Technology-Assisted Teaching Aids in Teaching and Learning: Evidence from the Malaysian Tahfiz Ulul Albab Model (TMUA)

Muhd Zulhilmi Haron, Mohamad Khairi Haji Othman, Mohd Isha Awang

Abstract: The use of state-of-the-art teaching aids in teaching and learning activities (T&L) had been proven in enhancing teachers' teaching effectiveness in the classroom. This study aims to examine the level of technology usage among teachers and students in the Tahfiz Ulul Albab Model (TMUA) program as well as teachers' perception on technology usage among teachers in the TMUA program based on 21st Century In-Service Training (LADAP PAK21). A total of 30 teachers and 100 students were selected as respondents in this study. Data analysis was performed using Statistical For Social Science (SPSS) Version 22.0 software. The findings show that the level of technology-assisted teaching aids usage is moderate to high. However, there is no difference among teachers who follow LADAP PAK21 towards technology-assisted teaching aids usage. The findings of this study show that although teachers have a positive perception of the importance of u technology usage, the level of usage is still at a moderate level. This shows that the level of awareness and encouragement in the usage of technology-assisted teaching aids needs to be increased.

Index Terms: technology-assisted teaching aids, technology, perception, training, tahfiz

I. INTRODUCTION

Technology is increasingly being used daily, hence there is increased awareness among the public on the importance of technology and all information is accessible at the fingertips. Various efforts and measures are taken by educational institutions in strengthening technology infrastructure in education which indicates that technology is an effective alternative in improving the teaching quality in classrooms. Teachers play a key role in leveraging on technology-assisted teaching aids for interactive teaching and learning activities. The existence of teaching aids makes teachers function as facilitators in enhancing the effectiveness of student-centred learning by only 25 per cent of teacher involvement in the classroom [1]. Teachers are aware of this fact to motivate student to focus on teaching activities.

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Although many studies have been conducted demonstrating the benefits of using technology-assisted teaching aids, the level of technology usage is still relatively modest. The technology usage among teachers in Malay Language [2], History [3], Islamic Education [4], Arabic [5]-[6] and Mathematics [7] is still at a moderate level despite having high perceptions on technology usage. Likewise, the use of technology-assisted teaching aids leads to a positive impact on the development of student learning Islamic Education subjects [8]. However, the technology presence has an impact on the technology-assisted teaching aids preparation by teachers in the classroom, especially for Tahfiz Ulul Albab Model (TMUA) teachers.

Observations during the TMUA Implementation Rating Examination found that TMUA teachers are also less likely to use audio-visual or visual related Qiraat al-Quran while schools provided relevant educational resources [9]. Besides, TMUA teachers pay less attention to the application of technology in their teaching and learning (T&L) [10]. This is due to an effective T&L that has interactive elements [11] as part of efforts to produce students with higher-order thinking skills [12].

In this regard, the purpose of this study was to examine the level of technology-assisted teaching aids usage implementation in the TMUA program. Besides, the study look at the differences in teachers' perceptions of technology-assisted teaching aids usage in the TMUA program based on LADAP PAK21. In particular, this study seeks to answer the following questions:

1. What is the level of technology-assisted teaching aids among teachers in the TMUA program?
2. What is the level of technology-assisted teaching aids usage among students in the TMUA program?
3. Is there a perceptual difference in the usage of technology-assisted teaching aids among teachers for the LADAP PAK21 program?

II. METHOD

This survey study used questionnaires as an instrument. The sample of this study consisted of 30 teachers (18 males & 12 females) who taught the Hifz Quran and the Maharat Quran and 100 fourth grade students (43 boys & 57 girls) in one of the schools implementing the TMUA program in the northern zone of Malaysia. Majority of the teachers are 24-30 years old (75%) and the remaining are between 32-46 years old (25%).

