

DEVELOPMENT OF INTEGRATION-INTERCONNECTION ORIENTED PROBLEM BASED LEARNING MODEL TO IMPROVE CRITICAL THINKING ABILITY

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Abstract - The research aimed at developing model on problem-based learning by integration and interconnection of *qouliyyah* and *qouniyyah* verses orientation in Islamic education philosophy. The materials designed by using the Dick and Carey models. The model development steps begin by identify instructional goals, conduct instructional analysis, analyze learner and contexts, write performance objectives, develop assessment instrument, develop instructional strategy, develop and select instructional materials, design and conduct formative evaluation of instructional, revising, and design and conduct summative evaluation. The development process applied expect and empirical validation. Empirical validation conducted three field, one-to-one learner treatment 5 students, small group treatment which is cover 9 students, and large treatment 35 students. The research resulted that model purposed could be effective on learning and teaching in Islamic education philosophy.

Index Terms - problem-based learning, integration, interconnection, development, model, Islamic education philosophy

1 INTRODUCTION

The Covid 19 pandemic that hit the world devastated the world of education at all levels. Educational theorists and practitioners are required to work hard to produce new learning models in various ways (Jia & Huang, 2016), in order to produce instructional methods and strategies that are effective, interesting, and fun (Klette & Hammerness, 2012). only need to have a strong vision and mission in carrying out learning tasks, but also need to have good mastery of educational technology in planning, implementing, and evaluating learning (Hammerness & Klette, 2015) so that learning ensures the development of all the potential of students, which includes potential cognition, affection, psychomotor, spiritual potential (Thoib: 2013) and the potential for meta-cognition (Smaldino, 2004).

The potential of meta-cognition or the potential for critical thinking is positioned by many experts as a potential that must be developed by the world of education in any difficult conditions. Critical thinking needs to be instilled so that students have the right perceptions, attitudes, and responses in the face of today's conditions and future conditions that are increasingly uncertain (Tilaar, 2004). The ability to think critically is important for a nation to create a complete and superior generation in the

global arena. Sutrisno (2012) even includes critical thinking skills as a new direction of learning in the 21st century. A critical thinker always strives to recognize problems well, formulate problems clearly, gather relevant information, use abstract ideas, think openly, solve the problems, and be able to communicate effectively with others (Duron, 2006; Event, 2013; Yu-Mae Lin & Pei-Chen Lee, 2013). Also, critical thinking skills promotes student's competitiveness (Nawawi, 2012).

Critical thinking skills can be developed by giving students as much space as possible to question what they hear and see, followed by asking why and how about it, gathering strong evidence in the form of data and facts before finally concluding something that was learned. Karakoc (2016) argues that critical thinking includes two major steps, namely carrying out a logical thinking process followed by decision making / problem solving. Therefore, critical thinking activities consist of formulating problems, analyzing, solving problems, concluding, and evaluating. Students' critical thinking skills can be improved with appropriate learning methods and strategies (Tuzlukova & Prabhukanth, 2018), which is interesting and fun learning so that students are encouraged to learn independently, and achieve maximum learning outcomes (Nosratnia & Zaker, 2013).

Philosophy, including the philosophy of Islamic education, is a scientific family that is very familiar with critical thinking skills. Between philosophy and critical thinking has a very close relationship. When a lecturer teaches philosophy, at that time he introduces critical thinking, and vice versa (Pecorino, 1987). In contrast to philosophy learning in general, learning the philosophy of Islamic education requires the creation of integration and interconnection of *qauliyyah* verses and *qauniyyah* verses in learning. Therefore, the construction of the problem which becomes the foothold in problem-based learning is a problem which is a product of the integration and interconnection of *qauliyyah* verses and *qauniyyah* verses. This is in line with the substance of the objectives and learning materials of Islamic education philosophy which are built based on the results of the integration between the holy verses of the Al-Quran and the real experiences of humans in dealing with the universe. In its implementation, philosophical terms related to the nature of man, the essence of God, the nature of nature, the nature of life, the nature of education and others are formulated in the form of problems that require solutions by students (Thoib, 2013: 74). This is important to do because the substance of the philosophy of Islamic education is essentially analyzing, synthesizing, evaluating, and producing a paradigmatic framework that will become the foundation and guidelines for Islamic education (Thoib, 2013: 12).

