

APPLICATION OF NEUROSCIENCE IN ESTABLISHING CHARACTER EDUCATION IN EARLY CHILDREN AT AISYIYAH 06 JATEN KINDERGARTEN STUDENTS

Nur Novita Sari¹, Nur Fauziyah²
^{1,2}Early Childhood Teacher Education
Muhammadiyah Surakarta University
A520221031@student.ums.ac.id

Keyword

neuroscience, character education, islamic education, early childhood

Abstract

This article aims to review character education in early childhood through the application of neuroscience. The research method used is descriptive qualitative method. Data collection techniques using observation, interviews, and documentation. Neuroscience is the scientific study of the nervous system. In fact, early childhood neuroscience is a golden period in the process of human development. In neuroscience there is the development of intelligence and morality for students. Thus students can optimally optimize the brain network system at an early age to develop their character. Teachers at Aisyiyah 06 Jaten Kindergarten need efforts to instill character education values in students. Through the application of neuroscience, children are given the opportunity to build knowledge through the learning process. The application of this neuroscience also has the potential to develop the character of Islamic education in Aisyiyah 06 Jaten Kindergarten.

INTRODUCTION

Education needs to be given and stimulated from an early age because it will have an effect on the child's development. In order to educate the life of the nation, the quality of education is an important thing that must be improved. The main education starts from its roots, namely early education or early childhood education. Early childhood education is very important because at an early age it is the golden age or the golden age for early childhood. At this time children are easily given stimulation and instructions and need to be guided in a good way according to their age, so that later they will become superior in religion and intellectually. Early childhood education (PAUD) today is increasingly recognized and realized how important its existence is for the good development of children's potential (El Fiah, 2017).

Both parents and teachers can develop their children's potential through a number of examples (Nurjannah, 2017), such as praying, interacting with others, working together, manners, ways of learning, lifestyle, and others. Character education is very important given to children from an early age because it will affect their lifestyle. Parenting and stimulus given early on can also affect a child's character, this affects brain development.

Neuroscience studies which explain that the brain development of children 0-5 years that functions is the subconscious mind, which includes behavior, habits, creativity related to character education, so early childhood is the right age to be given character education. Integrated neuroscience can be a development tool to shape character education as well as Islamic education.

Neuroscience is a field of study regarding the nervous system contained in the human brain based on biology, consciousness, sensory, attention, perception, emotion, memory, and their relation to learning. The concept of learning in neuroscience is learning that empowers the brain's abilities by creating a learning environment that is comfortable, challenging, fun, meaningful, and encourages students to be active.

Based on Law no. 20 of 2003 the Islamic education approach in character building is very important for properly educating children to become quality human beings so that the potential of students in various learning processes can be achieved. In addition, in neuroscience there is an inculcation of values that shape character, artistic values, cultural values, intelligence, skills and religion.

There are several studies on teacher efforts to shape student character. Nasrullah (2018) examines the efforts of Islamic religious education teachers in shaping student character. Through observation, interviews and documentation at SMA N 1 Kota Bima, it was concluded that there are three strategies for teacher efforts to shape student character, namely: 1) practicing noble behavior. 2) provide guidance to students. 3) provide religious guidance with character education materials (Nasrullah, 2018).

Furthermore, Wahyu (2021) examines teacher efforts in developing character education for elementary school students through child-friendly education. Through observation and interviews, Wahyu's research shows that the teacher's role is very important in developing the character of students through learning activities, habituation, school culture and school vision and mission (Kholifah, 2020).

From the results of this study, the author will explain the application of neuroscience in the formation of early childhood character education for TK Aisyiyah 06 Jaten, especially regarding the golden age of early childhood, the values of character education and the process of character formation in early childhood.

METHODS

In this study, the authors used a qualitative descriptive research method with a case study approach (Ramanda, Akbar, & Wirasti, 2019). Case studies are interactive studies with a number of people or sources (Sugiyono, 2022). This study uses a qualitative descriptive method where data is taken from observations at TK Aisyiyah 06 Jaten, Karanganyar Regency as well as the results of analysis from several appropriate research journals, then conclusions are drawn and a summary is made. The data obtained from the research results will be described and interpreted. Such conditions in the field will be described in detail.

Data collection techniques used in this study were interviews and observations of research informants. Interviews were conducted in an open and structured manner. The interviews were carried out in stages according to the established interview guidelines. The analysis used in this study is exposition and analytic because it will describe the existing facts and provide arguments that can be concluded

RESULTS AND DISCUSSION

The Golden Age of Early Childhood

Golden age is an important period in child development. The golden age is the golden period for children at the beginning of their lives, namely at the age of 0-5 years. This phase is important for parents to pay attention to because in this phase the child's growth develops so rapidly. Research says about 50% of adult intelligence begins to form at the age of 4 years.

