

The Influence of Instructional Materials and Educational Background on the Learning Outcomes of Islamic Education

(An Experimental Study at FISIP Muhammadiyah University Jakarta, 2019)

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ABSTRACT: The aim of this research is to determine the effect of instructional material on the achievements in Islamic Education of students with different educational background, i.e. Aliyah and non-Aliyah (general) high schools. The experiment was conducted at the Faculty of Social and Political Sciences, Muhammadiyah University of Jakarta, during the second semester of the academic year 2018/2019, using a 2x2 factorial design. A sample of 40 students was randomly chosen from the available students, i.e. 20 students with Aliyah background and 20 students with non-Aliyah background. Anova and Scheffe test is applied to analyze the data obtained.

The result of hypotheses testing showed that: (a) Independent instructional material ($X=79,45$) resulted in a better achievement ($F_0=21,44 > F_1=4,11$) than the PBS one ($X=75,6$), (b) There is an interaction between instructional materials and educational background ($F_0=4,43 > F_1=4,11$), (c) For students with Aliyah educational background, there is no significant difference found achievement in Islamic ($C_p=18,6 < A_{x_s}(C_p) = 33,40$) by using the PBS instructional material ($X=76,64$) compared to the Independent instructional material ($X=78,50$), and (d) For students with non-Aliyah educational background, the Independent instructional material ($X=80,4$) resulted in a better achievement in Islamic ($C_p=56 > A_{x_s}(C_p) = 33,40$) compared to the PBS one ($X=74,8$).

Keywords: Independent Instructional material, PBS instructional material, educational background, learning outcome, Islamic education.

INTRODUCTION

In all levels of education, including tertiary education, religious education is expected to be a motivating factor for students to apply religious teachings that have been learned, internalized, and incarnated in behavior in daily life (HarunNasution, 1995: 15). Therefore moral philosophy becomes the basis in transforming religious knowledge.

In Islamic Education learning practices, it is interesting to put forward the results of research by Rifqiyati et al (1994: 27-31) which concludes two things, (a) however the results of studying religious education of students do not make a difference in their religious behavior, and (b) whatever the attitude of students the regulations also did not make a difference in their religious behavior. From these findings it can be stated that the knowledge obtained by students from religious education has not been able to encourage them to apply it in their daily lives. This situation, as research conducted by Suradika and Mulyani (1997: 3-4) is related to two things, namely the lack of systematic learning methods applied and the inadequate instructional materials used which are still limited to existing textbooks.

In addition, students at Public Higher Education Institutions, including at Muhammadiyah University

of Jakarta, have so far consisted of those who have different religious knowledge backgrounds. Broadly speaking, they can be categorized into two groups, (a) who have a lot of religious knowledge, namely those who have Aliyah High School educational background, and (b) who do not have much religious knowledge, those who have a high school education background non-Aliyah. For lecturers, it is rather difficult to teach religious education by taking into account the diversity of religious knowledge background.

From the description above, there are problems of Islamic religious education learning related to (a) the use of instructional materials, and (b) the educational background of high school students. Utilization of instructional materials can be divided into two, namely Independent instructional materials and PBS. Furthermore Educational Background can also be divided into two, Aliyah and non-Aliyah high schools. Based on the background of this problem research problems can be formulated as follows: (1) which instructional materials will provide higher Islamic educational learning outcomes, independent instructional materials or PBS ?, (2) is there an interaction between instructional materials with educational background that is can provide differences in student learning outcomes in Islamic Religious Education courses ?, (3) for students who have Aliyah High School educational background, which instructional material will provide higher Islamic Religious Education learning outcomes, Independent instructional materials or PBS ?, and (4) For students who have non-Aliyah high school education backgrounds, which instructional materials will provide higher Islamic Religious Learning outcomes, Independent instructional materials or PBS?

LITERATURE REVIEW, THEORETICAL FRAMEWORK AND HYPOTHESIS

2.1 Instructional Material

Instructional material is an important part of the instructional system. According to Gagne et al (2005: 18) instructional systems can be defined as "an arrangement of resources and procedures used to facilitate learning". In other words it can be stated that the instructional system is related to the management of resources and procedures to facilitate learning.

Another expert, Smaldino et al (2005: 25) holds that "an instructional system consists of a set of interrelated components that work together, effectively and reliably, within a particular framework to provide learning activities necessary to accomplish a learning goal." In a learning system, containing components that depend on each other to work together to facilitate the learning activities needed to achieve certain learning goals.

Based on the two definitions above it can be concluded that the learning system is "a collection of elements that interact and are interdependent with each other in an effort to facilitate learning to achieve learning objectives". There are a number of instructional system development models, one of which is the model proposed by Dick and Carey (2009: 136,168) as shown in Figure 1. Based on Figure 1 it can be seen that the development of instructional materials was designed after the establishment of instructional strategies.