The results of preliminary studies through observation and in-depth interviews prove that some students actually perceive learning philosophy as complicated, heavy,

boring, misleading, and useless learning. As a result, not a few students are ignorant, negligent, unfocused, and even stay away from philosophy courses. As a result, students not only fail to make Islamic education philosophy courses as a medium for developing critical thinking skills, but also fail to get better learning outcomes of Islamic education philosophy. Therefore, significant breakthroughs are needed to change the paradigmatic framework of students in responding positively-constructively to the course of Islamic Education Philosophy. The breakthrough that is most needed is to present new innovations in learning. The reconstruction of the learning model from a conservative model to a modern model is needed to change the boring learning atmosphere to fun learning (Thoib, 2013: 42). One of the popular model to boosts students critical thinking is problem-based learning model.

The problem-based learning model in the perspective of Islamic education philosophy is a process of interaction of learners, learners, and learning resources (Rusman, 2013: 3). The process takes place in a multidirectional manner. In a multidirectional process, the learner's subject and the learner's subject are in an equal position, there is no one advantage over the other. When learners and learners are in an equal position, the learning process can take place dialogically-collaboratively (Restuningrum, 2018). Problem based learning allows the growth of a critical analytical tradition among students (Hussin, et. al, 2019), improves students' critical thinking skills in solving problems, also increases students' sense of independence and self-confidence (Hmelo-Silver, 2004).

In problem-based learning, which is oriented towards integration and interconnection of *qauliyyah* and *qauniyyah* verses, the main learning resource is the verses of the holy Al-Qur'an which are integrated and interconnected with other learning sources in the universe. Both sources are processed in such a way in the form of problems that require answers. These problems are then pondered and philosophically thought out by the learners in order to find philosophical truths that are guided by Qur'anic values and Islamic universalism values in the expanse of the universe. The role of lecturers in the problem-based learning model is not only teaching, but teaching students, involving students in the learning process and evaluation. In addition to involving students in the process and evaluation of results, a good indicator of learning is learning that uses multi-methods, multi-media, and multi-learning resources. This view is supported by many learning theories. One of them is the theory of learning cognitivism. According to cognitivism, learning is the result of individual efforts to interpret their experiences related to the world around them (Jamaris, 2010: 173).

The aforementioned background promotes the importance to develop integration-interconnection oriented problem-based learning model to improve students' critical

thinking ability. Development is important to introduce new learning strategies that can improve lecturer performance in learning as well as helping lecturers to prepare learning materials matching with the students' characteristics. The development involves the development of teaching guides for lecturers, which contain objectives, methods, media, materials, evaluation, and learning resources. While the improvement of learning tools is directed to produce syllabus, lesson plans, and teaching materials. The expected product is directed to produce the learning processes and outcomes that are the effective, efficient, and attractive.

2 METHOD

This research is research and development. The research was conducted to collect and analyze a number of data needed as a prerequisite for determining development needs. The process of implementing research and development refers to two main theories, namely the theory of Borg & Gall (1983) for research activities, and the theory of Dick and Carey (2015) for development. Development of a learning model according to the Dick & Cary version.

This research was conducted at UIN Mataram, lasted for 12 months, starting from March 2020 to March 2021. This research process involved teaching lecturers and undergraduate students programming the Islamic Education Philosophy course, they were 35 large group trial students, 9 students. small group trials, 5 students in individual trials, and 5 experts in expert trials.

In conducting research, researchers used several research methods as follows: (1) survey method. This method is used by researchers to collect data and information related to the needs of lecturers and students for new learning models in philosophy courses, (2) Expert analysis method. This method is used by researchers to determine the feasibility level of the developed learning model, (3) Product trial methods. This method is used by researchers to determine the level of product readability by potential product users, and (4) experimental methods. This method is used by researchers to determine the effectiveness of the learning model developed in improving students' critical thinking skills.

3 RESULTS AND DISCUSSION

3.1 The Need Analysis

Need analysis is crucial step that becomes the basis to develop a product. The need analysis was conducted through the direct observation, interview, testing, and doing survey.

3.1.1 The Comprehension Test

The preliminary test results showed that the learning competence of students in the Islamic Education Philosophy course was still very low, namely an average of 6.76 or in the sufficient category (C). The low learning outcomes of these students, after further investigation, were caused by several factors that are interrelated with one another. These factors are factors of learning and learning methods as well as the availability of learning materials (learning resources) which are still very limited.

