



DESIGNING BASIC SCIENCE CONCEPT MATERIALS BY USING ALQUR'AN, SAINS, CHARACTER (ALSAK) APPROACH FOR STUDENTS OF ELEMENTARY SCHOOL TEACHERS EDUCATION STUDY PROGRAM AS A CHARACTER BUILDING MEDIA IN HIGHER EDUCATION

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ABSTRACT

The scholar crimes cause the governments' concern about it. The scholar brawl, the drugs abuse, promiscuity, and many other become the main reason of the importance of character building in the college/ university which appropriates to the governors' mandate. The Basic concept of science is a skill course of the scholar of elementary school teacher which can be used as a media of character building through the development of teaching material. It is arranged by using the Al Qur'an, science and the character (ALSAK) approach is a concept notion of character building through the college. The ALSAK approach is a learning which involves the student actively and makes the Al Qur'an as a learning resource of science. The learning resources are conducted by presenting the Al Qur'an verses which relate to the concept of science. The packaging of the learning resource of science which relates to the Al Qur'an verses is expected can improve the spiritual and scientific attitude so it can strengthen the scholars' character.

Keywords: Learning Material, ALSAK Scholar

INTRODUCTION

The Presidential Regulation of the Republic of Indonesia Number 87 Year 2017 on the Strengthening of Character Education is inseparable from the increasing trend of morals degradation of students. The perpetrators of crime among the students are increasing. The Development of teaching materials basic concept of science with ALSAK oriented approach to character education is one solution that can solve the problem of increasing criminal cases that the student is the perpetrator.

The basic teaching materials of science concept with ALSAK approach as a character education medium in college is new concept. The ALSAK approach is a learning perspective involving students actively in discovering the learned concepts derived from the Qur'an. The learned science concepts are integrated with the Qur'an verse. Teaching materials that direct students to study the Qur'an and Natural Science is expected to arise the character of

the students about the creator of the universe that mandates humans to keep nature and kindness deed. The existence of integration of the Qur'an and science as the content of teaching materials the basic concept of science is expected to be an effective medium to carry out character education.

The purpose of higher education is to produce graduates who have a superior personality. Directorate General of Higher Education (DIKTI) (2011) the formation of strong and strong character is believed to be an important and absolute importance for learners to face the challenges of life in the future. obtained at the level of early childhood education to college can encourage them to become children of the nation who have a superior personality as expected in national education goals. Character education in college is a continuation of character education at lower levels. According to Farida (2012: 452)

Character education in universities should be formulated in the curriculum, applied educational methods, and practiced in learning. Therefore, character education through science learning for elementary school teacher education students is expected to be implemented through pen teaching materials with an approach that can facilitate character development through learning.

Natural Science Education learning supports the implementation of character education. Sayekti (2013: 145) character education needs to be instilled in the learning process into the child as a learner that aims to develop the potential of learners to be good-hearted, good-minded, and well behaved. One of them is through science learning. This is because in science lesson in addition there are aspects of products and processes there are also aspects of attitude. The value of the character has in common with the translation of the nature of science as an attitude. This means that the value of the developed character is integrated in the students' scientific attitude. The existence of a good attitude formation of learners is expected to form a good character as well, so it is expected to build a more successful nation life. Therefore, science learning is not only oriented to the mastery of concepts but attitudes and values, skills, and applications allegedly to facilitate character education in college.

Natural Science learning that is oriented character education in universities can be implemented through packaging of teaching materials with ALSAK approach (Alqur'an, Science, and Character). The approach is the starting point or point of view of the learning process / approachable way for the success of the learning objectives (Arends, 2007). The ALSAK approach is used as a way of character building and cultivating curiosity. The Qur'an commentator says natural phenomena have been written in the Qur'an so it is very appropriate to be used as a learning resource to carry out character education. Science Mastery of a nation is a

benchmark of developed countries. In the Qur'an contains verses that discuss the nature of good and bad `so it is believed is very appropriate as a source to carry out character education.

