

## Research Article

### **Increasing Student Mastery and Achievement in Islamic Education Through Game Techniques, Memory Aid 'The Link' and Mind Maps**

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**Abstract:** This action research is a product of a reflection on the problems of weak students in their studies of Tawhid, particularly in the topic of attributes of Allah Ta'ala. It was discovered that students are weak in remembering these attributes and are often confused by the dalil aqli (proof by reasoning) and dalil naqli (proof by revelation) of the attributes. Students are found to have weak memory of dalil naqli (proof by revelation); and are unable to explain and elaborate on dalil aqli (proof by reasoning). The purpose of this study is to improve students' knowledge in their studies of Tawhid through the application of game techniques, memory aid 'The link' and mind maps. Data on student problems were gathered through questionnaires, interviews and a pre-test. Researchers have planned activities to remediate the problems that students face, using the approach of 'Learning through Games'-using a token system to help memorisation-as well as the use of researcher-designed mind maps. This is to facilitate memorisation, to motivate and to impart a sense of fun in teaching and learning. A memory aid, 'The Link', is also introduced to help students summarize and remember detailed information. Based on the actions taken, observations and reflection on the planned activities as well as activities that have been implemented, it can be said that these steps are able to improve students' memorisation and mastery of the topic of attributes of Allah and improve their performance in the post-test.

**Keywords:** Achievement, application, mastery, mind map

## INTRODUCTION

Tawhid-the study of Islamic monotheism-is the core of Islamic education. At the secondary level, it is taught as a component of Islamic Education subject. This module comprises of concepts, facts and abstract knowledge; requiring comprehension, memory, higher reasoning and appreciation. Thus, the teaching and learning process should be carried out systematically in order to achieve the educational goals effectively. Teachers also have the additional challenge of helping students develop to their full potential in their cognitive, psychomotor and affective domains. Given this kind of learning is an important part of the process of thinking and remembering, it is important to consider the effectiveness of teaching methods, techniques and teaching aids.

Based on the reflections on past teaching and learning, the researcher found that students in Year 7 are not proficient in the topic of the attributes of Allah and their respective arguments and proofs. When questioned orally or through written tests, researcher

found students' answers to be unsatisfactory, particularly if the questions asked them to describe or elaborate. This shows that the students have not fully mastered the particular topic. On the other hand, observations and reviews of exercise books and examination papers, as well as discussions with teachers who teach the subject for Year 7 in Maktab Sains Paduka Seri Begawan Sultan, found that the cause of students' poor performances in the topic are likely due to confusion, poor memorisation and the lack of proficiency in answering questions.

## LITERATURE REVIEW

In the process of teaching and learning in Islamic education, the approaches and methods used should provide opportunities to produce students who are critical and creative and not too dominant with dogmatic and rigid approach. Kamarul and Abdul Halim (2007) emphasized that effective teachers are skilful teachers, being able to link knowledge and skills together. Skilful teaching includes being able to plan well, organize, deliver, guide and assess, with the aim

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of effectively imparting knowledge and skills to students. These approaches, strategies, methods and teaching techniques should be informed by theories of teaching and learning.

Other than strengthening the spiritual aspect and engaging the intellectual and social aspects, the teaching and learning of Islamic Studies should also consider emotional aspects. Abdul Fattah (2001) states that the Prophet himself, as the most distinguished of educators, taught effectively by guiding incrementally to avoid boredom. Similarly, teachers should consider measures and strategies to attract students' attention and focus and increase their motivation at the same time. According to Abdul Halim *et al.* (2010), teaching without taking into account the level of intellect and achievement can lead to complexity and boredom and eventually lead to failure in achieving the set objectives.

In order to fulfil a learning objective, teaching methods should be based on sound teaching models and learning theories. According to Abdul Halim *et al.* (2010), teachers and educators should communicate knowledge effectively through the selection of appropriate teaching methods.

