The Impact of Applying Religious Values through Online Problem-Based Learning among Undergraduate Students:
A Quasi-Experimental Study

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Abstract. Implementing religious value can develop good attitude and behaviour. It can be implemented in various ways such as in speech, behaviour, gesturing, comprehension and assessment. This study aimed to be establish the impact of applying religious values through online Problem-Based Learning among undergraduate students. A total of 81 students were involved in the study and were divided into treatment and control groups. In order to identify the effectiveness of the module in applying values, the quasi-experimental method was used through questionnaires. The results showed that there was a significant effect on the applying all religious value in the treatment group. The finding also revealed that learning through Problem-Based Learning (PBL) can provide a different learning environment as compared to regular learning sessions. The implications of this study can directly provide an alternative in applying values to students in the higher learning institution.

Keywords: Religious values; Problem-Based Learning; Module; Islamic education; Higher institution.

1. Introduction
The discussion on the new horizon in Islamic Education actively started since the *First Conference on Muslim Education* held in Makkah in 1977 (Ashraf, 1994). Due to the high awareness of the importance of Islamic Education around the world, the conference was extended several times to gather Islamic thinkers and discuss issues related to the Islamic Education world. The trial was subsequently continued in Islamabad (1980), Dakka (1981), Jakarta (1982), Cairo (1982) and

Amman (1990) (Daud, 2003). From this point on, various effects had been made in Islamic countries to develop and implement the philosophy and concept of Islamic Education that is in line with the demands and challenges of the 21st century.

Among the conference resolutions issued were those related to the malfunction of education system within the Muslim nation .The discrepancy in the education system that is dualism and secularism is a major cause of the weakness of Muslims today (Omar, 2005). These discrepancies also cause Muslim students to be separated from the vision of Islam as well as the history of Islamic magnificence (Nawi, Jamsari, Hamzah, Sulaiman & Umar, 2013). To make things worse, the Western-based educational system only places more emphasis on intellectual abilities, but neglects religion and moral values.

In the context of Brunei Darussalam, the government heavily emphasized on education, especially in Islamic Education. Islamic formal education starts from pre-school up to university level. In fact, it has become compulsory since 2012 for Muslim children aged seven to fifteen to be sent to a religious primary school (pelitabrunei.gov.bn). The implementation of this order is to ensure that every child is given due attention from the very beginning. In addition, the government has formulated a long-term policy to guide the development and achievement of the nation progress. In this regard, a body called the Vision Brunei 2035 (2007-2035) has been set up based on the three main components; (1) All citizens of the country need to be united in loyalty to the Sultan and the State; (2) the people need to be convinced of their religious values; and; (3) the people should practice the tradition of social tolerance and harmony (Brunei Government, 2008). This effort clearly shows that the country is concerned about the application of values and social harmony in achieving the nation's progress and development.

2. Problem Statement
As it is known, the Ministry of Education of Brunei has placed Islamic Education as a core subject in National Education System for the 21st Century (SPN21). Apart from providing students with the understanding of religious knowledge, the need to make Islam a way of life and the cultivation of religious values is also given attention. This optimum emphasis is to ensure that the state will be able to produce a generation of proficient and quality workforce based on religious values. This matter is respected and affirmed by His Majesty in an attempt to improve the quality of education in line with the progress of the nation.

The application of value should not only focus on certain subjects but also be absorbed through the contents of all subjects (curriculum) and co-curriculum activities performed directly or indirectly in or out of the classroom (Rashid, 2001; Pa, 1996; Ya, 2007; Noordin, 1998). In the in National Education System for the 21st Century (SPN21), the application of religious values is emphasized in two subjects which are Islamic Religious Education and Islamic Monarchy which

is based on the national philosophy (Nawi & Zakaria, 2016; Ministry of Education, 2009).

As known, the process of applying value in the schools depends on the practice of the teachers. The implementation of good and effective teaching practices can help students to improve their knowledge and appreciation of religious values (Rashid, 1993; Zakaria, Tajudeen, Nawi & Mahalle, 2014). The previous studies showed that the role of teachers and the application of value in moral subjects can have a positive and interdependent relationship (Razak, 2006; Othman & Suhid, 2010; Nawi, Hamzah, Ren & Tamuri, 2015; Jaafar & Tamuri, 2013; Hussin, 2005). However, studies on the teachers' practices of applying values in students have not yet reached a satisfactory level and are still questionable (Nawi & Zakaria, 2016; Noh & Tarmizi, 2009; Lubis & Aspar, 2005; Lubis & Sulaiman, 2008; Gharif, 2010).

