The Effectiveness of the Team-Teaching Method in the Islamic Religious Education Teaching

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ABSTRACT

Islamic education (PAI) is one of the obligatory General Subjects (MKU) taught at the Public Higher Education Institutions (PTU). It has broad materials, such as faith and belief, worship, morals, *muamalah*, *siyasa*, Islamic economics, and selectivity. On the other hand, it has only two credits in one semester. Due to its complex materials, perhaps the PAI lecturers may not master all of them properly. Therefore, it is necessary to use the best teaching methods to the students, such as team teaching. It is where several lecturers work together to teach parts of the material contained in one topic that has a broad scope. The results show that the team teaching method is more effective in teaching PAI at the Semarang State University (*UNNES*).

Keywords:	*PAI, PTU,* team teaching

I. Introduction

Law Number 20 of 2003 concerning the National Education System Article 36 states that each type, path, and level of education must include religious education. Therefore, it must be taught at the tertiary level.

The religious education at Public Higher Education Institutions (PTU) is contained within an Islamic Religious Education (PAI) course. Historically and constitutionally, it has a steady position in every PTU. The main issue lies in its quality and functions, not its existence.[1]

The PAI course, both at public and private campuses, is not considered a main subject that is functionally integrated and plays a role in building the graduates' character. At the Semarang State University (*UNNES*), PAI is an obligatory General Course (MKU). It is given in one semester for the S1 (bachelor's degree) and D3 (diploma 3 degrees) students.

The PAI is delivered using two methods; team teaching for bachelor/undergraduate students, and personal teaching for D3 students. The team-teaching method is where some lecturers work together to teach some parts of the material contained in certain courses. Meanwhile, the personal teaching method is that there is only one lecturer who teaches the entire subject matter.[2]

Theoretically, team teaching is more effective than the personal method. It will be very complex for a lecturer to master the entire PAI materials covering difficult topics like faith, worship, morals, *muamalah*, Islamic economics, *siyasa*, and select capital. The team teaching method can solve this problem effectively. Also, most of the PAI lecturers at UNNES have no original Islamic religious backgrounds.

From some descriptions above, the researcher is interested in conducting a study at UNNES on the team teaching method in teaching PAI at the Faculty of Languages and

Arts (FBS). The proposed problems are: 1) is there a difference in the effect of using the team teaching and personal teaching methods in improving the students' academic outcomes for the PAI course at UNNES, and; 2) is the team teaching method more effective than the personal teaching method in delivering PAI materials at UNNES?

II. Theoretical Framework And Hypotheses

A. Theoretical Frameworks on the Position of PAI at PTU and Some Teaching Methods Used

The Islamic Religious Education (PAI) in Public Higher Education Institutions (PTU) is included as the General Courses (MKU). Commonly, it has 2 out of 33-36 general courses credits or a minimum of 144 credits in the Undergraduate Program.[3] As part of the national curriculum, PAI should be in line with national education objectives as mandated by Law Number 20 of 2003 concerning the National Education System.

According to Suyanto, PAI plays a role in improving the quality of Indonesian human resources. More specifically, it can be implemented to achieve the mission of empowering Muslims. It is expected that universities can produce graduates who have strong Indonesian personalities and believe and fear Allah SWT.[4]

Asa'at Esyam describes that PAI aims to help and build mental attitudes and identity as the Indonesian nation. Therefore, it must not only contain the cognitive domains, but also effective and psychomotor ones.[5]

Satryo Soemantri Brodjonegoro viewed that the PAI is an obligatory course delivered and taught in all universities in Indonesia. However, it only has two credits, so it is almost impossible to make it a means of building students' personalities. The large scope of PAI materials such as ethics, worship, *sharia*, and *muamalah* will create severe problems for a lecturer because religion lecturers have different educational backgrounds. Therefore, there must be an effective method to deliver and cover all PAI materials, or the lecturers can only select certain topics to be taught to the students.[6]

PAI course has a key task and role, namely instilling fundamental values for building the students' attitudes. At the same time, it also functions as a learning source that gives meaning, color, and a binder of values developed by other courses. Therefore, it is expected that the universities can produce scholars who have strong Indonesian personalities and believe and fear Allah SWT.[7]

Tayar Yusuf and Syaiful Anwar suggested some techniques to teach the PAI materials. There are three most common methods implemented in many colleges. The first is the personal teaching method, where a lecturer conveys the topics of PAI entirely. The second one is the discussion method. The lecturer distributes the materials to the students to discuss the problems. The last one is the team teaching method, where some lecturers work together to deliver parts of the PAI course.[8]

