Development of Teaching Materials Integrated Spiritual Value Assisted by Visual Studio Media with Problem Based Learning Model In Terms of Learning Motivation

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Abstract. This study aims to determine the effect of learning motivation on learning outcomes taught by chemistry teaching materials integrated spiritual value using the problem-based learning model assisted by visual studio media. This research used the method of research and development. Instruments used a questionnaire of learning motivation and multiple choice. Based on the analysis of the learning outcome, it is obtained 0.004<\alpha(0.05) a sig.score, while the analysis of learning motivation is obtained 0.003<\alpha(0.05) a sig.score. This research can be concluded that there is a positive correlation between learning motivation and learning outcome based on Pearson correlation test minimum category as many as 0.325.

1. Introduction

Indonesian government has a new curriculum which called by 2013 curriculum. In this curriculum, assessment of students is measured by knowledge, skills and also the strengthening of character. The strengthening of character was supporting the goal of national education. The goal of national education is increasing faith and piety towards God Almighty. So that, the strengthening of character must be formed and built in every soul of student.

One way to be built people who have faith and piety can be done by presenting religious spiritual aspects or religious values. It caused teaching material has a very important role in learning activities [1]. Presenting spiritual aspects in teaching material will not reduce the quality of the scientific level of chemistry itself. However, it can be one of the effort in giving student an understanding that discoveries of science that have been found are predetermined destiny of God about what happened [2].

There are many factors that affect of student achievement through teaching material, such as: student motivation [3], learning styles [4], school climate [5], school leadership [6], designing classrooms [7], learning discipline [8] and classroom management[9]. One of the successful implementations of teaching materials which integrated spiritual values in increasing piety and faith in God Almighty on this experiment can be seen through improving student achievement in terms of learning motivation.

Motivation is an important influence on a learner’s attitude and learning behavior [10][11]. Therefore, without learning motivation is not possible for our education. Because of motivation, students can also do any task and achieve the goal [12]. Teaching would be meaningless too if the student is not motivated, even when the capacity and capability of the teacher are high [13][14].
The aim of this study is knowing the effect of learning motivation on student achievement through the development of teaching materials integrated spiritual value assisted by visual studio media with Problem Based Learning Model in Terms of Learning Motivation.

2. Literature Review
Theoretical description in this research development of teaching materials integrated spiritual value assisted by visual studio media with problem-based learning model in terms of learning motivation are teaching materials, teaching materials integrated spiritual value, Problem Based Learning model, media, visual studio, student learning outcomes, and motivation.

2.1. Teaching materials
Teaching material is all forms of material used to assist teachers in carrying out teaching and learning activities [15][16]. Teaching material or learning material is teaching material that is packaged as material to be presented in the learning process. The learning material in its presentation is in the form of a description that contains facts and principles, norms related to rules, values, and attitudes, and a set of actions/motor skills.

2.2. Teaching Materials Integrated Spiritual Value
The integration of science and technology with Islam in the context of modern science can be said as professionalism or competence in a worldly science in a particular field accompanied or built on the foundation of divine awareness. That divine awareness will emerge with the existence of basic knowledge about Islamic sciences. Therefore, the Islamic sciences and personality are two aspects that support each other and together form a foundation for the development of science and technology. It can be concluded, the integration of science means the mastery of science and technology combined with Islamic sciences and Islamic personality [17].

2.3. Problem Based Learning Model
Problem Based Learning (PBL) Model According to John Dewey is an interaction between stimulus and response, is a relationship between two directions of learning and the environment [18].

2.4. Media
The word media comes from the Latin medius which literally means 'middle', 'intermediary', or 'introduction'. In Arabic, the media is an intermediary or messenger of messages from the sender to the recipient of the message [19].

2.5. Visual Studio
Microsoft Visual Studio is a complete software (suite) that can be used to develop applications, be it business applications, personal applications, or other application components, in the form of console applications, Windows applications, or Web applications.

2.6. Student Learning Outcome
Student learning outcomes are essentially a change in behavior as a result of learning in the sense of covering the cognitive, affective, psycho motor fields. Then the learning outcomes are abilities possessed by students after receiving a learning experience.

2.7. Motivation
Motivation is a change in the energy within (personal) someone who is marked by the emergence of feelings and reactions to achieve goals [20]. The motivation to learn is an internal and external impulse that causes a person (people) to act or do reach the destination so that changes in her behavior is expected to occur [21].
3. Methodology of Research
This type of research used in this study uses a Research and Development (R&D) approach. The study was conducted at the Madrasah Aliyah Negeri 3 Langkat School on 2019/2020 Academic Year.

3.1. Population and Sample
As the population of this study was all high school / MA students who used the 2013 curriculum XI class odd semester on 2019/2020 Academic Year.