The effectiveness of ICT-based teaching in application of values to students is also in doubt. Indeed, various materials have been designed and developed with the aim of improving the achievement in examinations and attracting students' interest. However, most of the material fails to function as a value-added agent in the development of values in students (Baba, 2011; Nawi & Hamzah, Ren & Tamuri, 2015; Othman & Zin, 2014). On top of that, the uncontrollable use of ICT-based materials makes students become robotic. This erodes human nature and ignores the role of teachers as "*qudwah*", good example or good model in shaping the moral character and behaviour of their students (Baba, 2006).

Various factors that contribute to social illness and the decline in values among adolescents have been established in the literature. Among them are the negative effects of the mass media (Tamuri & Ismail, 2009; Ismail & Ali, 2011; Hamat et al., 2013), the parental and family problems (Tamuri & Ismail, 2009) and peer influence (Sharif & Roslan, 2011). Many studies have also revealed that the lack of religious exposure is the most dominant factor that contribute to students' negative behaviour (Tamuri., et al. 2004; Campbell, 2010; Ahmad et. al., 2012; Ibrahim, et al., 2012; French et. al., 2008; Sabita & Mahmood, 1995; Syarifah et. al., 2010).

Lack of religious appreciation also makes human becoming more materialistic and prone to the demands of desires (Noordin & Dan, 2002). The low level of religious appreciation signals the weakness in self-belief and this is feared to cause the tendency to bad behavioural conduct (Ahmad, 2006; Langgulung, 1997).

This scenario explains that religion is the most important factor in the development of a person's morals. The formation of morality begins with the application of values so as to highlight the religious character. Therefore, it is important to apply religious values among students as an attempt to live the true religion.

Therefore, this study attempts to identify the effectiveness of values through online modules. An online module, which will integrate the multimedia material to apply value indirectly will be specially designed online and used by treatment

group students during teaching and learning sessions in Islamic Education subjects. The students in the control group, on the other hand, will go through conventional learning.

3. Literature Review

In this study, problem-based learning strategies (PBL) are considered appropriate to teach religious values because through these strategies as students are exposed to various situations in the form of conflict or dilemma. According to Rashud (1993), the use of conflict situations is aimed at helping students to realize and identify personal values and values in others. Awareness among students can be applied through dilemma conflict situations and via activities such as role play, real story, movie use, acting, small group discussion, game or simulation. In addition, learning through PBL also encourages students to share personal value with the value of others and identify certain value systems or examine patterns of personal behaviour.

PBL was originally developed specifically for medical students. PBL was first used by Howard Barrows and his colleagues at the Medical School, McMaster University in Hamilton, Ontario, Canada (Neville, 2009). However, since the use of PBL contributed many benefits to learning such as stimulating student learning, generating ideas and motivating students to think, this type of learning has been expanded in to the various fields including in education (Barrows & Tamblyn, 1980). Savin-Baden and Major (2004) pointed out that learning through PBL is evolving in to the various fields due to the need to produce highly qualified and high-quality professionals. Initially the PBL was used only in McMaster University, Canada in 1980 (Barrows & Tamblyn, 1980) and it was then spread throughout the world including United States, United Kingdom, Denmark, Finland, France, Africa and Sweeden (Savin-Baden &Major, 2004)

Generally, PBL is one of the student-centered learning methods. This learning method provides students with the problem first as a stimulant of learning. When viewed from the definition of Barrows and Tamblyn (1980), the PBL is a form of learning that results from the process of understanding or resolving a problem. According to them, the discovery of a problem is the first step in the learning process. This problem then encourages the use of various problem and reasoning skills as well as encouraging students to find new information. When this process occurs, the existing knowledge organization within the student can be established in order to find a solution to solve a problem.

Initially, the PBL was used only in McMaster University, Canada in 1980 (Barrows & Tamblyn, 1980) and it was then spread throughout the world including United States, United Kingdom, Denmark, Finlad, France, Africa and Sweeden (Savin-Baden & Major, 2004). To date, PBL has been implemented in various fields including in teaching science (Argaw et al., 2017), healthcare training (Yew & Goh, 2016), mathematics (Paruntu et al. 2018), vocational skills (Chiang & Lee, 2016), engineering (Wang et al., 2017), history education (Wynn, 2016), and English (Hwang, 2017). However, there has not been any study on PBL in Islamic education. There is a study conducted in Islamic education but it

is only limited to theoretical aspects such as the study by Baharun and Ummah (2018) and the study by (Nawi & Zakaria, 2016) that is too general and only based at the students' view on the application of PBL in lessons only. Therefore, this study should be carried out to focus on assessing the effectiveness of applying values through the teaching and learning of PBL in Islamic Education. The study was also conducted empirically to ensure that the findings will be able to measure positive effects, especially in behavioural changes by implementing religious values.