Meanwhile, Wyn Bramley explained that the team teaching system is a teaching technique done by some persons on one topic. Bramley divided the tutoring group into a large and a small group of teachers. The small group model is effective to minimize conflicting information in the learning process delivered by the teaching team. The team teaching model is also better than the personal model. A lecturer's lack of knowledge about certain materials can be solved within a team. Different teaching techniques can also be incorporated into a single session. Another benefit is that the students can completely access relevant information about the material because it is taught by the lecturers who have complementary sides.[9]

B. Research Hypotheses

A hypothesis is a presumption that may or may not be correct. According to Sutrisno Hadi, a hypothesis may or may not be accepted, because it depends on the facts. If the facts show that it is true, the hypothesis will be accepted; otherwise, it will be rejected if the facts show contrary results.[10]

The two hypotheses proposed in this research are: 1) there is a difference in the effect

between the use of the team teaching and the personal teaching method in improving the students' academic outcomes for PAI course at UNNES, and: 2) the team teaching method is more effective than the personal teaching method in delivering PAI materials at UNNES.

III. Research Method

A. Research Design

It is experimental research with the team teaching and the personal teaching methods as two treated groups (manipulated independent variables) and academic outcomes in the PAI course as the dependent one. It is field research where the data are obtained from the research site. Meanwhile, the research is conducted at the Faculty of Languages and Arts (FBS) of Semarang State University (UNNES).

B. Population and Sample

Theoretically, the population is the total number of individuals to be studied. The research population is all UNNES students who have been taught with the PAI course, namely undergraduate students who have given the team teaching method in their learning process and D3 level students who are taught with the personal teaching method.

Due to a large population and the limited researcher's ability, only some units are taken as the sample. The sample is part of the population used as a representative.[11] The sample is set using the purposive sampling technique on the class 2006 students of the Department of Foreign Languages, Faculty of Languages and Arts (FBS) of Semarang State University (UNNES). Purposive sampling can only be applied within certain considerations.[12] The researcher uses this technique because the students of the French and Japanese Tourism Study Programs have very low Islamic knowledge before being taught the PAI course. Most of them are public high school graduates and have never studied religion formally in *madrasah* or non-formally as in Islamic

boarding schools or *majlis ta'lim*. For the undergraduate level (D3), there are 20 students chosen as the sample. They are the class 2006 students of the Department of Foreign Languages.

C. Data Collection Technique and Instrument

The data are collected using the observation method. It is a method of collecting data by observing and recording specific symptoms, work processes, and human behavior.[13] This method aims to collect, record, analyze, and draw conclusions about the results of PAI materials delivery using team teaching and personal teaching methods at the UNNES. Furthermore, to find out the differences and measure the effectiveness of the two methods, the researcher uses pretest and posttest.

E. Data Analysis Method

The differences between the team teaching and the personal teaching methods in improving academic outcomes are identified using a t-test.

M_I = the average score after the students taught using the team teaching method

M_{II} = the average score after the students taught using the team teaching method

If the two groups are homogeneous (having the same variance), then the hypotheses are tested using the following formula:

$$t = \frac{M_I - M_{II}}{\sqrt{\left[\frac{\sum x_I^2 + \sum x_{II}^2}{(n_I - 1) + (n_{II} - 1)}\right]\left[\frac{1}{n_I} + \frac{1}{n_{II}}\right]}}\ 14$$

Note:

M_I : the average score after the students taught using the team teaching method (for undergraduate students)

M_{II} : the average score after the students taught using the team teaching method (for D3 students)

n_I : the number of the sampled students (undergraduate students taught using the team teaching method)

n_{II} : the number of the sampled students (D3 level students taught using the personal teaching method)

The t-test above uses a degree of freedom ((df) n_I + n_I −2).

Then, the obtained t-value is consulted with the t-table value at a significant level of 5%. It aims to check whether there is a difference or not. If the t-count is higher than the t-table, then Ho is rejected.

Ho states that there is no difference in using the team teaching and the personal teaching methods in teaching PAI materials at UNNES to improve the students' academic outcomes.

After identifying the difference between the team teaching and the personal teaching methods, the next step is to find which one is more effective. This step involves the right-hand t-test formula with the following hypotheses:

Ho: There is no different effect between the team teaching and the personal teaching methods in improving students' academic outcomes for the PAI course.

