Analysis of the Unified Theory Acceptance and Use of Technology (UTAUT) Model to Join in the Program through Behavioural Intention

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ABSTRACT

This research is a quantitative study with a descriptive and verification approach. The population in this study are Bangkit 2021 participants from sample calculations using the Issac and Michael formula and determined using a probability sampling technique with a stratified sampling approach. The analysis method uses Structural Equation Model (SEM) analysis with Lisrel 8.72 and descriptive analysis with SPSS 21. The purpose of this research is to describe the UTAUT, Behavioural Intention, and decision to join in the Bangkit Academy 2021 and to find out How much influence UTAUT has on the decision to join the Program in the BANGKIT ACADEMY 2021 through Behavioural Intention. The results show that there is a significant effect between performance expectancy on behavioural intention, effort expectancy on behavioural intention but social influence has no significant effect on behavioural intention. Based on the result, this research has implications that in an effort to maintain the enthusiasm of prospective Bangkit Academy participants in the coming year, it is hoped that Bangkit Academy will focus on excellence or dimensions that are considered to have the greatest effectiveness in influencing decisions to join the program for prospective Bangkit participants.

Keywords: UTAUT; Behavioural Intention; Use Behaviour

1. INTRODUCTION

The era of Society 5.0 is a new value created by innovation that will eliminate regional, age, gender, and language gaps that allow providers of products and services designed for personal needs and latent needs [1]. In this era of society 5.0 faces technology that allows access to virtual spaces that feel like physical spaces. The basic principle of society 5.0 is to balance business and economic development in a social environment [2]. Indonesia must also prepare and start preparing for the era of society 5.0, known as a super-smart society [3].

The government must synchronize education and industry and apply technology in teaching and learning activities [2]. Implementing the curriculum in Indonesia must shape students' character and instil educational values in social life [3]. Merdeka Belajar – Kampus Merdeka (MBKM) is one of the policies of the Minister of Education and Culture, Nadiem Makariem. MBKM program is one of the programs to prepare students to face social, cultural, the world of work changes and rapid technological advances. MBKM program is expected to produce graduates [4]. One form of learning activity from MBKM is an independent study/project program. This independent study/project aims to develop innovative products, provide research and development-based education (R&D), and improve student achievement at the national and international levels [4].

The challenge for Indonesia is not about ability or ambition but about providing skills to people in Indonesia regarding digital skills by taking advantage of opportunities created by technology. Google, in this case, helps Indonesians acquire software skills that are in demand by Indonesian technology companies. In 2020, Google announced its initiative to hold a 6-month incentive training program for developers in collaboration with GoJek, Tokopedia, Traveloka, and several leading Indonesian universities in Jakarta, Denpasar, Bandung, and Yogyakarta. The Program is called BANGKIT, which is implemented free of charge and is attended by 300 participants who have passed the selection [5]. BANGKIT program membership data in 2020 and 2021 can be seen in Table 1 (data processed by authors).

Table 1 Participation Data Bangkit Program

No.	Category	BANGKIT 2020	BANGKIT 2021
1.	Applicants	+2.500 Participants	±40.000 Participants
2.	Passed	300 Participants	3.000 Participants
3.	Graduates	26% Female	30% Female
4.	Background non-CS/IT	-50%	29%

Sources: Data processing 2021

Best participants in BANGKIT will have the opportunity to participate in the University Innovation Fellow program from Stanford University [6]. Partnerships with various industries are also advantageous for BANGKIT 2021 participants because, at the end of the Program, a virtual career fair is held by leading companies in Indonesia [7]. BANGKIT 2021 participants also benefit from taking a free Google standard global certification exam. These certifications include Associate Android Developer for Android Programming, TensorFlow Certification for Machine Learning, and Associate Cloud Engineer for Cloud Computing [8]. BANGKIT 2021 program also provides learning soft skills such as collaboration, communication, design thinking, and work ethics which are very important for future career development [6].

The decision to join the Program can be measured using technology acceptance and use tools [9];[10];[11];[12]. Behavioural intention is the strength of a person's intention to carry out specific behaviours, such as the desire to use them at the next opportunity [11];[12]. UTAUT research has reached its practical limits explaining a technology acceptance and use decision in organizations, although UTAUT-based research has now developed. UTAUT can be applied with other theories or expanded to study various technologies both in organizations and non-organizations [13];[14];[9]. This research examined how Unified Theory Acceptance and Use of Technology (UTAUT) significantly influence the Decision to Join the Program through Behavioural Intention.