4. Research Questions
The purpose of this study is to answer the following four questions;

1) Is there a difference to the pre-test mean score of applying all the religious values between the treatment and control groups?

2) Is there a significant difference to the mean score of the pre-test and post-test applying all the religious values in the treatment group?

3) Is there a significant difference to the mean score of the pre-test and post-test applying all the values in the control group?

4) Is there a significant difference to the post-test mean score of applying all the religious values between the treatment and control groups?

5. Hypothetical Studies
To test the effectiveness of implementing values through the online PBL among students, several research hypotheses were developed to strengthen the findings of the study. The hypothesis to be used in this study is the null hypothesis (H_o). A total of four research hypotheses were set up to test the following questions:

$H_0 1$ There is no significant difference to the pre-test mean score of applying all the religious values between the treatment and control groups.

$H_0 2$ There is no significant difference to the mean score of the pre-test and post-test applying all the religious values in the treatment group.

$H_0 3$ There is no significant difference to the mean score of the pre-test and post-test applying all the values in the control group.

$H_0 4$ There is no significant difference to the post-test mean score of applying all the religious values between the treatment and control groups.

6. Research Methodology

This study is a quasi-experimental study involving two classes in Polytechnic of Brunei Darussalam. These two classes are almost identical in terms of the background and student achievement. Treatment group was taught using PBL modules developed specifically in Islamic Education while the control group was taught using conventional modules. Researchers also ensured that the students had the same background, were taught by the same teacher, learnt the same topic, and in the same week. Both groups went through 11 weeks of teaching and learning session (a meeting of 1 hour 30 minutes each) over a semester.

This study conducts pre-test and post-test on treatment group and control group. The value-applying questionnaire was initiated in early 2014 in several schools in Brunei-Muara and Kuala Belait, Brunei Darussalam to enhance the reliability of the questionnaire. The instrument used consists of a set of questionnaires that consists a likert scale from 1 to 5. Interview protocol was used for collecting data from students Observation checklist was also used for a teacher whom involved in the modules teaching.

Pre-test and post-test were conducted to measure the value-level variables of prior and post-interview towards the treatment and control groups. Based on the comparison results, the effect of interventions using PBL Modules can be determined whether it has been successful or not. Experiments designs were summarized as in the following table.

Table 1 : Experiment Design Model

Group	Pre-test	Treatment	Post-test
Treatment	O_1	X	O_2
Control	O_3	-	O_4

O_1 and O_3 = Pre-test
O_2 and O_4 = Post-test

X   = Treatment (group were taught using PBL modules developed)

-         = Control (group were taught using conventional modules)

7. Research Findings

In order to identify the effectiveness of the module in applying values, the quasi-experimental method was used through questionnaire. The results are shown in the tables below.

1) Analysis of Pre-Test Mean Score of Applying All the Religious Values Between the Treatment and Control Group
The independent sample t-test was conducted to see the difference in the mean score of pre-test of applying all the religious values among students from the treatment group compared with students from the control group. The

independent sample t-test is used to detect the differences of two independent variables. The findings of the independent t-test can be seen in the table below.

Table 2: The independent t-test of pre-test mean score of applying all the religious values between the treatment and control group

	Religious Value	Group	N	Mean	SD	t	Sig.
1.	Gratitute	Treatment	37	3.735	0.485	-0.636	0.527
		Control	44	3.805	0.493		
2.	Patience	Treatment	37	3.469	0.557	0.076	0.940
		Control	44	3.458	0.634		
3.	Mind the tongue	Treatment	37			-0.737	0.463
				3.838	0.516		
		Control	44	3.920	0.482		
4.	Humble	Treatment	37	3.868	0.455	-1.056	0.294
		Control	44	3.975	0.457		
5.	Spread salam	Treatment	37	3.402	0.488	-0.921	0.360
		Control	44	3.499	0.462		
6.	Love	Treatment	37	3.914	0.590	-1.090	0.279
		Control	44	4.049	0.516		
7.	Justice	Treatment	37	3.838	0.404	-0.379	0.705
		Control	44	3.880	0.561		
8.	Trust	Treatment	37	3.955	0.506	-0.517	0.606
		Control	44	4.017	0.570		
9.	Shyness	Treatment	37	4.092	0.561	-0.424	0.673
		Control	44	4.146	0.571		
10.	Dignity	Treatment	37	3.838	0.823	-0.605	0.547
		Control	44	3.936	0.641		
11.	Submission to Allah	Treatment	37			-0.465	0.643
				4.099	0.604		
		Control	44	4.155	0.484		
12.	Punctuality	Treatment	37	3.069	0.447	-0.054	0.957
		Control	44	3.075	0.610		
13.	Moderation	Treatment	37	4.112	0.505	1.496	0.139
		Control	44	3.935	0.550		
14.	Avoidance of sin	Treatment	37	3.992	0.635	0.156	0.876
		Control	44	3.971	0.603		