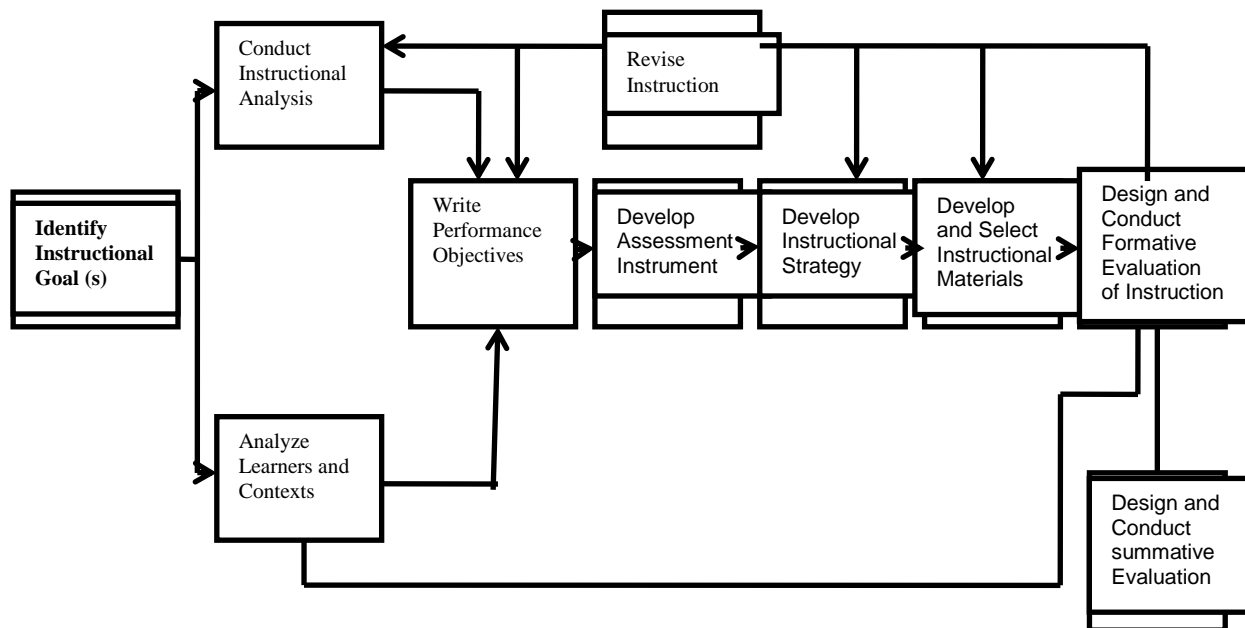


Figure 1. Systematic Design of Instruction

The development of instructional materials is a sub-system of the development of instructional systems. Based on the form of instructional activities, there are three forms of instructional materials (Suparman, 2012: 200), namely for (a) independent instructional materials, (b) conventional instructional materials, and (c) PBS instructional materials. In the following, the strengths and weaknesses of the two forms of instructional material used in this study will be presented, namely (a) Independent instructional materials, and (b) PBS.

2.1.1 Independent Instructional Material

Independent instructional materials have advantages and disadvantages. The advantage is the first, providing opportunities for students to learn at their own pace. This is possible because in the material there are instructions for students when they have to advance to learn the next topic, when they have to repeat to learn the same topic or another topic. Those with fast learning abilities can move forward without being interrupted by those who are slow. Conversely those who are slow do not need to feel left behind by those who are fast. Related to this advantage can be seen at least in Romiszowski (1981: 358), Kemp (1977: 55), Dick and Carey (2009: 166-167), and Suparman (2012: 197-200).

Second, students can get feedback that can be used alone. Gagne (2005: 315) suggests the importance of providing feedback in the learning process. According to him, feedback is needed in learning so that the learner can find out whether the performance (performance) that reflects the capabilities he just learned is true or false. With the feedback on Independent instructional materials, students are expected to immediately find out where their level of mastery is about a topic.

Furthermore the weaknesses of independent instructional material can be stated as follows. First, it requires high student discipline. No matter how good the quality of an Independent instructional material without high learning discipline will not be of any use. In other words it can be stated that in addition to the quality of learning materials, learning discipline is a very determining factor in student success. Second, it requires the perseverance of the instructor / facilitator to monitor student success, motivate, and provide consultation for those in need.

2.1.2. PBS Instructional Material

Compilation of learning materials in textbooks and the importance of teachers as the backbone of the use of these materials is an understanding related to the definition of Instructor-Student-Instructional Materials (PBS). PBS Instructional Materials are not intended as materials that can be used independently. The backbone of the use of PBS instructional materials is sourced from instructional and instructional materials, both of which must complement each other. Something that is not in PBS instructional material is complemented by instructors (Suparman, 2012).

Flexibility, i.e. easy to adjust instructional activities to the state of students or changes related to the content of a subject is an advantage of PBS instructional material. While the drawback lies in the selection of materials in the library that are not necessarily in accordance with what is needed by students. To overcome this problem usually the material developers then take various sources to complement each other. However, even this method still contains major weaknesses related to the consistency and linkages between the various sources.

2.2. Educational Background

Educational Background is a person's experience that has been obtained from a learning program. The experience can be in the form of (a) knowledge, or relating to cognition, (b) attitudes, or (c) certain behaviors. Different cognition, as stated by Krech, Crutchfield, and Ballachey (1988: 17), causes different ways of learning and thinking. Thus it can be stated that different educational settings will lead to the development of different knowledge where the development of knowledge occurs in accordance with the learning experiences that have been obtained.

The development of knowledge occurs through a process of transformation. According to information processing theory, as stated by Bell-Gredler (1988: 202), there are two important areas in learning, namely (a) the process of people obtaining and processing information, and (b) the tactics that people use in solving problems. These two fields relate to how the transformation process takes place, changing a message into another form of message that can control movement. Three important things from the transformation process stated by Gagne (1985: 71-76), (a) short-term memory, (b) long-term memory, and (c) remembering. The most important transformation of information occurs when information in short-term memory enters long-term memory. This process is called coding (encoding) which can be in the form of tables, room matrices, diagrams, images, or detailed images of the information learned. The main characteristic of material coded for long-term memory is that it must be semantically or meaningfully organized. Information in long term memory is inactive which can be recalled for later use. Furthermore, Gagne stated that when the matter of recalling what was learned was related to the application to a new situation or a new problem, what happened was called the transfer of learning. Gage and Berliner (1984: 356) state that in the transfer process there are two types of transfers, (a) positivetransfers, and (b) negativetransfers. Positive transfer is a transfer of past learning that can simplify or detail learning in the next period. Conversely negative transfer is the transfer of past learning that disrupts or complicates the learning process in the future.

From this description it can be stated that a supportive educational background will facilitate the next learning process. Or in other words it can be stated that for certain subjects, different educational backgrounds will result in different learning outcomes. In relation to Islamic Religious Education courses in Higher Education, the lessons learned at the High School (Aliyah) level affect the level their success. The more knowledge in the form of elements that are identical to the Islamic Religious Education obtained will make it easier for someone to study Islam, and thus vice versa.

