

CONSTRUCTIVISM OF NEUROSAINS-BASED IN BUILDING THE QUR'ANI CHARACTER OF SMP MUHAMMADIYAH I SLEMAN STUDENTS

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Abstract : *The character of the Quran is formed to foster a good self-awareness of the child both in terms of character, honesty and discipline. The aim of this research is the implementation of the Alquran Read and Write program to the change in the character of students who are expected to become individuals who have the character of the Quran. BTAQ learning is carried out using the theory of constructive which involves the concept of neuroscience theory. This study uses descriptive qualitative by taking data through several stages, namely observation, interviews and documentation. Based on research that has been conducted by researchers that Read the Qur'an is an effective way to develop children's character, starting with the habit of reading the Quran and understanding the values in the Quran.*

Keywords: *Neuroscience, Student Morals, Character, Constructive*

Introduction

Realizing the Quranic generation as exemplified by Rasulullah Saw is not a very easy job. The Quranic generation is not born and grow by itself without the formation of characters that are accustomed and built, to realize the generation of the Quran it is necessary to instill the character of the Quran that must be accustomed and developed and can be applied in the daily life.¹

¹ Said Aqil Husain Al-Munawar, *Aktualisasi Nilai-nilai Qurani dalam sistem pendidikan islam*(Jakarta: 2003)

The community is experiencing very rapid development as a result of the advancement of science, both science and technology causing an implementation of Koranic education is very important to be applied, Koranic education has values to be achieved including covering the spiritual dimension through faith, piety and noble character. , the cultural dimension includes an independent personality and the dimension of intelligence that will lead to progress.

So far there have been many studies that describe the character education of students both from the realm of the holistic personality of students and the formation and development of students both from developing potential and strengthening the role of families. In this study, researchers wanted to raise how educators can construct students so that not only has the character mentioned in previous studies but how character education in the Koran can be applied by students in everyday life.

Islam is a religion that always considers the existence of humans as caliphs on earth. Because of that, the teachings of Islam contain concrete teachings and can be adjusted to the times. In the principle of human Islam are creatures and caliphs on earth who are always looking for perfection themselves so that humans always need the name of knowledge and knowledge obtained with education. The Qur'an explains that the perfection of a human being does not only lie in his dohir dimension but through the spiritual dimension, man will always endure and seek perfection of himself as a caliph.

In developing the spiritual dimension, humans will find everything that is commendable, including good character. The Qur'an explains that good character is an interaction of the totality of humans, not only in the form of reason but there is a correlation between reason, moral awareness and purity of the soul. Good character can be produced from internalizing religious and moral values in a person which is characterized by positive behavior. Some of the main characters contained in the Koran, including steadfast and never give up include patience, consistency whose consequences do not follow lust, integrity built from oneself such as good discipline discipline to be honest, disciplined to always be fair and the last is professionalism that will give birth to mentality .

Lickona said that character is divided into three inseparable parts namely moral knowledge, moral feelings and moral behavior. A good character that is an awareness of doing good things, habits in

positive thinking and taking positive actions. In realizing the character of qurani in children can be from informal education, namely family and formal education, namely educational institutions (schools). In developing the character of the quran in formal education there are several principles and strategies including using the principle of continuity, routine and the principle of consciousness.² The principle of this awareness will be formed through habituation of children, in the theory of habituation learning this requires theories including constructivism theory, constructivism acts as a way for students to familiarize themselves to think so students can construct their learning experiences in order to form the character of the qurani.

The character of the Quran is formed whose function is to foster a good self-awareness of the child, this is part of the Spiritual Brain. Students will find the characteristics of the qurani when maximizing the function of the rational brain and senses. Self-awareness is an internal function of the human brain, without stimulation from outside of consciousness, it must still exist, but in the study of neuroscience to achieve self-awareness, the education system must provide opportunities for students to be able to find the value and meaning of what is sought.

From the studies described above, it is important to construct the character of the quran in students by involving their SQ needs so that students can practice something that has been experienced by themselves because of the needs of the spiritual brain. In this study the author will explain how the theory of constructivism based on neuroscience can be applied in learning the Koran to shape the character of the Quran in students.

