered such as attributes of reliability, relevancy, accuracy, precision, timeliness, currency, format, availability, completeness, sufficiency, volume, objectivity, personalization, consistency, and understandability. The system quality is comprised of the following attributes such as system reliability, system flexibility, system learnability, system integration, system navigation, system response time, system user interface, software adequacy, system security, system privacy, system documentation, system portability, system ease of use, system error delectability, system error recoverability, system appearance and layout, system functionality, and system accessibility (Gemoets and Mahmood, 2009).

The research conducted by Palm et. Al. (2006), on the Clinical Information System (CIS), an electronic survey instrument was designed using theorical model named TAM (Technology Acceptance Model). According to the technology acceptance model (TAM), perceived usefulness and perceived ease of use are two fundamental determinants of user satisfaction and utilization (Davis, 1989). The focus of users' satisfactions dimensions are user characteristics, CIS use, system quality, usefulness, and service quality. The research has shown that the studies should reinforce on integration of other model such as DeLone & McLean and other dimensions to evaluate the system acceptance.

Lee. et al (1996), has found that the overall users' satisfactions are the main indicator for system acceptance. The research conducted by Lee and team members reported ease of use, frequency of use, response times, and individual user characteristics are closed determinants of users' satisfaction. Lagzian et. al (2013) reported that the student shows positive attitude and perception during the early stage of implementation of Digital Library Systems (DLS). However, the research should be conducted on the student's acceptance of DLS after the system has been implemented for a few years. Survey of user acceptance on DLS continuance usage is also needed to measure the relevancy, usability, and stability of the system. The Task-Technology Fit (TTF) was developed as tool to determine whether IS satisfied the users demands and demonstrated positive impact upon effectiveness of IS. Omotayo & Haliru (2020), found that TTF model is useful in predicting the pattern of usage among students for Digital Library System (DLS).

Powers & Dickson (1973) were first measured the managers' satisfaction through the implementation of Management Information Systems (MIS) in the organization. They made an overall judgement and concluded that the users' satisfaction is the major determinant of the successful implementation of MIS in the organization. Noland and Seward (1974) conducted a survey on user's satisfaction by using the Likert scale 1 to 5. Based on the survey, they made a report to conclude the satisfaction level among users towards the system implementation. A questionnaire has been developed by Debons, Ramage & Orien (1978) to measure the user productivity perceptions. The IS attributes in measurement process including timeliness, reliability, assistance, accuracy, access, adequacy, and cost. Neumann and Segev (1980) designed a survey and considered four attributes such as accuracy, recency, content, and frequency. Based on the prior research conducted on IS user's satisfaction, the surveys tended to use a five-point Likert scale.

A study conducted by Liu et al. (2019), on users' satisfaction with mobile applications have found that the ease of use, usefulness, and perceived quality significantly influenced user satisfaction. The study also found that the users have higher intention to continue using the application and recommend others to use the application.

The Technology Acceptance Model (TAM) emerged in 1989 which revolutionizing the understanding of user adoption in technological viewpoint. This prominent model proposed that two key factors determine how users embrace new technology: perceived usefulness (does it make their lives better?) and perceived ease of use (is it intuitive and clear?). TAM has shifted the focus from technology itself to the user's perspective, providing a valuable roadmap for developers and marketers to design systems that resonate and inspire adoption. The TAM model was used as the basis for this study, especially for questionnaire construction.

The Development of UnityHub Web-Based System

This section will discuss about the UnityHub web-based system. The main purpose of this system is to facilitate lecturers the way of gathering students enrolled in distance learning. Thus, this platform can assist students in keeping up with coursework and not left behind while taking online classes. This platform provides a lot of information that students need since at the beginning of the semester. Information in the UnityHub includes a list of subjects registered by students along with class groups based on the latest semester class schedule. It is very easy to use. Students just need to select their subjects and groups followed by clicking the link to join the group selected. The UnityHub can also be accessed via mobile devices.