2.3. Learning Outcomes of Islamic Education

Student attitudes and behavior are capabilities that must also be mastered in religious education in addition to mastery of religious education knowledge. In connection with attitudes, Gagne (2005: 223)

defines attitudes as dispositions or readiness to take certain actions. Furthermore, stated by Gagne (2005: 230-235) that attitudes are generally considered to have an affective component (emotion), cognitive aspects, and consequences of behavior. There are three ways to learn. The attitude is through (a) a single experience, such as a person who is afraid of snakes because he has a frightening experience related to snakes as a child, (b) the experience of success and pleasure of someone, like a child who feels happy because of successfully playing the video game, and (c) imitating others, like a child who learns how to deal with strangers by looking at what his parents are doing.

Furthermore Lambert and McCombs in Watkins (2007: 72) suggest that "learning is a constructive process that occurs best when the learner is actively engaged in creating his own knowledge and understanding by connecting what is being learned with prior knowledge and experience". Learning is a constructive process that occurs when students are actively involved in creating their own knowledge and understanding by linking what is being learned with prior knowledge and experience that they already have.

Another expert, Mayer in Richey, Klein and Tracey (2011: 51) suggested that: Learning is relatively permanent change in a person's knowledge or behavior due to experience. This definition has three components; 1) the duration of the change is long-term rather than short-term; 2) the locus of the change is the content and structure of knowledge in memory or the behavior of the learner; 3) the cause of the change is the learner's experience in the environment rather than fatigue, motivation, drugs, physical condition, or psychological intervention.

Based on the views of the experts mentioned above, it can be concluded that learning is all things related to changes in human behavior obtained from experience in various forms, both in the form of measured knowledge, skills and attitudes. This means that knowledge, skills and attitudes can be measured by the level of change that an individual gets. Measured behavior change is referred to as learning outcomes.

Regarding learning outcomes, Slavin in Barsky (2008: 8) states that "learning outcomes are commonly expressed in terms of competences or skills and competences, competences are understood as a combination of attributes (as regards knowledge and its application to attitudes, skills and responsibilities) that describe the level or degree to which a person is capable of performing a given task. " Learning outcomes are generally expressed in terms of skills and competencies, where competence is a combination of attributes (in the form of knowledge, attitudes, skills and responsibilities) that describes the level or degree at which a person is able to perform the given task. Furthermore Krathwohl in Molenda (2008: 51) divides learning outcomes into three areas cognitive, affective, and psychomotor.

Thus it can be concluded that learning outcomes occur when there are changes in the realm of cognitive, affective, and psychomotor. There are three ways that can be used to measure learning outcomes, (a) tests for cognitive domains, (b) attitude scales for affective domains, and checklists for psychomotor domains. The whole items in the measuring instrument are designed based on specific instructional objectives that have been set. Thus it can be stated that the indicator of Islamic religious education learning outcomes is the acquisition of scores from the entire measuring instrument used that is designed based on specific instructional objectives.

2.4 Theoretical Framework

2.4.1. The Distinction in the effect of instructional materials on overall educational learning outcomes.

Based on the literature review as stated above, it can be stated the following mindset. Instructional material in the learning process is a very important factor. Through this material learning is directed to achieve certain goals. Independent instructional materials are different from PBS instructional materials. These differences lie in several aspects as shown in table 1.

Table 1.

The Distinctions Between Independent Instructional Material and PBS Instructional Material

No	Aspects	Independent	PBS
1	Form of Instructional Material	Selected and rewritten by the developer	Chosen from the existed material
2	Feedback	Mostly from the material.	Lecturer Oriented Material
3	Time Spent	Flexibility in controlling and motivating students	Mostly Content Delivery
4	Discipline	High	Low, Need Motivation
5	Instructional Objectives	Mentioned	No Mention
6	Students Participation in Reading Books	Participating	No Participation
7	Systematic Material	Systematic	Random Topics
8	Level of Readability	Easy to Understand	Mostly Difficult to understand

Based on table 1 it can be assumed that learning using Independent instructional materials will provide learning outcomes for Islamic Religious Education that are different than learning using PBS instructional materials. That is for several reasons.

First, in learning in an Independent instructional material, the role of instructors is more widely used to monitor student progress and motivate them. In addition, learning can still be done by students even without the presence of a teacher.

Second, instructional materials used in independent learning are specifically designed with regard to the general characteristics of students. This allows examples that are relevant and easily understood by students. Furthermore PBS instructional material uses the material chosen from the library so that it is very possible that there is a mismatch of descriptions, examples, or exercises with the general characteristics of students.

Third, one important problem in learning is feedback. Students need to immediately know whether something they have learned is correct. In Independent instructional material, students can use the feedback available on the instructional material used. While in PBS instructional material, feedback is usually given by instructors through structured assignments. So, it really depends on the teacher.

Fourth, by explicitly mentioning the specific instructional goals to be achieved, students can know in what direction they will be "taken" in the learning process. This will motivate them to learn Independent instructional materials.

Fifth, in an Independent instructional material, sentences are used that invite students to solve problems, try something, and find something. This causes students to feel involved when reading, something that is rarely found in textbooks.

Sixth, another important thing in learning is to learn something systematically from easy to difficult. This relates to the presentation of the subject. In an Independent learning material the subject is presented systematically from easy to difficult, whereas in using textbooks it is not uncommon to have to jump from one chapter to another.

Finally, Seventh, the use of sentences designed according to the general characteristics of students in Independent instructional materials makes it easy for them to understand the contents of these materials. Based on this argument, it can be assumed that learning using Independent instructional material will provide better Islamic religious learning outcomes compared to learning using PBS instructional material. Or in other words it can be stated that Independent instructional materials are more effective than PBS instructional materials.

2.4.2 Interactions between instructional materials and educational background that affect learning outcomes of Islamic Education.

Instructional materials determine the level of learning outcomes of Islamic Religious Education, but are not the only factors, but are also influenced by different educational backgrounds. In an Independent instructional materials, learning strategies in the form of descriptions, examples, and exercises are designed according to the general characteristics of students. The depth of discussion about the content presented refers to the specific instructional objectives (ICT) that will be achieved. In this connection, instructional material for Islamic Religious Education courses in General Higher Education is usually elementary. This is in addition because the participants who took part were those who had limited experience of learning about Islam, also because the time available was very limited. For those who have an educational background in Aliyah High School, this situation is an obstacle because there is a kind of boredom for them to learn something elementary. Here a negative transfer occurs. Conversely, those who have a non-Aliyah high school education background are suspected of not having difficulty because what they learn is something new so they are interested in learning it. Based on this thinking, it can be stated that when using Independent instructional materials, students who have a non-Aliyah high school education background are expected to get higher Islamic Religious Learning outcomes compared to those who have an Aliyah High School education background.

