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FACTORS MOTIVATING STUDENTS TO CONTINUE USING YOUTUBE AS A LEARNING AID POST-COVID-19 PANDEMIC

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Abstract

During the COVID-19 pandemic, the process of teaching and learning had to be conducted online, such as through Zoom meetings, due to physical meeting restrictions, including in higher education. However, this was not entirely effective due to various factors, such as individual student learning preferences. To enhance comprehension, students utilized video-sharing platforms like YouTube, which, as it turns out, was effective. Hence, this study aims to investigate what factors motivate students (both school and university students) to continue using YouTube as a learning medium post-COVID-19 pandemic. A theoretical lens of the Expectation Confirmation Model is used with the addition of external variables: Perceived Herd and Parasocial Interaction. A total of 242 respondents from both educational levels in Manokwari Regency were obtained and analyzed using Partial Least Square - Structural Equation Modelling (PLS-SEM). The study's results explain that students experience satisfaction in using YouTube, which motivates them in Manokwari to continue using it as a learning medium post-COVID-19. This satisfaction is influenced by variables such as confirmation (C), perceived usefulness (PU), and perceived herd (PH). However, the PU factor's impact on continuance usage (CU) has a t-statistic value <1.96 and a p-value >0.05, indicating it lacks significant influence. There is also a rejection of the parasocial interaction (PI) variable's influence on satisfaction (S). Furthermore, the use of control variables such as age and gender has shown significant influence on this study, with research findings indicating that age and gender significantly impact satisfaction and continuance usage.

Keywords*:* Control Variables, COVID-19, Expectation Confirmation Model, Parasocial Interaction, Perceived Herd, YouTube

I. INTRODUCTION

During the COVID-19 pandemic, the Ministry of Education and Culture issued Circular Letter No. 4 of 2020 regarding the Implementation of Education Policies during the COVID-19 Spread Emergency, namely Distance Learning, which required all elements of society, especially in education, to adhere to the standards set by the government, from early childhood education to higher education [1]. This led to a change in learning strategies for both teachers and students, as the learning process shifted to online platforms such as Zoom, Google Classroom, etc [2]. The Distance Learning regulations applied to all students in Indonesia, including those in Manokwari Regency. However, online learning was found to be less effective for students in Manokwari due to differences in learning preferences [3]. As a result, they sought alternative support for their learning process, such as utilizing video platforms like YouTube. The case study in this research focuses on YouTube as it can facilitate students in understanding their materials.

The use of video platforms such as YouTube in the learning process will have an impact on students' abilities [4]. During the COVID-19 pandemic, students were indirectly required to learn independently. This makes YouTube an appropriate choice for self-directed learning, as its advantages align with the implementation of distance learning. In Indonesia, YouTube is the most widely used application for self-directed learning because it can be used without live broadcasts, making it more flexible in terms of timing and accessible to the public [5]. In the previous explanation, the researcher intended to investigate the factors that motivate students to continue using YouTube as a learning medium post-COVID-19, especially for high school and college students in Manokwari Regency, using the Expectation Confirmation Model (ECM) research model.

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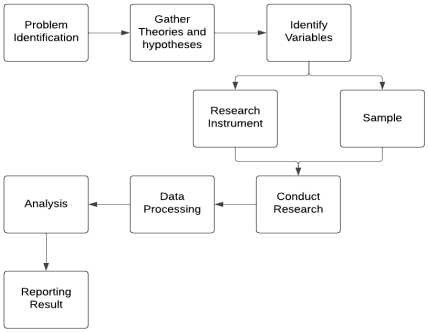
The ECM (Expectation Confirmation Model) was developed by Anol Bhattacherjee in 2001 and consists of three variables to predict and explain the intention to continue using a system, namely Perceived Usefulness, Confirmation, and Satisfaction. Referring to the issue at hand, the ECM model is suitable for this research as it can explain the behavior of students in Manokwari regarding the intention to continue using YouTube as a learning aid post-COVID-19. To align with the scope of this study, several factors are added to the test as social experience variables, namely perceived herd and parasocial interaction. These are used to assess how people around the students behave in using a particular system and the influence of parasocial interaction, which is used to observe the impact of interaction on social media, as it affects the intention to use services, purchase goods, and so on.

The purpose of this study is to identify the factors that motivate students in Manokwari to continue using YouTube as a learning aid post-COVID-19. This research is designed to analyze based on the Expectation-Confirmation Model (ECM).

II. MATERIAL AND METHODS

This research employs a quantitative methodology, chosen for the need for analysis in SEM PLS that utilizes numerical forms [8], [9]. Figure 1 illustrates the research flow as follows :

Figure 2 Research Flow



2.1 Data Collection

The data collection strategy in this research is to distribute questionnaires online using Google Forms to facilitate dissemination through WhatsApp and other online social media platforms. The questionnaire includes respondent data, filling instructions, and several statements that are structured to address and refer to each variable. This research utilizes the Likert scale for measurement. For quantitative analysis purposes, responses are needed as values, as explained in Table 2 below.