Packaging of basic science concept materials with ALSAK approach for elementary school teacher education students is an idea of application of character education in universities. Natural Science Education basic concept course is one of the subjects in the field of elementary school teacher expertise that can be integrated with aya-ayat alqur'an. The description of science basic concept subjects are (1) quantities and units, (2) matter, (3) energy and motion, (4) sound and light, (5) electricity and magnet, (6) living beings, and (7) heavenly bodies, (8) living things and life, and earth and space based on the results of analysis are listed in the verses of the Qur'an. Therefore, the idea of packaging of teaching materials is believed to be used as a medium of character education in universities.

METHOD

The method used in this paper is literature review. Library study is a collection of study materials from journals, books, and sources of information from electronic media.

RESULT AND DISCUSSION

Packaging of basic science concept materials with ALSAK approach (Alquran, Sains, dan Karakter) supported by previous theoretical studies and research studies. The results of the literature review and research results that support this idea are as follows.

Teaching Materials As Character Education Media Teaching

Materials are tools used in learning to achieve the planned goals. According to Pannen (Sadjati, 2012: 15) Learning materials are components of the message content in the curriculum that must be submitted to the students. This component

has a diverse message form, there is a form of facts, concepts, principles/rules, procedures, problems, and so forth. This component serves as the content or material that must be mastered by students in the learning process. Scopes and sequences of learning materials have been systematically arranged within the organizational structure of the education and training curriculum. Hernawan, Pengasih, Dewi (2010: 2) Learning Material is an external factor of students that can strengthen the internal motivation to learn. One of the learning events that can influence learning activities is to include learning materials in the activity. Completely designed learning materials, in the sense that there are elements of media and adequate learning resources will affect the learning atmosphere so that the learning process that occurs in students become more optimal.

The results of research Prihantana, Santyasa, Warpala (2014) the results of character analysis show the quality of moving characters from good qualifications towards very good. Differences test (t-test) of pretest and posttest scores showed probability value of $0.001 < 0.005$, this means there are significant differences in student learning outcomes between before and after learning using interactive materials based on character education. The result of the gain score is 0.76, this score is on the high criterion, this means the level of effectiveness of interactive teaching materials is high. Romdloni (2012) the results of the character analysis of the students show the quality of moving characters from qualification well towards excellent. Differences test (t-test) of pretest and posttest scores showed probability value of $0.001 < 0.005$, this means there are significant differences in student learning outcomes between before and after learning using interactive materials based on character education. The result of the gain score is 0.76, this score is on the high criterion, this means the level of effectiveness of interactive teaching materials is high. Situmorang (2013) results showed that the students' learning

achievement in the experimental group (84.44 ± 8.33) was higher than the control group (75.28 ± 11.62), and both differed significantly ($t\text{-test} 7.964 > t\text{-table } 1.662$).

It was found a positive correlation between learning achievement with learning motivation and good character of student ($r^2 = 0,871$) in chemistry study. Based on literature review and previous research results, teaching materials are effective as a character education medium. Therefore, the packaging of teaching materials basic concept of science with Alqur'an approach, Science, and Character (ALSAK) is believed to be effectively used as a medium of character education in universities. Asmarawati research results (2015) Character-based science teaching materials with smart card media can improve the achievement of fourth grade students of SD N Patangpuluhan Yogyakarta as evidenced by the increase in average value and most have reached the criteria mastery. In students the limited trial on pretest obtained an average grade of 5.5 and most unresolved (66.7%). After the postes become 7.33 and the whole becomes thorough (100.0%). While on field test students when pretest got an average value of 6.35 and most unfinished (52.9%). After the postes obtained an average score of 7.82 and most complete (94.1%).

The basic teaching materials of the basic concept of science are prepared using the ALSAK approach aimed to pack the science material that is integrated with the Qur'anic verses that explain the natural phenomena learned from the teaching materials. This ALSAK approach is believed to develop a spiritual attitude, and a scientific attitude.