Hi: The team teaching method is more effective than the personal teaching method in improving students' academic outcomes for the PAI course.

The following formula (the right-hand (one tail) t-test formula) is used to find out which method is more effective:

$$t = \frac{M_I - M_{II}}{S_{gab}\sqrt{\frac{1}{n1} + \frac{1}{n2}}} \quad 15$$

Untuk mengetahui simpangan baku gabungan (S$_{gab}$) digunakan rumus:/ The standard deviation (S$_{gab}$) is obtained using the following formula:

$$S_{gab} = \frac{\left(n^1 - 1\right)S_1^2 + \left(n^2 - 1\right)S_2^2}{n_1 + n_2 - 2} \quad 16$$

The degree of freedom (df) is n1+n2-2. Then, the obtained t-value is consulted with the t-table at a significant level of 5%.

Ho   is accepted if $- t_{table}\ \frac{1}{2}\ \alpha < t_{count} < t_{table} - \frac{1}{2}\ \alpha$.

Ho stated that there is no difference in the effect of the team teaching method with the personal teaching method in improving the students' academic outcomes for the PAI course.

IV. Results And Discussions
A. The PAI teaching at UNNES

The PAI course only has 2 credits within one semester for the undergraduate (S1) and D3 (diploma 3) students. It has a very broad scope so the delivery of the materials should not be done by a single lecturer.

All PAI materials must be delivered adequately. Therefore, UNNES implements the team teaching method for this course. The team-teaching method is applied to undergraduate students, while the D3 students still use the personal teaching method, where one lecturer must teach the entire PAI materials. The number of undergraduate students per year is far more than the D3 level.

B. Research Data Display

The following sections describe the differences between the team teaching and personal teaching methods in delivering the PAI materials at the UNNES.

1.   The PAI Teaching using Team Teaching Method

The pretest scores of the undergraduate students taught using the team teaching method are shown in the following table:

Table 1
Pretest Scores of the Students Taught using Team Teaching Method

Nu.	SRN	Pretest Score
1	2301406001	71
2	2301406002	73
3	2301406003	79
4	2301406004	88

5	2301406005	79
6	2301406006	75
7	2301406007	73
8	2301406008	73
9	2301406009	74
10	2301406010	70
11	2301406011	84
12	2301406012	77
13	2301406013	74
14	2301406014	75
15	2301406015	73
16	2301406016	77
17	2301406017	73
18	2301406018	73
19	2301406019	70
20	2301406020	70

*SRN= Student Registered Number
(*Source: Research Data*)

The posttest scores of the undergraduate students taught using the team teaching method are shown in the following table:

Table 2
Posttest Scores of the Students Taught using
Team Teaching Method

No.	SRN	Posttest Score
1	2301406001	80
2	2301406002	79
3	2301406003	85
4	2301406004	92
5	2301406005	87
6	2301406006	81
7	2301406007	80
8	2301406008	85
9	2301406009	88
10	2301406010	80
11	2301406011	89
12	2301406012	82
13	2301406013	83
14	2301406014	95
15	2301406015	84
16	2301406016	87
17	2301406017	85
18	2301406018	80
19	2301406019	86
20	2301406020	82

*SRN= Student Registered Number
(*Source: Research Data*)*

After having the students' scores taught using the team teaching method, the next is calculating the average (mean) of each score shown in table 4.3.

Table 3
Average Scores of the Students Taught using
Team Teaching Method

No.	SRN	Pretest	Posttest	Average
1	2301406001	71	80	76
2	2301406002	73	79	76
3	2301406003	79	85	82
4	2301406004	88	92	90
5	2301406005	79	87	83
6	2301406006	75	81	78
7	2301406007	73	80	77
8	2301406008	73	85	79
9	2301406009	74	88	81
10	2301406010	70	80	75
11	2301406011	84	89	87
12	2301406012	77	82	80
13	2301406013	74	83	79
14	2301406014	75	95	85
15	2301406015	73	84	79
16	2301406016	77	87	82
17	2301406017	73	85	79
18	2301406018	73	80	77
19	2301406019	70	86	78
20	2301406020	70	82	76
				M_1= 80

(Source: Research Data)

The data show that the average score (M1) of the undergraduate students taught using the team teaching method is M1 = 80

2. The PAI Teaching using the Personal Teaching Method
The pretest scores of the D-3 level students taught using the personal teaching method are shown in the following table:

Table 4
Pretest Scores of the Students Taught using
Personal Teaching Method

Nu.	SRN	Pretest Score
1	2302406001	73
2	2302406002	73
3	2302406004	70
4	2302406005	69
5	2302406006	70
6	2302406007	73
7	2302406008	72
8	2302406009	69
9	2302406010	64

10	2302406011	67
11	2302406012	69
12	2302406013	65
13	2302406014	70
14	2302406016	66
15	2302406018	68
16	2302406022	70
17	2302406023	65
18	2302406024	60
19	2302406029	70
20	2302406030	66

(Source: Research Data)

The posttest scores of the D-3 level students taught using the personal teaching method are shown in the following table:

Table 5
Posttest Scores of the Students Taught using
Personal Teaching Method

Nu	SRN	Post Test Score
1	2302406001	75
2	2302406002	75
3	2302406004	74
4	2302406005	71
5	2302406006	72
6	2302406007	73
7	2302406008	74
8	2302406009	71
9	2302406010	50
10	2302406011	52
11	2302406012	69
12	2302406013	51
13	2302406014	75
14	2302406016	70
15	2302406018	55
16	2302406022	52
17	2302406023	60
18	2302406024	62
19	2302406029	66
20	2302406030	60

(Source: Research Data)
The next step is calculating the average (mean) of each score as shown in table 6.

Table 6
Average Scores of the D-III Students Taught using
Team Teaching Method

Nu.	SRN	Pretest	Posttest	Average
1	2302406001	73	75	74
2	2302406002	73	75	74
3	2302406004	70	74	72
4	2302406005	69	71	70
5	2302406006	70	72	71
6	2302406007	73	73	73
7	2302406008	72	74	73
8	2302406009	69	71	70
9	2302406010	64	50	58
10	2302406011	67	52	60
11	2302406012	69	69	69
12	2302406013	65	51	58
13	2302406014	70	75	73
14	2302406016	66	70	68
15	2302406018	68	55	62
16	2302406022	70	52	61
17	2302406023	65	60	63
18	2302406024	60	62	61
19	2302406029	70	66	68
20	2302406030	66	60	63
				$M_{11}= 67$

(Source: Research Data)

The data show that the average score (M1) of the students taught using the personal teaching method is $M_{II} = 67$.

Table 7 shows the comparison of the students' PAI test scores and the average scores taught using the team teaching and the personal teaching methods.

Table 7
Comparison of PAI Test Scores between Team Teaching and Personal Teaching Methods

Team Teaching					Personal Teaching				
Nu	SRN	Pretest	Posttest	Mean	Nu	SRN	Pretest	Posttest	Mean
1	2301406001	71	80	76	1	2302406001	73	75	74
2	2301406002	73	79	76	2	2302406002	73	75	74
3	2301406003	79	85	82	3	2302406004	70	74	72
4	2301406004	88	92	90	4	2302406005	69	71	70
5	2301406005	79	87	83	5	2302406006	70	72	71

6	2301406006	75	81	78	6	2302406007	73	73	73
7	2301406007	73	80	77	7	2302406008	72	74	73
8	2301406008	73	85	79	8	2302406009	69	71	70
9	2301406009	74	88	81	9	2302406010	64	50	58
10	2301406010	70	80	75	10	2302406011	67	52	60
11	2301406011	84	89	87	11	2302406012	69	69	69
12	2301406012	77	82	80	12	2302406013	65	51	58
13	2301406013	74	83	79	13	2302406014	70	75	73
14	2301406014	75	95	85	14	2302406016	66	70	68
15	2301406015	73	84	79	15	2302406018	68	55	62
16	2301406016	77	87	82	16	2302406022	70	52	61
17	2301406017	73	85	79	17	2302406023	65	60	63
18	2301406018	73	80	77	18	2302406024	60	62	61
19	2301406019	70	86	78	19	2302406029	70	66	68
20	2301406020	70	82	76	20	2302406030	66	60	63
M_I				80	M_{II}				67

(*Source: Research Data*)

3. Data Analysis

Next, the obtained data are processed using the Microsoft Excel program and the results are shown in Table 8.