Table 2 Likert Scale [10]

Number	Description
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

As mentioned earlier, this research focuses on the sustained interest in the YouTube application among students. Therefore, the researcher prioritizes the research sample from high school and college students in Manokwari who use YouTube as a learning aid.

III. RESULTS AND DISCUSSION

3.1 Respondent Data

After the explanation above, the results of this data collection used a population of high school and college students in Manokwari who used YouTube as a learning media. Data were collected from April 28 to May 17, 2023, with a total of 272 respondent data, as shown in Table 3 below:

Table 3 Respondent Data

	Category	Frequency	Percentage
Gender	Male	152	57%
	Female	118	43%
Age	16 – 20 years	115	42,3%
	21 – 25 years	123	45,2%
	26 – 30 years	28	10,3%
	> 30 years	6	2,2%
Education Level	SMA/SMK/STM/MA	97	35,7%
	University	175	64,3%

3.2 Results and Analysis

This test uses SmartPLS 4 tools, which have two steps in assessing the model. The initial step is to complete the outer model testing to approve the estimation model, ensuring all relationships are reliable and valid [11]. The next step is the inner model, which aims to identify patterns within each data relationship [12].

1. Analysis Outer Model

The outer model in this research aims to specify the relationships between latent variables and their respective indicators. The testing involves examining the results of convergent validity tests, which consist of two stages: determining the value of the Loading Factor (LF), with valid values if each indicator value > 0.7 [13], and checking the value of AVE. The criterion for convergent validity for AVE is AVE > 0.50, indicating that more than half (50%) of the indicator variances can be included in the construct score. If AVE < 0.50, it means that, on average, there are more measurement errors that cannot be explained by the construct [13].

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Next, reliability testing is conducted to demonstrate the reliability of the indicators in measuring their constructs. This involves testing composite reliability (CR) and Cronbach's alpha (CA), which are considered reliable if their values are > 0.70 [12]. The following section presents the confirmatory factor analysis of the variables in Table 4:

Table 4 Results of the Confirmatory Variables

Construct	Statement Items	Code	LF
Perceived Usefulness (PU) (Ahmad R. P, 2020) & (Bhattacherjee, 2001) CA,CR,AVE=0.759,0.862,0.714	I feel that YouTube makes learning easier for me.	PU1	0.863
	I feel that YouTube can help improve my study productivity.	PU2	0.832
	I feel that YouTube provides benefits as a learning aid."	PU3	0.767
Confirmation (C) (Bhattacherjee, 2001) CA.CR,AVE=0.801,0.833,0.741	Using YouTube as a learning aid provides a better experience than expected.	C1	0.848
	The services provided by YouTube as a learning medium are better than expected.	C2	0.851
	Overall, my expectations are met in using YouTube as a learning medium.	C3	0.838
Satisfaction (S) (Cheng-Min Chao, 2019) CA,CR,AVE=0.851,0.899,0.707	YouTube provides a very satisfying experience in the learning process.	S1	0.848
	YouTube provides a very enjoyable experience in the learning process.	S2	0.834
	I am satisfied with YouTube's performance as a learning aid.	S3	0.817
	I am satisfied with my decision to use YouTube as a learning medium.	S4	0.824
Continuance Usage (CU) (Susanto et al, 2016) CA,CR,AVE=0.762,0.862,0.687	I will continue to increase my use of the YouTube application as a learning aid.	CU1	0.806
	I will continue to use the YouTube application as my preferred learning aid over other alternative applications.	CU2	0.841
	I will frequently use YouTube services as a learning aid in the future.	CU3	0.818
Perceived Herd (PH) (Lee and Hong, 2016) CA,CR,AVE=0.852,0.910,0.790	I am willing to use YouTube services as a learning aid because many of my acquaintances use it.	PH1	0.882
	The more people who use YouTube as a learning aid, the more it will motivate me to continue using the service.	PH2	0.880
	I will use YouTube as a learning aid because many of my acquaintances recommend it.	PH3	0.873
Para-social Interaction (PI) (Lim and Kim, 2011) CA.CR,AVE=0.949,0.949,0.914	I like to listen to recommendations from my idols regarding education on the YouTube application.	PI1	0.996
	I feel that my idol has an influence on my decision to use the YouTube application as a learning aid.	PI2	0.912
	I feel that statements from my idol about education can influence me in approaching YouTube services as a learning medium.	PI3	0.873

Next is the Discriminant Validity testing, where we examine the Fornell-Larcker value. To check this value [14], we ensure that the AVE value is compared to the correlation square between constructs. The value should be the highest

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among the other constructs. The Fornell-Larcker value can be seen in Table 5 below:

Table 5 Result of Discriminant Validity (Fornell-Larcker Criterion)

	C	CU	PH	PI	PU	S
C	0.846					
CU	0.658	0.822				
PH	0.606	0.663	0.879			
PI	-0.010	0.030	-0.032	0.929		
PU	0.670	0.530	0.465	0.002	0.822	
S	0.730	0.735	0.655	-0.017	0.717	0.831

2. Analysis Inner Model

The inner model aims to identify patterns within each relationship, which will answer the hypotheses formulated in the study [12]. In the inner model testing, the measurements of VIF and R-square (RS) can be observed [13].

