

# Creating a Quran Generation with Science Literacy

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## ABSTRACT

One of the main obligations of parents, including teachers, is to lead their children and students to become individuals who have spiritual depth and moral exaltation. These two things can be achieved through an integrated learning approach that combines the Qur'an with various information including scientific concepts which are expected to strengthen each other. This kind of learning is expected to grow a generation that is able to understand the Qur'an well, as well as have scientific literacy that is able to use scientific concepts, skills, processes, and values in making decisions, especially those related to their environment and fellow living creatures.

**Keywords:** *quran, generation, science, literacy*

## 1. INTRODUCTION

Changes in people's lives that are increasingly volatile, uncertain, complex, and unclear, lately require the role of parents, teachers, education managers, and the community in general to equip children, students, and the younger generation through various new things. Starting from the way of thinking, the way of working, to the way of living together in harmony. New ways of thinking include critical thinking skills, creative thinking skills, and problem solving skills. These skills are needed by someone in achieving success in learning, working, and living in the 21<sup>st</sup> century [1][2][3]. Someone who has high critical thinking skills and good communication skills will easily adapt to changing conditions and be appreciated both in the academic context and the world of work [4][5][6].

It is very important for anyone to have a new way of working, which is followed by communication skills, collaboration, creativity and innovation, as well as literacy or open insight. Several types of literacy include reading literacy, media literacy, cultural literacy, ICT literacy (Information, Communications and Technology), economic literacy, and scientific literacy. Scientific literacy will help a person in solving various life problems while still considering environmental factors and technological advances as a means of improving living standards, so it is very necessary to be taught from an early age in the learning process and implemented in various sectors of life.

Apart from being a way of life for every Muslim, the Qur'an is also a source of scientific literacy, there are various phenomena and scientific concepts contained in it. Through the integration of the Qur'an with science and vice versa, it is hoped that the Qur'anic generation will be formed, they will become a generation of faith, piety, and good character that will not change even though they live in the Industrial Revolution Era 4.0, 5.0 or later.

## 2. METHOD

Literature study was used in writing this article. The study of books, journals, papers and other writings is carried out to enrich the study of the meaning of the Qur'anic generation and scientific literacy. In addition, several empirical studies are used as secondary data to strengthen arguments which are then synthesized into a single unit to provide meaningful information.

## 3. RESULT & DISCUSSION

### 3.1. Qur'anic Generation

The phrase "today's youth are tomorrow's leaders" can be used as a basis in preparing superior generations in the future. To make it happen, real efforts are needed that are sustainable through the formation of the Qur'anic generation. The Qur'anic generation can be interpreted as a generation that always tries to apply the Qur'an as a way of life to

achieve happiness in the world and the hereafter. The Qur'anic generation believes that the Qur'an is a guide for mankind which covers all aspects of life in order to be harmonious [7]. In line with that, the Qur'anic generation is the generation that keeps Allah's verses in their hearts, has a Qur'anic personality, takes the Qur'an as the main source in their lives through reading, studying, understanding and practicing it in every aspect of life by fostering feelings love the Al-Qur'an, and do tadabur from an early age [8], thus a generation with a Qur'anic spirit means a generation that has a personality that is formed through the values taught by Allah in the Qur'an [9].

Efforts that can be made to build a Qur'anic generation are by involving various elements and institutions, including families, schools, and communities. The family as a system of community life which is limited by the existence of ties of blood ties or descent can be a place to in still Islamic aqeedah as the only basis for thinking and acting by introducing the Qur'an, teaching and getting used to reading it, exemplifying and practicing its contents, and create a religious family environment. Schools as institutions or institutions that are one of the benchmarks of educational success have great potential in shaping the Qur'anic generation, this can be realized through the development of an educational curriculum that integrates the Qur'an and science. This development pattern certainly needs to be integrated into learning activities, so that it is more interesting and will add to the scientific treasures and quranic literacy for students.

The position of society is influential in giving direction to the education of a generation, especially through the presence of social organizations. Community organizations can help generations in manifesting Islamic teachings in everyday life, of course, followed by the role of community leaders who have good personalities, and uphold Islamic teachings in behavior.

Another thing that plays a role in realizing the Qur'anic generation is information and communication technology. Internet-based information and communication technology has become a necessity of life that cannot be denied, because it is able to become a means of introducing the Qur'an, a facilitator in teaching starting from how to read to understanding its meaning and significance, conveying information about the contents and contents of the verses of the Qur'an even various information about the miracles of the Qur'an which discusses the concepts and studies of science and technology, and others.