The development of UnityHub involves three parties, which are academic management including lecturers, students and system development (Figure 1). Initially, the academic management will provide a timetable that will be distributed to lecturers and students. Based on the timetable, the lecturer will register the group in the WhatsApp or Telegram platform to obtain the platform link. For system development, the first step is to provide an online form. Online form (Figure 2) is distributed to lecturers to collect data to be used during the development of UnityHub. The information collected includes the area of subject, subject code, subject name, class group, lecturer's name, communication platform and join group link. After receiving information from the lecturers, the development of UnityHub will be carried out. After the development of UnityHub, this platform link is distributed to students through faculties and official social media. Based on the timetable, students will select the group listed on UnityHub and they only need to click the link provided to join the student class group.

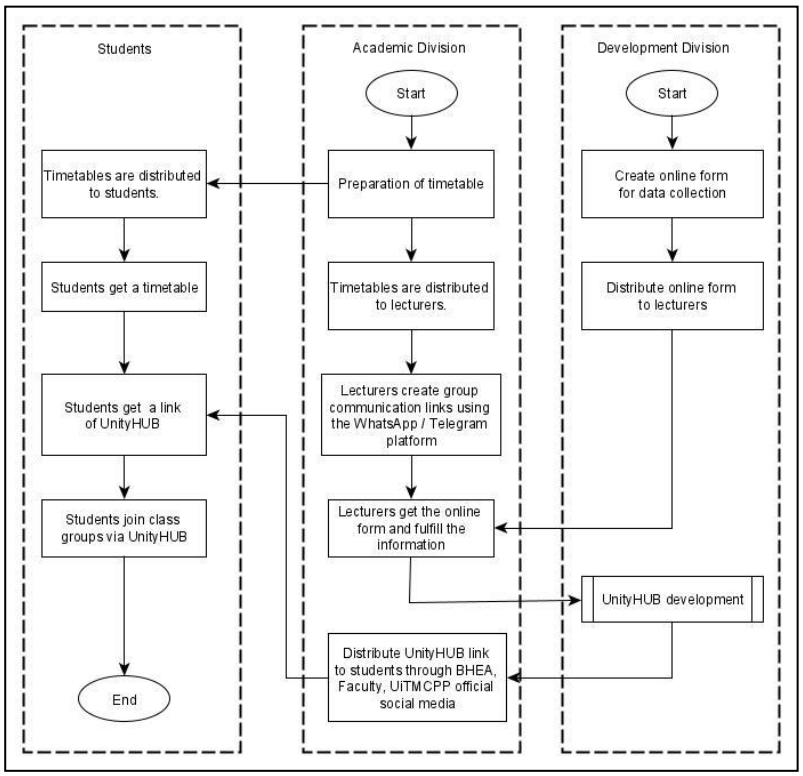

Figure 1 Flowchart Class Group Registration using UnityHub

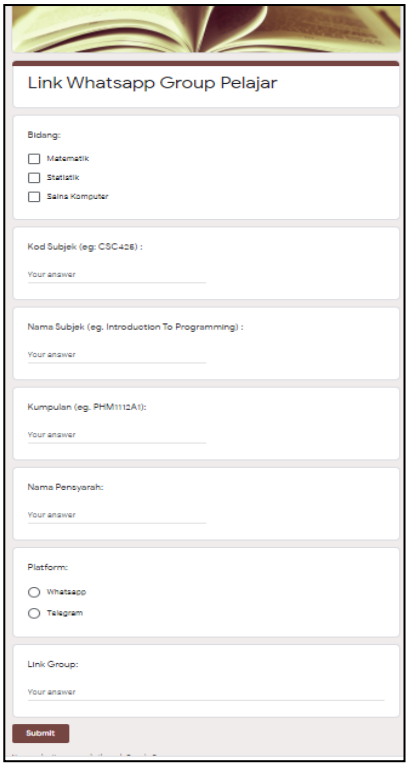

Figure 2 Online form.

Thus, this method is more effective for gathering students who are in different destinations where the lecturer does not need to invite each student to join the group. Prior to the first class, lecturers are required to gather their students in a short period of time and within a week, all students need to successfully gather prior to the class being conducted.