In PBS instructional material, the material used was not specifically designed by the instructor, but was chosen from Islamic religious science textbooks in higher education because the textbooks were usually intended for readers who intended to deepen knowledge. This situation can be a stimulant but also at the same time an obstacle in learning. For students who have a non-Aliyah high school education background, this is an obstacle. On the other hand, for those who have an Aliyah High School education background, the knowledge of the Islamic Religion that they had previously acquired provided for them to understand the existing textbooks. Based on this thinking, it is suspected that when using PBS instructional materials, students who have an Aliyah High School education background will obtain higher Islamic Religious Learning outcomes compared to those who have a non-Aliyah High School education background.

Based on the description above, it can be suspected that there is an interaction between instructional materials with a high school education background that can provide a different effect on the learning outcomes of Islamic Religious Education.

2.4.3 Differences in the influence of Independent and PBS instructional materials on learning outcomes of Islamic Religious Education for students who have non-Aliyah high school educational backgrounds.

Students with an Aliyah High School education background have several general characteristics, including (a) having a fair amount of knowledge about Islam that is identical in elements to the content of the Al Islam course, (b) they are prepared to study religion at an educational level that is higher, and (c) have high motivation to study the religious sciences so that they are interested in finding learning resources according to their needs.

The basic difference between Independent and PBS instructional materials, as stated in the previous description, lies in the depth of the contents of each subject. In Independent instructional material, the depth of the topic of discussion leads to the instructional objectives to be achieved which are adjusted to the general characteristics of the students who follow. In this connection, instructional materials for Islamic Religious Education courses in general tertiary institutions are elementary. In contrast, PBS instructional materials compiled from textbooks are usually intended for readers who really intend to deepen religious knowledge.

Based on these differences, it is suspected that the use of PBS instructional materials for students with Aliyah High School education background, is more effective than Independent instructional materials. This is because of two reasons, (a) when using Independent instructional material those who have an

educational background are saturated and uninterested Aliyah High School because the depth of the discussion is very elementary and does not motivate them to develop their thinking, whereas motivation is a prerequisite for a positive transfer. Conversely, (b) when using PBS instructional materials, they will feel they are getting something new because the material presented has not been obtained when they were in high school. This stimulates them to read textbooks according to their needs and concentrates on the identical elements they have learned so that positive transfers occur.

2.4.4 Differences in the influence of Independent and PBS instructional materials on learning outcomes of Islamic Religious Education for students who have a non-Aliyah high school education background.

Students with a non-Aliyah high school education background have several general characteristics, including (a) having limited religious knowledge, (b) being prepared to explore general science at a higher level of education, and (c) studying religion not as a topic of study science but as a way of life.

Independent instructional material was specifically designed to meet the needs of students studying Religion in General Higher Education, as knowledge that is expected to be a guide to their lives. Therefore the discussion of the contents is elementary. In contrast to PBS instructional material, the textbooks used discuss a topic in depth. In this context, for students with a non-Aliyah high school education background the use of Independent instructional materials is thought to be more effective than PBS instructional materials. This is because of two reasons, (a) Independent instructional materials are easier to learn, the depth of discussion is in accordance with their abilities, the terms used are easy to understand, there is feedback so it is not difficult for them to know whether or not something has been learned, vice versa (b) when using PBS instructional materials, they will get a number of difficulties especially those related to the use of foreign terms, in-depth discussion, and direct feedback cannot be obtained. This becomes an obstacle for them in learning.

2.5. Hypothesis Formulation

Based on the thinking framework as stated above, then the hypothesis can be formulated as follows:

1. Independent Instructional Materials will provide higher Islamic Religious Education learning outcomes compared to PBS Instructional Materials.
2. There is an interaction between instructional material and educational background that can provide differences in learning outcomes of Islamic Religious Education.
3. For students with Aliyah High School education background, the learning outcomes of Islamic Religious Education students who use PBS instructional materials are higher than those who use Independent instructional materials.
4. For students with non-Aliyah high school educational background, the use of Independent instructional materials will provide higher Islamic Religious Education learning outcomes compared to those using PBS instructional materials.

3. RESEARCH METHOD

This research was conducted at the Faculty of Social and Political Sciences, Muhammadiyah University, Jakarta. The study was conducted in the even semester of the academic year 2018/2019, namely from February to July 2019. The implementation was given during 16 meetings including midterm and end of semester tests.

The study population was students of the Faculty of Social and Political Sciences at the Muhammadiyah University of Jakarta who attended Al Islam II lectures in the even semester of the 2018/2019 academic year. A sample of 40 students was drawn from two classes by random stratification

based on the high school's educational background. Each class is taken as many as 20 people, namely 10 people who have an educational background in Aliyah High School and 10 non-Aliyah High School people. Thus the sample size of each group as a whole is:

LBP BI	Independent	PBS
Aliyah	10	10
Non-Aliyah	10	10

This research is an experimental study conducted using a 2 x 2 factorial design with the following chart and constellation of problems:

Instructional Material Senior High School Educational Background	Independent A ₁	PBS A ₂
Aliyah B ₁	A ₁ B ₁	A ₂ B ₁
Non-Aliyah B ₂	A ₁ B ₂	A ₂ B ₂
All	A ₁	A ₂

To gain confidence that the research design chosen is good enough to test the research hypothesis and the results can be generalized, it is necessary to control the internal and external validity of the research design (Isaac and Michael, 1982: 59-63). The treatment given can be explained as follows. Groups A1B1 and A1B2 were taught using Independent instructional material. Furthermore, the A2B1 and A2B2 groups were given instruction using PBS instructional materials. For these groups, lectures are given by two lecturers who have the same ability. One person for the Independent group (A1B1 and A1B2), another person for the PBS group (A2B1 and A2B2). The same lecture time is 100 minutes each time.