Discussion

BTAQ learning in SMP Muhammadiyah 1 Sleman

BTAQ learning in Sleman Muhammadiyah Middle School has become a daily routine for both Tahfidz and beginner learners. In BTAQ activities are compulsory activities in schools that must be attended by all students starting from class VII to class IX. BTAQ learning in SMP Muhamamdiyah 1 Sleman is not done simultaneously but students are taught privately in turn, starting at the

² . Suyadi, Mawi Khusni Albar. *Budaya Ngrowot Dalam kajian Neurosains di pondok pesantren Luqmaniyah Yogyakarta* (Ibda: Jurnal kajian Islam dan Budaya, 2018), hlm. 143.

second class until the 7th class on Monday-Thursday. In BTAQ learning each student gets 10 minutes. in BTAQ learning students are not only taught to read but also taught to write. In the aspect of writing according to the father of faris, children are taught to recognize letters hijaiyah to be able to write correctly using the Imla method '. According to Mrs. Susana as the person in charge of the BTAQ program, this activity was carried out as a form of school endeavor to produce graduates who had the character of the Quran and could read the Koran.

The BTAQ program at SMP Muhammadiyah 1 Sleman does not only carry out routine reading of the Koran, but teachers instill the value of morality and awareness of why they must study the Koran. Instilling the values of students is done by the teacher to accustom students when they meet the teacher must say greetings first, after sitting in front of the teacher students are taught to sit properly, the teacher accustoms students before starting to read the Koran to pray first. In the learning of BTAQ, SMP Muhammadiyah Sleman uses the iqra method, which is a method that emphasizes direct reading practice, the iqra method in practice does not really need a lot of tools because it does not use classical.

The iqra method 'becomes the choice in BTAQ learning at SMP Muhammadiyah Sleman because the iqra method' is a very fast method because it is arranged from simple to increasing reading but with easy steps. The teacher's firmness in teaching also shapes the student's personality and discipline, so that students are serious about carrying out the BTAQ process. According to Mrs. Susana in teaching BTAQ, it must be really considered both from makhoriul khuruf and other laws, quoting Mrs. Susana's words "I am very strict with students, if students are wrong in sounding letters then I ask students to repeatedly improve the reading until absolutely right. Seen when observing in BTAQ activities the children are very orderly, for those who have not been called, the children do not leave the classroom while for students who are called by name they will immediately meet the teacher and when there is an error in reading they repeat the reading until it is correct.

Constructivism approach in BTAQ

The teacher in giving knowledge to students is based on the principles of education that is not giving knowledge directly to students but a student must be active in finding his own knowledge so

that students can build knowledge in their minds, essentially the teacher as a facilitator who facilitates students in cognitive aspects, affective and psychomotor. Teachers must be able to make the learning process an important thing so that students get meaningful things in the learning process because students experience themselves naturally.³ in learning theory such a learning process is called the theory of constructivism.

The constructivism approach in learning is based on a combination of several studies and a behavior modification based on operant conditioning theory in behavioral psychology. The principle in the theory of constructivism is that a student actively builds his knowledge and skills independently by obtaining from the environment outside himself.⁴

Learning models in the theory of constructivism have the same view that all students build knowledge based on the experiences they have. The learning method in constructivism theory always involves the activeness of students and arouses enthusiasm for learning including the Quantum Teaching method. Quantum Teaching is a method that creates an effective learning environment and facilitates the learning process. Quantum Teaching assembles a multi-sensory, intelligence and compatible package with the brain so that the teacher is able to inspire students to excel.⁵

Quantum Teaching Method is not much different from the methods in the constructivism family, namely active learning, contextual teaching and learning and cooperative learning, Quantum Teaching emphasizes more on students' motivation to learn learning with a pleasant nuance. In BTAQ learning, Quantum Teaching plays an important role in BTAQ learning because BTAQ requires an effective strategy so that it can be well understood by students.

There are several approaches in BTAQ learning, namely:

1. Faith is an encouragement to develop understanding and belief in Allah SWT.
2. Practicing is something that conditions students to practice the contents of the Koran in everyday life.

³ Suyanto. *Panduan pembelajaran beebasis Ramah Anak*. (Malang: Plan Indonesia, 2014)

⁴ Esa Wahyuni Baharuddin, *Teori Belajar dan Pembelajaran* (Jogyakarta: Ar-Ruzz Media Group, 2007), hlm. 115.