Figure 3 shows the UnityHub interface. It is divided into six (6) tabs, namely HOME, SARJANA, SERJANA MUDA, DIPLOMA and PRA-DIPLOMA as well as KENALI JSKM. The 'HOME' section displays the message from the JSKM coordinator. Another tab displays the list of subjects under JSKM, whereas Kenali JSKM brings the users to the JSKM official website. For example, if the student is at the Pre-diploma level (see tag no.1) he/she will click on the PRA-DIPLOMA tab, which will list the pre-diploma subjects under JSKM. Students will select the relevant subjects (see tag no.2) and the platform will list the class group. Students only need to click on the link provided to join the class group. Next, lecturers and students will get notifications through the registered platform (see tag no.3).

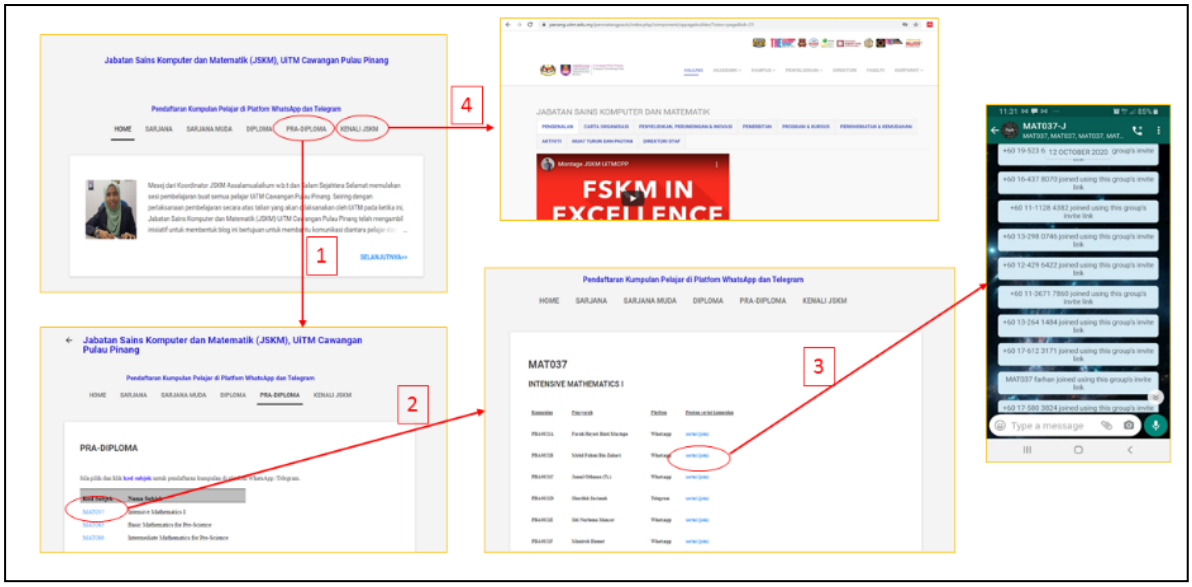

Figure 3 UnityHub contents

Methodology

Population/sample

The population for this study consisted of students from the Universiti Teknologi MARA at Penang Branch. A sample of 90 students comprised of 36 males and 54 females was selected for the study using cluster sampling. This sampling method involved selecting a few classes from the Computer and Mathematics department based on the corresponding lecturer and all respondents have equal level of computer literacy.

Instrument

The researchers utilized an adopted and adapted self-administered questionnaire for data collection in this study. The questionnaire was developed based on the instruments in Technology Acceptance Model (TAM) used in previous studies. Some modifications have been made to align the instruments with the specific objectives of this study. The online questionnaire served as a convenient and efficient method for data collection, where data were collected from the students using an online questionnaire distributed via WhatsApp and telegram. The questionnaire was divided into two sections: the demographic profile and user satisfaction of using UnityHub. The demographic profile section included questions regarding students' gender, age, level of education, field of study, sources of information about UnityHub, and the purpose of using UnityHub. The second section focused on assessing various factors related to the use of UnityHub, namely self-efficacy, perceived usefulness, perceived ease of use, intention to use, attitude towards use, and satisfaction. The questionnaire comprised a total of 24 items, and participants were asked to rate their responses on a five-point Likert scale. This structured questionnaire format allowed for systematic data collection and facilitated the measurement of participants' satisfaction related to their usage of UnityHub.

