Increasing Student Learning Motivation through the Application of Problem-Based Learning Models

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ABSTRACT

This research aims to see the improvement of students in learning Islamic religious education on Aqidah and Morals material. This research was conducted at junior high schools where cognitively students had entered the formal thinking stage and the transition from concrete to formal. This research was carried out at MTs Arrukhshatul 'Ulum, West Bandung using a quasi-experimental research method in which a pretest and posttest were given in both classes with a problem-based learning model and a conventional learning model in the form of a lecture method. The population of this study was all students at MTs Arrukhshatul 'Ulum with a sample of 61 students, namely 30 students in the experimental class and 31 students in the control class. In testing the pretest data, it shows that there is a difference in the average initial ability of experimental class and control class students in student motivation and the posttest average final ability of experimental class students' motivation is significantly better than the control class average. Furthermore, the N-Gain data normality test showed that the data was not normally distributed and showed that the increase in motivational abilities of experimental class students was better than that of control class students. It can be said that problem-based learning in Islamic Religious Education with Aqidah and Morals material can make significant improvements compared to conventional learning.

1. Introduction

In the contemporary era, competition in the current of globalization that is growing exponentially requires students to have adequate reversibility of cognition (Tamin et al., 2022)(Lukmantya, 2023)(Lukmantya, 2023) Education is a pillar in human life which broadly contains all aspects of skills both *soft skills* and *hard skills* to have for students in higher-order thinking (Al Ayyubi et al., 2018). The ability to think at a higher level these days is often echoed by similarities in education with the term *Higher Order Thinking Skills* which can be supported by motivation in students to be able to pay more attention in learning (Wafa, 2022). Because *Artificial Intelligence* has been invited into everyday life, this makes students have to have an unyielding fighting spirit in solving problems, especially in learning critically, creatively, and innovatively in facing problems in their daily lives (Lukmantya, 2023)

In reality, there are still many students who have not heeded and realize that the challenges ahead are no longer fellow humans to be able to compete, but artificial intelligence made by humans themselves to be able to further simplify the problems that exist in their daily lives (Rahayu et al., 2022) There are still many students who are considered unable to be motivated in learning ((Ziplin, 2021) this is detected because of their lack of interest in monotonous learning and does not activate student motivation in learning (Sawitri, 2020). So that the learning methods or models used in the classroom can be fairly conventional (Bukhori et al., 2023; Paradina et al., 2019; Rambe, 2023). Students are noticed that there are still those who seem eccentric about things whose basis does not have implications for their daily lives in society and also for their future to support in work that suits their interests and talents. Meanwhile, apart from that, students realize that there are globalization challenges that must be culminated for them to be able to compete with other learners who can use *artificial intelligence* well (Hasrah, 2023)

Learning that is considered very innovative and makes students able to understand the implications and coherence in learning both a priori and aposteriori is with a problem-based learning model or some call it problem-based *learning* (Meilasari &; Yelianti, 2020; Rahayu &; Sulaiman, 2022). With the PBL model, students are directly involved in learning their knowledge according to their interests and talents both implications for their daily lives and for their future (Azizah, 2022; Djonomiarjo, 2020; Primadoniati, 2020; Saenab et al., 2019). The principle in the PBL learning model is to construct students to be able to learn contextually and activate the motivation of students in learning. Because the *focus and* scope *in*   this model is problem-based in accordance with the conditions and situations of students in everyday life. So far, research on the PBL model in science, especially science, is rife, while in the context of Islamic religious education it must always be echoed because of its intersecting nature with the vertical realm (Sukriyatun et al., 2023).

Thus, it can be said that research that uses the PBL model to stimulate student motivation in learning Islamic religious education has not been widely conducted (Al Ayyubi &; Rohmatulloh, 2023; Sabarudin, Al Ayyubi, Rohmatulloh, et al., 2023; Sabarudin, Al Ayyubi, Suryana, et al., 2023). So to fill the gap, this study aims to see the increase of students in learning in Islamic religious education on Aqidah and Akhlak material (Solihah & Syamsul, 2023). This research was conducted at the junior high school level where in cognition students have entered the stage of formal thinking and transition from concrete to formal. In addition, the novelty value in this study is the process of deepening problem-based learning with vertically existing slices, because considering the study of Islamic religious education, there are things that can be brought empirically and metaphysically related to the faith of students (Bakar et al., 2023; Ishmael &; Ahida, 2022).

2. Method

This research was carried out at MTs Arrukhshatul 'Ulum, West Bandung with a quasi-experimental research method which was given pretest and postest in both classes with a

problem-based learning model and a conventional learning model in the form of a lecture method on Islamic religious education subjects with aqidah and moral material. The population of this study was all students in MTs Arrukhshatul 'Ulum with a sample of 61 students, namely 30 students in the experimental class and 31 students in the control class. This research instrument uses tests and questionnaires (Solihah & Syamsul, 2023). The data analysis requirements test used consisted of data normality test using Kolmogorov-Smirnov assisted by SPSS software version 26.

