

Integration of UTAUT 2 and Delone & McLean to Evaluate Acceptance of Video Conference Application

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^{1*}Shahnilna Fitrasha Bayastura, ²Budi Warsito, ³Dinar Mutiara
Kusumo Nugraheni

^{1,2,3}Magister Sistem Informasi, Universitas Diponegoro
E-mail: ¹shahnilnafit@gmail.com, ²budiwrst2@gmail.com,
³dinar.mutiara@live.undip.ac.id

*Corresponding Author

Abstract—This article explores how college students adopt video conferencing software for distance education. This research aims to examine the factors that influence the spread of video conferencing programs in Indonesia. A video conferencing application is a multimedia program that generates audio and visual content to facilitate real-time, two-way communication between its users. Because of COVID-19, classes of all kinds are now being taken online. As a result, more people are turning to tools like video conferencing. Therefore, learning how to access student video conferencing software is crucial. The UTAUT 2 and Delone & McLean models will be integrated into the analysis. A total of 327 people answered the survey. Next, we used the PLS-SEM technique in smart pls 3.0 to analyze the data collected from the respondents. The R-Square value of 26.2% for the retention intent variable and 62.3% for the user satisfaction variable demonstrate that independent variables in the study can explain endogenous variables and that the remaining variance is influenced by factors external to the survey.

Keywords— video conference application; UTAUT 2; Delone & McLean; PLS-SEM

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Corresponding Author:

Author [Shahnilna Fitrasha Bayastura],
Department [Magister Sistem Informasi],
Institution [Universitas Diponegoro],
Email [shahnilnafit@gmail.com]



I. INTRODUCTION

At the beginning of March 2020, the spread of COVID-19 prompted all Indonesian universities to implement online learning systems utilizing video conferencing applications [1]. Video conferencing software facilitates online communication between teachers and students [2]. Because of this, services such as Zoom, Google Meet, Microsoft Teams, Google Classroom, and so on have become increasingly popular. Despite more available information on video conference app downloads, there is still a shortage of studies on the widespread use of such tools for online education [3]. Some of the problems found when using video conferencing applications, namely resources, technology and infrastructure costs that do not support and lack of technical support, are considered problems when using video conferencing applications [4][5]. From some of these things, knowing how to accept video conferencing applications for online learning is essential.

Numerous research models have been constructed to determine the factors contributing to an application's success. The Unified Theory of Acceptance and Use of Technology and the DeLone-McLean model are two of the most popular (UTAUT). UTAUT 2 is an updated version of the original model that considers three additional factors—hedonic motivation, price value, and habit—that influence users' propensities to take specific actions when interacting with a computerized system [6]. The model created by DeLone and McLean in 1992 was revised in 2003. DeLone and McLean's model considers these six factors: data quality, system quality, service quality, intent to use, user satisfaction, and net benefits. It was found that bringing together the UTAUT and the DeLone and McLean models provided a comprehensive explanation of user acceptance [7][8][9].

This research aims to evaluate how students at State and Private Universities in Indonesia have adopted video conferencing applications for distance education. General rating based on the UTAUT 2 and DeLone & McLean integration model. There have been multiple studies along these lines, including work by Alzahrani & Seth [1]. Using an amalgamation of the DeLone & McLean and TAM models, they analyzed LMS users' perspectives on satisfaction and future sustainability in the United Kingdom. COVID-19 data shows that student satisfaction is more strongly influenced by factors like the quality of the information provided and the student's sense of competence than by the quality of the learning management system itself. Furthermore, the findings indicate that prior experience and social influences, but not self-efficacy or user satisfaction, influence an individual's expectations of outcomes. The results of this study also provided new tools that developers of learning management systems could use to attract more participants to their plans during COVID-19.

Hidayatullah et al. [10] studied students' attitudes toward zoom applications who relied on the Delone & McLean model. This study found that users' evaluations of zoom's system quality, information quality, and service quality all play a role in determining how satisfied they are with the app. As a result, the overall gain has shifted since then. It's safe to assume that students widely adopted the zoom app for distance learning during the COVID-19 timeframe. Users are more content with an information system if they have faith in it [11]. More system development on the zoom application must be carried out, such as the level of security and privacy of users who are still vulnerable to hacker attacks. This causes the need for more investment in the development of zoom applications to the fullest [12].