Significant level: $p < 0.05$

The independent sample t-test analysis in the above table is carried out to see the difference in the mean score of pre-test mean score of applying all the religious values between the treatment and control group. The findings show that there is no significant difference between the test mean score of pre-applying religious values level between the treatment group and the treatment group.

Since all p values are greater than 0.05 (p = 0.00> 0.05), the zero Hypothesis (H_01) is accepted. This means that there is no significant difference between the test score of religious values level between the treatment group and the treatment group. The pre-level test value of religious values for both groups is the same. It can be explained that post-stage test scores of applying all the religious values that will be analyzed later will not be affected by this pre-test value. This means that the increased value of the post-test is due to the treatment process (the use of PBL Modules and the usual) performed on both groups later on.

2) Analysis of the Pre-Test and Post-Test Mean Score Applying All the Religious Values in the Treatment Group

To answer this research question (Is there a significant difference to the mean score of the pre-test and post-test applying all the religious values in the treatment group?), a hypothesis of the study has been developed (H_02 There is no significant difference to the mean score of the pre-test and post-test applying all the religious values in the treatment group). To test this hypothesis, paired sample t-test is suitable for use as it can detect the differences between two variables in one group (treatment group). To carry out this test, the researcher has ensured that the study data fulfilled the conditions specified by Pallant (2007) such as the balance between samples and normalized. Relative t-test findings can be seen in the table below.

Table 3: The paired sample t-test of the pre-test and post-test applying all the religious values in the treatment group

	Religious Value	Stage	N	Mean	SD	t	Sig.
1.	Gratitute	Pre	37	3.735	0.485	-1.565	0.126
		Post	37	3.880	0.541		
2.	Patience	Pre	37	3.469	0.557	-3.810	0.001*
		Post	37	3.740	0.609		
3.	Mind the tongue	Pre	37	3.838	0.516	-2.546	0.015**
		Post	37	4.054	0.406		
4.	Submission to Allah	Pre	37	3.868	0.455	-3.273	0.002**
		Post	37	4.130	0.409		
5.	Spread salam	Pre	37	3.402	0.488	-2.192	0.035**
		Post	37	3.591	0.524		
6.	Love	Pre	37	3.914	0.590	-2.439	0.020**
		Post	37	4.081	0.487		

7.	Justice	Pre	37	3.838	0.404	-2.612	0.013**
		Post	37	4.054	0.355		
8.	Trust	Pre	37	3.955	0.506	-2.412	0.021**
		Post	37	4.153	0.504		
9.	Shyness	Pre	37	4.092	0.561	-1.281	0.208
		Post	37	4.211	0.447		
10.	Dignity	Pre	37	3.838	0.823	-3.235	0.003**
		Post	37	4.222	0.492		
11.	Submission to Allah	Pre	37	4.099	0.604	-2.171	0.037**
		Post	37	4.306	0.514		
12.	Punctuality	Pre	37	3.069	0.447	-3.327	0.002**
		Post	37	3.360	0.511		
13.	Moderation	Pre	37	4.112	0.505	-.734	0.468
		Post	37	4.179	0.521		
14.	Avoidance of sin	Pre	37	3.992	0.635	-1.013	0.318
		Post	37	4.100	0.552		

Significant level:* $p < 0.01$
** $p < 0.05$

Table 3 shows a t-test analysis of treatment groups that uses PBL modules of applying all the religious values. T-test analysis showed that there was a significant difference between pre-test and post-test against 10 of 14 religious values. The result shows that there are ten values of p less than 0.05 (p = 0.00 <0.05); they were patient (p = 0.001), mind the tongue (p = 0.015), submission to Allah (p = 0.02), spread *salam* (p = 0.035), love (p = 0.020), justice (p= 0.013), trust (p= 0.021), dignity (p= 0.003), submission to Allah (p = 0.037) and punctuality (p = 0.002). Due to the p value less than (p = 0.00 <0.05) then the null hypothesis ($H_0$2) is rejected. This means that 10 out of 14 religious values have been successfully being applied to the students after they use the i-PBL Module. The rest of the religious values of gratitude, shyness, humble and avoidance of sin have also increased based on mean but not significant.