2. METHOD

This research is a quantitative study with a descriptive and verification approach [15]. The population of this study consisted of 3000 students who participated in the BANGKIT 2021 program, which consisted of three learning paths: Machine Learning, Mobile Development, and Cloud Computing. Number of samples studied was 342 respondents, who will be divided into three learning paths resulting from sample calculations using the Issac and Michael formula with an error rate of 5% and determined using a probability sampling technique with a stratified sampling approach [16]. Types of data and sources of data used in This research use primary data and secondary data. Sources The data source of this research is external data. Data collection techniques used in this study are as follows: literature, study literature, and Questionnaire. The analysis method uses Structural Equation Model (SEM) [17] analysis with Lisrel 8.72 and descriptive analysis with SPSS 21.

3. RESULT AND DISCUSSION

3.1. Descriptive Analysis

Description from distributing questionnaires that aim to determine how respondents apply. Based on measurements on these dimensions, the percentage of respondents' answers to each question can be seen on Table 2 (data processed by authors):

Table 2 Recapitulation of Performance Expectancy

No.	Dimensions	Average Score	Criteria
Performance Expectancy			
1	Perceived Usefulness	1382.5	Agree
2	Extrinsic Motivation	1470	Strongly Agree
3	Job-fit	1059.33	Sufficiently Agree
4	Relative Advantage	1498	Strongly Agree
5	Outcome Expectancy	1487.33	Strongly Agree
Sum Average Score		6897.16	Agree
Performance Expectancy		1379.43	
Effort Expectancy			
1	Perceived Ease of Use	1438.5	Strongly Agree
2	Complexity	1439.67	Strongly Agree
3	Ease of Use	1450.33	Strongly Agree
Sum Average Score		4328.5	Strongly Agree
Effort Expectancy		1442.83	
Social Influence			
1	Subjective Norm	1072	Sufficiently Agree

No.	Dimensions	Average Score	Criteria
2	Social Factors	1134	Sufficiently Agree
3	Image	1240	Agree
Sum Average Score		3446	Sufficiently Agree
Social Influence		1148.66	
Facilitating Conditions			
1	Perceived Behavioural Control	1330	Agree
2	Facilitating Conditions	1443.33	Strongly Agree
3	Compatibility	1416	Agree
Sum Average Score		4189.33	Agree
Facilitating Conditions		1396.44	
Behavioural Intention			
1	Perceived Usefulness	1501.5	Strongly Agree
2	Perceived Ease to Use	1395.33	Agree
3	Task Technology Fit	1406	Agree
Sum Average Score		4302.83	Agree
Behaviour Intention		1434.28	
Use Behaviour (Decision to Join Program)			
1	Facilitating Conditions	1464.33	Strongly Agree
2	Habit	1498.67	Strongly Agree
3	Behavioural Intention	1519	Strongly Agree
Sum Average Score		4482	Strongly Agree
Use Behaviour		1494	

Source: Data Processing, 2021

Based on table 2, the result of the average dimension score on the performance expectancy variable is 1379.49. Through the measurement results, it is known that the dimension that obtains the highest average score is relative advantage of 1498. This can be interpreted that relative advantage affects respondents in participating in the 2021 Bangkit program. According to research conducted by [11] states that performance expectancy has an effect on behavioural intentions of online registration users which can increase satisfaction, profits for online registration users.

The result of the average dimension score on the effort expectancy variable is 1442.83. Through the measurement results, it is known that the dimension that obtains the highest average score is perceived ease of use with 1450.33. This can be interpreted that perceived ease of use affects respondents in participating in the Bangkit 2021 program. Previous research conducted by [13] identified that the use of information technology is influenced by ease of use. The ease of using a technology will create a feeling in the individual that the system has benefits and creates a sense of comfort.

The result of the average dimension score on the social influence variable is 1148.66. Through the measurement results, it is known that the dimension that gets the highest average score is image with 1240. This can mean that the Bangkit image is noticed and affects respondents in participating in the 2021 Bangkit program. Previous research conducted by [18] states that the natural environment, the human/society environment, and the mindset/concept/value environment that develop in society are able to influence the final goals to be achieved by the system.

The result of the average dimension score on the facilitating conditions variable is 1396.44. Through the measurement results, it is known that the dimension that obtains the highest average score is facilitating conditions with 1443.33. This can be interpreted that the facilitating conditions provided by Bangkit affect respondents to participate in the Bangkit 2021 program. According to previous research conducted by [12] which says that the interest of application users is influenced by the resources or devices owned by users, such as smartphones, and internet connections.