Additionally, students' maturity level is also a factor that should be considered, with respect to their age and levels of cognitive development. According to Abdul Halim *et al.* (2010), teachers should deliver lessons that are tailored to students' interest, maturity, age and their intelligence.

**Learning theory:** This action research was conducted based on several theories, one of which is learning through play. Techniques such as this may contribute positively to the brain, emotions, motivation and student interaction as proposed by Gwen and Todd (1988) who argue that learning through games can develop the brain and motivation. Play also cultivates natural social, emotional and spiritual experiences. Other skills acquired are efficiency and high imagination. Zakaria Din @ Nasirudin and Abdul Halim *et al.* (2010) state that in the teaching of beliefs, teachers should diversify learning activities to stimulate the senses of students based on their abilities, talents and learning styles. It was hoped that students will master the knowledge and impacting themselves in the process.

Therefore, activities that are complemented with the use of teacher-designed teaching aids such as graphic organizers can facilitate students' recall and memorisation. This is supported by Poh (2002) who states that a tool that represents various mind processes can assist students in managing information because our thinking is often organised visually. This helps students to think and organize the lesson contents. Mapping and information organizers help create a complete picture of the knowledge and make recalling information easier.

Students should be familiarised with techniques or formulas that can help them in the recall and memorisation of detailed information. One such technique as proposed by Gunter *et al.* (1995) is utilising a memory aid called 'The Link', stating that even though recall is not a very significant learning process, detailed information is still difficult to memorise and would require memory aid. When students are more proficient in the technique of remembering, they would be able to find the information they need.

With regard to memorising dalil naqli (proof by revelation), the recall method as mentioned by Abdullah (1995) in Abdul Halim *et al.* (2010) is a method that can boost memory and train someone to increase mental alertness, intelligence, strength of mind and confidence.

Ultimately, the effectiveness of teaching and learning depends on the ability of teachers in using skills and strategies that can facilitate the learning process and inspiring students to learn effectively.

**Research objectives:** This action research aims to help improve students' mastery of Tawhid, specifically on the topic of attributes of Allah and their evidence. Thus, the objectives of this research are:

- To help students match the attributes of Allah Taala in Arabic with their meanings in Malay, including the dalil naqli (proof by revelation).
- To help students remember and memorise dalil naqli (proof by revelation) of each attribute of Allah Taala.
- To help nurture students' confidence in producing detailed and complete answers when answering questions requiring dalil naqli (proof by revelation).

## RESEARCH METHODOLOGY

This is an action research which involved 8 students (Table 1) of Year 7 in one of the secondary schools in Brunei Darussalam. Researcher put a strong focus on these 8 students as they are the students with low achievements in the subject of Tawhid (out of 97 students of Year 7). The identification of the level of students' achievement was done through a pre-test.

In order to get an in-depth data and to identify the problems faced by students, researcher has used several methods to obtain such information, namely:

- Questionnaires and interviews to detect and identify problems
- A pre-test to detect problems, as well as to identify the number of respondents who would be the target of the study

Table 1: Results of pre-test

Marks	Marks category	Number of students	Student's percentage
71-100	Good-very good	58	59.79
41-70	Average	31	31.95
1-40	Weak	5	5.15
0	Very weak	3	3.09
Total		97	100

The findings and results of the pre-test, questionnaires and interviews were analysed to further understand the students' problem. Furthermore, to collect more information on the strengths and weaknesses of activities implemented, more data was collected through:

- Observations in order to obtain information about the phenomenon in question
- Interviews to actively collect information from the respondents
- A post-test to detect any changes affected by the action taken
- Questionnaires to elicit data from respondents to determine the value of the research as a whole

## RESULTS

The findings of this study are described in two levels. In the first one, the findings formulate a description of the problems faced by students while at the same time, identifying and assembling the target group through the pre-test, questionnaires and interviews. On the other hand, the post-test, interviews, questionnaires and observations are used to detect any changes, by comparing students' performance in the pre and post-test on the topic of attributes of Allah and their respective evidence.