Science Concept Teaching Material using ALSAK Approach

ALSAK approach (Alqur'an, Science, and Character) is the preferred way to construct teaching materials to achieve the goal of character education in universities. Theoretically, the ALSAK approach supports character education because it includes an indoctrination approach, a value

classification approach with reasoning and skills, exemplary approach, and a habituation approach already used by character education practitioners. Ambarwati (Sudaryanti, 2010: 5) describes the indoctrination approach by giving punishment, reward, and physical control. Approach to the classification of values by reasoning and skills. Exemplary approach is done by teaching to discipline, responsibility, empathy, and others. Approach habituation by way of behaving like praying, reading the scriptures, fasting, and other activities that familiarize exemplary. Al Qur'an is very appropriate source of learning to carry out character education. Djudin (2011: 1) says, many verses of the Qur'an that commanded us to think of some signs of greatness and majesty through the creation of the heavens and the earth, as well as various phenomena and natural events. For example Q.S Ali Imran, 3: 190-191 Al-Imran (3):190 *"Verily in the creation of the heavens and the earth, and the alternation of night and day there are signs (unity and power of God) for the intelligent (who will think). Allah says: "Then He goes to heaven and the sky is still smoke, then He says to him and to the earth: come both of you according to my commandment with pleasure or compulsion. Both replied: "We come with kindness" (Surat al-Fushshilat, 41: 11).*

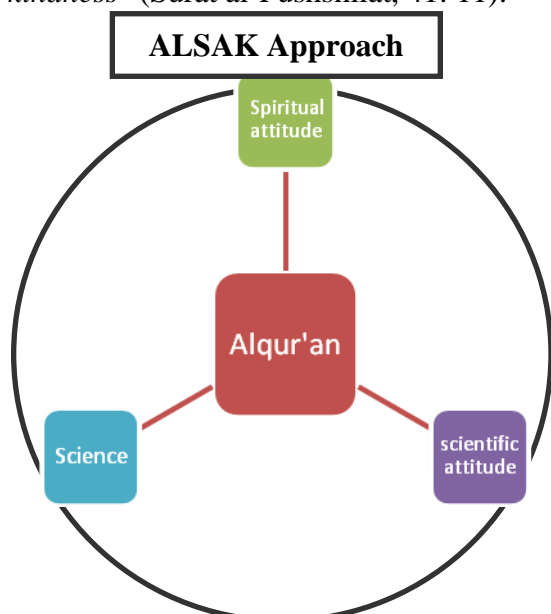


Figure 1. ALSAK Approach (Alqur'an, Character, and Science)

Instructional Material Basic Concept Model of Science Based on ALSAK Approach

The model of teaching materials with ALSAK approach is a description of teaching materials that package learning activities independently by choosing the Qur'an as a learning resource. Kasin and Rahman (2014: 256) said the attention of the Qur'an to character education can be proved by the many verses relating to morals although the words morality itself a little, but the substance of the verses are related to morals. For example, when the Qur'an speaks of faith, it is always coupled with good deeds (good deeds). Emzulia & Madzalin (2014) guided discovery learning model by integrating Qur'anic verses in general good, this is shown in the highest student response is in the fourth statement that students more easily understand the concept in learning with 100% percentage and the second statement of students feel happy and not bored during learning with a percentage of 96% and both are very good. Besides being a source of knowledge of science, the Qur'an as a source to learn the character and potentially grow the character of students. Mahmudah (2016: 448) if it is brought into the realm of education it will form a new breakthrough that is the teaching that combines between the science of religion (spiritual) and science (science). Teaching using spiritual education in the classroom is expected to produce learners who are characterized. Maduriana & Seniwati (2015) concluded that the teaching materials that are packed with the oral content of the growing tradition in Balinese society contain character education that can be integrated in the science materials. The draft of the textbook that is submitted deserves to be developed into an alternative textbook, with the assessment being in a good category. The results of Kumala and Hartatik (2016) concluded that the assessment of the lecturers of the subjects of IPA SD in each aspect consisted of 85%, 88% and 92%. The student's response to the teaching materials developed is that the students feel interested because the teaching