Studying how people ranked different information systems, Sorongan [13] conducted research analogous to that of Delone & McLean. E-Government implementation in Balikpapan City is reviewed and evaluated to determine what factors influence their spread. The analysis process uses Structural Equation Modeling (SEM) and SmartPLS 3.0. The findings demonstrate that system quality impacts user satisfaction but is not used. Numerous analyses have validated the validity of this framework. Because of this, we can use the variables found in the Delone & McLean model. Research by Juningsih et al. [14] using SmartPLS 3.0 and the PLS-SEM processing method, based on the UTAUT 2 model, assessed the extent to which students in Jakarta adopted the Gmeet messaging app. This research results that the Gmeet application is successfully used for online learning, which can be seen from performance expectations, social influences, hedonic motivation, habits, and user interests.

Sarosa [15] also researched the application system's acceptability using the UTAUT model. Students' acceptance of iPads is analyzed at a university. Methods from the Structural Equation Model and the Partial Least Squares were used in the analysis. The findings indicate that only anxiety and self-efficacy are associated with intent to use. However, iPad use is affected by both user intent and the surrounding environment. Gender plays a moderating role in the correlation between self-efficacy and plans to use. Knowing how to use the iPad well can make a difference in the strength of the link between intention and action. Ramadan et al. [16] also evaluated an ERP system embedded in a PC table for archival purposes. Issues crop up when brand-new applications are rolled out without sufficient time for users to become accustomed to them and prefer doing things by hand. Using the UTAUT model, we find that the independent variables in the study can explain 35.2% of the variation in the behavior intention variable, while the remaining 67.8% is due to factors beyond the scope of the survey.

As many users are compelled to use information systems in the COVID-19 situation, the integration of the UTAUT 2 and Delone & McLean models is appropriate for research [17][18][19]. After comparing several theories of acceptance of information systems, researchers

have found that combining the UTAUT 2 and Delone & McLean models is advantageous. User acceptance of the information system is the sole domain of the UTAUT 2 model; therefore, the integration of the UTAUT 2 acceptance model and the Delone and McLean model [20] is required to assess both user acceptance and the overall success of an information system. The UTAUT 2 model and the Delone and McLean model complement each other well when evaluating the success and acceptance of an information system, as shown in studies [21], [22], and [23]. This study will integrate the UTAUT 2 and Delone and McLean models by looking at the topic from the perspective of those who utilize video conferencing tools.

II. RESEARCH METHOD

Google form, Instagram, WhatsApp, Line, Microsoft Excel, and the SmartPLS application were used to collect, organize, and analyze the data for this study; in addition, we will use Partial Least Square-Equation Modeling (PLS-SEM) to make predictions and construct theories to identify and emphasize the most critical aspects of exploratory studies and to develop an already established framework. In PLS-SEM, we take two measurements: an outer model measurement and an internal model measurement. The external model includes two validity tests (convergent and discriminatory) and two reliability tests (Cronbach's alpha and composite reliability). The internal model measurement consists of the R-Squared, Q-Squared, and hypothesis tests (P-Values, T-Statistics, Original Sample).

Furthermore, the material needed in this study is respondent data, namely students from public and private universities who use video conferencing applications for online teaching and learning. This research was conducted quantitatively by processing the results of a Likert scale questionnaire so that the data generated was in the form of numbers. The data needed include demographic data and data on respondents' statements. Information collected included respondents' gender, age, level of education, college attended, institution's name, and the types and names of video conferencing software programs used in the classroom. Meanwhile, 40 statement items represent the variables in the questionnaire's statement.

The proposed model used in this investigation is depicted in Figure 1 and is an amalgamation of the UTAUT 2 and Delone & McLean models.