3) Analysis of the Pre and Post-Test Mean Score Applying of All the Values in the Control Group

To answer this research question (Is there a significant difference to the mean score of the pre-test and post-test applying all the values in the control group?), a hypothesis of the study has been developed ($H_0$3 There is no significant difference to the mean score of the pre-test and post-test applying all the values in the control group). To test this hypothesis, paired sample t-test is used as it can detect the differences between two variables. To carry out this test, the

researcher has ensured that the study data fulfilled the conditions specified by Pallant (2007) such as the balance between samples and normalized condition. Paired sample t-test findings can be seen in the table below.

Table 4: The paired sample t-test of the pre-test and post-test mean score applying all the religious values in the control group

	Religious Values	Stage	N	Mean	SD	t	Sig.
1.	Gratitute	Pre	44	3.804	0.493	0.092	0.927
		Post	44	3.799	0.501		
2.	Patience	Pre	44	3.458	0.634	-0.983	0.331
		Post	44	3.534	0.473		
3.	Mind the tongue	Pre	44	3.920	0.482	0.742	0.462
		Post	44	3.849	0.529		
4.	Submission to Allah	Pre	44	3.975	0.457	-0.079	0.937
		Post	44	3.982	0.567		
5.	Spread salam	Pre	44	3.499	0.462	-0.461	0.647
		Post	44	3.533	0.556		
6.	Love	Pre	44	4.049	0.516	0.466	0.643
		Post	44	4.011	0.615		
7.	Justice	Pre	44	3.880	0.561	0.000	1.000
		Post	44	3.890	0.531		
8.	Trust	Pre	44	4.017	0.570	-0.398	0.693
		Post	44	4.053	0.490		
9.	Shyness	Pre	44	4.146	0.571	0.292	0.772
		Post	44	4.122	0.562		
10.	Dignity	Pre	44	3.936	0.641	-0.789	0.435
		Post	44	4.155	0.673		
11.	Submission to Allah	Pre	44	4.015	0.484	-1.686	0.099
		Post	44	4.269	0.492		
12.	Punctuality	Pre	44	3.075	0.610	-2.274	0.028**
		Post	44	3.239	0.680		
13.	Moderation	Pre	44	3.935	0.550	-2.033	0.048**
		Post	44	4.055	0.502		
14.	Avoidance of sin	Pre	44	3.971	0.603	-1.965	0.056
		Post	44	4.139	0.641		

Significant level: * $p < 0.01$

              ** $p < 0.05$

As shown in Table 4, a t-test analysis of the control group that has undergone the usual teaching and learning process. The t-test analysis showed that there was a significant difference between the pre-test and the post-test for the control group against two (2) of 14 religious values. The findings show that there were two (2) p values less than 0.05 ($p = 0.00 <0.05$), which is time ($p= 0.028$) and medium ($p= 0.048$) values. Due to the $p$value less than ($p = 0.00 <0.05$) then the null hypothesis (H_03) is rejected. This means that two (2) out of 14 religious values were successfully applied after they undergo the normal process of teaching and learning for the Islamic Education courses. However, there are some other religious values, such as patience, humble, giving *salam*, trust, dignity, submission to Allah and avoidance of sin have also increased based on mean the value but not significant. While the rest of the religious values which are gratitude, mind your tongue, love and shyness experience a decrease to the mean score. Only the value of justice remains and does not change.

4) Analysis of the Post-Test Mean Score of Applying All the Religious Values between the Treatment and Control Groups

The independent sample t-test was conducted to see the difference in the mean score of the post-stage test on the religious values towards the treatment group and control groups. The independent t-test was suitable to be used to detect the differences of two independent variables. The findings of the independent t-test can be seen in Table 5.

Table 5: The independent sample t-test on the mean score of post-stage test applying of all religious values between experiment and control groups

	Religious Values	Group	N	Mean	SD	T	Sig.
1.	Gratitute	Treatment	37	3.880	0.541	0.697	0.488
		Control	44	3.799	0.501		
2.	Patience	Treatment	37	3.740	0.609	1.707	0.092
		Control	44	3.534	0.474		
3.	Mind the tongue	Treatment	37	4.279	1.575	1.705	0.092
		Control	44	3.849	0.529		
4.	Submission to Allah	Treatment	37	4.130	0.409	1.323	0.190
		Control	44	3.982	0.567		
5.	Sebarkan salam	Treatment	37	3.591	0.524	0.482	0.631
		Control	44	3.533	0.556		
6.	Love	Treatment	37	4.081	0.487	0.558	0.578
		Control	44	4.011	0.615		
7.	Justice	Treatment	37	4.054	0.355	1.700	0.093
		Control	44	3.880	0.531		