3.1.2 The Observation

The observation was conducted to see directly the students' and lecturers' performance in philosophy class. In terms of learning methods, students do not yet have appropriate learning methods in studying Islamic Education Philosophy. Most of the students interviewed stated that students studied the Philosophy of Islamic Education by relying on the lecturers' explanations in lectures. Learning for students is memorizing notes that were recorded from the lecturer's explanation, learning is repeating what has been explained by the lecturer. Lack of lecturers' ability to apply varied learning methods is very dangerous for learning, because it will create boredom in learning, and can lead to dissatisfaction and even student dissatisfaction with the course itself.

From the result of direct observation to three philosophy lecturers regarding their variation of teaching method, the results are described in the following table:

TABLE 3.1

OBSERVATION RESULTS OF LECTURER LEARNING METHODS

| NO | LECTURER | OBSERVATION RESULTS |
|----|----------|--|
| 1 | A | The implementation of learning at all stages (introduction, core activities, and closing activities) does not provide opportunities for students to develop critical thinking skills. The lecturer conveyed the learning objectives but did not give special time for students to ask questions and did not give initial questions to students related to the learning being carried out. Learning is carried out with a monotonous method, the lecturer plays a very active role in explaining the learning material, while students tend to be passive. Lecturers do not prepare hand outs for students, |
| 2 | B | The implementation of learning at the initial stage (preliminary), the lecturer only asks questions to students related to learning that has been carried out at the previous meeting, but does not ask questions that can |

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|---|---|---|
| | | provoke students' critical thinking creativity in the lesson that is being carried out. The learning method applied is the lecture method. Sometimes interspersed with questions and answers. Lecturers provide opportunities for students to question material that has not been understood. However, the question was answered directly by the lecturer, and the result of the lecturer's answer was considered the final result. In general, the implementation of learning in this class is controlled by the lecturer. |
| 3 | C | The implementation of learning is more interesting, the lecturer informs the learning objectives and materials and uses power point learning media. Even though the class is still dominated by lecturers, lecturers do not only lecture, but also present power points that can help students access learning. however, learning is still taking place in one direction, not multi-direction. Student activeness is still at a very low level. Lecturers do not provide an instrument to measure students' critical participation in learning. |

The dissatisfaction of students with Islamic Education Philosophy lectures is not only caused by less attractive learning methods but also due to limited learning resources that can be accessed easily and cheaply by students. The results of the observation showed that out of 35 students, only 1 person (2.86%) had one Islamic Education Philosophy reference book, while 34 people (97.14%) had no books. The inability of students to have learning resources is due to lack of funds to buy books (88.24%), difficulties in getting books at bookstores and in libraries (11.76%).

The results of observations in the UIN Mataram library show that the number of Islamic Education Philosophy books available is very limited, namely there are 7 titles with a total of 70 copies still available. This number is not proportional to the number of students who need it, which reaches 2000 people per year.

3.1.3 The Interview

To strengthen the judgement, the interview was conducted to three philosophy lecturers with the following results:

a. The use of speech method for teaching

The results of interviews with lecturers revealed that the use of the lecture method had been a habit for a long time. The lecture method is used by lecturers because it is considered easier and more efficient. As stated by A ": "The lecture method I use is the lecture method that is dominant. This method is easy to use to convey

philosophical thoughts in the field of Islamic education. By using the lecture method, students are expected to understand what is being learned. Besides using the lecture method, I also use the assignment method. I assign students to read some literature and report it in the form of a paper "

In full, F reveals: "The use of learning methods and media by lecturers determines the effectiveness of learning. that is why, when teaching I do not use one method and one medium. I always try to use multi methods and multimedia. I always use the lecture and question and answer method in learning. I also use power points as a medium so that students have an appeal. Even so, there are still obstacles that I have encountered, students' power of reasoning or analysis is still weak. This can be seen in the results of the test which show the ability to reason is still weak "

According to M: "Philosophy, including the philosophy of Islamic education, is a subject that contains philosophical thought concepts in the field of education. The right method for teaching philosophy courses is the lecture method. Because with this method the lecturer can easily transform the contents of these philosophical thoughts. Apart from the lecture method, the assignment method is also good to use. Students need to be given the task to read mandatory and recommended reference books in this course".

b. Teaching Obstacles

The obstacles faced by lecturers in learning the philosophy of Islamic education is the low level of student understanding of the lesson. Students are still weak in logical thinking, so it is necessary to have new methods that are more appropriate in teaching the philosophy of Islamic education. As F stated: "The obstacle I feel in studying the philosophy of Islamic education is that students are still weak in logic, even though philosophy is based on logical thinking. I have tried to present this lesson well, but still our students are weak in terms of this logic. In my opinion, the presence of a new method is very important to overcome this problem".