Some of the phenomena of concepts and studies of science and technology contained in the Qur'an include: (1) the meeting of two seas whose water does not merge in the QS. Ar-Rahman, verses 19-20; (2) fire on the seabed in QS. At-Tur, verse 6; (3) the orbit of the solar system in QS. Al-Anbiya 'verse 33; (4) Formation of rain, QS. Ar-Rum verses 48-49; (4) fingerprints in humans, QS. Al-Qiyamah, verse 3; (5) the process of human creation, QS. Az Zumar, verse 6, and others. This information is certainly a source of literacy, including scientific literacy.

### **3.2. Scientific Literacy**

Scientific literacy consists of the words literatus which means literate and scientia which means having knowledge. Scientific literacy is the ability to use scientific knowledge, identify questions, and draw conclusions based on evidence, in order to understand and make decisions regarding nature and changes made to nature through human activities [10].

Scientific literacy according to the Program for International Student Assessment (PISA) is defined as "the capacity to use scientific knowledge, to identify questions and to draw evidence-based conclusions to understand and help make decisions about nature and the changes made through human activities". Based on this explanation, scientific literacy can be defined as the ability to use scientific knowledge, identify questions, and draw conclusions based on evidence, in order to understand and make decisions regarding nature and changes made to nature through human activities. The main elements contained in scientific literacy according to Harlen [11] include: (1) concepts or ideas, which help understand the scientific aspects of the world around us and enable us to understand new experiences by relating them to what we already know, (2) the process of , namely mental and physical skills used in obtaining, interpreting, and using evidence about the world around to gain knowledge and build understanding, (3) attitude or disposition, which shows willingness and confidence to engage in investigation, debate, and further learning, (4) understand the nature (and limitations) of scientific knowledge.

Poedjiadi stated that, someone who has scientific and technological literacy is characterized by the ability to solve problems using scientific concepts obtained in education according to their level, recognize technology products around them and their impacts, are able to use technology products and maintain them, creative in making simplified

technological results so that they are able to make decisions based on the values and culture of the community [12].

Millar and Osborne wrote that scientific literacy can be improved by paying attention to the following lessons: (1) maintaining and developing the curiosity of the younger generation about the nature around them, and building their self-confidence in order to recognize their potential. This can be done by cultivating a sense of wonder, enthusiasm and interest in science so that young people feel confident and competent to engage with scientific and technical matters. (2) helping young people to gain a broad general understanding of important ideas and explanatory frameworks of science, and procedures of scientific inquiry, which have a major impact on the environment and culture [11]. Based on the explanation above, alternative learning that can be done to improve scientific literacy skills for the younger generation is by applying science learning that emphasizes the development of attitudes, ideas, and science process skills that emphasize scientific inquiry activities, with such learning it will increase enthusiasm, students' interest in, and admiration for, science.

### ***3.3. Realizing the Qur'anic generation armed with Scientific Literacy***

Science education has a very important and useful role in supporting life and contributing to the development of science in general. A competitive generation is needed in natural science and technology which refers to scientific literacy skills [13]. Thus, a teacher needs to develop student literacy in order to be successful, both in learning and in real life.

As a developing concept, scientific literacy is an inseparable part of environmental education [14]. The scientific literacy model based on Islamic values and Indonesian culture can be interpreted as the ability to engage with science (science) on related issues and with scientific ideas as reflections as citizens who are religious and cultured. The idea of scientific literacy based on Islamic values and Indonesian culture still requires a more in-depth study, either through discussions, seminars, or application so that it is more applicable, namely an assessment tool can be developed, with the hope that this idea will become one of the concepts in the theme of integration. science and Islam [15].

A generation that has a Qur'anic spirit means a generation that has a Qur'anic personality, namely a

personality that is formed through the arrangement of traits that are deliberately taken from the values taught by Allah SWT in the Qur'an, so that you can imagine the structure being built. from the elements of the teachings of the Qur'an [9].

Printing means producing something with certain efforts. Printing what is meant here is to produce generations with certain efforts such as educating, directing, guiding, fostering humans to have the spirit of the Qur'an. Talking about humans, beings with souls, personalities, and consciences, is always interesting. Therefore, neither discussion of the physical aspects nor the internal aspects of human beings, such as the soul and heart, is never finished [9].

## **4. CONCLUSION**

The Messenger of Allah at the end of his life said "I leave for you two things. You will not go astray as long as you hold on to it, namely the Book of Allah (Al-Quran) and the Sunnah of the Prophet Muhammad". If you refer to the message, parents and teachers don't really need to worry about the changing times that are happening today. If parents, teachers, equip their children with the Al-Quran as a way of life as well as a source of scientific literacy, it is certain that the younger generation will be successful in their lives, so that the Qur'anic generation will be realized.

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