8.	Trust	Treatment	37	4.153	0.504	0.905	0.368
		Control	44	4.053	0.490		
9.	Shyness	Treatment	37	4.211	0.447	0.769	0.444
		Control	44	4.123	0.563		
10.	Dignity	Treatment	37	4.222	0.492	1.553	0.124
		Control	44	4.015	0.673		
11.	Submission to Allah	Treatment	37	4.306	0.514	0.334	0.740
		Control	44	4.269	0.492		
12.	Punctuality	Treatment	37	3.360	0.511	0.896	0.373
		Control	44	3.239	0.680		
13.	Moderation	Treatment	37	4.179	0.521	1.088	0.280
		Control	44	4.055	0.502		
14.	Avoidance of sin	Treatment	37	4.100	0.552	-0.284	0.777
		Control	44	4.139	0.641		

Significant level: $p < 0.05$

The independent sample t-test analysis in the above table was carried out to see the difference in the mean score of the post-test applying all the religious values among the treatment and control groups. The t-test analysis showed that there was no significant difference between the post-test mean scores of the applying of religious values between the treatment and control groups. Since all values of p are greater than 0.05 ($p > 0.05$), the zero Hypothesis ($H_0 4$) is accepted. This means that there is no significant difference in the post-test score of applying religious values between the treatment and control groups. This shows that the level of applying value for both groups increases together. This increase has no difference whether to undergo teaching and learning using the PBL Module or through the usual teaching and learning process.

As the findings did not prove any difference in the teaching method used in both groups, the researchers tried to identify the mean score increase using the gained score mean analysis. This mean increase analysis is usually used to identify the true increase in the mean levels between pre and post-tests within the group (Becker, 2000; Ahmad, 2012). According to them, a mean increase score can be obtained when the pre-test score is rejected by the post-test scores. The result of this rejection is named as a gained score mean before and after learning.

However, the mean increase analysis has a weakness and cannot be used if the pre-test score is too high. This will lead to a slight increase in scores when compared with post-test scores. Therefore, the researcher has to make sure that the pre-test score for both groups is the same; therefore, this mean increase analysis can be used. Furthermore, both groups are homogeneous. The

independent t-test findings (an analysis of the increase in post-test and pre-testmean score) can be seen in Table 6.

Table 6: Independent sample t-test gained score mean analysis
analysis of the mean score increase (post-test and pre-test) applying of all religious values between the treatment and control groups

	Religious Values	Group	N	Mean Increase	SD	t	Sig.
1.	Gratitute	Treatment	37	0.145	0.562	1.387	0.169
		Control	44	-0.006	0.412		
2.	Patience	Treatment	37	0.271	0.433	1.836	0.070
		Control	44	0.076	0.511		
3.	Mind the tongue	Treatment	37	0.441	1.483	2.079	0.041**
		Control	44	-0.071	0.636		
4.	Submission to Allah	Treatment	37	0.262	0.487	2.142	0.035**
		Control	44	0.007	0.571		
5.	Spread salam	Treatment	37	0.189	0.525	1.389	0.169
		Control	44	0.034	0.482		
6.	Love	Treatment	37	0.167	0.416	1.902	0.061
		Control	44	-0.037	0.528		
7.	Justice	Treatment	37	0.216	0.504	1.876	0.064
		Control	44	0.000	0.527		
8.	Trust	Treatment	37	0.198	0.500	1.318	0.191
		Control	44	0.036	0.594		
9.	Shyness	Treatment	37	0.119	0.565	1.179	0.242
		Control	44	-0.023	0.516		
10.	Dignity	Treatment	37	0.384	0.722	1.989	0.050**
		Control	44	0.078	0.659		
11.	Submission to Allah	Treatment	37	0.207	0.581	.819	0.415
		Control	44	0.114	0.447		
12.	Punctuality	Treatment	37	0.292	0.534	1.141	0.257
		Control	44	0.164	0.477		
13.	Moderation	Treatment	37	0.068	0.560	-0.498	0.620
		Control	44	0.121	0.393		
14.	Avoidance of sin	Treatment	37	0.108	0.649	-.442	0.660
		Control	44	0.168	0.566		

Significant level: ** $p < 0.05$

The table above shows the result of the the t-test of post-test mean increase in applying of religious values for treatment and control groups. T-test analysis showed that there was a significant difference between the pre-test and the post-test for the control group against three (3) of 14 religious' values. The findings show that there are three (3) *p*values less than 0.05 (*p*= 0.00 <0.05), which is mind the tongue (*p*= 0.041), submission to Allah (*p*= 0.035) and guarding the dignity (*p*= 0.050). Due to the *p*value less than (*p*= 0.00 <0.05) then the null hypothesis is rejected. This means that the use of PBL modules has effectively applied three (3) religious values among the treatment groups higher than those of the control group through regular teaching and learning.