The following are the findings to identify the problems faced by students. These findings were also used to identify and assemble the target group through the pre-test, questionnaires and interviews.

**Pre-tests:** Based on the marks obtained in the pre-test, the student scores can be classified as shown in the Table 1.

Based on students' performances in the pre-test, students who scored between 0 and 40 are categorized as weak and very weak. Students in both groups became the target group for this study.

**Questionnaires and interviews:** Based on the questionnaires and interviews conducted with the target group, it was found that: Table 2 shows that (87.5%) students reported that they understand the topic of this lesson and at the same time (100%) responded that they have not mastered this topic. This is most likely due to confusion and poor memorization of the topic. From the students' questionnaires, there were more responses

Table 2: The results of questionnaires and interviews in terms of the number and percentage of respondents

Item No.	Respondents		Respondents	
	(yes)	(%)	(no)	(%)
1	5	62.5	3	37.5
2	6	75.0	2	25.0
3	7	87.5	1	12.5
4	8	100	-	-
5	6	75.0	2	25.0
6	3	37.5	5	62.5
7	7	87.5	1	12.5
8	-	-	8	100

Appendix

indicating their lack of understanding. (62.5%) of the respondents stated their confusion between dalil aqli and dalil naqli; 87.5% noted their misunderstanding of dalil naqli and 75% reported that poor memorisation and knowledge on the topic of attributes of Allah and the respective evidence. Additionally, 75.0% of the respondents stated that the information contained in dalil aqli is too difficult to remember and memorized due to their length and details. This is evidenced by the 100% reportage by respondents.

It can be concluded that the problem here is the students had a poor grasp of the topic due to their confusion as well as not being able to memorise the attributes and their evidence. Hence, this action research is highly desirable as it was conducted with the aim of improving students' knowledge of the Tawhid, specifically on the topic of the attributes of Allah and their evidence.

The following describes the observation conducted in order to examine any changes in achievement based on the comparison between the students' performances in the pre and post-tests.

**Observations:** Overall, based on the observations conducted, researcher found that the students have shown excellent development where the majority of students have performed very well in the activities. Based on the marks collected for behaviour shown during the three activities, students' outcomes were generally very good.

The first activity (Activity A) undertaken was to help students overcome their confusion. During the observation, students were able to:

- Match the Arabic words for the attributes of Allah with their meanings in Malay on the mind map board by placing the correct card in the correct place within the allocated time period.
- Differentiate between dalil aqli and dalil naqli on the mind map board by placing the correct card in the correct place within the allocated time period.
- Match the attributes of Allah with their respective dalil naqli evidence on the mind map board by placing the correct card in the correct place within the allocated time period.

The second activity (Activity B) was to help students enhance their memorization through the implementation of the token system. Students were given a limited time period to memorize the dalil naqli. Those who were able to recite the evidence well will be awarded with tokens, given that there are no errors in their recital. Students with the most number of token will be rewarded. While students are engaged in recital with their peers, teachers will be the moderators of the activity.

Another way to help improve students' memory is to have them write down the memorised Naqli evidence within a limited period of time. Teachers check the written answers and reward students if they are able to write down the correct answer. In this action research, it is compulsory for the students to be able to memorise the translated naqli propositions, but it would be an advantage if the students are able to memorize the respective verses from the Qur'an.

Below are the steps involved when Activity B was done:

**Step 1:** The students were asked to memorise dalil naqli within 15 min. Then, in pairs the students were asked to listen to the memorisation of their partners. Tokens were given if the students make no mistakes in their memorisation. The role of the teacher was as a moderator on the activities done by the groups.

**Step 2:** Further, the students were asked to write down the memorised dalil naqli and teachers would check on the answers written. Tokens were given if there are no mistakes in the written answers.

In this action research, memorisation of the sentences and their translations is a requirement specifically for this subject (Tawhid). Being able to memorise the verses in Al-Quran would be an advantage.