Sampling

In this study, a probability sampling technique called cluster sampling was employed to ensure accurate and efficient data collection. Four classes were selected as clusters, and all the students within those selected classes were included as respondents for the study. The

cluster sampling approach allowed for the collection of information from a representative sample of students who were using UnityHub for their course registration. Each respondent was requested to allocate approximately 10 to 15 minutes of their time to complete the survey, which aimed to gather their experiences and feedback regarding the usage of UnityHub. By using cluster sampling, the researchers could efficiently collect data from a diverse group of students and obtain valuable insights into their perspectives on using UnityHub.

Analysis Method

IBM SPSS Statistics version 26 was used to analyse the data. Cronbach's Alpha is used to assess the study's reliability. Cronbach's Alpha values range from 0 to 1, with 0 indicating complete unreliability and 1 indicating perfect reliability (Field, 2015). Hinton P. R. et al., (2004) provide a good guide for reliability, with Alpha scores of 0.90 and above indicating a scale of excellent reliability, 0.70 to 0.90 indicating a scale of high reliability, 0.50 to 0.70 indicating a scale of moderate reliability, and less than 0.5 indicating a scale of low reliability. Frequency analysis, correlation, and multiple linear regression were used to analyse the data. For all categorical data, the frequency distribution is obtained (demographic data). It is used to calculate the number of responses from various variable values, and the results are displayed in table form. The correlation analysis is used to assess the strength of the relationship between the dependent and independent variables (Sekaran, 2003), specifically the association between the dependent variable (satisfaction) and the independent variable (self-efficacy, perceived usefulness, perceived ease of use, intention to use and attitude towards use). If the correlation value is zero (r=0), there is no association between the variables, whereas a correlation value of one implies a perfect relationship between the dependent and independent variables.

Multiple linear regression analysis is a statistical method used to predict the condition (rise and fall) of a dependent variable based on the manipulation (increase or decrease) of two or more independent variables acting as predictive factors. In this analysis, the relationship between the dependent variable and the independent variables is examined to understand how changes in the independent variables can influence the outcome. The purpose of multiple linear regression is to establish a mathematical model that can estimate the impact of these independent variables on the dependent variable (Schneider, A. et. al, 2010).

Multiple regression analysis is utilized in this study because the researchers want to determine the factors that contribute to the user's satisfaction in UnityHub. Regression analysis investigates the scenario in which a dependent variable is impacted by numerous independent variables at the same time. R Square, Adjusted R Square, Beta (B), and its related indicator were used to evaluate the regression model (p value). R Square denoted the percentage variance of dependent variables explained by independent factors. A higher R Square indicates that the variables are more closely related.

Result and Discussion

Descriptive Analysis

The survey included responses from a total of 90 students. Among these students, 60% were female while 40% were male. This indicates that the sample had a higher representation of female students than male students. In terms of age, the survey focused on young adults, specifically those aged 18 to 22. These individuals made up 90% of the participants in the

survey. It's worth noting that the age range indicates that the study targeted students who are typically enrolled in higher education institutions, such as colleges or universities.
Regarding the respondents' level of academic achievement, the survey captured data from individuals with different educational backgrounds. Among the respondents, 63.3% held diplomas, which suggests that a significant proportion of the participants had completed a diploma program. 35.6% of the respondents were degree students. This category likely refers to students pursuing an undergraduate degree, such as a Bachelor's degree. Interestingly, only one respondent identified as a master's student. This indicates that the sample had a minimal representation of individuals pursuing a master's degree.