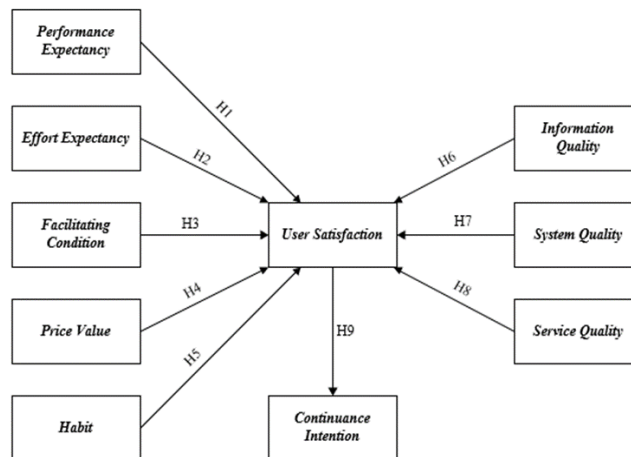


Figure 1. PROPOSED MODEL

- H1: Performance Expectancy (PE) has a positive and significant effect on User Satisfaction (US)
- H2: Effort Expectancy (EE) has a positive and significant effect on User Satisfaction (US)
- H3: Facilitating Condition (FC) has a positive and significant effect on User Satisfaction (US)
- H4: Price Value (PV) has a positive and significant effect on User Satisfaction (US)
- H5: Habit (H) has a positive and significant effect on User Satisfaction (US)
- H6: Information Quality (IQ) has a positive and significant effect on User Satisfaction (US)
- H7: System Quality (SQ) has a positive and significant effect on User Satisfaction (US)
- H8: Service Quality (SQ) has a positive and significant effect on User Satisfaction (US)
- H9: User Satisfaction (US) has a positive and significant effect on Continuance Intention (CI)

The research flow is a series of activities or stages to achieve research objectives. The research flow in this study is the problem formulation stage, the literature review stage, the model formulation stage, the research instrument stage, the data collection stage, the data processing, and analysis stage, and the conclusion drawing step, as shown in Figure 2.

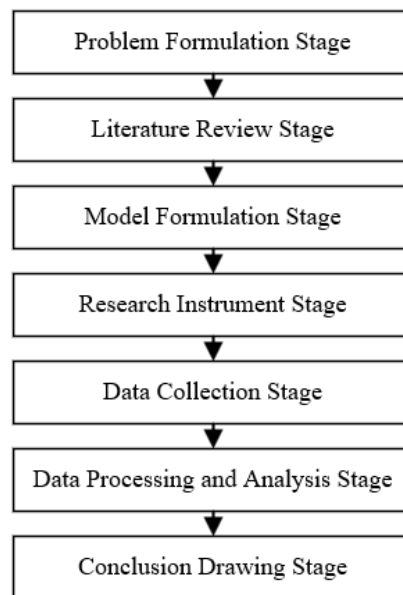


Figure 2. RESEARCH FLOW

The population in this study were students from public and private universities who used video conferencing applications for online teaching and learning. The data collected were 327 respondents who met the criteria.

This study's questionnaire collects first-hand information using indicators that make up the variables derived from the combination of the UTAUT 2 and Delone & McLean models. Data indicators are displayed in Table 1. The latent variables in this research are as follows:

Table 1. PERFORMANCE EXPECTANCY STATEMENTS

Code	Statements
PE1	Using video conferencing applications is very effective during the COVID-19 pandemic because it can be done anywhere
PE2	With the COVID-19 pandemic raging, I believe that video conferencing applications are beneficial for online learning, allowing lectures and socially distancing activities to continue even amid the epidemic.
PE3	Even though I can't physically be in class right now, I can still contribute to the teaching and learning that's taking place thanks to the power of video conferencing software.
PE4	Using video conferencing applications for online teaching and learning can improve my learning performance well

The variable performance expectation is stated in Table 1. TAM's usefulness variable is linked to users' hopes that the system will boost their efficiency, measured by their performance expectancy [23].

Table 2. EFFORT EXPECTANCY STATEMENTS

Code	Statements
EE1	In my opinion, how to use video conferencing applications is easy to learn and understand
EE2	During the current COVID-19 pandemic, it is simple to communicate with professors and friends via the video conferencing app.
EE3	The video chat program's language is straightforward, in my opinion.
EE4	In my opinion, the features available in the video conferencing application are easy to use
EE5	In my opinion, the video conferencing application interface is easy to understand

An explanation of the work expectancy variable is provided in Table 2. The effort expectancy is based on the system's performance as a result of the effort, any resulting imbalance, and the ease with which the system can be operated or used [24].

Table 3. FACILITATING CONDITION STATEMENTS

Code	Statements
FC1	The video conferencing app is compatible with other technologies I use
FC2	There is assistance from lecturers and college experts when I have difficulty using the video conferencing application
FC3	I have internet facilities (quota and Wi-Fi) that are adequate to conduct an online study
FC4	Infrastructure such as technology (laptops and smartphones) is sufficient to support online learning through video conferencing applications

Table 3 is a statement of the facilitating condition variable. Facilitating condition is the level of user confidence in the availability of technical and organizational infrastructure in supporting the use of information systems and is the level of users having objective support obtained from adequate facilities [25].