This study uses several instruments, (a) Independent instructional material in the form of Al Islam II learning material, (b) PBS instructional material in the form of a compilation of al Islam II subject matter from a number of relevant books, and (c) test in the form of multiple choice tests, essays, and check list. Data analysis techniques with Variant Analysis (ANAVA) coefficients and overall analysis requirements were searched using existing statistical applications, namely SPSS. Before testing the hypothesis with Anava, the requirements are first checked, whether (1) The sample comes from an independent group, (2) Variants between homogeneous groups, and (3) Data in each group is normally distributed

Statistical Hypothesis

1 Ho : $\mu A_1 = \mu A_2$
 Ha : $\mu A_1 > \mu A_2$

2 Ho : Interaction A x B = 0
 Ha : Interaction A x B > 0

3 Ho : $\mu A_2B_1 = \mu A_1B_1$
 Ha : $\mu A_2B_1 > \mu A_1B_1$

4 Ho : $\mu A_1B_2 = \mu A_2B_2$

$$H_a : \mu_{A_1B_2} > \mu_{A_2B_2}$$

4. FINDING AND DISCUSSION

4.1 Data Description

From the data collected regarding al-Islam II learning outcomes using instructional materials and based on high school educational background can be presented in table 2.

Table 2. Score of Central Tendency Al Islam Learning Outcomes

Score	A ₁	A ₂	A ₁ B ₁	A ₁ B ₂	A ₂ B ₁	A ₂ B ₂
Average	79,45	75,6	78,5	80,4	76,64	74,8
SD	3,15	2,19	2,62	3,32	2,26	1,74
Modus	75,0	77,0	75,0	75,0	73,0	72,0
Median	80,0	76,0	79,0	81,0	77,0	75,0

Source: Research Finding, 2019.

Information :

A₁ = Independent Instructional Material

A₂ = PBS Instructional Material

B₁ = Aliyah High School Education Background

B₂ = Educational background of non-Aliyah high school

SD = Standard deviation value

4.2 Testing Requirements Analysis

a. Normality test

From the data collected which was then tested for sample normality with Lilefors test obtained Lo for each group as shown in table 3.

Based on the data as shown in table 3 above, it can be concluded that for each group, the data comes from normally distributed populations.

b. Homogeneity Test.

Homogeneity test is carried out using the Bartlett Test. From the test results obtained by the X² score of 4.01 as shown in table 4. The score is smaller than the score of X² table = 7.81. This means that the variance of the population is homogeneous.

TABLE 3: Normality test results with the Liliefors test for experimental groups with a significance level of 0.05.

Groups	Lo	Lt	Conclusion
A ₁	0,17	0,19	Normal
A ₂	0,12	0,19	Normal
A ₁ B ₁	0,21	0,26	Normal
A ₁ B ₂	0,15	0,26	Normal
A ₂ B ₁	0,16	0,26	Normal
A ₂ B ₂	0,15	0,26	Normal

Table 4: Homogeneity test with Bartlett test at significance level = 0.05

S ² Mixing	B	dk	X2 h	X2t	Conclusion
6,91	33,58	3	4,01	7,81	Homogen

With normally distributed data and homogeneous population variance, the analysis requirements with Anova have been fulfilled.

4.3 Hypothesis Testing

Testing the statistical hypothesis of this study using analysis of variance (anava) or F test for factorial design and scheffe test for comparison between groups as a whole and on the same particular educational background. Overall anava results can be seen in table 5, while the Scheffe test results in table 6.

Table 5: Anava summary for the main effects of instructional materials and interactions.

Varians Sources	JK	db	RJK	F h	Ft ($\alpha = 0,05$)	Note
Instructional Material	148,23	1	148,23	21,44	4,11	significant
Interaction	30,63	1	30,63	4,43	4,11	significant
Deep	248,90	36	6,914			
Sum	426,76	38				

Table 6: Summary of Scheffe Test

Compared Groups	Sum	Score II	Cp	A x s (Cp)	Note
A1 and A2	1.589	1.512	77	33,59	Significant
A2B1 and A1B1	766,4	785,0	18,6	33,40	Not Significant
A1B2 and A2B2	804	748	56	33,40	Significant

4.3.1 Difference between Al Islam II learning outcomes between those using Independent and PBS instructional materials.

From the ANAVA results in table 5 it appears that the score of F observation for instructional materials is 21.44. This score is greater than the F table score of 4.11. Likewise the Scheffe test in table 6 shows that the contrast score (Cp) of 77 is greater than the score of A x s (Cp) of 33.59. Thus it can be concluded that the Independent instructional material ($X = 79.5$) gives significantly higher results compared to PBS instructional material ($X = 75.6$). This means that hypothesis 1 which states "Independent instructional material will provide higher Islamic Education learning outcomes compared to PBS instructional material" has been able to be verified in this study.

4.3.2 Interaction between instructional material and educational background.

From the Anova results in table 5 it appears that the F score of observation for interaction is 4.43. This score is greater than the Ftable score of 4.11. Thus it can be concluded that there is an interaction between instructional materials with educational background. This means that hypothesis 2 which states "there is an interaction between instructional materials with educational backgrounds that can provide differences in learning outcomes of Islamic Religious Education" can be tested for its truth in this study.

The interaction is shown in Figure 2. In the picture it appears that line A which shows the average student learning outcomes using Independent instructional materials and line B which shows the average student learning outcomes using PBS instructional materials intersect at one point. Thus it can be concluded that there is an interaction between instructional material and educational background.