Reliability Test

The reliability of the survey constructs was assessed using Cronbach's Alpha, a measure of internal consistency. The Cronbach's Alpha values for all the variables in the study were found to be greater than 0.80, as presented in Table 1 According to Hinton, P. R. et al. (2004), a Cronbach's Alpha value greater than 0.50 indicates moderate reliability, while a value of 0.70 and above suggests high reliability for both the dependent and independent variables. Therefore, the obtained Cronbach's Alpha values indicate that the measurement items for all variables in the survey demonstrate consistency and reliability. This implies that the constructs used in the study are reliable and can be considered valid for further analysis and interpretation.

Table 1
Summary of Cronbach's Alpha

Variable	Items	Cronbach's Alpha	Result
Satisfaction (DV)	4	0.868	High reliability
Self-efficacy	4	0.912	High reliability
Perceived usefulness	5	0.914	High reliability
Perceived ease of use	4	0.924	High reliability
Intention to use	3	0.901	High reliability
Attitude towards use	4	0.872	High reliability

Correlation Analysis

User satisfaction is the evaluations made by users regarding the products or services they utilize, wherein users tend to assess whether the performance of a product or service surpasses their expectations. From the analysis of the correlation between satisfaction and independent variables (self-efficacy, perceived usefulness, perceived ease of use, intention to use, and attitude towards use), it was found that all independent variables have a good positive association with the independent variable, satisfaction. This means that as the values of the independent variables increase, satisfaction tends to increase as well. This finding suggests that these factors play a role in influencing satisfaction. The results of the analysis in Table 2 also indicated that all the Pearson correlation coefficients between the independent variables and satisfaction were statistically significant, with p-values less than 0.05. This significance level indicates that the observed associations between the variables are unlikely to have occurred by chance (Dahiru, T., 2008). Among the independent variables, perceived ease of use had the strongest positive association with satisfaction, as indicated by a correlation coefficient (r) of 0.791. This means that individuals who perceive a UnityHub as easy to use are more likely to experience higher levels of satisfaction. Perceived usefulness

followed closely behind, with a correlation coefficient of 0.788. This suggests that when individuals perceive a UnityHub as useful, they are more likely to be satisfied with it.

Attitude towards use had a correlation coefficient of 0.711, indicating a moderately strong positive association with satisfaction. This means that individuals with a positive attitude towards using the UnityHub are more likely to experience higher levels of satisfaction. Intention to use showed a correlation coefficient of 0.638, indicating a moderately positive association with satisfaction. This suggests that individuals who have a greater intention to use the UnityHub are more likely to report higher levels of satisfaction. Finally, self-efficacy had the lowest correlation coefficient of 0.542, indicating a somewhat moderate positive association compared to the other variables. Self-efficacy refers to an individual's belief in their ability to perform a specific task or use a UnityHub effectively (Yang, G., et. al, 2022). This finding suggests that while self-efficacy is still positively associated with satisfaction, its influence may be slightly less pronounced compared to the other variables examined in the study. Based on these findings, self-efficacy, perceived usefulness, perceived ease of use, intention to use, and attitude towards use are all important factors that contribute to satisfaction (Kulviwat et al., 2014). The results highlight the significance of perceived ease of use and perceived usefulness in particular, as they showed the strongest positive associations with satisfaction.

Table 2
Summary of Correlation Analysis

	Satisfaction in using UnityHub, r	**p-value**
Self-efficacy in using UnityHub	0.542**	0.000
Perceived usefulness in using UnityHub	0.788**	0.000
Perceived ease of use in using UnityHub	0.791**	0.000
Intention to use UnityHub	0.638**	0.000
Attitude towards using UnityHub	0.711**	0.000

Multiple Regression Analysis

This study focused on the technology acceptance model (TAM) and try to understand the relationship between the main independent variable of interest, satisfaction as the dependent variable and 5 independent variables which are self-efficacy, perceived usefulness; perceived ease of use; intention to use and attitude towards use. the research hypotheses were tested using multiple liner regression to draw necessary conclusions about the variables.