3. Result and Discussion

The In this study, two classes were selected to be used as research. The data presented were data on the motivational ability of experimental class students who numbered 30 people and the control class which had 31 students. The data was obtained from the results of the initial *test (pre-test) and final test (*post-test) given to each group with a maximum score of 60. The next step is to conduct a normality test on the pre-test scores of the two classes. To test the normality of pre-test scores in this study, the *Kolmogorov-Smirnov test* was used, with a significance level $\alpha = 0.05$.

Tabel 1. Pre-test Data Normality Test Output

Kelas		Kolmogorov-Smirnov[a]		
		Statistic	Df	Sig.
Nilai	Eksperimen	.134	30	.200
	Kontrol	.102	31	.200

Based on Table 1 above, the significance value for the experimental class and control class is 0.200. From these data, it is obtained that the significance value is greater than 0.05, it can be concluded that *the pre-test data of the* experimental class and the control class are normally distributed, then the Levene test is carried out.

Tabel 2. Pre-test Data Homogeneity Test Output with Levene test

Levene Statistic	df1	df2	Sig.
9,587	1	59	.002

Based on Table 2 above, it is obtained that the significance value is 0.002 or less than 0.05. This shows that the variance of data from both classes is not homogeneous, so the t' test is then carried out.

Tabel 3. Output of Mean Similarity Test Pre-test Data with t-test

		t-test for Equality of Means		
		T	Df	Sig. (2-tailed)
Nilai	Equal variances assumed	2.176	59	.031
	Equal variances not assumed	2.119	38.427	.042

Based on Table 3 above, it is obtained that the value of Asymp. Sig. (2-tailed) = 0.042 or less than 0.05. This shows that there is a difference in the average initial ability of experimental class students with control class students.

Tabel 4. Post-test Data Normality Test Output

Kelas		Kolmogorov-Smirnov[a]		
		Statistic	Df	Sig.
Nilai	Eksperimen	.147	30	.200
	Kontrol	.112	31	.200

Based on Table 4 above, the significance value for the experimental class and control class is 0.200. From these data, it is obtained that the significance value is greater than 0.05, it can be concluded that *the post-test data of the* experimental class and the control class are normally distributed, then the Levene test is carried out.

Tabel 5. Post-test Data Homogeneity Test Output with Levene test

Levene Statistic	Sig.
9,711	.002

Based on Table 5 above, it is obtained that the significance value is 0.002 or less than 0.05. This shows that the variance of data from both classes is not homogeneous, so the t' test is then carried out.

Tabel 6. Output of Mean Similarity Test Post-test Data with t-test

		t-test for Equality of Means		
		T	**Df**	**Sig. (2-tailed)**
Nilai	Equal variances assumed	1,967	59	.053
	Equal variances not assumed	1,912	34.837	.064

Based on Table 6 above, it is obtained that the value of Asymp. Sig. (2-tailed) = 0.064/2 = 0.032 or less than 0.05. This showed that the average *post-test* of the final ability of the experimental class students was significantly better than the average control class. Furthermore, to find out whether the learning carried out is meaningful or not, the N-Gain test is carried out.

Tabel 7. N-Gain Data Normality Test Output

Kelas		Kolmogorov-Smirnov[a]		
		Statistic	**Df**	**Sig.**
Nilai	**Eksperimen**	.214	30	.004
	Kontrol	.286	31	.200

Based on Table 7 above, the significance value for the experimental class is 0.004 and the control class is 0.200. From these data, it was obtained that the significance value of the experimental class was smaller than 0.05 while the significance value of the control class was greater than 0.05, it can be concluded that *the N-Gain* data is not normally distributed, so the Mann-Whitney test was then carried out.

Tabel 8. Mann-Whitney Test Output N-Gain Data with t test

	N-Gain_Persen
Mann-Whitney U	328.000
Wilcoxon W	713.000
Z	-.387
Asymp. Sig. (2-tailed)	.664

Based on Table 8 above it is obtained that the value of Asymp. Sig. (2-tailed) = 0.664, *then the value of Asymp. Sig. (1-tailed) = 0.664/2=0.332.* Because of the value of Asymp. Sig. (1-tailed) = 0.332 or greater than 0.05, then H0 is accepted. This shows that the increase in motivation ability of experimental class students is better than control class students in Islamic Religious Education subjects with Aqidah and Akhlak material.

4. Conclusion

In this study conducted on 61 students with 30 experimental class students and 31 control classes, it was obtained that the pretest and postest data were normally distributed and class variance was not homogeneous. In testing, pretest data showed that there was a difference in the average initial ability of experimental and control class students on student motivation and

the average postest of the final ability motivation of experimental class students was significantly better than the average control class. Furthermore, the N-Gain data normality test showed that the data were not normally distributed and showed that the increase in motivation ability of experimental class students was better than that of control class students. It can be said that problem-based learning in Islamic Religious Education with Aqidah and Akhlak material can make significant improvements compared to conventional learning.

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