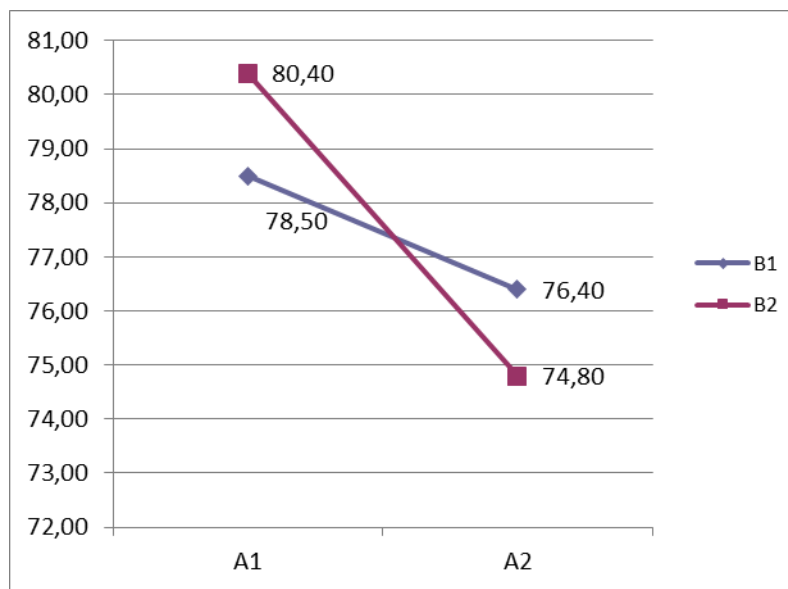


Figure 2: Interactions between instructional material and educational background.

4.3.3 Differences in Al Islam II learning outcomes for students who have an Aliyah High School education background between those who use PBS and Independent instructional materials.

From the results of the scheffe test in table 6 it appears that the score contrast (Cp) for the educational background of Aliyah High School between those using PBS and Independent instructional materials is 18.6. This score is smaller than the score of Axs (Cp) of 33.40. Thus it can be concluded that for those who have an Aliyah High School education background, the use of PBS instructional materials (X = 76.64) does not provide significantly higher learning outcomes compared to Independent instructional materials (X = 78.5). This means that hypothesis 3 which states "for students who have Aliyah High School education background, the use of PBS instructional materials will provide higher Islamic educational learning outcomes compared to Independent instructional materials" cannot be tested for truth in this study.

4.3.4 Differences in learning outcomes of Al Islam II for students who have a non-Aliyah high school education background between those who use Independent and PBS instructional materials.

From the results of the scheffe test in table 6 it appears that the score contrast (Cp) for non-Aliyah high school educational backgrounds between those using Independent and PBS instructional materials is 56. The score is greater than the score of Axs (Cp) of 33.40. Thus it can be concluded that for those who have a non-Aliyah high school education background, the use of Indepen instructional materials (X = 80.4) provides significantly higher learning outcomes compared to PBS instructional materials (X = 74.8). This means hypothesis 4 which states "for students who have a non-Aliyah high school education background, the use of Independent instructional materials will provide higher Islamic religious learning outcomes compared to PBS instructional materials" the truth of this study can be tested.

4.4 Discussion

Judging from the average learning outcomes, in general the scores of student learning outcomes using Independent instructional materials (X = 79.45) are higher than those using PBS instructional materials (X = 75.6). The results of this study are in accordance with the opinion of Bartel (1976: 21) which states that an instructional material for an

exercise plan that is well developed through a systems approach will benefit so that more effective learning outcomes are obtained. In addition, it is also in accordance with the results of Sabarti Akhadiah's research (1983: 3) which states that the plus package material is more effective to increase scientific performance compared to the existing material (package). Furthermore, this study supports Je Dae Sik's research (1996: ii-iii) which states that the development of Indonesian language material for Korean managers requires attention to the specific objectives to be achieved, namely in accordance with job training. In connection with Widodo's research (1993: 2) the results of this study further strengthen the proposal that textbook writing needs to pay attention to learning theories and writing principles where specific instructional objectives are needed, adequate descriptions, practice questions, and explanations of abstract material.

When viewed separately, for students who have Aliyah High School education background, learning outcomes using PBS instructional materials ($X = 76.64$) do not make a significant difference when compared to those using Independent instructional materials ($X = 78.5$). Furthermore, for students with non-Aliyah high school education backgrounds, the average student learning outcomes using Independent instructional materials ($X = 80.4$) were higher than those using PBS instructional materials ($X = 74.8$). This means that certain forms of instructional material only apply to a certain educational background. For those who have non-Aliyah educational backgrounds, the form of Independent instructional material provides higher Islamic Religious Learning outcomes compared to PBS instructional material. Furthermore, for those who have an educational background in Aliyah High School, the use of PBS instructional materials does not make a difference in learning outcomes of Islamic Religious Education compared to the use of Independent instructional materials.

The rejection of hypothesis 3 of this study, which states "for students who have an Aliyah High School education background, the use of PBS instructional materials will provide higher Islamic educational learning outcomes compared to Independent instructional materials", may be caused by two factors. First, the allegation that those who have an educational background in Aliyah High School are not interested and are bored when using Independent instructional material because the material is elementary, may need to be reviewed. The depth of understanding of the religious knowledge they gained when in high school might not be deeper than what was presented in Independent instructional material so they were also interested in reading the instructional material because they discovered something new. Second, PBS instructional material which is a collection of existing textbooks and is thought to be able to stimulate them to learn it because of the depth of the discussion, might actually cause them to have obstacles to learn it so that their learning outcomes are not optimal. Whether these two things really caused hypothesis 3 to be rejected is interesting to study further.

5. CONCLUSIONS, IMPLICATIONS, AND SUGGESTIONS

5.1. Conclusion

Based on the research data and the results of the statistical calculations that have been described in the previous section several conclusions can be drawn. First, it turns out instructional material is a variable that affects the learning outcomes of Islamic education. Students who were given lectures using Independent instructional materials ($X = 79.45$) were higher than those who used PBS instructional materials ($X = 75.6$).

Secondly, there is an interaction between instructional material and educational background which can provide a different effect on the learning outcomes of Islamic education.

Third, for students with an Aliyah High School education background, it was noted that the use of PBS instructional materials ($X = 76.64$) did not give higher scores on Islamic education learning outcomes compared to the use of Independent instructional materials ($X = 78.50$).

Fourth, for students with a non-Aliyah high school education background, the use of Independent instructional materials ($X = 80.4$) gives scores for Islamic education learning outcomes higher than the use of PBS instructional materials ($X = 74.8$).