The third activity (Activity C) using a memory aid called 'The Link' by Gunter *et al.* (1995) is quite challenging for the students. From the observations, it has been noted that this activity can help promote students' thinking skills in order to select important information. At the same time, it helps improve their memorisation and nurture their confidence in writing answers that are detailed and complete (Table 3).

**Post-test:** Analysis of post-test data have shown drastic changes of student achievement where students' achievement increased by approximately 60% in the post-test compared to the results obtained in the pre-test.

The following is a graph charting the improvements achieved by the target students (Fig. 1).

Table 3: Below shows the types of activities and the duration of each activity

Action	Time (min)
1-activity A	50
2-activity B	50
3-activity C	50
4-pre-tests	50

Table 4: Comparison of performance (marks) between the pre-test and post-test

Student	Pre-test (%)	Post-test (%)
1	30	94
2	30	90
3	23	84
4	23	84
5	23	86
6	0	76
7	0	69
8	0	60

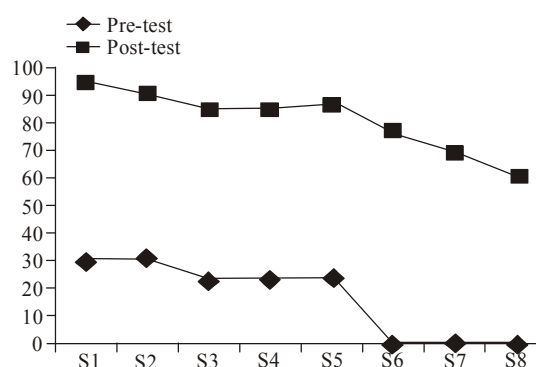


Fig. 1: Student improvement

Based on comparison of the test performance in pre-and post-test, significant improvement can be observed in students' performances in the post-test. This means that actions undertaken have helped students improve their mastery of the topic (Table 4).

**Questionnaires (for post tests data):** Based on the questionnaires distributed, 100% of students responded that the activities carried out were very effective and fun and motivated them to memorize quickly. It also showed that 100% of the students also reported being interested with the mind map and that it helped eliminate confusion and improve memorisation.

Meanwhile, 100% of the students reported that the model of 'The Link' as something that is new to them and they found it to be effective. Memory Aid 'The Link' by Gunter *et al.* (1995) helps them in answering questions that require long answers as well as improving their memorization and confidence in answering questions that require elaborate answers.

From the findings of the survey conducted, the implemented activities elicited positive responses from the respondents as a whole and have been able to help students improve memorization; reduce confusion while increasing their proficiency and achievement.

**Interviews (for post-tests data):** From the findings of interviews, the statements made by the students showed their support for the actions implemented as can be seen from the positive statements made by the respondents. Nearly all admitted the effectiveness of the activities and saw them as new and fun, as well as applicable to other subjects, especially Islamic history, exegesis and the study of hadiths.

## DISCUSSION

In the early stages before the implementation of the activities, a few students were uncomfortable with the teaching and learning situation. This was most likely due to the merging of various classes in forming the target group where they might feel unfamiliar with each other. Alternatively, it could be the possibility that the students were shy because they feared being labelled as poor students in the subject of Islamic Religious Knowledge. However, this changed when students knew about the purpose of the action research and began to feel comfortable and have fun in class. The results also show encouraging results where it can be seen that students' proficiency on the topic in hand can be improved.

Upon reflection, the researchers believed that this action research helped them gain more understanding and experiences in finding ways to overcome problems in teaching and learning, thus leading to best practice in teaching. It also underlines the important role of teachers in selecting teaching strategies based on the approaches and techniques that can stimulate students' learning. Finally, this study contributes towards the researchers' effort in generating creativity and innovation in teaching, providing intrinsic satisfaction and a morale boost.