M said: "In several existing books, it appears that the material on the philosophy of Islamic education overlaps with Islamic Education. For example, the subject of Islamic education discusses the nature of educational goals, the nature of educational methods and media, the nature of the curriculum, the nature of educators and students, the nature of evaluation and the educational environment. The same thing is also the focus of discussion of several books on Islamic Education Philosophy. This condition can be very confusing. So that there needs to be assertiveness, which is the field of philosophy of Islamic education and which is the field of Islamic education "

S said: "In the field of Islamic Education Philosophy, we still feel a lack of relevant books and learning resources, both on and off campus. This condition must be

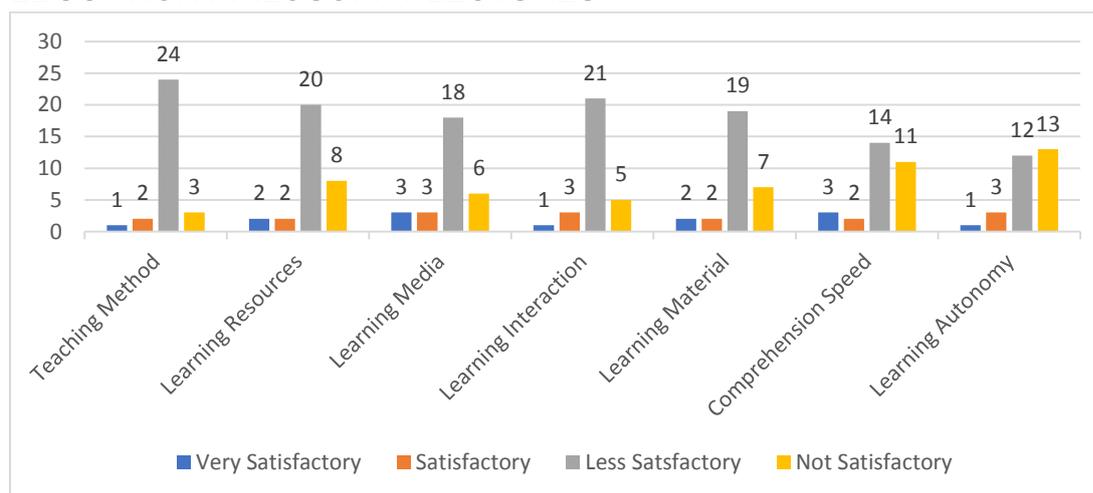
overcome so that lecturers and students are comfortable in the learning process. I really agree with the creation of a lecturer who develops learning packages in this field, because it is hoped that it can overcome the problems we are facing "

3.1.4 Survey Results of Student Satisfaction Levels on Islamic Education Philosophy Lectures

In general, students are not satisfied and dissatisfied with the methods, learning resources, media, learning interactions, and Islamic Education Philosophy teaching materials. Students are also less satisfied with the speed of understanding and learning motivation in the Islamic Education Philosophy course. Low satisfaction can also be seen in the ability to access learning resources other than lecturers and in learning independence. The detail of the data are described in the following graphic:

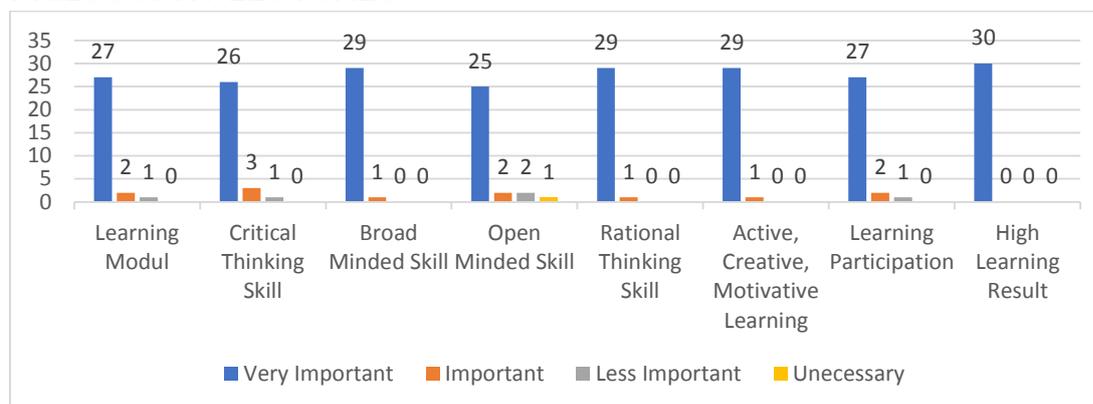
GRAPHIC 3.1

SURVEY RESULTS OF STUDENT SATISFACTION LEVELS ON ISLAMIC EDUCATION PHILOSOPHY LECTURES



Conversely, the level of student need for better Islamic education philosophy courses is high on average. This shows that learning Islamic Education Philosophy needs to be changed from lecturer-oriented learning to student-oriented learning. Students need to be given space to participate in the learning process. There is a need for students to have deep, open, rational, and free thinking after receiving a lecture on Islamic Education Philosophy, as well as the need for better learning outcomes in the Islamic Education Philosophy course, the need for fundamental changes in Islamic education philosophy courses. The results of the analysis of student needs in the Islamic Education Philosophy course can be described as follows:

GRAPHIC 3.2
 RESULTS OF STUDENT NEEDS ANALYSIS FOR ISLAMIC EDUCATION
 PHILOSOPHY LECTURES



3.2 The Products

The development of an integration-oriented PBL model with the interconnection of *qauliyyah* verses and *qauniyyah* verses in Islamic Education Philosophy learning at UIN Mataram was developed by referring to the Dick and Cerey model. The development produces three product components, namely (1) product components related to Islamic education philosophy teaching materials with problem-based learning models oriented to integration and interconnection of *qauliyyah* and *qauniyyah* verses. (2) product components related to the learning guide. This component is in the form of a lecturer manual which explains the mechanism for using the product in the implementation of learning, and (3) the product component that is related to the study guide. this component contains practical instructions for students in using teaching materials in independent learning and inside the classroom.

In product components related to teaching materials, this development succeeded in producing four learning packages, namely (1) Basic Concept of Islamic Education Philosophy, (2) Macro Pedagogics of Islamic Education, (3) Micro Pedagogics of Islamic Education, (4) Problems and Educational Reformulation Islam. Each learning package has a content framework consisting of: (a) introduction, (b) learning procedures (c) learning media, (d) Learning Implementation Plan which includes (objectives, indicators, time, subject matter, and steps). learning), (e) Description of the learning material, (f) summary, (g) exercises, (h) formative tests, (i) feedback and follow-up, (j) answer keys, (k) reference sources.

In the learning guide component, this development succeeded in producing learning guides intended for lecturers in teaching Islamic education philosophy using the PBL

model which is oriented towards the integration-interconnection of *qauliyyah* and *qouniyyah* verses, which consists of: (1) Subject identity, which is a description of what and how the Islamic Education Philosophy course. (2) rational, namely the purpose of having a lecturer manual and containing the systematics of learning materials. (3) explanation of the learning content framework. This component explains the topics in the learning package and its description. The purpose of presenting this component is to provide lecturers with an overview of the content framework for learning Islamic Education Philosophy. (4) learning framework. This component contains an explanation of the general objectives of learning, subjects and sub-subjects, and a schedule. This component is presented with the aim of providing an overview to the user about the general objectives of learning, subject and sub-subjects as well as how subjects are distributed in the learning schedule in meetings. (5) learning strategies. This component contains how the learning package is taught to students. Therefore, this component describes the things that need to be done by lecturers in pre-learning activities, during learning activities, and at the time of closing learning activities. (6) description of the learning meeting. This component contains plans for distributing learning materials in learning meetings. (7) Learning Implementation Plan. This component is presented with the aim of providing an overview to the lecturer about how learning is carried out. This component contains a series of learning steps, from initial activities, core activities, and closing activities. (8) Learning Power Point. This component is presented with the aim of assisting the lecturer in presenting each of the objectives, methods, steps, and learning materials to students, so that students are expected to be able to participate in the process actively and participatively to achieve the learning objectives that have been set.

In the study guide component, this development has succeeded in producing a general guide that can be used as a reference by students and other learners in understanding teaching materials. The general guide contains the learning content framework and the core concepts contained in learning packages 1, 2, 3, and 4. The general guide is important in its meaning as a reference for learning package users, so that they can use the learning package effectively and efficiently.