VIF is used to evaluate collinearity in each construct, aiming to avoid high correlations between constructs in the model [13]. The criteria for VIF values are considered valid if VIF < 5 or > 0.2 [15]. It can be seen that all variables in this study have VIF values > 0.2 or < 5, indicating good collinearity with the dependent variables, namely CU, PU, and S, and enabling the study to proceed to the structural model testing stage.

In the hypothesis testing stage, the values of the p-value and t-statistic are examined. The criteria for acceptance are a p-value < 0.05 or a t-statistic > 1.96 [12]. The research results indicate that 5 hypotheses meet these criteria: H1, H2, H3, H6, and H7, indicating they are accepted. However, 2 hypotheses, H4 and H5, do not meet the criteria and are rejected.

Next, hypothesis testing was conducted by adding two control variables, namely age and gender. The test results showed that students in the age category of 21-25 years are more likely to have the intention to continue using YouTube as a learning medium. There were also test results on gender as a control variable, indicating that male and female students equally have the intention to continue using YouTube as a learning aid. Here are the results of the structural model evaluation in this study, as shown in Table 6.

Table 6 Evaluation of the Structural Model

Hypotheses	T-statistics	P-values	Result	16-20 years	21-25 years	>26 years	Male	Female
H1:C→S	4.239	0.000	Accepted	Rejected	Rejected	Accepted	Accepted	Accepted
H2:C→PU	12.97	0.000	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
H3:PH→S	5.516	0.000	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
H4:PI→S	0.158	0.874	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
H5:PU→CU	0.0841	0.933	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
H6:PU→S	5.331	0.000	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
H7:S→CU	10.360	0.000	Accepted	Accepted	Accepted	Rejected	Accepted	Accepted

To assess the level of influence of independent variables on the dependent variable, we can look at the R-Square value [13]. This result indicates that the variables Satisfaction and Perceived Usefulness can explain 54% of the influence on Continuance Usage and have a moderate predictive power. Furthermore, the Confirmation variable can explain 44.9% of the influence on Perceived Usefulness and has weak predictive power. Finally, the Confirmation, Perceived Usefulness, Perceived Herd, and Parasocial Interaction variables explain 68.3% of the influence on Satisfaction, with moderate predictive power. Here is Figure 3, the final model of this study.

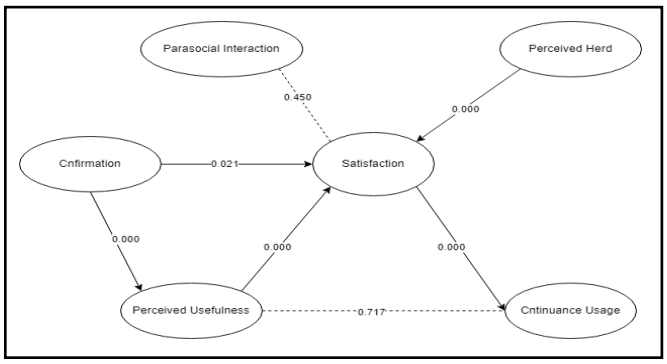

Figure 3. Final Model Results
(**p-value* <0.05, ***p-value* <0.01)

VI. CONCLUSION

After reviewing the results of the research stages, it can be concluded that several factors motivate high school and college students in Manokwari to continue using YouTube as a learning medium post-COVID-19 pandemic. This study utilized the ECM research model and included external variables such as perceived herd and parasocial interaction, along with two control variables, age, and gender. The results

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of this study indicate that five hypotheses significantly and positively influence the intention to continue using YouTube as a learning medium: H2 (confirmation towards perceived usefulness), H1, H3, H6 (confirmation, perceived herd, perceived usefulness towards satisfaction), and H7 (satisfaction towards continuance usage). The ECM model's research results explain that students in Manokwari feel that YouTube services have met the criteria and have provided good services as a learning medium, offering benefits and convenience. This satisfaction motivates students in Manokwari to continue using YouTube as a learning aid post-COVID-19 pandemic. However, reconsideration of the factor of perceived usefulness (PU) may be necessary for YouTube services as a learning medium, as the research results indicate that perceived usefulness (PU) towards continuance usage (CU) does not have a significant influence, with a t-statistic value <1.96 and a p-value >0.05.

Social experience is important to be considered as a support for the scope of this research because it can influence someone's decision-making about the service. This is evidenced in this study where perceived herd (PH) has a significant influence on satisfaction, indicating that students in Manokwari agree that the number of friends who recommend and use YouTube as a learning medium can influence student satisfaction. Meanwhile, parasocial interaction (PI) has a less significant influence on student satisfaction in Manokwari, as parasocial interactions sometimes only affect someone's lifestyle needs [16].

The use of control variables age and gender has been found to have a significant impact on this study. The research results show that both male and female students have an influence on satisfaction and continued use of YouTube as a learning medium. Meanwhile, the use of the age control variable shows that the age category of 21-25 years has an impact on student satisfaction in Manokwari and is more likely to have the intention to continue using YouTube as a learning medium.

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