A regression equation with multiple variables used can be describe as:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \varepsilon \quad (1)$$

where y is the predictor and x_1, x_2, x_3, x_4 and x_5 are the independent variables. β_0 is the y - intercept and $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and ε are the coefficients and error term respectively.

Result in Table 3, where R=0.821 shows that there is a strong positive relationship between respondents' satisfaction in using UnityHub with the five independent variables namely, self-efficacy, perceived usefulness, perceived ease of use, intention to use and attitude towards use. The value R square=0.674 in Table 3 indicates that self-efficacy, perceived usefulness, perceived ease of use, intention to use and attitude towards use explained 67.4% of the

variance in satisfaction. This finding was also reported by Qu S et al. (2023), who found that the overall explanatory power of the theoretical model is acceptable, with an R-square of 55.7% for intention to use weight management apps, suggesting that the extended TAM is able to explain the consumers intention to use weight management apps during the COVID-19 pandemic.

Table 3
Model Summary

Model	R	R Square	Std. Error of the estimates
1	0.821	0.674	0.37451

Predictors: (Constant), attitude_towards_use, self_efficacy, perceived_usefulness, intention_to_use, perceived_ease_of_use

Further analysis was done using Analysis of Variance (ANOVA) and the values from Table 4 indicates that the overall multiple linear regression model is significant with p-value less than 0.05. Therefore, the model is significant enough for determining the dependent variable.

Table 4
ANOVA[a]

		Sum of Squares	df	Mean Square	Sig
1	Regression	24.344	5	4.869	.000[b]
	Residual	11.781	84	.140	
	Total	36.125	89		

An analysis of coefficient was performed, and the following hypotheses have been tested in accordance with the study objectives.

H1: Satisfaction is positively related to self-efficacy.
H2: Satisfaction is positively related to perceived usefulness.
H3: Satisfaction is positively related to perceived ease of use.
H4: Satisfaction is positively related intention to use.
H5: Satisfaction is positively related to attitude towards use.

Table 5 shows the outcomes that both PU and PEOU have a significant influence on satisfaction where p-values are 0.007 and 0.013 respectively and below 0.05. Therefore, H2 and H3 are both supported, PU and PEOU do contribute to the model. A unit increase in PU is associated with an increase in satisfaction of 0.365 units. This suggests that a slight increase in PU can have a significant influence on students' satisfaction, as they view UnityHub as being more useful. The results also imply that students' overall satisfaction levels should increase as they come to appreciate the value and advantages that UnityHub offers. Accordingly, users are more likely to be satisfied with their experience when they believe the system is more useful in meeting their wants and attaining their goals. This emphasizes how critical it is to create and implement systems that successfully meet users' needs and offer concrete value, ultimately resulting in higher levels of satisfaction (Kruk, et al 2018).

Table 5
Coefficient of Regression

Model 1	Unstandardized Coefficient	Standard Coefficient	p-value	Remark
	B	Std.Error		
Constant	0.611	0.265	0.023	significant
Self-efficacy	0.038	0.072	0.601	Not significant
Perceived usefulness	0.365	0.132	0.007	significant
Perceived ease of use	0.338	0.134	0.013	significant
Intention to use	-0.048	0.120	0.692	Not significant
Attitude towards use	0.168	0.146	0.253	Not significant

a. Dependent Variable: satisfaction

In addition, the results also demonstrate that a unit rise in PEOU is correlated with a 0.338-unit increase in satisfaction. The results indicate that the simplicity of using UnityHub has a significant impact on customer satisfaction. According to this, user happiness can be greatly increased through user-friendly designs, intuitive interfaces, and straightforward procedures. Students are more likely to be pleased with their experience when they can easily interact with and use a system or product. Therefore, emphasizing, and prioritizing ease of use can be a key factor in promoting user satisfaction and improving overall user experiences. According to the current findings, earlier research by Susilo, and Setyadi,(2023) showed that perceived ease of use has a positive and significant effect on the effective usage of the e-procurement system at the Open University. Ease of e-procurement refers to how simple it is to operate the e-procurement system and conduct online auctions for products and services. The Open University will be more effective in using the e-procurement system if its offerings are clear and easy to use. The system is extremely simple to use, extremely simple to learn, and extremely simple to work with, among other qualities that make it simple to use.