Table 4. PRICE VALUE STATEMENTS

Code	Statements
PV1	In my opinion, online teaching and learning using video conferencing applications do not cost a lot to purchase internet quota
PV2	In my opinion, the costs incurred for studying by using video conferencing applications are less than learning in class
PV3	The video conferencing application provides the best service according to the price
PV4	Compared with similar video conferencing applications, the one I use is relatively cheap.

The price value in Table 4 is the user's perception of the costs incurred in using information systems for the benefits obtained [6].

Table 5. HABIT STATEMENTS

Code	Statements
H1	I've noticed a rise in the frequency with which I use video conferencing tools.
H2	These days, I can't imagine not having access to video conferencing tools.
H3	During this COVID-19 epidemic, I have no choice but to use a video conferencing app for distance education.
H4	I've used video conferencing apps before

Based on Table 5, habit is the level of users using information systems automatically (because of learning), and it is a predictor of intention and use of technology [6].

Table 6. INFORMATION QUALITY STATEMENTS

Code	Statements
IQ1	In my opinion, the information provided by the video conferencing application is beneficial for online studying
IQ2	In my opinion, the information conveyed by the lecturer through the video conferencing application is clear enough
IQ3	In my opinion, the information provided by video conferencing applications to users is very accurate
IQ4	In my opinion, the information provided by the video conferencing application is always presented as the date

Table 6 is a statement of the information quality variable. Information quality refers to the information provided by the video conferencing application to users and whether users get clear and understandable information. The quality of the information provided is often cited as a significant predictor of customer happiness [22].

Table 7. SYSTEM QUALITY STATEMENTS

Code	Statements
SyQ1	I rarely encounter errors when using video conferencing applications
SyQ2	Video conferencing applications can be accessed quickly
SyQ3	The video conferencing application can be accessed for 24 hours
SyQ4	I can access the video conferencing application in real-time (anywhere and anytime)
SyQ5	Video conferencing applications can be accessed on various devices and information systems

Table 7 is a statement of the system quality variable. The system quality variable is a combination of hardware and software in a system and focuses on system performance and refers to how well the capabilities of the hardware, software, policies, procedures, and designs are permanently attached to the system itself [26].

Table 8. SERVICE QUALITY STATEMENTS

Code	Statements
SyQ1	The response of the video conferencing application to users is fast, according to what I asked for
SyQ2	The video conferencing application provides facilities to contact a technician (help desk) quickly if there is a problem with the application
SyQ3	I feel safe using video conferencing applications for online learning because each user has a different password

Service quality provides an overview of the quality of the services provided in accordance with the user's perception or point of view when using information systems [26]. Table 8, is a statement of the service quality variable.

Table 9. USER SATISFACTION STATEMENTS

Code	Statements
US1	In the wake of the recent COVID-19 pandemic, I realized the importance of using video conferencing tools to support educational initiatives.
US2	The educational goals of the video conferencing application are consistent with the need to facilitate online education during the COVID-19 pandemic.
US3	Overall, I am satisfied with using video conferencing applications for online teaching and learning purposes
US4	In my opinion, using an application for online teaching and learning as a substitute for lectures in class during the COVID-19 pandemic is a good idea

Based on Table 9, User satisfaction is a response in the form of feelings of pleasure and satisfaction from users in using information systems[21].

Table 10. CONTINUENCE INTENTION STATEMENTS

Code	Statements
CI1	After the COVID-19 pandemic ends, I will continue to use video conferencing applications regularly
CI2	I will continue to use video conferencing applications as I do now
CI3	If the COVID-19 pandemic is over, I will suggest that my friends continue using the video conferencing application to discuss the material studied in class.

The use of continuity intention variables to determine the sustainability of the use of an information system influences the acceptance and success of an information system[27]. Table 10 is a statement of the continuance intention variable.

III. RESULT AND DISCUSSION

Validate the data, it takes profile data of respondents who are students who use video conferencing applications in Table 11.