The learning package developed integrates PBL oriented integration-interconnection of *qauliyyah* verses and *qauniyyah* verses, especially in the aspects of the formulation of learning objectives, learning methods and steps, and learning evaluation. The integration process is carried out by: (1) integrating integration-interconnection-oriented PBL in formulating instructional objectives. The Instructional Purpose Formulation uses operational verbs that describe higher-order thinking skills, namely the ability to think analysis, synthesis, and evaluation (Bloom) or think

analytically, evaluate, and create (Anderson). (2), the integration of integrated-interconnection-oriented PBL in learning methods and steps is carried out by establishing learning methods and steps that allow students to be able to identify, formulate, and solve the problems integratively and interconnectively. (3) integrating integrated-interconnection-oriented PBL in learning evaluation. At this stage, the ability to identify, formulate, and solve problems is used as an instrument for assessing the learning process.

In addition to process evaluation, the integration of integration-interconnection-oriented PBL is also carried out in evaluating learning outcomes. The pattern of integration is carried out by providing evaluation questions that inspire the ability to analyze, synthesize, evaluate, and create problem-based students who are integrated and interconnected with *qauliyyah* and *qouniyyah* verses.

3.3 Product Feasibility Test

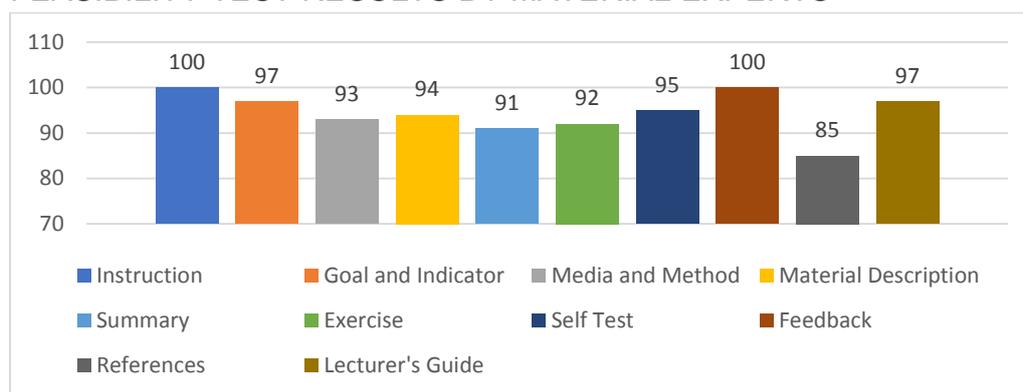
To determine the feasibility of the model being developed, a model feasibility test is carried out. The feasibility test of the model is carried out theoretically and empirically.

3.3.1 Theoretical Feasibility Test

The theoretical feasibility test is carried out by asking for responses from material experts and learning design experts about the product being developed. The results of the material expert's response indicate that the product developed has a very strong theoretical feasibility, which reaches an average of 94.4%. The distribution of eligibility can be described as follows:

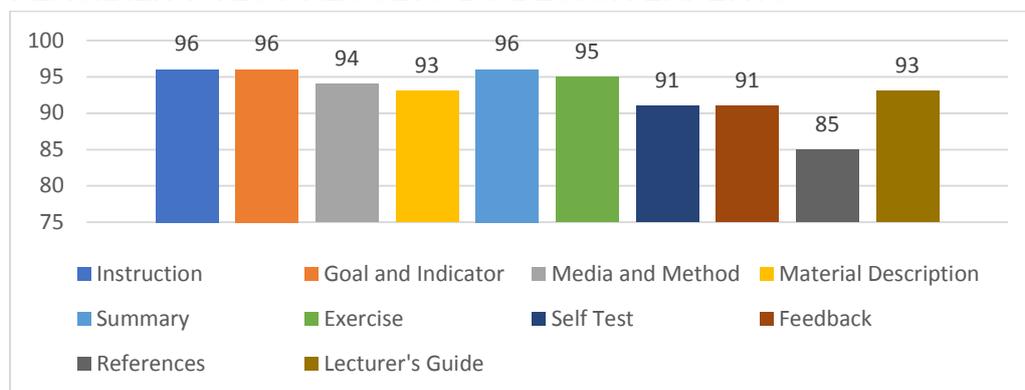
GRAPHIC 3.3

FEASIBILITY TEST RESULTS BY MATERIAL EXPERTS



The results of the feasibility test by learning design experts show that the learning package developed reaches an average feasibility of 93%. The percentage distribution of the theoretical due diligence results from design experts can be described as follows:

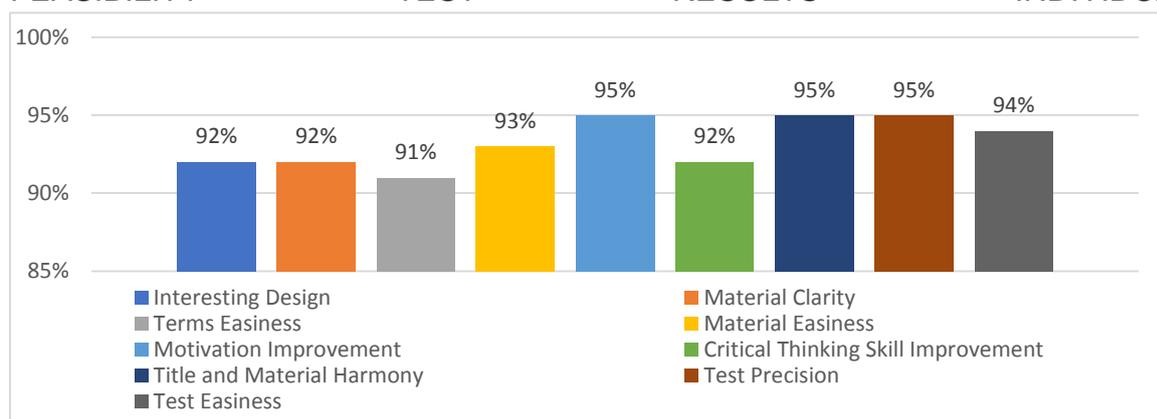
GRAPHIC 3.4
 FEASIBILITY TEST RESULTS BY DESIGN EXPERTS



3.3.2 Empirical Feasibility Test

The object used for the empirical feasibility test is students. The empirical due diligence process is carried out in three stages, namely the one-to-one test, the small group test, and the field test. The process and results of the empirical due diligence are described as follows. Individual trials were carried out on students who were programming the Islamic Education Philosophy course. The individual trial process begins by determining the criteria and number of potential trial participants, then carrying out the trials carefully according to the planned scenario.

GRAPHIC 3.5
 FEASIBILITY TEST RESULTS



The results of the small group empirical feasibility test showed that all components of the package developed were considered feasible, with an average feasibility level of 92.6%. This feasibility is seen in the aspects, a) 94% clear and interesting instructions, b) specific instructional objectives reaching 92% level of clarity, c) 93%

description of learning content is clear, easy, interesting, and appropriate for students, d) summary components 92% is appropriate and clear, e) components of the practice questions are 95% appropriate, f) feedback reaches 94%, g) components of the reference list are 90% appropriate, h) ease of learning reaches 90% easy, i) clarity of description of learning material 95 %, and j) attractiveness to be used by students reached 91%. The complete results of the assessment of the small group trial participants can be described in the following table.

3.3.3 Product Feasibility Test to Small Group

The following is the table to show the result of product feasibility test to the small group:

TABLE 3.2

PRODUCT FEASIBILITY TEST TO SMALL GROUP

| NO | ASPECTS | ASSESSMENT (%) |
|----|---|----------------|
| 1 | Clarity and attractiveness of instructions | 94 % |
| 2 | Clarity of specific instructional goals | 92% |
| 3 | Clarity, convenience, attractiveness, and accuracy of content description | 93% |
| 4 | The suitability and clarity of the summary components | 92% |
| 5 | Appropriateness of components of practice questions | 95% |
| 6 | Clarity of feedback | 94% |
| 7 | Reference list conformity | 90% |
| 8 | Ease of package to learn | 90% |
| 9 | Clarity of description of learning material | 95% |
| 10 | Attractiveness of packages for student use | 91% |

The results of the large group trial participant assessment of the package indicate that the package components are feasible to be considered feasible, with an average feasibility rate of 94.7%. The feasibility is shown by the student's assessment of the existing components; a) the instructions are 95% clear and interesting, (b) the objectives and learning indicators are 94% clear, (c) the description of the learning content is 94% appropriate, easy, clear, and interesting, (d) the summary is 95% appropriate and clear, (e) test questions and answer keys are 94% appropriate, (f) feedback 95% clear and appropriate, (g) list of references 95% appropriate. Meanwhile, the ease of learning the contents of the learning package reached 92%, the clarity of the learning content for students to understand

was 96%, the attractiveness of learning using packages was 96%, and the attractiveness of the appearance of textbooks reached 93%.