The research sample was taken by purposive sampling. In this study, it determined by 2 sample classes, wherein each class each consists of the same number of students who have 40 students. One class (as experimental class I) is taught with integrated spiritual values teaching material with PBL models assisted by visual studio media while the next class (as experimental class II) is taught with instructional materials integrated spiritual values with PBL models. Design in this research can be seen in the following table:

| Motivation (B) | Teaching Material integrated spiritual with PBL model value + Visual Media (A_1) | Teaching Material integrated spiritual value with PBL model (A_2) |
|----------------|---------------------------------------------------------------------------------|------------------------------------------------------------------|
| High (B_1)     | A_1B_1                                                                           | A_2B_1                                                           |
| Low (B_2)      | A_1B_2                                                                           | A_2B_2                                                           |

Description:
- A_1B_1: Teaching materials integrated the spiritual value with PBL models assisted by visual studio media with high learning motivation
- A_1B_2: Teaching materials integrated the spiritual value with PBL models assisted by visual studio media with low learning motivation
- A_2B_1: Teaching materials integrated the spiritual value with PBL models with high learning motivation
- A_2B_2: Teaching materials integrated the spiritual value with PBL models with low learning motivation

3.2. Research Procedures
The research procedure is the steps that will be carried out in the study. The research procedure includes the ADDIE model stage. The research procedure can be seen in Figure 1.
3.2.1. Trial procedure for Teaching Materials Integrated Spiritual Assisted by Visual Studio Media with Problem Based Learning Model

The trial procedure of teaching materials assisted by visual studio media with a problem-based learning model on thermochemistry is a step that researchers must carry out in a study to get good results. This procedure can be described in figure 2.
4. Results and Discussion
The Result is data of learning outcome and motivation questionnaire on teaching materials integrated spiritual assisted by visual studio media with problem-based learning model. Results of research and discussion as follows:

4.1. Data of Learning Outcome
Student learning outcomes are obtained through post-test value. However, to know an increase in student learning outcomes can be seen through differences in the average value of the pretest and post-test. Summary of the value of student learning outcome can be seen in the following table:
Table 2. Student Learning Outcome

| Category | Pretest | Postest | N-Gain | Category |
|----------|---------|---------|--------|----------|
| Experiment 1 | 25,20   | 82,08   | 0,76   | High     |
| Experiment 2 | 28,65   | 78,60   | 0,70   | Medium   |

From the table above, it can be seen that an increase in average student learning outcomes in both classes. The experimental class one obtained an average N-gain of 0.76 (including the high category) while for the experimental class two an N-gain average of 0.70 (including the medium category) was obtained. The difference in student learning outcomes obtained by the value of N-Gain 0.004<alpha (0.05) sig. score. It can be concluded that there are differences in student learning outcomes that are taught with teaching materials integrated spiritual values with the PBL model assisted by visual studio media compared to those who only use teaching materials integrated spiritual with the PBL model.

The difference between the pre-test and post-test value in the two classes can also be seen in Figure 3 below:

4.2. Data of Motivation

Data on student motivation is obtained through a questionnaire that was given before learning to determine the level of student chemistry learning motivation. A total of 25 items contained in this questionnaire were distributed to the two experimental classes to determine the level of student motivation. Data on student motivation is divided into 2 categories, namely high and low. The data on student motivation can be seen in Table 3 below:
Table 3. Motivation

| Class       | Lowest Score | Higher Score | Average |
|-------------|--------------|--------------|---------|
| Experiment 1| 50           | 87           | 72.15   |
| Experiment 2| 51           | 88           | 72.35   |

From the data table above, it can be seen that there are differences in the average values of motivation. In experiment class 1, the average value on motivation data was 72.15. And, for the experiment class 2, the average value on motivation data was 72.35.

4.3. Motivation Data on Learning Outcome

Motivational data on learning outcomes were obtained by taking high motivation data of students with pretest and posttest value on teaching materials integrated spiritual with PBL model assisted by visual studio media, high motivation data of students with pre-test and post-test value on teaching materials integrated spiritual with PBL model, low motivation data of student with pre-test and post-test value on teaching materials integrated spiritual with PBL model assisted by visual studio media, low motivation data of students with pre-test and post-test value on teaching materials integrated spiritual with PBL models. As for the results, it can be seen in Table 4.

Table 4. Motivation Data with Average of Pretest and Postest

| Motivation (B) | Teaching Material integrated spiritual with PBL model value + Visual Media (A1) | Teaching Material integrated spiritual value with PBL model (A2) |
|---------------|--------------------------------------------------------------------------------|----------------------------------------------------------------|
| High (B1)     | 84.83±5.036                                                               | 74.5±3.316                                                      |
| Low (B2)      | 81.58±6.574                                                               | 79.05±6.773                                                      |

From the above table, it can be seen that spiritually integrated teaching materials with PBL models assisted by visual studio media have a fairly high learning average (84.83±5.036 and 81.58±6.574) compared to those who only use spiritually integrated teaching materials with PBL model (74.5±3.316 and 79.05±6.773). For the analysis of student learning motivation data obtained 0.003 < alpha (0.05) a sig.score. It can be concluded that it was found that there is an influence of learning motivation on student learning outcomes.

In addition, based on the Pearson correlation test minimum categorized as many as 0.325>alpha (0.05) a sig.score. It means that there is a positive correlation between learning motivation and learning outcomes.

5. Conclusion

This study aims to determine the effect of learning motivation on learning outcomes taught by chemistry teaching materials integrated spiritual value using the problem-based learning model assisted by visual studio media.

Based on research and discussion data, the conclusion obtained is 1) The difference in student learning outcomes taught using teaching materials integrated spiritual with PBL model assisted by visual studio and those taught using teaching materials integrated spiritual with PBL model obtained by the value of N-Gain 0.004<alpha (0.05) sig.score, 2) There are differences in student learning motivation in both classes taught using teaching materials integrated spiritual with PBL model assisted by visual studio media with those taught using teaching materials integrated spiritual with PBL model obtained 0.003<alpha (0.05) sig.score, 3) There is a positive correlation between learning motivation
and student learning outcomes based on the Pearson correlation test minimum categorized as many as 0.325>alpha (0.05) a sig.score.

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