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The Effect of Gender toward Student Attitude on Using Interactive Multimedia IPAD

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Abstract

This paper aims to explore the studies on the application of technology in learning, especially during this pandemic. One of the most popular technologies in the world today is the use of the iPad in learning. However, it is unfortunate that until now there has been little research related to it. Therefore, this research was conducted with the aim of knowing students' attitudes towards the use of interactive multimedia iPad in Islamic religious education (Pendidikan Agama Islam or PAI) learning - how gender influences students' attitudes and whether there are differences in student attitudes based on gender. This research employs a quantitative method. An online survey using google forms was distributed with the help of the homeroom teacher to a research sample of 135 secondary school students. The results show several important findings: 1) Students' positive attitudes towards the use of interactive multimedia iPad in PAI learning. 2) There is no significant effect of gender on students' attitudes towards the use of interactive multimedia iPad, and 3) there is no significant difference between males and females regarding their attitudes towards the use of interactive multimedia iPad.

Keywords— Gender, Interactive Multimedia, iPad, Learning, Islamic Education

I. INTRODUCTION

he use of information and communication technology in learning has an effect on learning including ease of learning and broad access to users [1]. The use of ICT in learning is an interesting issue [2] and is gaining much attention especially in its use during the COVID19 pandemic, where all activities are not only using ICT and implementing online education. One of the most popular new technologies used around the world is the iPad. The use of iPad applications in learning was first released in 2010. However, until now, only a few empirical studies have discussed the use of iPad and its impact [3], particularly in the Islamic Education, or Pendidikan Agama Islam (PAI). Some findings show that students' attitudes are abnormal towards online learning through ICT [4]. Other findings also say that students' attitudes are moderate and face high barriers in online learning [5]. Therefore, this research is deemed very necessary to determine students' attitudes towards online learning using the iPad and it adds to the study of the application of the iPad in learning.

In Indonesia, the application of the iPad device in learning at school has been found in several places, such as in the Province of Riau-Indonesia where there is one school that implements this device. Based on the findings of previous research, it was found that this iPad is something promising and is seen as an effective medium in facilitating the learning process, improving learning outcomes and

student learning activities[3], [6]–[9]. Another finding states that the use of iPad is believed by students to play an important role in student engagement in learning. Thus, encouraging students to be active in the classroom and paving the way for their success[10]. This shows that the usefulness of the iPad is felt by students. The benefits of using technological devices are an opportunity for developing countries to educate many people through the use of technology such as the iPad in learning. However, to see the success of its applications, it is necessary to study individual acceptance of the use of these devices [11]. Several theories regarding the acceptance of the use of information and communication technology such as Technology Acceptance Model (TAM) and (write in full) TPB as well as the unified theory of acceptance and use of technology (UTAUT), discuss four aspects or factors of individual acceptance of the use of information and communication technology, namely ease, usability, attitude, and behavior intention [12], [13]. On this occasion the authors are interested in discussing one aspect of individual acceptance, namely student attitudes towards the use of iPad in online learning of PAI.

A study on students' attitudes towards the use of iPads, including the use of iPads in language learning, found that students' attitudes were positive and there was no significant difference based on gender and age [2]. However, the current study has a different construct and subject from this research. The construct of this current study was adopted from the TAM theory and its subject in PAI learning. Therefore, this study aims to find out how students' attitudes towards learning PAI during the COVID19 pandemic are. The study is guided by the following research questions:

1. What is student attitude in using interactive multimedia on PAI Learning?
2. Do students' gender influence students' attitude on PAI learning toward interactive multimedia iPad?
3. Do students' attitude on PAI learning toward interactive multimedia iPad differ by gender?