5.2. Implication

5.2.1 For Management of Learning

The results of this study indicate that in general the Founding instructional material gives Islamic Religious Education learning outcomes higher than PBS instructional material. These results provide instructions that in order to obtain high Islamic Religious Education learning outcomes it is necessary to develop instructional materials by paying attention to the theories and principles of learning as well as considering the general characteristics of students who take classes.

Good Islamic Education instructional materials as stated in the previous section are those that have the criteria of (a) having Attractiveness, (b) conformity of ICT and TIU, (c) compatibility of content and ICT, (d) suitability of Language, (e) accuracy sequence, (f) have practice questions, (g) there are clear answers to improvement efforts, and (h) there are instructions for students who direct them from one activity to another.

The attractiveness of an instructional material in the form of print media lies in its physical appearance: artistic, neat typing and not too tight, not too thick, and easy to carry and read. An instructional material that has poor physical appearance will reduce the desire of students to learn it even though it actually has good content. To obtain instructional materials that have an attraction, lecturers or instructional material developers need to work closely with instructional media development experts.

The suitability of ICTs with TIU needs attention in the development of instructional materials. Formulation of ICT that is not in accordance with TIU will result in failure to achieve learning objectives because ICT is not directed to achieve TIU. Many mistakes made by lecturers in preparing ICT. The most basic mistake is when they formulate ICT based on the content of the lesson to be taught. ICTs should be formulated as an elaboration of TIU by conducting instructional analysis so that goals are more specific so that they cannot be interpreted in other terms and become more measurable.

In the ICT formulation there is an element of behavior that is expected to be achieved by students at the end of the lecture. Therefore, by formulating ICT, it means that the content of the lesson to be taught has been identified. The formulation of behavior that exists in ICTs consists of two main things, (a) verbs, and (b) objects. The object shows the topic or subject matter of the lesson content. Each topic can be broken down into several sub topics.

Independent instructional material is designed with the intention that students can learn it themselves without much depending on the presence of a lecturer, therefore the language used must be a language that reflects direct conversation from lecturer to student. By reading the instructional material as if the student is dealing directly with the lecturer. For this reason, the use of highly formal language must be avoided, but it does not mean that the learning material used in everyday conversation language is used. In other words it can be stated that the language used is between formal language and everyday language.

In compiling the sequence of instructional activities there are two factors that must be considered, namely (a) the sequence of instructional activities, and (b) the order of presentation that must be arranged from the easiest to the most difficult. The sequence of instructional activities consists of three components, (a) a preliminary component consisting of a brief explanation of the content of the lesson, an explanation of the content of relevance of the content of the lesson to be learned with student experience, and an explanation of the specific instructional objectives, (b) the presentation component consisting of description, examples, and exercises, and (c) the closing component consisting of formative tests and feedback and follow-up. Most of the instructional activities in instructional materials in the form of textbooks contain only one component, namely the presentation component in the form of a breakdown of lesson content without examples and exercises. Introductory components and closing components are rarely found in textbooks.

In addition, the order of presentation of the content of the lesson needs to be arranged from the easiest to the most difficult. By paying attention to this aspect students are expected to study the contents of the lesson systematically. Do not jump from one section to another. This is rarely considered in the preparation of textbooks.

Exercise is a student learning activity in order to apply what is being learned. With the practice it is expected that students can learn actively that will accelerate the process of mastery of the content of the subject being studied. Without practice, students do not have the opportunity to know whether they have mastered the content of the lessons they have just learned. This is also rarely considered in the preparation of

textbooks.

To believe that what they have just learned is correct, Independent instructional materials must present clear answers that can be used by students themselves to check their answers for their practice. This answer can be used by students to correct their mistakes.

In Independent instructional materials, instructions for students are needed for them to be able to find out whether they have been able to move from a learning activity to the next learning activity or need to repeat back to the previous learning activity. If students have successfully answered the exercises given, they can proceed to the next activity. Conversely, if not, students need to go back to their previous activities. Such instructions are rarely found in textbooks.

However, it also needs to be stated that even though Independent instructional materials will provide better learning outcomes compared to PBS instructional materials, it does not mean PBS instructional materials cannot be used at all. If in certain circumstances the lecturer has problems so that Independent instructional materials cannot be obtained, PBS instructional materials can still be used by paying attention to several aspects. These aspects include (a) the compilation of materials arranged in a package so that it is not difficult for students to find and use them, (b) the order of presentation is arranged from the easiest to the most difficult and the linkages between one chapter and another are also stated, given exercises in the form of assignments, (c) assignments done by students corrected and given feedback so that students know that what they have just learned is correct, and (d) provide follow-up in the form of instructions to relearn if there are parts that have not been under his control.

Related to the management of learning, the results of the study showed that for students with an Aliyah High School education background, it turned out that the use of PBS instructional materials did not provide higher learning outcomes compared to the use of Independent instructional materials. In addition, the results of the study also showed that for students with a non-Aliyah high school education background the use of Independent instructional materials gave Islamic Religious Education learning outcomes higher than the use of PBS instructional materials. This means that the form of Independent instructional material does not only apply to a certain educational background. For those who have a non-Aliyah high school education background the form of Independent instructional material provides higher Islamic educational learning outcomes compared to the use of PBS instructional material. Furthermore, for those who have an educational background in Aliyah High School, the use of PBS instructional materials does not make a difference in the learning outcomes of Islamic religious education compared to the use of Independent instructional materials. This finding implies that if the learning process uses Independent instructional materials, it does not need to be separated between students who have Aliyah and non-Aliyah high school educational backgrounds.

5.2.2 For Lecturers and Students

As stated in the previous section, generally lecturers in tertiary institutions are those who master lecture material but are limited in their ability to develop instructional materials. For that, they need to be introduced to various forms of instructional materials and how to develop them. The importance of introducing various forms of instructional materials is intended so that lecturers know and can implement what principles need to be considered in order to transform their knowledge to students.