Table 8
Results of Data Analysis of Team Teaching and
Personal Teaching Methods

Nu.	Team Teaching			Personal Teaching		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	X_I	x_I	X_1^2	X_{II}	x_{II}	x_{II}^2
1	76	-4	16	74	+7	49
2	76	-4	16	74	+7	49
3	82	+2	4	72	+5	25
4	90	+10	100	70	+3	9
5	83	+3	9	71	+4	16
6	78	-2	4	73	+6	24
7	77	-3	9	73	+6	24
8	79	-1	1	70	+3	9
9	81	+1	1	63	-4	16
10	75	-5	25	60	-7	49
11	87	+7	49	69	+2	4
12	80	+0	0	58	-9	81
13	79	-1	1	73	+6	36
14	85	+5	25	68	+1	1
15	79	-1	1	62	-5	25
16	82	+2	4	61	-6	36
17	79	-1	1	63	-4	16
18	77	-3	9	61	-6	24
19	78	-2	4	68	+1	1
20	76	-4	16	63	-4	16
Total	**1599**	**-1**	**295**	**1346**	**6**	**510**

(*Source: Research Data*)

Note:
x = X - M   x = X - M
x_I = 76 – 80 = -4 x_{II} = 74 – 67 = + 7

The data are inserted into the t-test formula:

$$ t = \frac{M_I - M_{II}}{\sqrt{\left[\frac{\sum x_I^2 + \sum x_{II}^2}{(n_I - 1) + (n_I - 1)} \right]\left[\frac{1}{n_I} + \frac{1}{n_{II}} \right]}} $$

$$ t = \frac{80 - 67}{\sqrt{\left[\frac{295 + 510}{(20 - 1) + (20 - 1)} \right]\left[\frac{1}{20} + \frac{1}{20} \right]}} $$

$t = 12, 6$

The degree of freedom (df) is:
df = (20-1) + (20-1)
  = 38

Based on the significance level of 5%, the degree of freedom is 38. It means the limit for rejection of the null hypothesis shown in the table of "t" values is 2.021.

This result indicates that the "t" value obtained from the investigation (t-count > t-table) is significant, so the null hypothesis is rejected. Based on the significance level of 5%, the null hypothesis (Ho) is rejected, meaning there is a difference between the team teaching and the personal teaching method.

The right side (one tail) t-test formula is used to decide which method is more effective:

$$t = \frac{M_I - M_{II}}{S_{gab}\sqrt{\frac{1}{n1} + \frac{1}{n2}}}$$

$$t = \frac{80 - 67}{63{,}74\sqrt{\frac{1}{20} + \frac{1}{20}}}$$

$t = 2{,}096$

The result shows that Ho is accepted if $-t_{table} - \frac{1}{2}\alpha < t_{count} < t_{table} - \frac{1}{2}\alpha$ is significant, meaning the null hypothesis is rejected. Based on the significance level of 5%, the null hypothesis (Ho) is rejected. Therefore, the team teaching is more effective than the personal teaching method in teaching Islamic Religious Education Course at the UNNES.

C.   Conclusions

The materials delivery requires attractive and heterogeneous methods to achieve effective and successful learning processes. Team and personal teaching are two main learning methods used in the PAI learning sessions. They are different; team teaching involves some lecturers working together to teach parts of the material contained in PAI according to their competence. Meanwhile, in personal teaching, only one lecturer who delivers one subject with a wide range of material sections.

The two methods also have different ways of presentation and resulting output. The team-teaching method only demands a lecturer to teach a topic he understands. Meanwhile, in the personal teaching method, a lecturer must deliver all the topics alone even though there are difficult materials for him. Such teaching techniques will influence the students'' enthusiasm during their learning.

Due to this issue, the researcher conducts some tests/trials in the form of pretest and posttest related to the two methods at UNNES. From the analysis of the difference in the average students' scores in the PAI course, it can be seen that there is a significant difference, where after the t-test, the t-count is 12.6 (higher than the t-table of 2.021).

Based on the average student core, the team teaching method has better outcomes than the personal method in teaching PAI. The average test score of the students taught using the team teaching method is 80, while those taught using the personal teaching method are only 64.

The results of the analysis of the right side difference test (one tail) show that the team teaching method is more effective than the personal method, where after the right side t-test, we find that $021 - \frac{1}{2}\alpha <$ t-count = 12,6 < t-table - $\frac{1}{2}\alpha$ is significant. These research findings conclude that the team teaching method is more effective in teaching PAI at the Semarang State University than personal teaching.

V. Conclusions

Based on the discussions above, it can be concluded that there is a difference in the effect between the team teaching method and the personal teaching method in improving the students' academic outcomes for the PAI course at UNNES. The team-teaching is declared more effective than the personal teaching method.

Endnote

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