materials developed in easy-to-understand language, containing many images of the concept of science materials, presents the daily-known problems of the students. In the aspect of student character, the characters that appear during the learning process using the character-based science teaching materials are: 1). Discipline, 2). Tolerant, 3). Responsibility, 4). Honesty, 5). Thinking logically, critically, rigorously and innovatively, 6). Curiosity, 7). Social and environmental care, 8). Aware of the rights and obligations of others.

Research conducted Khusniati (2012) about the character education through the learner of science education character that is needed by the learners can be instilled through science learning, one of them is using contextual approach. The integration of character education in the learning process is carried out from the planning, implementation, and learning evaluation. Wibawa (2013) integrated science-based teaching materials based on character education on the theme of Environmental Chemical Impact on the Environment can bring up the character of learners especially the character of tolerance, democratic, disciplined, independent, honest, responsible, and caring environment. The verses of the Qur'an become the reinforcement of the material of science. Purwaningrum (2015: 132) in the Qur'an there is a verse that explains the origin of life from water (Surat al-Anbiya ': 30); Various kinds of water as a source of life (Surat al-Taha: 53 Al-An'am: 99 Al-Qas al-Sahl: 65 Al-Hajj: 5); The world of plants that thrives on water (QS Fushshilat: 39 QS Qaf Al-Nahl: 10-11); Various kinds of fruits, flowers, and harvests that can be picked (QS Al-Hijr: 19, QS Al-Qamar: 49, QS Ar-Ra'd: 3-4, QS Thaha: 53; QS Luqman : 10; QS.Hajj: 5; QS.asy-Shura: 7-8; QS Al-An'am: 95; QS Yasin: 36); The animal world (Surat al-Najm: 45-46; Surah Zukhruf: 12.

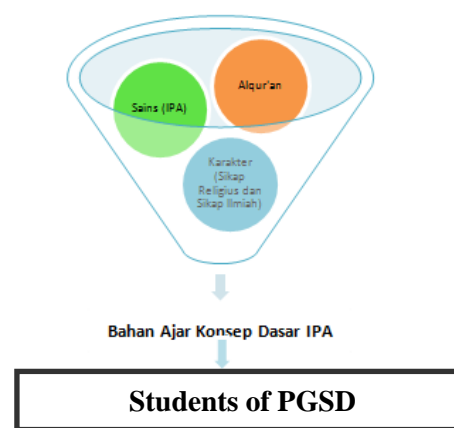


Figure 2. Basic Concept of science Learning Materials using ALSAK Approach

Implementation of Basic Concepts of Science Materials' Packaging using ALSAK

Packaging Materials Teaching Basic Concepts ALSAK approach is an explanation of the implementation of the preparation of these teaching materials. The steps of packaging the teaching materials as follows.

Analysis and Theme of Materials Teaching Basic Concepts of Science the ALSAK approach

Material and theme analysis is obtained and the character for integration is used as the basis for the students' interest, contextuality and curiosity. The following illustrates step one in packaging the teaching materials.

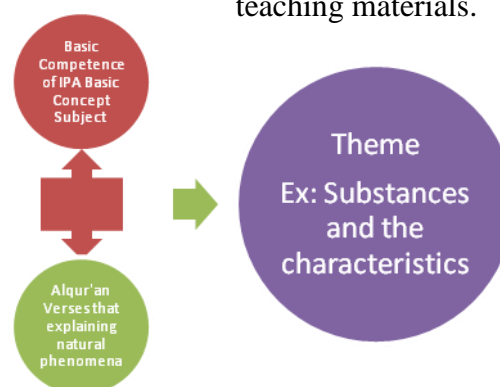


Figure 3. Description Step 1 Packaging Material of Basic Concept science through ALSAK approach

Analysis of Basic Concept Science Materials Purposes through ALSAK

Objective analysis is an activity to determine learning objectives. The objective analysis is the attainment of learning achievement, the subject's description, and the competencies achieved through the basic science concept course. The following illustrates step two in packaging the basic concept materials of IPA approach of ALSAK.