The result of the average dimension score on the behavioural intention variable is 1434.28. Through the measurement results, it is known that the dimension that obtains the highest average score is perceived usefulness with a value of 1501.5. This can be interpreted that perceived usefulness affects respondents to participate in the 2021 Bangkit program. According to [19] a person's behavioural intention to use an e-wallet is higher, the higher the intensity of its use.

The result of the average dimension score on the use behaviour variable is 1454. Through the measurement results it is known that the dimension that gets the highest average score is behavioural intention with 1519. This can be interpreted that behavioural intention affects respondents in joining the Bangkit 2021 program. Previous research what was done [12] which said that the increase in behavioural intention will affect the intensity of long-term use behaviour and it is not impossible to make online transportation for daily use.

3.2. Verification Analysis

Model specifications are the stage where a research model is carried out to establish a relationship between

latent variables and indicators to form a relationship in a variable. The formation of a relationship between one latent variable and another latent variable is based on the applicable theory.

Based on Figure 1 shows that the overall value of the loading factor on the path diagram of this standardized solution has a value of > 0.30 (processed by the authors). The next step is to estimate the model using t-value, the results of which can be seen in Figure 2 (processed by the authors).

Based on the results of Figure, the t-value estimation results have variables that do not have a path, namely the Y to Y.1 variable and the Z to Z.1 variable. Variables that do not have this path are defined as variance reference, which is an indicator variable that is significantly related to the latent variable.
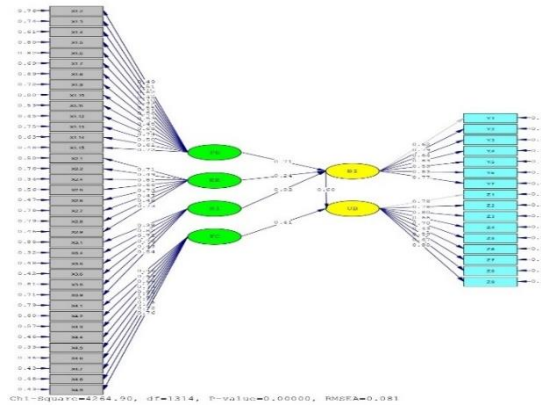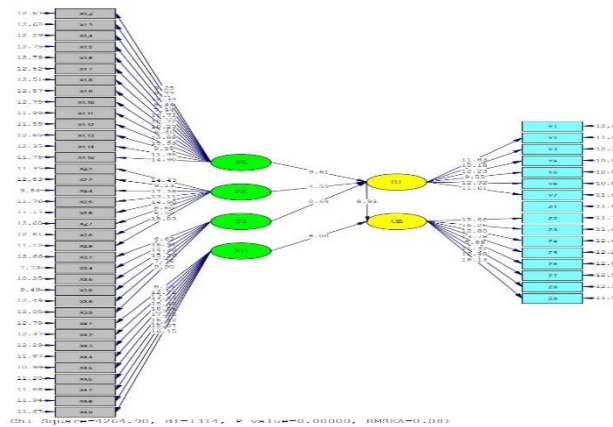

Figure 1 Path Diagram Standardized Solution Result

Figure 2 Path Diagram T-value Result

Table 3 Partial Test of UTAUT

Partial Effect of UTAUT Model on Behavioral Intention				
Exogenous Latent Variable	**Endogenous Latent Variable**	**Standardized Coefficient (<1)**	**T-Value (>1,96)**	**Note**
Performance Expectancy (PE=X1)	Behavioural Intention (BI=Y)	0.809	9.338	Significant
Effort Expectancy (EE=X2)	Behavioural Intention (BI=Y)	0.151	2.451	Significant
Social Influence (SI=X3)	Behavioural Intention (BI=Y)	-0.011	-0.297	Not Significant
Facilitating Conditions (FC=X4)	Use Behaviour or Decision to Join Program (UB=Z)	0.395	6.429	Significant
Behavioural Intention (BI=Y)	Use Behaviour or Decision to Join Program (UB=Z)	0.609	8.092	Significant
Partial Effect of UTAUT Model on Use Behavior Through Behavioral Intention				

Variable	Behavioural Intention (BI=Y)	Behavioural Intention (BI=Y) to Use Behaviour (UB=Z)	Use Behaviour (Decision to Join Program) (UB=Z)	T-Value (>1,96)	Note
Performance Expectancy	0.809	0.609	0.493	7.617	Significant
Effort Expectancy	0.151	0.609	0.092	2.41	Significant
Social Influence	-0.011	0.609	-0.006	-0.297	Not Significant

Source: Lisrel 8.72 Data Processing Result, 2021

There is a partial effect of Effort Expectancy on behavioural Intention of Y=0.151X2. The T-Value on the exogenous latent variable Effort Expectancy (EE=X2) against the endogenous latent variable Behavioural Intention (BI=Y) was 2.451>1.96. This shows that the Effort expectancy variable has a significant effect on Behavioural Intention. This study supports previous research conducted [12]; [22]; [23] said that Effort Expectancy has a significant effect on behavioural intention. This study rejects the results of research conducted by [20]; [21]; [11] which states that effort expectancy has no significant effect on behavioural intention.