If looked in detail, the mean score of all religious values for the treatment group increased but not significant (mean = 0.068 to 0.292). However, not all religious values for the control group have an increased mean score. In fact, the mean score decrease is based on a negative score on mean analysis. The religious values of mean decrease are the value of gratitude (mean = -0006), mind the tongue (-0.071), love (-0.037) and shyness (mean = -0.023). This suggests that the usual method of teaching and learning can have a negative impact on the applying of all the religious values compared to the use of PBL modules.

In conclusion, based on the statistical analysis of independent sample t-test and paired sample t-test in the Table 7 below, it can be concluded that three of the research questions, i.e. iii (b), iii (c), and iii (d), have significant mean. There is only one question, however, that iii (a) that does not show significant differences. However, the question of this study should provide insufficient answer as it can prove that the mean value of the pre-test level of applying all the religious values of the two groups is the same. On the other hand, if the question of this study provides a significant answer, then the two groups cannot be compared because they differ in the pre-test score. It can be explained that the increased value in post-test is due to the treatment process (the use of PBL modules and the usual) performed on both groups (treatment and control groups). The overall score of the applying of religious values obtained through the analysis of pre-test data and post-test and comparison between the two groups is set out in the table below.

Table 7: The Overall Findings of Inferential Analysis

No.	Research Question	Test Method	Result
iii(a)	Is there a difference to the pre-test mean score of applying all the religious values between the treatment and control groups?	(Independant sample t-Test)	(p=0.00>0.05) Not significant
iii(b)	Is there a significant difference to the mean score of the pre-test and post-test applying all the religious values in the treatment group?	(Paired sample t-Test)	(*p*=0.00 < 0.05) Significant

| iii(c) | Is there a significant difference to the mean score of the pre-test and post-test applying all the values in the control group? | (Paired sample t-Test) | (*p*=0.00 < 0.05)

Significant |
| iii(d) | Is there a significant difference to the post-test mean score of applying all the religious values between the treatment and control groups? | (Independant sample t-Test) | (*p*=0.00 < 0.05)

Significant |

8. Discussion

Before discussing the question of how far the PBL Module affects the level of applying value among students, the researcher wants to explain some basic concepts that needs to be understood about values. If the views of Salleh (2008), Suhid (2009) and Jodi et al. (2012) in context of the value of the human being, majority agrees that the concept of value is abstract and implied in humanity which cannot be seen with the naked eye. However, the real value can be measured by human behaviour through the actions and conversations of a person. Any action that is manifested by good or bad deed depends on the human internal system. This system is a determinant that can control one's behaviour towards good deeds or vice versa. In Islam, this has been narrated in Sahih al- Bukhari and Muslim (Hibban, 1993);

<div dir="rtl">

إن في الجسد مضغة إذا صلحت صلح الجسد كله
وإذا فسدت فسد الجسد كله, ألا وهي القلب

</div>

"Beware! There is a piece of flesh in the body if it becomes good (reformed) the whole body becomes good but if it gets spoilt the whole body gets spoilt and that is the heart..."

Therefore, this study had a variety of constraints in measuring student applying values in both the treatment group and the control group. However, the researchers have tried to adopt some of the internal and external threats in the study. According to Campbell and Stanley (1963), there are several major threats to internal validity. They are history, maturity, pre-test, instrument, participant selection, mortality and participant selection interaction with maturity. While the threat to external validity involves the effects of treatment selection interactions, the effects of specific variables, reactive effects such as Hawthorne or Novelty effects, the effects of researchers and the effects of treatment pollution. These listed threats are controlled and maintained so as not to affect the treatment methods carried out.

Therefore, these findings are based on the data collected during the pre and post-test periods. At the same time, researchers were involved indirectly throughout the implementation process using the module to ensure that the effects resulting from the post test results were due to the treatment provided. In order to identify the effectiveness of using the PBL module in applying the

values of the treatment and control group students, the researchers used a dependent t-test analysis to detect the differences between the two variables within the groups and in separate analyzes. The t-test analysis showed that there was a significant difference between the pre-test and the post-test against 10 of 14 religious values. The findings show that there are ten $p$values less than 0.05 (p= 0.00 <0.05). This means that the use of the PBL module has successfully implemented almost all of the measured values.