Figure 4. Description Step 1 Packaging Material of Basic Concept science through ALSAK approach

Preparation of Teaching Materials Basic Concepts of Science ALSAK Approach

Preparation of teaching materials is the last step in packing materials with ALSAK approach. Hernawan, Pengasih, Dewi (2009: 5-6) completeness of a teaching materials as follows.

a. Chapter Overview / Themes

The chapter review / Themes is a general overview of the overall subject content of the teaching materials that includes:

- 1) Description of the exercise
- 2) Use of the exercise
- 3) General Instructional Objectives
- 4) Composition of Themes / Chapters and Interrelationship between Chapters / Themes
- 5) Other supporting materials (tapes, kits, etc.)
- 6) General instructions on chapters / Themes

b. Chapter / Theme Principle

Chapter / Theme Principle covers the following:

- 1) Provides general information about the practice
- 2) Encourages participants to read
- 3) Demonstrates the usefulness of learning the module

4) Guides participants to learn the practice

- c. Exercise Overview Procedure
 - 1) Understand GBPP eye exercises
 - 2) Understand TIU
 - 3) Create module position map and relationships between modules
 - 4) Anticipate the use of training eye
 - 5) Identify the learning step independently
- d. Study Materials in Teaching Materials
 - 1) Introduction

It is the opening of a set of learning modules, including: Specific Instructional Instructions (ICT). Entry behavioral descriptions (entry behavior) The relevance of the material and activities in / between modules (cross reference) The importance of studying modules, and logical sequence of items in the modules.

2) Learning Instruction

In the learning activities contained in the module, should contain at least the following elements:

- a) Description of the materials

Presentation of facts / data, concepts, principles, theories, values, procedures, skills, law, problems Presented in a narrative or pictorial manner.
- b) Example and Illustration

Bend numbers, images, etc. which represents the concept of confirming the reader to the description of the material.
- c) Exercises

Various forms of learning activities that participants must undertake to establish knowledge, skills and attitudes related to the description of the material are presented creatively according to the characteristics of the eye of the exercise.

3) Summary

Summary is the essence of the description of the material presented in the learning activities. Serves to infer and affirm learning experiences that can condition the growth of new concepts in the minds of readers / participants. The provisions in mebuat summarize are: (a) Contains the basic idea of material; (b) presented in a sequential and concise

manner, is conclusive; (c) communicative, (d) establishing understanding; and (e) put before formative tests.

4) Formative Test

It is a test given to measure the mastery of participants after a learning activity ends which aims to measure the level of mastery of participants. The results are used as a basis for continuing to the next learning activity. Conditions that must be considered in making the formative test in the module is to measure the ICT, the test material is true and logical, the subject matter is quite important, qualify the writing of the item, can be a multiple choice form or a brief description. Answer key is stored at the end of each module, should be accompanied the reason.

5) Language Usage

The language used in module writing should use good and correct language, easy to digest and easy to read, interesting and stimulating curiosity, logical order of serving, greeting using your word.

6) Glossary

Glossary is a list of words that are considered difficult / difficult to understand the reader so that additional explanations should be given.

7) References

References is a collection of sources of information used in writing

CONCLUSION

The teaching materials of the basic concept of science approach of ALSAK (Alquran, Science, and Character) is still idea of character education media for Elementary School Teacher Education students who can be used in university. In packing the teaching materials of ALSAK approach, the Qur'an was chosen as a science learning resource. In the verses of the Qur'an many explain the natural phenomena. On that basis, the basis of the compilation of teaching materials integrates the concept of science with the verses of the Qur'an. Preparation of teaching materials basic concept of science begins with

material analysis, objective analysis, and preparation of teaching materials.

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