II. LITERATURE REVIEW

Student attitude is one of the important factors in learning. In the acceptance theory model, students' attitudes towards the use and application of technological devices are the object of study that is very often studied [12], [13]. Attitude is defined as an individual's reaction to something about his attraction and aversion to some aspect of his environment [14]. Attitude is a determinant of a person's success, because if the individual's attitude focuses on success, then the success he will get [15]. In learning that uses technology, attitude is the most effective factor in determining success [16]. Students' attitudes towards the use of technology are interpreted as all students' affective reactions to using technology devices [13]. The form of students' positive attitudes towards technology includes the degree to which students like being comfortable and happy with the various attributes of technology used in learning [17].

Several studies that have been conducted show that students' attitudes are positive towards the use of iPad in learning [2], [18]. Previous research found that gender significantly affects students' attitudes and there are significant differences in attitudes between men and women [18]. Another study found that men have more positive attitudes towards the use of technology in learning [18]. Other studies have found that women are less likely to use technology and are less confident than men [19]. Likewise, the results of research on students' self-efficacy and attitude toward the use of mobile learning found that gender differences only exist in attitudes, with male students having more positive attitudes towards the use of e-learning than female students [20].

In contrast, several other findings found that gender did not affect students' attitudes towards the use of technology in learning, as well as there were no differences between men and women in their attitudes towards the application

of technology in learning [21]. It was also found that gender was an insignificant factor and did not affect students' attitudes towards the use of technology in learning [22]. Also, several other contradicting findings stated that there was no difference in attitudes based on gender and gender did not affect students' attitudes towards learning using technology [21], [23].

III. METHODOLOGY

This research was designed using a quantitative approach [24]. Participants were selected from junior high schools in Indonesia that implemented the iPad application in learning. Data was collected using a questionnaire created using the Google Form application. The questionnaire containing a 5-point Likert scale was administered in Indonesian representing "strongly agree", "agree", "neutral", "disagree", and "strongly disagree". The items are adapted from Dixon [25]. The population for this study was 802 junior high school students consisting of 250 grade 7 students, 270 grade 8 students, and 272 grade 9. In this study, some samples were taken from the population. The number of research samples was as many as 260 people [26]. The sampling technique used is stratified random sampling, and the distribution of the survey was assisted by student homeroom teacher. There were 135 students who filled out the questionnaire which had been distributed consisting of 52 grade 7 students, 29 grade 8 students and 54 grade 9 students. The description of the participants can be seen in table.1

Table 1 Demographic Information of Respondents

Attributes	Classification	Frequency	Percentage%
Gender			
	Male	69	51,1
	Female	66	48,9
Grade			
	Grade 7	52	38,5
	Grade 8	54	40
	Grade 9	29	21,5

Data analysis was performed using SPSS. The data were analyzed using the one sample Kolmogorov Smirnov-test. Data normality test, the test results were analyzed for reliability by looking at the Cronbach alpha score and instrument validity tests were carried out to ensure all items were valid by comparing the significance value and the calculated r value. From the test results, all instruments are valid and reliable. In this paper, the first section presents the data analyzed using descriptive analysis. Meanwhile, to test the effect of gender on students' attitudes, simple regression analysis was used. Finally, a test of differences in students' attitudes towards the use of iPad based on gender was run using ANOVA analysis [27].

The results of instrument reliability based on the value of Cronbach's alpha for student attitudes in PAI learning using the iPad for the 5 items, obtained a Cronbach's alpha value of 0.908. Meanwhile, the validity value for each item is as follows. The first item 'I feel earning PAI using the iPad is fun' with a score of 0.872. The second item 'I find learning PAI using an iPad is interesting' with a score of 0.854. The third item 'I feel that learning PAI using the iPad is effective' with a score of 0.896. The fourth item 'I feel that learning PAI using the iPad application can add wider and deeper knowledge and insights' with a score of 0.796. The last item 'I like to learn PAI using the iPad application' with a score of 0.861.

IV. FINDING

Hypothesis

H1: There is a significant effect of students' gender on students' attitude.

H2: There are differences of students' attitude in learning PAI using interactive multimedia iPad based on students' gender.