Table 11. RESPONDENTS PROFILE DATA

Respondent Profile	Total	Persentase
Gender		
Female	140	42.8%
Male	187	57.2%
Age		
< 20 Year	102	31.2%
20 – 29 Year	198	60.6%
30 – 39 Year	10	3.1%
40 – 49 Year	11	3.4%
> 50 Year	6	1.8%
Domicile		
Bali	2	0.6%
Banten	12	3.7%
Bengkulu	1	0.3%
DI. Yogyakarta	9	2.8%
DKI Jakarta	59	18%
Gorontalo	1	0.3%
Jambi	1	0.3%
Jawa Barat	97	29.7%
Jawa Tengah	64	19.6%
Jawa Timur	50	15.3%
Kalimantan Barat	3	0.9%
Kalimantan Selatan	1	0.3%
Kalimantan Tengah	1	0.3%
Kalimantan Timur	2	0.6%
Kepulauan Bangka Belitung	1	0.3%
Kepulauan Riau	2	0.6%
Lampung	8	2.4%
Riau	1	0.3%
Sulawesi Selatan	3	0.9%
Sulawesi Tengah	1	0.3%
Sulawesi Tenggara	1	0.3%
Sulawesi Utara	1	0.3%
Sumatera Barat	3	0.9%
Sumatera Selatan	1	0.3%
Sumatera Utara	2	0.6%
Educational Stage		
D3	18	5.5%
D4/S1	255	78%
S2	47	14.4%
S3	7	2.1%
Video Conference Application used		
Google Classroom	58	17.7%
Google Meet	62	19%
Microsoft Teams	81	24.8%
Zoom	126	38.5%

Respondents in this study amounted to 327 people who came from students of various ages and students who lived in 25 provinces. Respondents in this study were also students with different educational levels, namely D3, D4/S1, S2, and S3. As well as in online learning activities, students used several other video conferencing applications such as google classroom, google meet, ms teams, and zoom.

It was testing on the outer aims to determine the regression value of a latent variable with its indicators by using two tests, namely validity and data reliability.

1. Data Validity Testing

When evaluating a questionnaire's efficacy as a research tool, validity testing employs convergent and discriminant validity. The outer loading and AVE values are compared first to ensure concurrent validity.

Table 12. CONVERGENT VALIDITY TESTING WITH OUTER LOADING RESULT

Indicator	Outer Loading
CI1	0.931
CI2	0.902
CI3	0.830
EE1	0.703
EE2	0.709
EE3	0.830
EE4	0.830
EE5	0.820
FC1	0.723
FC2	0.638
FC3	0.718
FC4	0.817
H1	0.759
H2	0.823
H3	0.803
.....
US4	0.811

* OUTER LOADING < 0.5

Table 12 shows that an outer loading value greater than 0.5 indicates a pass in the concurrent validity test. Similarly, the external loading value of 0.497 suggests that the H4 indicator stating that users have used video conferencing applications before has a high degree of reliability. Consequently, the H4 indicator should not be relied upon as a reliable way to gauge the habitual variable. This is why we aren't using the H4 indicator as part of our measurement model for this research. Thirty-nine more indicators make up the measurement model and are listed in Table 13.

Table 13. CONVERGENT VALIDITY TESTING WITH OUTER LOADING AFTER H4 WAS DELETED

Indicator	Outer Loading
CI1	0.931
CI2	0.902
CI3	0.830
EE1	0.703
EE2	0.709
EE3	0.830
EE4	0.830
EE5	0.820
FC1	0.723
FC2	0.638
FC3	0.718
FC4	0.818
H1	0.785
H2	0.829
H3	0.823
.....
US4	0.811

Each of the 39 indicators used in the study has an external loading value greater than 0.5, as shown in Table 13 of the outer loading test table, indicating that they are valid and can adequately explain their corresponding latent variables. The next step in establishing convergent validity is to ensure that the Average Variance Extracted (AVE) is more significant than 0.5, as was hypothesized.

TABLE 14. Convergent Validity Testing with AVE Result

Variable	AVE	Description
CI	0.789	Valid
EE	0.610	Valid
FC	0.528	Valid
H	0.660	Valid
IQ	0.639	Valid
PE	0.603	Valid
PV	0.583	Valid
SeQ	0.617	Valid
SyQ	0.514	Valid
US	0.672	Valid

Table 14 demonstrates that all variables are valid because they all have a value greater than 0.5, which indicates that all latent variables in this study can explain the variance of each indicator. The next phase involves conducting a discriminant validity test. Discriminant validity can be examined in two ways: by cross-loading factors or calculating the AVE's square root.

