

School's Facilities And Achievement Of Students In Ulul Albab Model Tahfiz Schools In Malaysia: A Mediating Roles Of Satisfaction

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Abstract: Schools with good infrastructures and well-equipped facilities can improve the quality of teaching and learning. In turn, the provision of effective learning in the classroom will increase students' achievement. This study was conducted to examine the influence of school facilities on student achievement. The study involved 304 form four students from three schools implementing the 'Tahfiz Model Ulul Albab' (TMUA) programme in Malaysia. The structural equation modeling, using Smart Partial Least Square software (SmartPLS3), was used to analyse the data. Findings show that the quality of infrastructure and facilities in schools affect the achievement of TMUA students, with satisfaction acts as the mediator in this relationship. This study shows that facilities and infrastructures are some of the elements that influence the achievement of TMUA students. Based on this finding, relevant authorities should strive to increase the quality of infrastructures and facilities in schools as it could improve students' academic achievement.

Index Terms: facilities, achievements, satisfaction, performance, tahfiz, Malaysia.

1. INTRODUCTION

In recent years, the tahfiz (Quranic memorization) education model has seen a rapid growth in Malaysia due to the increasing public attention and awareness towards the importance of Quran recital and memorisation. Recent trends have shown that more parents are choosing tahfiz schools for their children's education. In line with this development, the Terengganu Foundation and Majlis Amanah Rakyat (MARA) have established the Ulul Albab (gifted learners) Tahfiz programme for students of the Imtiaz Secondary School and several MARA Science Colleges (MRSM). Based on this model, the Ministry of Education Malaysia (MOE) has started offering the Ulul Albab Tahfiz Model (TMUA) programme in 16 selected secondary schools across Malaysia. The aim of the TMUA programme is to produce students who can memorise all 30 Quranic 'juz' (parts) throughout their five years in secondary school [1]. The MOE has taken numerous efforts and measures to improve infrastructure and facilities in schools as a way to improve students' performance. Schools with good facilities and well-equipped facilities play an important role in increasing students' achievement as well as their performance. Furthermore, it can facilitate the use of technology to create an interactive classroom learning experience [2]. It was reported that the presence of good facility enhances the effectiveness of student-centred learning and requires only 25 per cent of teacher involvement in the classroom [3]. In this light, teachers have realized this significant role in their effort to stimulate the interest and satisfaction of TMUA students towards the teaching and learning process. The access to well-equipped facilities and good infrastructure enables teachers to use a variety of resources to achieve the learning outcomes [4]. The state of facilities in schools vary across their locations, types, and

categories of schools. A school's facilities and infrastructures are not only limited to the physical classrooms, but also included all components in a school's environment such as the School Resource Center (PSS), teaching aids, and textbooks. Maintaining a school environment that is conducive for learning will help students to learn optimally during the teaching and learning process and increase their academic performance.

School's resource centre allows the systematic collection and access to teaching and learning materials. The resource centre provides access to information, references and resources that could help teachers to improve their lessons. At the same time, school resource centre helps students to develop research and library skills so that they can find academic resources independently. Subsequently, this will encourage reading and develop a culture of knowledge and lifelong learning among students. The use of the school's resource centre can increase students' awareness towards the importance of caring for the environment [5]. Findings of this study indicate the positive relationship between the use of school resource centre and the increase of students' awareness about environmental issues. Students spend most of their school time in their classroom. Therefore, classrooms environment should be conducive for learning [6]. The learning environment of a classroom depends on a number of factors, including the size of the classroom, lighting, ventilation system and the layout of the classroom furniture. All of these can influence students' learning process. This reflects that students' learning experience could depend on the physical facilities available in the classroom. Having a good and conducive physical facilities stimulate cognitive activities, enhance interaction and stimulate active learning among students. This situation enhances students' interest towards learning and increases the quality of the teaching and learning process. The use of teaching aids during lessons could increase students' interest and improve the achievement of TMUA students. Teachers play an important role to choose and use the suitable teaching aids to facilitate effective learning. The use of teaching aids strengthens teachers' role as facilitators of student-centred learning activities. Teachers need to utilize teaching aids to increase the interest and satisfaction of TMUA students to optimize learning. Numerous

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studies [7] , [8] have shown the positive effects on the use teaching aids, specifically in increasing students' interest and satisfaction towards learning. Textbooks are one of the most important and widely used resources. Textbooks provide teachers with the syllabus contents to ensure each learning outcome in the syllabus is achieved. Meanwhile, textbooks provide the basic reference on the subject to the students. The MOE has launched the nationwide Textbook Loan Scheme (SPBT) in 1975 to help poor students, and in 2007, textbooks are provided free of charge to all students. The MOE has spent almost RM60 million annually to supply free textbooks to all schools across Malaysia [9]. A study by the MOE found that the SPBT programme contributes to the increase in students' performance [10]. A study conducted by [11] found that the use of textbooks in the classroom influences the students' understanding of the learning content. Students' achievement is influenced by numerous factors, including students' interest and satisfaction. Based on the review of literature, studies have found positive relationship between these factors and achievement in different subjects including Arabic [12], Islamic Education [13], History [14], Additional Mathematics [15] and Science [16]. However, studies on the relationship between facilities and student achievement are still lacking in regards to students enrolled in specific programme like TMUA. Based on the research gap presented above, there is a need for studies to examine the influence of access to adequate facilities on satisfaction and achievement of TMUA student. This study will answer this research question on whether a school's infrastructures and facilities affect the satisfaction and achievement of TMUA students? Thus, four hypotheses were developed in this study, as follow;

H1: There is a positive and significant relationship between school's facilities and the achievement of TMUA students.