⁵ Badiatul Hikmah, *meningkatkan motivasi belajar baca tulis al Quran dengan metode Quantum Teaching*, (Bangil, Journal Of Islamic Education, 2019)

3. Habituation is an encouragement that accustoms students to behave and behave properly in accordance with Islamic teachings contained in the Qur'an and As-Sunnah.
4. Rational is an effort to improve the quality of students in reading the Koran by functioning of the ratio of students so that the values embedded can be understood by reasoning.
5. Emotional is an attempt to influence the emotional of students to live the learning of the Qur'an.

To create a success in BTAQ learning as a complement to the BTAQ method, the role of the Quantum Teaching Method is needed, the principles of Quantum Teaching are truths that become a basic concept of thinking and acting that affect all components of learning.⁶ The BTAQ learning design in Quantum Teaching is:

1. Grow

In this element, trying to foster student interest in BTAQ learning so students can think early about the benefits of learning BTAQ for themselves. This is important to be done by educators of students to create a fabric of mutual understanding between educators and students.

2. Natural

This element provides students with experience and utilizes the natural desires of the student's brain to explore. So students can think naturally in the learning process.

3. Demonstrate

This element provides the opportunity for students to translate verses of the Koran that have been learned, and relate it to personal experiences so that students feel that they know.

4. Repeat

In this element the educator asks students to repeat the material that has been learned either by copying verses that have been read or translating them so that students feel that they already know about the material assigned by the teacher.

5. Celebrate

In this element educators give a gift to students who have succeeded in running the learning process, both giving gifts by giving praise, applause and others.

⁶ Departemen Agama RI. *Kurikulum dan Hasil Belajar Quran Hadits Madrasah Ibtidaiyah*, (Jakarta: Dirjen Kelembagaan Agama Islam, 2007)

In implementing BTAQ learning using the Quantum Teaching method students become the main actors in the learning process, students will quickly construct knowledge because all five senses take part in the learning process.

Constructivism in the concept of Neuroscience

Conceptual in the learning process if viewed from the cognitive aspect, learning is not the acquisition of information directly obtained by educators but students look for the meaning of each experience through the process of assimilation and accommodation that leads to cognitive structure, learning that puts forward the cognitive aspects is the theory of learning Constructivism, in theory constructivism there are several learning strategies to realize success in learning, namely active learning, independent learning, cooperative and collaborative, the importance of strategies in learning so that students can go to independent learning and can develop knowledge and skills in students.⁷

In the learning process students must feel a balance both physically and mentally so that there are changes in students because in essence a learning is a "change" that occurs in students after learning activities. Learning activities emphasize process more than results. The process of learning can be "*Constructing and restructuring of knowledge and skills within the individual in a complex network of increasing conceptual consistency*".⁸ Pieget asserted that a knowledge is built in the child's mind through assimilation and accommodation that is the absorption of new information and rearrangement of the mind structure because of new information, in this process constructivism theory gives freedom to students to find the nature of learning without any pressure on students, in this Neuroscience theory called by activating the power of thinking right brain and left brain. Students in the perspective of neuroscience are the learner's brain during experiencing a response to learning.⁹

In the context of passive and tense learning education triggers the lack of activation of the learner's brain so that the results obtained in learning are less than optimal. Active and fun learning will activate

⁷ Sumarsih, *Implementasi Teori Pembelajaran Konstruktivistik dalam Pembelajaran Mata Kuliah Dasar-dasar Bisnis*: 2009

⁸ Budiningsih, Asri C. *Belajar dan Pembelajaran* (Jakarta: Rineka Cipta, 2012)

⁹ Wilis, Ratna, *Teori Belajar dan Pembelajaran*. (Jakarta: erlangga, 2002)

the brain more so that learning will be more successful. Wathon explained that the clearer the observation of brain activity, the easier it is to control one's behavior.

Neuroscience is the study of science that has the objectives of learning the biological basics of each individual's behavior. Neuroscience explains human behavior from the point of view of the activities that occur in the brain. Research in the field of neuroscience has proven that there is no separation between the brain and human behavior (character). In the Positron Emission Tomography Instrument, it was found that there are 6 brain systems that integratedly regulate all human behavior, namely the prefrontal cortex, limbic system, gyros cingulatus, basal ganglia, temporal lobe and cerebellum. This discovery provides knowledge that behavior is no different from developing brain potential. The brain system found in the study has an important role in the regulation of cognition, affection and psychomotor.