There is a partial influence of Social Influence to behavioural Intention of Y=-0.011X3. T-Value on the latent variable exogenous Social Influence (SI=X3) on the latent variable endogenous Behavioural Intention (BI=Y) is -0.297<1.96. This shows that the Social Influence variable does not significant effect on Behavioural Intention. This study supports previous research conducted [11]; [21]; and [22] which states that social influence does not have a significant effect on behavioural intention. This study rejects the results of previous research conducted by [12]; [20]; and [23] which states that social influence has a significant effect on behavioural intention.

There is a partial effect of Facilitating Conditions on Use Behaviour of Z=0.395X4. The T-Value on the exogenous latent variable Facilitating Conditions (FC=X4) on the endogenous latent variable Use Behaviour or Decision to Join Program (UB=Z) is 6.429>1.96. This shows that the Facilitating Conditions variable has a significant effect on Use Behaviour. This study supports previous research conducted by [24] which states that facilitating conditions have a positive effect on use behaviour. This study rejects the research conducted by [11] dan [22] which state that facilitating conditions do not have a significant effect on use behaviour.

There is a partial effect of Behavioural Intention on Use Behaviour or Decision to Join Program for Z=0.395Y. The T-Value on the exogenous latent variable Behavioural Intention (BI=Y) on the endogenous latent variable Use Behaviour or Decision to Join Program (UB=Z) was 6.429>1.96. This shows that the Behavioural Intention variable has a significant effect on Use Behaviour. This study supports previous research conducted [12]; [22] which states that behavioural

intention affects use behaviour. This study rejects the results of research [11] which states that behavioural intention has no significant effect on use behaviour.

Path coefficient of performance expectancy to behavioural intention is 0.809 and behavioural intention to use behaviour is 0.609. Thus, the coefficient of indirect effect of performance expectancy on use behaviour through behavioural intention is 0.493 with a t-count value of 7.617. This means that there is a significant indirect effect of performance expectancy on use behaviour through behavioural intention. This study supports the results of research [12] which states that performance expectancy has a significant effect on use behaviour indirectly through behavioural intention.

Based on the results of data processing shows that the effort expectancy of behavioural intention is 0.809 and behavioural intention to use behaviour is 0.609. Thus, the coefficient of indirect effect of effort expectancy on use behaviour through behavioural intention is 0.092 with a t-count value of 2.41. This means that there is an indirect effect of effort expectancy on use behaviour through behavioural intention significantly. This study is in line with research conducted by [22] which states that there is a significant indirect effect of effort expectancy on use behaviour through behavioural intention.

Based on the results of data processing, it shows that the path coefficient of social influence on behavioural intention is -0.011 and behavioural intention towards use behaviour is 0.609. Thus, the coefficient of indirect social influence on use behaviour through behavioural intention is -0.006 with a t-count value of -0.297. This means that, insignificant there is an indirect social influence on use behaviour through behavioural intention. This study supports research [25] states that social influence has no significant effect on use behaviour through behavioural intention. This study rejects the research conducted by [26] which states that social influence has a significant effect on use behaviour through behavioural intention.

4. CONCLUSION

Based on the results of the research that has been carried out, conclusions of this research are that UTAUT in the Bangkit Academy 2021 is relatively high. The social influence variable is in the sufficiently category. The facilitating conditions variable is in the agree category. Behavioural Intention in the Bangkit Academy 2021 is classified in the agree category. Use Behaviour

(Decision to Join Program) in the Bangkit Academy 2021 in the strongly agree category. UTAUT has an effect on behavioural intention in the Bangkit 2021. UTAUT consists of several variables that have different significance. Partially, Performance Expectancy, Effort Expectancy, and Facilitating Conditions has a significant effect on Behavioural Intention. Social Influence has no significant effect on Behavioural Intention. Behavioural Intention has a significant effect on Use Behaviour. UTAUT affects use behaviour through behavioural intention. In this study, there are three variables that affect use behaviour indirectly, namely: there is a significant indirect effect of performance expectancy on use behaviour through behavioural intention. There is a significant indirect effect of effort expectancy on use behaviour through behavioural intention. And there is an indirect significant social influence on use behaviour through behavioural intention.

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