H2: There is a positive and significant relationship between satisfaction and the achievement of TMUA students.

H3: There is a positive and significant relationship between school's facilities and the satisfaction of TMUA students.

H4: Satisfaction is a mediator in the relationship between school's facilities and the achievement of TMUA students.

2 METHODOLOGY

2.1 Participants

This study was conducted using the quantitative research approach. Population of this study is students participating in the TMUA programme and the sample was selected from three Malaysian schools pioneering the programme. This schools represent three states from different zones, the central zone (Kuala Lumpur), the northern zone (Kedah) and the eastern zone (Pahang). Samples consists of 304 form four students. Among them, 170 (56%) of the participants were female, while 134 (44%) students were male. Table 1 shows the frequency and percentage of participants' distribution according to school and gender. Table 2 illustrates the frequency distribution and percentage of the number of juz' (parts) of the Quran memorised by TMUA students. This study found that the majority of students (49.3%) have successfully memorise all of 30 juz' in the Quran. Meanwhile, only 2 (0.7%) of the students were able to memorise up to 20 juz'.

TABLE 1:
DISTRIBUTION OF PARTICIPANTS ACCORDING TO SCHOOL AND GENDER

School	Gender	Frequency	Percentage (%)
X	Male	47	15.4
	Female	53	17.4
Y	Male	52	17.1
	Female	51	16.7
Z	Male	35	11.5
	Female	66	21.7
TOTAL		304	100

TABLE 2:
TOTAL NUMBER OF NUMBER OF JUZ' MEMORISED BY THE PARTICIPANTS

Juz'	Frequency	Percentage (%)
20	2	0.7
21	3	1.0
22	4	1.3
23	11	3.6
24	16	5.3
25	22	7.2
26	35	11.5
27	20	6.6
28	22	7.2
2.2 Instrument	19	6.3

2.2 Instrument

In this study, the survey questionnaire was adapted from previous studies [17],[18]. The items were adapted and modified to suit the study's population and the objectives of the study. The questionnaire consists of two sections, Part I consists of questions that probe the participants' personal information (demography) while items in Part II probe on three constructs, namely infrastructure (16 items), satisfaction (five items) and achievement (one item). For the construct of facilities, three items measured use of the school resource center; example of item (there is sufficient number of reference material for learning Hifz (memorisation) of the Quran). Furthermore, there are three items that measured classroom use, for example (my classroom environment is conducive to study the tahfiz of the Quran). Another four items measured the use of teaching aids, i.e., (there are various teaching aids for studying the tahfiz of the Quran in my school). There are several items on textbook usage, for example (textbooks are very helpful in my learning). Lastly, the items for measuring satisfaction gauged whether the students "enjoy participating in learning activities in the TMUA programme" along with four other items under the same construct. The Five-point Likert scale was used for the constructs of facilities and satisfaction. Participants were asked to express their agreement of the statement in each item according to the Likert scale, which range from Strongly Disagree (SDA) with the score of 1, to Strongly Agree (SA) with a score of 5. The value of Cronbach's alpha obtained from the questionnaire was 0.837, which can be considered as high. Particularly, the Cronbach's alpha for items under the construct of facilities, was 0.816 and the Cronbach alpha for items under the construct of satisfaction

was 0.903. In examining the achievement of TMUA students, each of student's achievement of their quranic memorization from January 2016 until October 2019 was obtained from the school. It is worth to note that the participants of this study have underwent approximately four years of the programme. Each student is continuously evaluated by a tahfiz teacher in a group of 10 students.

2.3 Data Analysis

Data obtained from the questionnaire were examined and analysed through structural equation modelling, by using the Smart Partial Least Square software (SmartPLS3). The researcher used a two-stage procedures, as suggested by [19]. In the first stage, the measurement model analysis was used to find the values of Factor Loading, Composite Reliability (CR) and Average Variance Extracted (AVE) in order to determine the validity and reliability of each construct. Subsequently, the second stage of the structural analysis was used to determine the relationships between the constructs to confirm the hypotheses of the study.