Table 15. DISCRIMINANT VALIDITY TESTING WITH CROSS LOADING RESULT

	CI	EE	FC	H	IQ	PE	PV	SeQ	SyQ	US
CI1	0.931*	0.357	0.348	0.256	0.531	0.471	0.442	0.461	0.163	0.501
CI2	0.902*	0.321	0.326	0.238	0.488	0.385	0.379	0.420	0.145	0.424
CI3	0.830*	0.318	0.255	0.204	0.420	0.412	0.344	0.381	0.120	0.432
EE1	0.349	0.703*	0.415	0.359	0.489	0.459	0.333	0.339	0.165	0.410
EE2	0.247	0.709*	0.356	0.303	0.406	0.454	0.377	0.385	0.190	0.448
EE3	0.282	0.830*	0.465	0.333	0.522	0.434	0.360	0.396	0.164	0.444
EE4	0.308	0.830*	0.511	0.342	0.497	0.409	0.366	0.417	0.218	0.459
EE5	0.284	0.820*	0.487	0.310	0.474	0.444	0.408	0.464	0.254	0.488
FC1	0.250	0.585	0.723*	0.303	0.423	0.438	0.384	0.410	0.305	0.422
FC2	0.223	0.342	0.638*	0.212	0.420	0.263	0.322	0.440	0.184	0.347
FC3	0.237	0.334	0.718*	0.223	0.344	0.305	0.400	0.290	0.196	0.309
FC4	0.300	0.380	0.818*	0.286	0.426	0.374	0.388	0.348	0.272	0.431
H1	0.224	0.322	0.264	0.785*	0.333	0.285	0.287	0.208	0.184	0.349
H2	0.265	0.373	0.333	0.829*	0.459	0.378	0.327	0.311	0.105	0.427
H3	0.150	0.329	0.269	0.823*	0.389	0.310	0.223	0.289	0.176	0.397
IQ1	0.475	0.525	0.387	0.434	0.783*	0.506	0.436	0.417	0.144	0.600
IQ2	0.419	0.429	0.443	0.368	0.772*	0.463	0.449	0.468	0.184	0.494
IQ3	0.431	0.474	0.454	0.389	0.840*	0.459	0.459	0.558	0.245	0.506
IQ4	0.402	0.516	0.505	0.362	0.802*	0.510	0.430	0.490	0.202	0.545
PE1	0.329	0.462	0.445	0.313	0.494	0.780*	0.316	0.436	0.189	0.535
PE2	0.314	0.485	0.368	0.329	0.444	0.830*	0.324	0.333	0.190	0.578
PE3	0.424	0.416	0.348	0.324	0.497	0.802*	0.402	0.373	0.156	0.488
PE4	0.458	0.373	0.336	0.281	0.470	0.688*	0.402	0.352	0.170	0.398
PV1	0.349	0.256	0.351	0.151	0.321	0.257	0.744*	0.351	0.098	0.319
PV2	0.369	0.307	0.355	0.202	0.364	0.335	0.770*	0.316	0.130	0.369

* VALUE OF LOADING WITH THE UNDERLYING VARIABLE

Table 15. DISCRIMINANT VALIDITY TESTING WITH CROSS LOADING RESULT [CONTINUE]

	CI	EE	FC	H	IQ	PE	PV	SeQ	SyQ	US
PV3	0.327	0.466	0.466	0.367	0.553	0.451	0.791*	0.461	0.286	0.461
PV4	0.307	0.381	0.377	0.288	0.415	0.319	0.750*	0.381	0.126	0.407
SeQ1	0.428	0.469	0.452	0.278	0.505	0.408	0.495	0.835*	0.303	0.487
SeQ2	0.324	0.267	0.315	0.191	0.373	0.199	0.305	0.655*	0.227	0.303
SeQ3	0.374	0.444	0.429	0.302	0.522	0.458	0.376	0.852*	0.291	0.608
SyQ1	0.163	0.149	0.228	0.067	0.161	0.037	0.167	0.306	0.524*	0.140
SyQ2	0.197	0.227	0.306	0.155	0.250	0.194	0.250	0.303	0.709*	0.254
SyQ3	0.039	0.172	0.197	0.085	0.116	0.163	0.117	0.179	0.756*	0.178
SyQ4	0.070	0.153	0.194	0.128	0.129	0.114	0.141	0.235	0.770*	0.225
SyQ5	0.111	0.204	0.268	0.189	0.186	0.244	0.122	0.251	0.794*	0.293
US1	0.429	0.473	0.409	0.357	0.525	0.555	0.465	0.503	0.249	0.838*
US2	0.357	0.523	0.487	0.413	0.522	0.500	0.389	0.539	0.315	0.793*
US3	0.442	0.489	0.412	0.424	0.616	0.563	0.446	0.538	0.256	0.837*
US4	0.447	0.410	0.424	0.392	0.549	0.513	0.395	0.460	0.225	0.811*