Efforts to foster character education in a diametrically educational environment will produce spiritual intelligence. Taufik Pasiak holds that Spiritual Quotient is the deepest part and is very important for humans, Spiritual Quotient operates from the center of the brain that is from the function of the brain. In science, Spiritual Quotient is located in the neuroanatomy and neurochemical section which proves that Spiritual Quotient is based on the brain in humans.¹⁰ Spiritual Quotient is built on the "God Spot" theory. God Spot is a collection of nerves located in the temporal lobe area of the brain behind the temples, God Spot has the function to provide awareness of the fundamental existence that causes humans to be idealistic and look for the illusion of a problem.

In the science of neuroscience the brain has a miracle in the form of intelligence, awareness, creativity, being able to think and is a center for receiving sensory information.¹¹ Taufiq Pasiak believes that the brain has a very important role because it is the center of all activities that occur in the human body, the position of the brain is at the very top after the body that we can interpret as the leader of the body that functions as controlling, managing.¹²

¹⁰ Pasiak, Taufiq. *Revolusi IQ, EQ, SQ : Antara Neurosains dan al-Qur'an*, (Jakarta: Prenada Media Grup, 2003) hlm. 27

¹¹ Astuti, Suyadi. *Relevansi Konsep akal bertingky Ibnu Sina dalam pendidikan islam di era milenial*. (Ta;dibuna: Jurnal Pendidikan Islam, 2019) hlm. 227.

¹² Nukman, *Mind revolution*. (Yogyakarta: Diva Press, 2019)

Education is essentially an attempt to develop the potential in humans to be able to be independent, for that humans are given various abilities such as concepts, principles, creativity, responsibility and skills so that they can interact with others because humans are social creatures who need interaction with other humans, this can be obtained through education which will develop a balanced state between individual and social development.

Based on the discussion described above, it can be concluded that the constructivist learning theory and neuroscience theory have the same goal of wanting to activate the thinking ability of students or individuals with the will and ability possessed by students and teachers understand the needs of students so that they can become facilitators in activating students the ability of the right brain and left brain of students. so learning will be more successful and students discover for themselves the nature of learning.

In this 21st century education can not only be focused on disciplines but educators must be able to unite a discipline that is being taught with neuroscience or the ability to understand the human brain in the effort to form the character of the Quran which is sought by the teacher through reading and writing learning Al Quran Constructivism is very instrumental because in the process of awareness carried out by the habit of learning the Koran routinely and the teacher becomes a good facilitator in the learning process, students will form a positive mindset.¹³ this is an effort to improve the Islamic education system which has an indication that Islamic religious learning seems doctrinal pedagogical, and not empirical rational.¹⁴

Conclusion

Character education becomes the most important point in the education process. Forming a character that is in accordance with the vision and mission of Islamic education requires special attention so that students can have a character that is in accordance with the character of the Prophet that is the character of the Quran. The character of the Quran can be realized with the habit of studying the

¹³ Suyadi. *Millenialisasi Pendidikan Islam Berdasarkan Neurosciensi di Universitas Generasi ke tiga di Yogyakarta* (Qijis: Qudus International Journal of Islamic Studies,2019)

¹⁴ Suyadi, S. *Studi Silsilah Ilmu Pendidikan Agama Islam di Fakultas tarbiyah dan Keguruan UIN Sunan Kalijaga*,(*AlJami'ah: Jurnal Studi Islam*, 2018d) hlm.29–58.

Koran and knowledge of the values contained in the Koran so that it can be practiced by students in everyday life. The process of realizing this requires the skills of an educator with good methods so that students can consciously construct what they have learned, activities in conscious habituation can be done with constructivism learning theory how educators are only facilitators in the process of students seeking knowledge, of course this requires a skill and understanding from educators to find out and explore students' abilities. Educators have a responsibility to learn the biological underpinnings of each individual's behavior. In the science of neuroscience that educators can know human behavior from the point of view of the activities that occur in the brain.

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