The golden period or golden age is the most important stage of growth and development in the early days of a child's life. Golden age covers the first 1000 days of a child's life which is calculated from the period in the womb until the child reaches two years of age.

The golden age is a very important period and needs special attention by parents. At the golden age, the brain grows optimally, as well as physical growth. In addition, during this period the child's personality development also occurs and the formation of patterns of behavior, attitudes, and emotional expression. If various children's needs are ignored at the golden age, it is feared that the child will experience less than optimal growth and development.

The privileges of children during the golden age are very different. To deal with them, of course, tests one's patience. One way is to apply discipline to children without overly punishing them when the child makes mistakes, fulfilling adequate nutrition, physical growth and so on. At

the age of 0-5 years, children are still dependent on their parents, but there is a desire for socialization that has started to grow at this time. Characterized by independence and ability to self-control. Children at this time need an environment to socialize, so at this age children can enter playgroups or kindergartens. The goal is for children to socialize, play and develop their potential. Provision of good stimulation will strengthen nerve cell networks in the child's brain, can also store all information related to behavior and habits. Everything can be recorded by the brain even though the process is so complicated. Like a computer, the human brain stores more than 100 billion bits of information (Lusi, 2014).

Children's learning outcomes are in the form of knowledge and skills, by applying neuroscience a negative to positive behavioral process will be obtained so that learning objectives can be achieved. Through neuroscience one can also see the abilities of students at Kindergarten Aisyiyah 06 Jaten in terms of knowledge, skills, attitudes and values that are embodied in children's daily habits.

Values of Character Education and Islamic Education

Character education is given to children as early as possible to make it easier for parents to direct and educate children's character, because parenting styles greatly influence the formation of children's character. Planting and forming character education is very necessary (Faiz, 2019). Indeed, the foundation for the sustainability of a nation's civilization is seen from the existence of quality character education.

According to Khan, the values contained in character education are religious, nationalist, intelligent, responsible, disciplined, independent, honest, wise, respectful, polite, generous, helpful, mutual cooperation, confident, hard working, tough, creative, leadership, democratic, humble tolerance, solidarity and caring (Khan, 2010). The application of neuroscience in Islamic education can provide Islamic knowledge capital so that it can shape the character of students. Islamic education is needed in Aisyiyah 06 Kindergarten, Central Java, emphasizing on activities that are in accordance with needs as the main tool for character growth. The earlier you provide stimulation and stimulation to your child, the better the results will be.

In neuroscience, the discipline of the nervous system develops which relates to humans and God in matters of the physical. In neuroscience, children can be taught spiritual and intellectual material. Because of that spirituality in Islam focuses on thoughts that are considered true. In an institution it is required to implement character education to form human beings with character and as a means of finding identity.

The formation of a child's character must begin at an early age. The goal is to shape the child's good personality so that later when he grows up he becomes a good person who can benefit his fellow human beings and their environment.

Character building is included in the goals of national education. Article 1 of Law Number 20 of 2003 concerning the National Education System states that the goal of national education is to develop the potential of students to have intelligence, personality and noble character. This means that education does not only form intelligent human beings, but also personality and character.

Stimulation and Character Formation Process of Aisyiyah 06 Kindergarten Students, Jaten

Instilling character values at this time is very necessary to prevent a decline in moral quality that occurs in children and adolescents (Badry and Rahman, 2021). The educational process in schools should provide an appropriate portion as a teacher's effort in shaping the character of students. There is research showing that the current conditions tend to ignore the importance of providing character education stimulation, even though the stimulation will affect the next pattern of life (Sholichah, 2020).

Stimulation in the formation of children's character from an early age can be provided through education in educational institutions such as playgroups or kindergartens and through parenting at home and in the community. Providing stimulation to early childhood should be considered by teachers and also parents as stimulants. As for institutions, it is necessary to

provide development, there are six aspects of development that exist in early childhood, especially aspects of morals and religious values. This aspect includes aspects of religious life, values, and character.