3.3.4 Product Feasibility Test to Bigger Group

The following is the table to show the result of product feasibility test to the bigger group:

TABLE 3.3

PRODUCT FEASIBILITY TEST TO BIGGER GROUP

| NO | ASPECTS | ASSESSMENT (%) |
|----|---|----------------|
| 1 | Clarity and attractiveness of instructions | 95% |
| 2 | Clarity and appropriateness of specific instructional goals and learning indicators | 94% |
| 3 | Clarity, ease, attractiveness, and accuracy of material description | 94% |
| 4 | Conformity and clarity of summary | 95% |
| 5 | The suitability of the components of the test questions and answer keys | 94% |
| 6 | Clarity and reciprocity | 95% |
| 7 | Reference list conformity | 95% |
| 8 | Ease of package to learn | 96 % |
| 9 | Clarity of description of learning material | 96 % |
| 10 | Attractiveness of packages for student use | 93 % |

The data obtained shows that the product developed has empirical feasibility both at the level of review by material experts, design experts, linguists, individual trials, small groups, and large groups. The feasibility assessment indicates that the product developed has met the theoretical and empirical requirements to be applied or implemented in the actual field.

3.4 Products Effectiveness Test Results

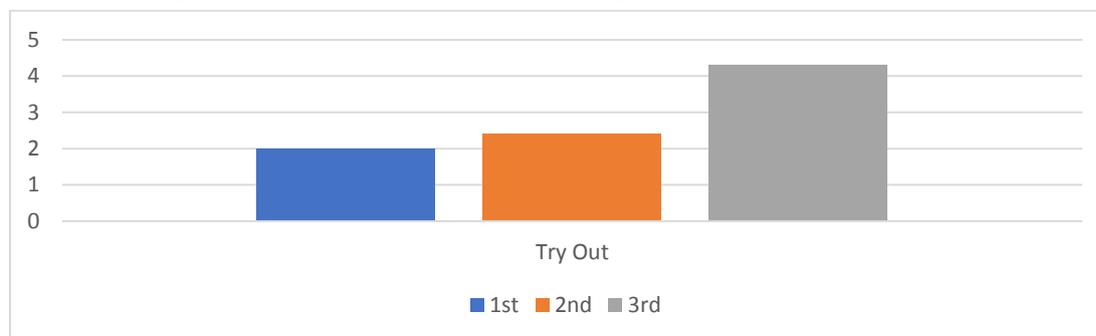
To determine the extent to which the developed model is effective in improving students' critical thinking skills, a model effectiveness test is conducted. The model effectiveness test mechanism is carried out by giving students the opportunity to learn to use a model that has been developed. The learning process is carried out for three meetings, namely meeting 1, meeting 2, and meeting 3. At each meeting, a critical thinking ability test is conducted. Aspects of critical thinking skills that are the focus of the assessment are as follows: (1) the ability to ask questions and express

opinions; (2) the ability to find information / evidence that supports the facts presented; (3) the ability to argue logically and not emotionally; (4) the ability to recognize that there is more than one answer or explanation; (5) the ability to compare various answers and determine which one is the best; (6) the ability to evaluate what other people say; and (7) the ability to ask questions and dare to speculate to create new ideas or information.

The results of the effectiveness test showed that there was an increase in critical thinking skills that were continuous in the experimental group during the trial. The results of the effectiveness test are described in the following histogram.

GRAPHIC 3.6

PRODUCTS EFFECTIVENESS TEST RESULTS



Based on this figure, it can be seen that the average value of the effectiveness test for stage 2 is greater and significantly different from the value of the effectiveness test for stage 1 ($8.45 > 7.15$), the average value for the effectiveness test for stage 3 is greater and significantly different from the value for the effectiveness test for stage 3 2 ($9.05 > 8.45$). In conclusion, the integration-interconnection-oriented problem-based learning model is proven to be effective in realizing the improvement of students' critical thinking skills.

CONCLUSION

The development of a problem-based learning model oriented to the integration-interconnection of *qauliyyah* verses and *qouniyyah* verses in the Islamic Education Philosophy course is carried out to answer the real needs of lecturers and students of UIN Mataram in order to improve the performance of the process and learning outcomes and learning of Islamic education philosophy. Product development has excellent theoretical and empirical feasibility. Theoretically, the product is feasible in terms of learning materials reaching an average of 94%, while in terms of learning design it reaches an average of 93%. Empirically, development products are empirically feasible with their respective feasibility levels of 93.2 in individual trials,

92.6% in small group trials, and 94.7% in large group trials. In the dimension of product effectiveness, product development is proven to be effective in increasing students' critical thinking skills in the seven aspects tested, with the level of effectiveness getting better at the three stages of the effectiveness test.

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