Research Question I

To answer the first question, the SPSS software was used through the descriptive analysis. The results are as shown in table 2 and table 3 below.

Table 2. Gender Frequencies

		F	%	Validity (%)	Cum. %
Valid	Boys	69	51.1	51.1	51.1
	Girls	66	48.9	48.9	100.0
	Total	135	100.0	100.0	

Table 3. Attitude toward ICT and Gender Descriptive Statistic

	N	Min.	Max.	M	Std. D	Variance
Attitude	135	12	25	19.88	3.537	12.508
Gender	135	1	2	1.49	.502	.252
Valid N (list)	135					

Table 3 above shows the students' attitude toward interactive multimedia iPad. The mean value is 19.88, maximum value is 25 and minimum value is 12. This table shows that the score of mean data about students' attitude toward interactive multimedia is high. So, this mean score means that students' attitudes towards the use of iPad in learning PAI are positive.

Research Question 2

The second question is whether gender affects student attitudes in PAI learning using interactive multimedia iPad. The results of the regression analysis test using SPSS software obtained the output coefficient as in table 4 below.

Table. 4 Output Coefficient Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.742	.954		19.640	.000
	Gender	.765	.608	.109	1.260	.210

a. Dependent Variable: Attitude

The results of the table above are used to answer the second question of this study, namely whether there is an influence of students' gender on their attitudes towards the use of interactive multimedia iPad in PAI learning. The analytical test to answer the second problem above can be used through the sig value and the t value [28], [29]. The value of the t table in this study is 1,656 while the t count as can be seen in table 4 above is 1,260 smaller than the t table. This means that there is no significant effect of gender on student attitudes in learning PAI using interactive multimedia iPad. Likewise, the significant value indicates that the significance value obtained is 0.210, which is greater than 0.05. This means that there is no effect of gender on student attitudes in PAI learning using the iPad.

Research Question 3.

The third question of this research is whether there are differences in students' attitudes towards the use of interactive multimedia iPad in PAI learning. The results of the ANOVA analysis obtained a score as can be seen in Table 5 below.

Table 5. Analysis of Variance (Gender& Attitude) Homogeneity test

Attitude

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19.766	1	19.766	1.587	.210
Within Groups	1656.337	133	12.454		

Total	1676.104	134

Table 6. Tests of Between-Subjects Effects

Dependent Variable: Attitude

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	19.766[a]	1	19.766	1.587	.210
Intercept	53381.189	1	53381.189	4286.384	.000
Gender	19.766	1	19.766	1.587	.210
Error	1656.337	133	12.454		
Total	55038.000	135			
Corrected Total	1676.104	134			

a. R Squared = .012 (Adjusted R Squared = .004)

The results of the ANOVA analysis as can be seen in table 5 above show that there is no significant difference in students' attitudes towards the use of interactive multimedia iPad in PAI learning by gender. The table above shows the sig value of 0.210 which is greater than 0.05. Thus, the hypothesis is rejected, and the null hypothesis is accepted.

V. DISCUSSION

The use of iPad technology is still very rarely found in some parts of Indonesia. As a tool used for teaching and learning activities in schools, the results of research on it can be used as references and considerations. Regarding the application of technology in general, there is still a general assumption that the use of technology in learning can lead to negative behavioral tendencies in some students and doubt the level of effectiveness. This is what needs to be followed up through research related to the application of technology in learning, especially related to students' attitudes to the application of iPad interactive multimedia-based technology that has been carried out in several schools in Indonesia. Thus, it can be used as a consideration for education managers and the community in choosing the right learning system in improving the quality of learning for students or their children. The main focus of this study is to reveal students' attitudes quantitatively by explaining the influence of gender on attitudes and differences in attitudes between male and female gender in the application of interactive multimedia in PAI learning.