* VALUE OF LOADING WITH THE UNDERLYING VARIABLE

Table 15 shows that when cross-loading factors are used to test discriminant validity, all variables paired with the latent variable have a more excellent outer value than those paired with other latent variables. This demonstrates that all of the variables used in this analysis have high discriminant validity.

Table 16. DISCRIMINANT VALIDITY TESTING WITH THE SQUARE ROOT AVE RESULT

	CI	EE	FC	H	IQ	PE	PV	SeQ	SyQ	US
CI	0.888*									
EE	0.375	0.781*								
FC	0.350	0.575	0.727*							
H	0.263	0.421	0.358	0.813*						
IQ	0.542	0.612	0.558	0.489	0.800*					
PE	0.478	0.563	0.483	0.402	0.609	0.777*				
PV	0.440	0.474	0.513	0.344	0.555	0.456	0.764*			
SeQ	0.476	0.515	0.513	0.335	0.602	0.478	0.501	0.786*		
SyQ	0.162	0.256	0.336	0.187	0.240	0.227	0.221	0.350	0.717*	
US	0.511	0.578	0.527	0.484	0.676	0.651	0.518	0.622	0.318	0.820*

* AVE SQUARE ROOT VALUE

The AVE square root value in the latent variable has a higher value than the correlation between other variables, so the results in Table 15 are supported by the discriminatory validity testing in Table 16. Therefore, the discriminant validity generated in this study is of high quality and is considered applicable.

2. Data Reliability Testing

Cronbach's alpha and composite reliability > 0.7 are used to assess the precision, consistency, and accuracy with which indicators measure the underlying variables.

Table 17. CRONBACH'S ALPHA AND COMPOSITE RELIABILITY RESULTS

Variable	Cronbach's Alpha	Composite Reliability	Description
CI	0.865	0.918	Reliable
EE	0.838	0.886	Reliable
FC	0.701	0.816	Reliable
H	0.744	0.854	Reliable
IQ	0.812	0.876	Reliable
PE	0.781	0.858	Reliable
PV	0.764	0.848	Reliable
SeQ	0.700	0.827	Reliable
SyQ	0.762	0.839	Reliable
US	0.837	0.891	Reliable

The data reliability tests in Table 17 using Cronbach's alpha show that all latent variables (CI, EE, FC, H, IQ, PE, PV, SeQ, SyQ, and the US) have values > 0.7. This shows that the answers given by respondents are pretty stable and consistent with statements representing an indicator that underlies certain latent variables. As for the data, it has been shown through composite reliability

that all latent variables have a value > 0.7, indicating that they can be relied upon for use in the next stage of the study, hypothesis testing.

Analysts turn to inner model analysis to foretell how latent variables are connected. The internal model can be tested in three ways: by using the R-Squared statistic, the Q-Squared statistic, or by testing the null hypothesis. Q-Square test: > 0 indicates predictive, 0 means not predictive; R-Square test: 0.67 or higher indicates strong, 0.33 or higher indicates moderate, and 0.19 or lower indicates weak. In addition, the P-Values, T-Statistics, and Original Sample values for hypothesis testing are generated through a bootstrapping procedure. The recommended study uses a 5% significance level of error for P-values. The T-Statistic is said to be significant if the resulting value is > T-Table (T-Statistic 1.96) and not significant if the resulting value is < T-Table. Testing the relationship between latent variables will show a positive influence relationship between variables if the Original Sample value is > 0 and negative between variables if it < 0.