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Majority of the teachers are novice teachers (96.7%) and have not yet completed their teaching course (90%). Majority of the students scored excellent results in the Hifz Al-Quran (78%). The Alpha Cronbach value for the teachers' questionnaire is 0.768 and the Alpha Cronbach value for the students' questionnaires is 0.775. The data obtained from the questionnaires were processed and analysed using the Statistical Package For The Social Science 22.0 (SPSS 22.0) program using descriptive statistics and inferences such as mean, standard deviation and t-test. The interpretation scales used for the meanings in this study are as follows:

1.0 – 2.3 (Low)
2.4 – 3.7 (Moderate)
3.8 – 5.0 (High)

This study involved two sets of questionnaires that were divided into the Teachers' Questionnaire and the Students' Questionnaire Set. The development of the instrument is based on the CIPP Evaluation Model [13] which was adapted and based on the subject matter and objectives of the study [14].

III. RESULTS

A. Level of technology-assisted teaching aids usage among teachers in the TMUA program

Overall, almost all items in this section have a moderate mean score of 3.00 to 3.57. At this moderate level, the highest value 3.57 was recorded by item T3 which is the level of proficiency in technology-assisted teaching aids usage, while the lowest value was 3.00 by item T4 which is the frequency in technology-assisted teaching aids usage. For item T5, the latest level of teaching aids usage and suit student needs recorded a score of 3.23. The highest mean score of 4.40 was recorded by item T1 which is the technology-assisted teaching aids usage to increase students' interests followed by item T2, which is the ability of teachers in using the technology-assisted teaching aids recorded a score of 3.90.

Based on Table 1, the overall mean score value for technology-assisted teaching aids consumption among teachers was found to be 3.62. This indicates that the level of technology-assisted teaching aids usage among teachers as a whole is modest.

Table 1: Level of technology-assisted teaching aids usage among teachers in the TMUA program

No.	Item	Mean	Standard Deviation	Level
T1	The use of technology-assisted teaching aids enhanced students' interest in T&L tahfiz	4.40	0.77	High
T2	I can use multimedia material during T&L tahfiz	3.90	0.88	High
T3	I am skilled in using technology tools (audio, video,	3.57	0.89	Moderate
	software, computers) during T&L tahfiz			
T4	I always use technology-assisted teaching aids during T&L tahfiz	3.00	0.87	Moderate
T5	I always use the latest technology-assisted teaching aids application to suit the needs of my students	3.23	1.10	Moderate
	Overall Mean Value	3.62		

B. Level of technology-assisted teaching aids usage among students in the TMUA program

Table 2 shows the mean scores of students' perceptions of technology-assisted teaching aids usage in the TMUA program. The highest mean score of 3.77 was obtained in item S1 related to the technology-assisted teaching aids usage in enhancing students' interest in tahfiz learning.

Item S2 describes teachers' technology-assisted teaching aids usage as the second highest mean score with a mean score of 3.22 after item S1. In relation to students 'perceptions of teachers' skills in using technology-assisted teaching aids through item S3, the findings show a mean score of 3.15. Whereas students' perceptions of the current level of technology-assisted teaching aids usage and suit their students' needs through item S5 show a mean score of 3.00. The lowest mean score recorded is obtained from item S4, which is the teachers' frequency in using technology-assisted teaching aids with a mean score of 2.97. Based on Table 2, the analysis of the questionnaire on students' perceptions of technology usage in TMUA programs was found to be moderate.

Table 2: Level of technology-assisted teaching aids usage among students for TMUA programs

No.	Item	Mean	Standard Deviation	Level
S1	The usage of technology-assisted teaching aids enhanced my interest in tahfiz learning.	3.77	0.94	Moderate
S2	My teachers use multimedia material in the teaching of tahfiz	3.22	1.26	Moderate
S3	My teachers are skilled in using technology tools (audio, video, software, computers) during the T&L tahfiz	3.15	1.16	Moderate

S4	My teachers always use technology-assisted teaching aids to teach when teaching tahfiz	2.97	1.15	Moderate	
S5	My teachers always use the latest technology-assisted teaching aids application in meeting students' current needs	3.00	1.18	Moderate	
Overall Mean Value		3.22			

C. Comparison of perceptual differences in technology-assisted teaching aids usage among teachers in the TMUA LADAP PAK21 program

H_{o1}. There is no significant mean difference between teachers who attended and those who did not attend LADAP PAK21.