This study found that students' attitudes towards the use of interactive multimedia iPad in PAI learning were positive. This is as shown in table 3 above which shows the acquisition of a high mean score of 19.88 and a standard deviation score of 3.537. This means that the use of interactive multimedia iPad is favored by students. This finding is in line with other previous findings which state that students' attitudes are positive towards the use of technology such as mobile learning [17], [30], [31]. Other research also says that most students have a positive attitude towards the use of mobile learning [32]. Other qualitative studies are also in line, also in which one study found that online learning in the COVID-19 emergency reveals the effectiveness of learning in terms of cost and time, safety, comfort and a positive attitude with increased student participation in learning. While the most severe disturbances are related to network problems, instructors and friends [5].

This study also found that gender had no effect on students' attitudes towards the use of interactive multimedia iPad in PAI learning. This is indicated by the t-count score and p-score (sig) as in table 4 above with the t-count score of 1,260 which is smaller than the t table

of 1,656. Also, the p value (sig) with a score of 0.210 is greater than 0.05, which means that there is no significant effect of gender on students' attitudes towards the use of interactive multimedia in PAI learning. This finding is in line with previous findings such as the finding that gender is not a significant factor influencing attitudes towards the use of information and communication technology in the teaching and learning process [32]. Other studies have also revealed that gender bias is not a significant factor when considering attitudes towards the use of technology in learning [21].

The last finding of this study is that there is no significant difference in student attitudes based on gender between male and female towards the use of interactive multimedia iPad in PAI learning. As the results of the ANOVA analysis above show that the p value (sig) 0.210 is greater than 0.05, thus the null hypothesis is accepted. This means that there is no significant difference in students' attitudes towards the use of interactive multimedia iPad in PAI learning. This finding is in line with previous findings which said that there was no difference in students' attitudes towards the use of information and communication technology in learning [32], [33].

The findings above indicate that even though this research was conducted during the COVID-19 pandemic in 2021, students' attitudes towards the use of interactive multimedia on the iPad remained positive, as found before the pandemic. This means that the pandemic situation does not cause a negative attitude towards the use of the iPad in the online learning system. The possibility of the emergence of negative attitudes found in some research is not due to the device factor, the authors agree with the findings which say that there are several online problems, namely the teacher, network and friend factors [5]. Actually, there is boredom that appears during the lockdown during the pandemic, not only experienced by students, but everyone feels this boredom. This can be due to activities that are limited to only being at home for months which cause the effect of being bored and uninterested. This finding also indicates that there is no gender stereotype in students' attitudes towards the use of interactive multimedia iPad. This is very good because it means that there is no assumption that technology is synonymous with men only. This finding also proves that there is no significant effect between gender on students' attitudes towards the use of interactive multimedia iPad in learning.

The findings in this study have both theoretical and practical implications. Theoretically, these findings can enrich research related to the application of technology in learning, especially the iPad. It is especially related to several theories such as the acceptance model theory [12], [13], in which there is no significant effect of gender on students' attitudes towards the use of interactive multimedia iPad in learning. Another practical implication shows that the application of interactive multimedia technology on the iPad is addressed positively, thus it can be used as a basis for the government and education management leaders in considering the use of tablet-based technology in their learning system whereby until now is still rarely found in big cities in Indonesia. Indeed, the challenge of changing the direction of education in integrating the application of technology in learning is no longer something that must be avoided at this time.

VI. CONCLUSION

The application of technology in learning that is used as a medium and source of learning is a necessity, it is not just a complement, but is a unified component that is interrelated in achieving quality learning. The interactive multimedia iPad is one of the technologies whose use is still very rarely encountered in the learning system in schools in big cities in Indonesia. So, its application in several places needs research studies to find out how students accept this device, alongside studies of other aspects. This research has found that students' attitudes towards the use of interactive multimedia are positive, the effect of gender is not significant on students' attitudes towards the use of interactive multimedia iPad and there is

no difference in students' attitudes based on gender. These findings have implications for educational theory, especially in the field of learning media, as well as several other practical implications. Thus, it can be concluded that the use of interactive multimedia iPad can be applied in learning, especially learning the Islamic religious education.

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