While the value applying among the control group students also receives a significant difference score between the pre-test and the post-test. This suggests that learning through the usual methods is also effective in applying religious values to students. However, only two values were successfully applied from 10 values of religious value which are punctuality (p= 0.028) and humble (p= 0.028). It can be concluded that the application of PBL modules in the experiment group are able to increase the level of applying religious values in the students compared to the control group that was taught using conventional modules. However, independent t-tests need to be carried out to identify the actual comparison of the mean value of post-test mean score of applying all the religious values between treatment groups and control groups.

After the analysis is carried out, the result of the independent t-test which is the score of the post-test between the treatment group and the control group showed that all the $p$values were greater than 0.05 (p> 0.05). This shows that the level of value applying for both groups is equal and does not have any difference. This score explains that both groups have the same level of applying value and do not have a different level of value applying whether to undergo teaching and learning using the PBL module or through the usual teaching and learning process.

Therefore, if the researchers only conclude based on the findings of this t-test analysis alone, the researchers have failed to prove that the use of the PBL module is more effective than the use of the usual method of applying values among students. In other words, the process of applying the value either through the use of the PBL module or through the use of the normal method does not have a significant difference. The findings of this study are similar to the study by Yaacob (2007) where the two groups in her study are treatment groups and control groups that are not statistically different in the pursuit of religious values. However, her statistical data shows that there is a significant difference in students' understanding. Similarly, the study by Abdullah (2012), the effectiveness of modules in changing the effects of business idea generation cannot be statistically validated. However, he only succeeded in proving that the module was effective in increasing the number and quality of ideas in business between treatment and control groups.

Alternatively, researchers are also conducting a mean increase analysis to identify which group has the highest mean increase in the value-stage implementation process. This is based on the suggestion by Ahmad (2012) where this mean increase analysis is usually used to identify the actual level of increase between the pre and post-test within the group. According to him, the mean increase score can be obtained when the pre-test score rejects the post-test score

(post-pre). The result of this rejection is named as a mean increase score before and after learning and is compared with independent t-test statistics.

After the analysis, the findings show that there are three (3) p values less than 0.05 which is mind the tongue (p = 0.041), submission to Allah (p= 0.035) and guarding the dignity (p= 0.050). This means that the use of the PBL module has proven to effectively apply three (3) religious values among the treatment group compared to the control group through regular teaching and learning. If looked in detail, all the values in the experiment group are increasing based on the actual mean values, but they are not significant.

For the control group, the increase in the analysis of the mean score does not only indicate an increase in the mean values of non-significant values, but it also shows that there is a decrease in the mean score based on a negative score towards the increase of mean analysis. Religious values that experience decrease are gratitude (mean = -0.006), mind the tongue (-0.071), love (-0.037) and shyness (mean = -0.023). This shows that the method of teaching and learning can have a negative effect on the applying all the religious values compared to the teaching and learning using the PBL module.

9. Conclusion and Recommendation
The process of applying all the religious values through the PBL module is a form of initiative in enhancing the understanding of students in Islamic Education courses. Apart from enhancing the understanding of the students, the PBL module also emphasizes on the applying of the religious value and this was actually the main focus of this study. Universal values are the values that are in focus. Given that there are various effective learning strategies and strategies to improve the quality of teaching and learning, this module has revealed that the adoption of PBL strategies has been effective for use in learning especially on the subjects of morality. Therefore, this module is one of the alternatives for teachers to educate students and as guideline when they are facing various problems in life.

This module is also developed online to facilitate the use of lecturers and students regardless inside or outside of the classroom. The effect of using this module also increases the level of applying values among students. The continuous use of this module is expected to further optimize the value of applying values to ensure that students do not only understand the knowledge but are able to appreciate what they learn until they can translate them into behaviour and actions.

This study is conducted only to gauge the effectiveness of the module in applying Islamic values among students. It is recommended to take into account the effect of the module on student's moral considerations in future studies. The researcher proposes to see the impact on moral judgment as this is important in determining the student's thinking pattern in making judgments and decisions on something that happens in their life.

In addition, although the research instrument used in this study is sufficient to assess the level of applying religious values among students, it is still dissatisfying. The items developed should have high reliability and legitimacy in order to achieve a high standard measuring instrument. As it is known, the value is an abstract and cannot be seen, so additional instruments can be used to reinforce the findings of the study. Among other examples of instruments that can assist in future research is by adding peer based assessment questionnaires and behavioural specific observation forms that can be applied inside or outside the teaching and learning process.

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