Table 18. R-SQUARE AND Q-SQUARE RESULTS

Endogenous Variable	R-Square Value	Q-Square Value
CI	0.262	0.201
US	0.623	0.408

The outcomes of the inner model's R-Square and Q-Square tests are shown in Table 18. The R-Square test results show that the exogenous variables have a weak (0.262) and a moderate (0.623) effect on the endogenous variables, namely the continuity intention variable (CI) and the user satisfaction variable (US), respectively. In addition, Q-Square values for both exogenous variables (CI and US) are more significant than zero, demonstrating that the two exogenous variables in this study have predictive value.

Table 19. HYPOTHESIS TESTING RESULTS

	Hypothesis	Original Sample (O)	T-Statistic	P-Values	Desc
H1	PE → US	0.273	4.136	0.000	Accepted
H2	EE → US	0.068	1.136	0.257	Rejected
H3	FC → US	0.028	0.428	0.668	Rejected
H4	PV → US	0.064	1.546	0.123	Rejected
H5	H → US	0.127	2.849	0.005	Accepted
H6	IQ → US	0.207	3.023	0.003	Accepted
H7	SyQ → US	0.064	1.714	0.087	Rejected
H8	SeQ → US	0.221	3.824	0.000	Accepted
H9	US → CI	0.511	10.890	0.000	Accepted

Hypothesis testing results are shown in Table 19. Five hypotheses are accepted: H1, H5, H6, H8, and H9; four ideas are rejected: H2, H3, H4, and H7; however, original sample values for all variables are more significant than zero, indicating a positive effect. The T-Statistic for the five

accepted hypotheses is greater than the T-Table value (1.96). In contrast, the T-Statistic for the four rejected beliefs is smaller than the T-Table value (1.96), yielding P-Values > 0.05 .

This study shows that the video conferencing application has succeeded in meeting user expectations regarding performance expectancy, as seen from H1. Students believe that online teaching and learning video conferencing applications benefit and improve their learning performance. Nonetheless, the study results show that H2 is incorrect and that user satisfaction with video conferencing applications is unrelated to users' effort expectancy. This is because students must exert much effort when using video conferencing programs in the classroom.

In addition, students also feel that the infrastructure for video conferencing applications does not support online learning activities such as networks, Wi-Fi, internet, technology, and university assistance, which can be seen from the rejection of H3. H4 was rejected in this study because students felt that using video conferencing applications for online studying requires no small cost to purchase internet or Wi-Fi quotas compared to when students learn directly from class. The charge is essential because students themselves must facilitate supporting media used in teaching and learning activities.

Conversely, the accepted H5 suggests that routine positively and significantly impacts user happiness. At the same time, all students at State and Private Universities were mandated to use video conferencing applications for online study during the COVID-19 pandemic, leading to an increase in the intensity of the use of video conferencing applications and their continuous service, which made it a natural thing and accustomed students to using them.

In addition, H6 was accepted because students felt that the information provided by the video conferencing application followed student expectations, such as the information provided was clear, accurate, and always presented up to date. However, students felt that the system's quality was not a determining factor for satisfaction because the performance of the video conferencing application was not in line with student expectations, which made H7 rejected. On the other hand, the services provided by the video conference application affect user satisfaction because the quality of the video conference application follows student expectations.

This study also shows that the video conferencing application is successful and can be well received by students for online teaching and learning. The highest T-statistic of 10,890 indicates that users' satisfaction positively affects their intent to keep using the service, supporting Hypothesis 9. Suppose students are happy with the results of using video conferencing applications. In that case, they are more likely to use them again in the future, which is why user satisfaction plays a crucial role in the evolution of an information system.

IV. CONCLUSION

The study only confirmed five of the nine hypotheses tested while disproving the other four. The factors that affect whether or not a user will keep using a video conferencing app are the app's ability to meet the user's needs, the user's familiarity with the app, the user's habits, the quality of the information provided, and the quality of the User satisfaction is positively correlated with effort expectancy, enabling conditions, price value, and system quality; however, the correlation is weak. The study results show that those who use video conferencing applications are interested in doing so again in the future for educational purposes, suggesting that the applications are well received and provide a satisfactory experience for their users.

The study results back up the researcher's suggestion to increase the scope of the survey. This study's survey data were primarily collected from Java-based students; ideally, future research will access a more globally dispersed sample of respondents. The timing of this study, conducted while students were required to use video conferencing applications due to the COVID-19 pandemic, set the stage for subsequent research to be completed after the end of the pandemic, with revised research designs and additional factors.

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