3 FINDINGS

3.1 Measurement Model

Firstly, the convergent validity was tested to make sure all items measuring the same construct are in agreement. As can be seen in Table 3, the value of factor loadings for all items exceeded the threshold value of 0.6 [19]. The values of CR for all first-order and second-order constructs ranged from 0.796 to 0.928 which exceeded the suggested value of 0.7 [19]. In order to assess the overall amount of variance in the indicators accounted for by the latent constructs, the AVE value was ranged from 0.516 to 0.756 and exceeded the suggested value of 0.5 [19].

TABLE 3:
MEASUREMENT MODEL ASSESSMENT

First-order construct	Second-order construct	Item	Factor Loading	CR (>0.7)	AVE (>0.5)
PS		PS1	0.885	0.884	0.718
		PS2	0.885		
		PS3	0.767		
BD		BD1	0.839	0.796	0.569
		BD2	0.779		
		BD3	0.629		
BBM		BBM1	0.876	0.925	0.756
		BBM2	0.889		
		BBM3	0.865		
		BBM4	0.848		
BT		BT1	0.784	0.844	0.644
		BT2	0.887		
		BT3	0.729		
Facilities		PS	0.767	0.805	0.516
		BD	0.669		
		BBM	0.866		
		BT	0.526		
Satisfaction		PUAS1	0.764	0.928	0.722
		PUAS2	0.877		
		PUAS3	0.905		
		PUAS4	0.847		
		PUAS5	0.848		
Achievement		JUZ	1.000	1.000	1.000

Note: PS: Resource Centre, BD: Classroom, BBM: Teaching aid, BT: Textbook, CR: Composite Reliability, AVE: Average Variance Extracted

Then, in order to make sure the degree to which items differentiate among constructs, the discriminant validity was assessed by following Fornell-Larcker rules [20]. Table 4 shows the values of the square root of the AVE for Achievement (1.000), Facilities (0.609), and Satisfaction (0.850) was higher than the correlations values among each constructs. In summary, we conclude that the measurement model demonstrated adequate convergent validity and discriminant validity.

TABLE 4:
DISCRIMINANT VALIDITY

Constructs	(1) Achievement	(2) Facilities	(3) Satisfaction
(1) Achievement	1.000		
(2) Facilities	0.321	0.609	
(3) Satisfaction	0.339	0.533	0.850

3.2 STRUCTURAL MODEL

The structural model indicates the causal relationships among constructs (facilities, satisfaction and achievement in Hafazan) in the model. The beta and significance values of path coefficients and the R² value indicate how well the data support and evaluated the hypotheses developed for this study. Figure 1 and table 5 show the findings of the structural model from the PLS algorithm output. Facilities (β=0.196, t=2.890, p < 0.01) and satisfaction (β=0.235, t=3.401, p < 0.01) explaining 14.3% of the variance in achievement, hence, supported the H1 and H2. Facilities also meaningfully predicts satisfaction, thus, H3 is confirmed (β=0.533, t=11.114, p < 0.01). In order to test whether satisfaction was a mediator of facilities and achievement relationship, the results for indirect effect (β=0.125, t=3.312) which p-value was less than 0.01. This finding supports H4, which stated that satisfaction is a mediator in the relationship between school's facilities and the achievement of TMUA students.



Fig. 1. PLS Algorithm Of Structural Model Assessment

TABLE 6:
SUMMARY OF STRUCTURAL MODEL

Hypotheses	Relationship	Std. Beta	t-value	p-value	Decision
H1	Facilities -> Achievement	0.196	2.890	0.002	Supported
H2	Satisfaction -> Achievement	0.235	3.401	0.000	Supported
H3	Facilities -> Satisfaction	0.533	11.114	0.000	Supported
H4	Facilities -> Satisfaction -> Achievement	0.125	3.312	0.000	Supported

4 DISCUSSION AND CONCLUSIONS

All in all, this study found a relationship between school's facilities and the achievement of TMUA students. Furthermore, it was found that student satisfaction acts as a mediating variable in the relationship between the state of the school's facilities and the students' achievement. This demonstrates that having a good infrastructure and well-equipped facilities can help teachers improve the quality of their teaching and influence students' satisfaction during lessons in the classrooms. In this regard, students' satisfaction will also have an impact on their achievement in the memorisation of Quran verses. These findings suggest that MOE should take the initiative to improve the infrastructures and facilities in schools in a timely manner. At the same time, school administrators need to ensure that the facilities in schools, including the school resource centre, classrooms, teaching aids and textbooks, are well maintained and supervised to ensure that they can be used optimally by teachers and students. This study supports the findings that good infrastructure can affect students' satisfaction in learning [21]. Meanwhile, teachers need to be more creative in providing the latest teaching aids and to provide a classroom environment that is conducive for learning to increase students' interest in learning. On the other hand, the R^2 value of achievement in this study account at only 14.3% of variance explains. This indicates the presence of other elements that influence students' achievement in Quran memorisation. These might include teaching strategies, teaching methods and techniques, the use of teaching aids, assessment methods, pedagogical knowledge and teaching skills. Based on this finding, further study could be done to examine these elements to obtain a more comprehensive finding on factors influencing the achievement of TMUA students.

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