This study aligns with past study by Quet al. (2023), who found that perceived usefulness is a key determining factor and strongly influences attitudes and behavioral intention in the context of the adoption of weight management applications by obese people. Perceived ease of use also plays a crucial role in shaping the perceived usefulness and behavioural intention of overweight or obese individuals regarding adopting weight management mobile apps. Most of the time, while applying a modern system or technology, individuals will focus on whether it can actually increase their comfort or productivity at work (performance expectancy in UTAUT). The study also found that perceived usefulness influences the adoption of health services in a developing country, the intention to receive influenza vaccination among healthcare workers, and the acceptance of wearable technology in healthcare. Kalankesh et al (2020) agreed that perceived usefulness was considered one of the main dimensions of user satisfaction with Hospital Information Systems. The notion of perceived usefulness implies that users have the willingness to use information systems based on the degree that they believed it would assist them in performing their job.

Lai, and Pires, (2010) has conducted a study to 460 non business portal users with ages 18 and above and the result showed that if the content of a portal is easy to be manage then it will likely indirectly facilitate citizens satisfaction. These results are supported by (Han et al. 2022) who perform a study to university students and found that institutional support mediate the relationship between perceive ease of use and student's e learning satisfactions and perceived usefulness has significant relationship with student's e learning satisfactions.

Seo and Lee (2017), agreed that perceived ease of use is a critical factor in determining user satisfaction, and that it influences users' attitudes towards technology. His studies were conducted to 350 users, who were asked to rate their satisfaction level with a variety of technologies, such as smartphones, laptops, and social media platforms. The developer must ensure that the application is easy to be used in the sense of the friendly messages, smoothness of system operations, less system navigations and the simplicity of the instructions in order to maximize the user's satisfaction. These elements are the contributing factors to yield good quality of an application and hence increase the user's satisfaction towards the application.

Research conducted by Vignali et al. (2019) have found that the website design, content, navigation, and website functionality significantly influenced the user satisfaction. The study also found that user satisfaction positively affected the intention to revisit the website and encouraged others to use the application. User satisfaction is a crucial factor for the success of applications or web systems. Therefore, system developers must prioritize user satisfaction when developing mobile applications or web systems to ensure the system quality and success.

A regression test was done by Wicaksono, A., & Maharani, A. (2020) to determine the effect of PE and PEOU on behavioural intention to use the online travel agency. The two variables were tested simultaneously and it was found that PE and PEOU were positively significant to behavioural intention with p-value less than 0.05 and $r = 0.844$. It is believed that the customer's intention to use will be higher if they received more benefits and convenience from the online agency.

Result in Table 5 also shows that self-efficacy, intention to use and attitude towards use to be insignificant with p-values greater than 0.05. Therefore H1, H4 and H5 are not supported and self-efficacy, intention to use and attitude towards use do not contribute to the model.

Conclusion

The proposed work has good potential to be commercialized as a hub in connecting between communities, especially in the education sector and business enterprises. In terms of education, the relationship between educators and students will develop the value of knowledge, while in terms of business development, there will be an industry linkage between entrepreneurs and customers, thus able to increase the commercial value of the product. UnityHub is one of a kind that facilitates the communication process between students and teachers on a digital platform The development of UnityHub was done through the integration of existing communication platforms that proven to be cost and time effective. UnityHub provides benefits especially to institutions, lecturers, and students. For an institution, the UnityHub will help to save cost in gathering students physically and at the same time, the platforms can be a rapid information hub for all students. For lecturers, UnityHub helps them to effectively gather students for teaching and learning process and at the same time ensure the class can be conducted on time with full students' participation. For students, communication with their lecturers as well as classmates is effortless as the system can provide an effective communication medium. In a nutshell, UnityHub is an effective communication platform for students and lecturers in their teaching and learning process.

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