With this ability, it will greatly help lecturers and students in the learning process. For students, the availability of Independent instructional materials that are arranged systematically and with regard to general characteristics and can be used alone, will motivate them to learn it without having to rely heavily on lecturers. Furthermore, for lecturers, the availability of Independent instructional materials will ease their tasks in the whole learning process starting from planning, implementing, and assessing.

To introduce various forms of instructional material and how to develop them training or upgrading is needed. The training or upgrading presents at least several topics, (a) learning theory and teaching skills, (b) the development of instructional systems, (c) the development of instructional materials, and (d) assessment of learning outcomes.

Lecturers need to be trained to make Independent instructional materials comprehensively so that

eventually all courses can have Independent instructional materials. This will make it easier for lecturers in the learning process because students can learn material at home and then in class lecturers only need to hold enrichment discussions. Thus students are also taught to study independently, which is indeed the main goal of learning in higher education.

5.3. Suggestion

Based on the conclusions and implications of the research stated above, a number of things are suggested as follows:

- a. In teaching Islamic Religious Education, lecturers need to use Independent instructional materials that are specifically developed. Descriptions, examples, and exercises designed according to the general characteristics of students will greatly assist them in understanding religious norms taught in Islamic Religious Education effectively and efficiently.
- b. Lecturers in providing treatment in the form of Independent instructional materials do not need to differentiate between Aliyah and non-Aliyah high school educational backgrounds, because whatever their background, Independent instructional materials are more effective than PBS instructional materials.
- c. With the absence of hypothesis 3 which states that "for students who have an Aliyah High School education background, the use of PBS instructional materials will provide higher Islamic educational learning outcomes compared to Independent instructional materials", it may be interesting to conduct further research with regard to the limitations of this study .

REFERENCES

A. Text Book Resources

- [1]. Akhadiyah Maryono Kabirin, Sabarti. Pengaruh Materi Pengajaran Bahasa Indonesia, lokasi sekolah, dan jeniskelamin terhadap kemampuan penalaran ilmiah siswa SMP. *Disertasi* (Jakarta : FPS IKIP Jakarta. 1983).
- [2]. Alan Januszewski dan Michael Molenda, *Educational Technology* (New York: Lawrence Erlbaum Associates, 2008),
- [3]. Banathy. Bela H. *Instructional Systems* (Belmont, California : Fearon Publishers, Inc. 1968).
- [4]. Bartel, Carl R. *Instructional analysis and materials development* (Illinois: American Technical Publishers, Inc, 1976).
- [5]. Bloom, Benjamin S et al (1965). Lihat W. Robert Houston, et al., *Touch the future, Teach!* (St Paul: West Publishing Company, 1988).
- [6]. Bower, Gordon M. and Hilgard, Ernest R, *Theories of learning*, Fourth Edition (Englewood Cliffs, New Jersey: Prentice Hall, Inc, 1986).
- [7]. Chris Watkins et al, *Effective Learning in Classrooms* (London: Sage Publications, 2007)
- [8]. Dick, Walter and Carey, Lou. *The Systematic Design of Instruction* (New Jersey ; Pearson. 2009).
- [9]. Gagne, Robert M. *Principles of Instructional Design* (Belmont, CA: Wadsworth/Thomson Learning, 2005).
- [10]. E. Kemp, Jerrold. *Instructional design* (California: Fearon Publisher, 1977).
- [11]. Isaac. Stephen and Michael, William B. (California: Edits Publisher, 1982).
- [12]. Je Dae Sik, Pengembangan Materi Pelajaran Bahasa Indonesia untuk paramanager Korea di Jakarta. *Disertasi* (Jakarta: PPS IKIP Jakarta, 1996).
- [13]. Lefrancois, Gay R. *Theories of Human learning* (California: Brooks/Cole Publishing Company, 1995)
- [14]. Nasution, Harun. "Perlunya Menghidupkan Kembali Moral". dalam Harun Nasution (ed). *Pendidikan Agama Dalam Perspektif Agama-Agama* (Jakarta: Konsorsium Pendidikan Agama di Perguruan Tinggi Umum. Ditjen Dikti. 1995).
- [15]. Noah P. Barsky, et al, *The Power of Technology for Learning* (New York: Springer, 2008)
- [16]. Riberu, "Membentuk Filsafat Hidup Pribadi". dalam Harun Nasution (ed). *Pendidikan Agama Dalam Perspektif Agama-Agama* (Jakarta: Konsorsium Pendidikan Agama di Perguruan Tinggi Umum. Ditjen Dikti. 1995).

- [17]. Rifqiyatidkk, *PengaruhHastiBelajar IslamdanSikapTerhadapPeraturanKampusPadaPeritakuIslamiMahasiswa.* LaporanPenelitian (Jakarta: UniversitasMuhammadiyah Jakarta. 1994).
- [18]. Rita C. Richey, James D. Klein, Monica W. Tracey, *The Instructional Design Knowledge Base: Theory, Research, and Practice*, (New York: Routledge, 2011)
- [19]. Romiszowki, AJ. *Designing Instructional System* (London: Kogan Page, 1981).
- [20]. Suparman, Atwi. *Desaininstruksional* (Jakarta: PAU PPA, 2012).
- [21]. Suradika. AgusdanMulyani, Sri. *Pengajaran Agama di PerguruanTinggi Umum.*Jurnal PenelitianNo.VIITH.III (UniversitasMuhammadiyah Jakarta. 1997).
- [22]. Smaldino, Sharon E., Rusell, James D., Heinich, Robert, Molenda, Michael. *Instructional Technology and Media for Learning* (eight edition). (New Jersey: Pearson. 2005).
- [23]. Widodo, Antonius Tri. *Tingkat KeterbacaanTeks :SuatuEvaluasiTerhadapBukuTeksIlmu Kimia KelasSatuSekolahMenengahAtas, Disertasi*(Jakarta: PPS IKIP Jakarta, 1993).

B. Online Resources

<https://www.google.com/search?q=outlier+adalah&oq=outlier&aqs=chrome.2.69i57j46j0l6.8760j1j7&source=chrome&ie=UTF-8>

<https://www.statistikian.com/2014/04/independen-t-test-dengan-spss.html>.