Through delivery in good ways and in accordance with the stage of child development, habituation will be realized as a behavior towards the character that will be instilled. Educators or teachers at TK Aisyiyah 06 Jaten need to develop lesson plans that can be used as guidelines and references for teachers in implementing early childhood education programs. The strategies for forming character in children are as follows:

1. Learn to respect yourself
It is better if children are taught to be able to respect themselves, so that they know that there is quality and potential in them.
2. Discipline
Children are taught to have a spirit of discipline in building character. If children get used to discipline from an early age, they will be able to manage a good life order later.
3. Habituation
Habituation is an effective method in the form of good attitudes and behavior that is given repeatedly in order to shape the child's character as expected.
4. Exemplar
As a parent and being a teacher at school, of course, you are obliged to provide a good example or role model for children to emulate. Exemplary can be given in the form of words or deeds.
5. Moral and religious values
Teachers in schools need to insert moral and religious messages in every child's activity, because through these activities children will understand more easily.
6. Literacy Activities
Through literacy activities, parents and teachers and children will increasingly understand the importance of character education in schools.

The formation of children's character requires exemplary and stimulation from an early age. Because basically children who have low character are children who are likely to experience risks or difficulties in learning and even unable to control themselves.

This strategy and stimulation of planting character values should be carried out in a pleasant atmosphere, namely during learning activities through play. The teacher can observe and pay attention to the attitudes and behavior of the child, what the child's interests are and what the child wants to express or feel. Teachers can also provide motivation and encouragement if children do good things.

CONCLUSION

At the age of 0-5 years, children are still dependent on their parents, but there is a desire for socialization that has started to grow at this time. Characterized by independence and ability to self-control. Children at this time need an environment to socialize, so at this age children can enter playgroups or kindergartens. The goal is for children to socialize, play and develop their potential. The application of neuroscience in Islamic education can provide Islamic knowledge capital so that it can shape the character of students. Islamic education is needed in Aisyiyah 06 Kindergarten, Central Java, emphasizing on activities that are in accordance with needs as the main tool for character growth. The earlier you provide stimulation and stimulation to your child, the better the results will be.

The formation of a child's character must begin at an early age. The goal is to shape the child's good personality so that later when he grows up he becomes a good person who can benefit his fellow human beings and their environment. The strategies for forming character in children include learning to respect themselves, discipline, habituation, exemplary, moral and religious values, literacy activities at school.

REFERENCES

- Aiman Faiz. "Character Education-Based Habituation Program at Aiman Faiz School because character quality determines". pgsd Muhammadiyah University Cirebon, 5.20 (2019). <https://doi.org/https://doi.org/10.32534/jps.v5i2.741>
- Directorate of Technical Personnel. 2003. Early Childhood Growth and Development, 0-6 Years, Jakarta: PT Grasindo.
- El Fiah, Rifda. 2017. Early Childhood Guidance and Counseling. Jakarta : PT Raja Grafindo Persada
- Intan Mayang Sahni Badry, and Rini Rahman. "Efforts of Islamic Religious Education Teachers in Instilling Religious Character Values". An-Nuha: Journal of Islamic Education, 1.4 (2021): 573-583. <https://doi.org/https://doi.org/10.24036/annuha.v1i4.135>
- Khan, Yahya, 2010, Potential Self-Based Character Education, Yogyakarta.: Pelangi Publishing.
- Koesoema, D. 2007. Character Education: Strategies for Educating Children in the Global Age. Jakarta: Grasindo
- Lusi, Samuel S. 2014. SEIP Intelligence: Spiritual, Emotional, Intellectual and Physique, Yogyakarta: Kanisius.
- Nasrallah. "Efforts of Islamic Religious Education Teachers in Shaping Student Character (Case Study at SMA Negeri 1 Kota Bima)". JIE: Journal of Islamic Education, 3.2 (2018): 163-186. <https://doi.org/https://doi.org/10.29062/jie.v3i2.99>
- Riskha Ramanda, Zarina Akbar, and R. A. Murti Kusuma Wirasti. "Literary Study Concerning Body Image Theory Basis for Adolescent Development". Educational Journal : Counseling Guidance Study Media, 5.2 (2019): 121-135. <https://doi.org/http://dx.doi.org/10.22373/je.v5i2.5019>
- Sholichah, Aas Siti. "The Urgency of Character Education in Early Childhood in a Neuroscience Review." Jecies: Journal of Early Childhood Islamic Education Study 1.1 (2020): 01-14. <https://doi.org/https://doi.org/10.33853/jecies.v1i1.51>
- Sugiyono. 2020. Quantitative and Qualitative Research Methods and R & D. Bandung: Alfabeta
- Zuchdi, Darmiyati (2009). Character Education, Grand Design, and Target Values. Yogyakarta: UNY Press