## CONCLUSION

The researchers believe that this study is important in terms of improving the effectiveness of teaching practices and strategies as well as improving the teaching and learning process. It enables teachers and students to experience changes. Hopefully, the outcomes of this action research will empower teachers to practice reflection on the teaching and learning process and to not be afraid of changes. It is also hoped that this study can be a useful guide for education managers, particularly in terms of how changes in teaching and learning can lead to positive outcomes in terms of quality or quantity, particularly:

Religious teachers are recommended to be more creative and innovative in teaching and learning, while at the same time considering teaching and learning theories and models of education which have been proven to be effective. Abdul Halim *et al.* (2010) state that conventional methods and innovations can be utilised in Islamic education.

Adnan Yussop in Abdul Halim *et al.* (2002) concurs that teaching and learning in Islamic education be based on concepts such as learning levels. Teachers design teaching to provide for learning at all levels of student performance while methods should be diversified, attractive and effective. Activities meanwhile should be student-centred with materials that are fun and are able to run smoothly and effectively in class.

Lesson objectives can be achieved by structuring the activities in such a way that they begin from simple and get progressively challenging. According to Ahmad (1997), the learning and teaching activity is an important component of teaching technique that teachers need to manipulate in order to raise and maintain students' interest in learning. Teaching must also be organized and have good continuity in order to achieve learning.

Motivating students is also an important factor in the process of teaching and learning. Teachers need to engage students' interest learning and to provide them with opportunities to see learning as worthwhile and fun. Kamaruddin (1993) emphasizes that motivation is important in the teaching and learning process, because it keeps students' interest and attention, provides continuous encouragement and pushes them to compete.

In conclusion, being less proficient in a particular subject is not a permanent and lasting state. Guidance and training, motivation and encouragement and attention are needed to garner students' interest, commitment and enthusiasm for the subject. Efforts to improve the capacity of students is beneficial not only to the students but to the teachers themselves. Shahabuddin *et al.* (2007) state that human is equipped with various capabilities. Man should strive to develop these abilities in order to benefit themselves and the society. Other than building students' capacity to learn, a teacher should also be able to manage a classroom, form students' behaviour and make students feel appreciated. Abdul Halim *et al.* (2010) have also pointed out that the most important aspect of teaching is the ability to observe the formation of behaviour-the learning outcomes being self-worth, feeling appreciated and self-identity.

Teaching aims to set positive behaviours, further enriching the development of an individual, including in the academic context. Gamal (2002) states that educators must be capable of managing the classroom to ensure a smooth learning process. As a whole, through action research, the researchers have been made to be more aware of the practice of teaching, better prepared and to think critically to improve and improve the quality of education while enhancing teaching professionalism.

Appendix

No. item	Statement
1	Confused between dalil aqli and dalil naqli
2	Does not remember and know very well the meaning of the attributes of Allah
3	Confused about dalil naqli for the attributes
4	Information in dalil aqli is too long
5	Information in dalil aqli is too difficult and to remember and memorize
6	Aware of effective memorizing techniques
7	Understand the topic of attributes of Allah
8	Proficient in the topic of attributes of Allah and their respective evidence

**RECOMMENDATIONS**

Based on the results of this action research, the researcher believed that similar research, particularly in overcoming the problem of student mastery of topics in religious education, should be extended. Therefore, the researchers recommend:

- Memory Aid ‘The Link’ by Gunter *et al.* (1995) could be applied to other religious subjects, especially those related to history which contain a great deal of information to be remembered.
- Mind maps or any other graphic organisers should be used more especially in Fiqh (jurisprudence) lessons as the subject contains volumes of information that can be organised and categorised.
- Subjects such as Tafsir Al-Quran and Hadith seem ideal for the implementation of the token system to facilitate memorisation. It encourages healthy competition and promotes quick memorization as students compete to earn tokens as they memorize verses from the Qur’an or hadith. Gamal (2002) underlines that good rewards can help motivate young learners to be more diligent and hard working.

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