This hypothesis is presented to view if there is a significant difference in the mean scores on the perceptions of technology usage among teachers for the TMUA program based on the LADAP PAK21 program. The t-test is used to test the hypothesis on the population mean.Independent sample t-test was performed to determine whether there was a significant mean score difference between the dependent variables and the independent variables.

Based on Table 3, the mean t-value for comparison of perceptions between teachers who have attended and teachers who have not attended LADAP PAK21 is t = 1.333 and p = 0.194. This significance level is greater than 0.05 (p = 0.194> 0.05). Therefore, the t-test result fails to reject the null hypothesis (Ho1). This means that there is no significant difference between teachers who attended (mean = 3.80) and teachers who have not attended (mean = 3.48) LADAP PAK21.

Table 3: Comparison of Perceptual differences in technology-assisted teaching aids usage among teachers for TMUA program based on LADAP PAK21

D.V	LADAP PAK21	N 30	Mean	S.D	t-value	Sig. p
technology-assisted teaching aids usage	Attended	13	3.80	0.55	1.33	1.94
	Did Not Attend	17	3.48	0.71		

*significant at level of p<0.05

IV. DISCUSSION

A. Level of technology-assisted teaching aids usage among teachers and students in the TMUA program

This study found that teachers and students have a moderate perception of the technology-assisted teaching aids usage in TMUA program. This finding is not in line with [8] which had shown that religious secondary school teachers have a high perception of the technology-assisted teaching aids usage in T&L. However, this study is in line with [15] which shows that the level of technology usage among religious secondary school teachers is moderate.

This study shows that teachers have a high perception of technology-assisted teaching aids usage in enhancing students' interest. The study also found that TMUA teachers have the ability to use high-tech technology. Teachers need to be aware of the current changes in the education field. The advantage of technology in education should be leveraged by teachers as it can assist in enhancing teaching methods. The benefits of using technology as teaching aids medium in T&L should be taken seriously since there are many benefits of using technology in T&L [11] and it can stimulate students' vision recognition, listening, writing and reading [16]-[17].

B. Comparison of perceptual differences in technology-assisted teaching aids among teachers for TMUA program based on LADAP PAK21

Based on this study, technology-assisted teaching aids usage technology in teachers who attended LADAP PAK21 is higher than teachers who did not attend LADAP PAK21. However, there is no significant difference in teachers who attended LADAP PAK21 in the technology-assisted teaching aids usage. This may be due to the majority of teachers are novice teachers who have less than three years of teaching experience and have not yet taken any teaching course This indicates that teachers' skills in diversifying teaching aids usage should get noticed as teachers who are skilled in teaching aids usage can enhance student interests.. In this regard, researchers are of the view that teachers should use the latest technology applications in their presentations to stimulate students' sense of purpose in creating interactive T&L [11]-[18].

V. CONCLUSION

Overall, researchers found that the practice of using technology-assisted teaching aids among teachers and students is at a moderate level. Although the findings show that teachers have high perceptions of the technology-assisted teaching aids usage in enhancing students' interests and have the ability to use high-tech teaching aids. However their skill, the regularity and the latest teaching aid usage which meet the needs of students are at a moderate level.This study has implications for several parties, especially educational institutions, school administrators and teachers. Educational institutions should provide special funds and opportunities in enabling teachers to enhance their competencies in technology usage. School administrators need to encourage teachers to take advantage of the use of technology in the classroom. While teachers need to be ready to embrace the latest technology in their teaching aids design to be more creative and innovative. This is because the effectiveness of technology-assisted teaching aids during T&L depends on teachers' skills and attitudes.

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