

Review Article**Character Education Human Nature Based-Curriculum
in Science Learning of Primary School***Fuat ISKANDAR¹  Bedjo SUJANTO²  Mohamad Syarif SUMANTRI³ **Abstract**

Dioramas are seen as unique teaching tools for environmental education in general and biodiversity education in particular as they present realistic learning environments that can reflect the components of the biodiversity, relationships among these components and changes occur over time. The aim of this study is to examine middle school students' views on diorama supported biodiversity education. A phenomenological approach based on student experiences were employed for the study. The study group of the research consists of twenty-four 7th grade students studying during the 2021-2022 academic year. Students participated in an 8 hours experimental process included diorama supported 5E constructivist teaching model. Interviews were used as the data collection tool. The analysis of data revealed that dioramas contribute positively to biodiversity education as they enhance learning, mitigate the effects of misconceptions, increase students' awareness to protect biodiversity and of biodiversity sustainability. Therefore, including and using dioramas in learning environments for biodiversity education can mediate learning as well as help students to benefit from a realistic environment that include living things, the ecosystems they form and the places they live in.

Keywords: Curriculum, character, human nature, physics**1. INTRODUCTION**

Character is a characteristic that distinguishes a human from another. Character is a basic thing that every human being has. Character education is learning that must be internalized from the start at all levels of education, from elementary to university level (Widayanti, 2018). Schools are one of the strategic places for character building other than in the family and society (Abdulloh Hamid, 2017). Therefore, it is necessary to cultivate character education, especially in elementary schools with various activities that can support character cultivation in intra-curricular, co-curricular, and extra-curricular activities. school. Sa'dun Akbar, a professor of Primary Education from the State University of Malang, said in his paper that several problems in today's educational practice cannot develop the personality of students as a whole, so it is not optimal in developing good character for students, such as taxonomic orientation, unbalanced between the "thought" and "heart" aspects in educational practice, unbalanced development between the Programmed Curriculum and the Hidden Curriculum, the problem of presenting and internalizing values through various subjects, and non-optimal in educational practices and learning for personality development (Akbar, 2011). Reinforcing what has been described by Sa'dun Akbar, Hamdi Muluk who is a Professor of Psychology at the University of Indonesia explained that the elementary school level should make the character a pressure point. According to him, education in primary schools in Indonesia must be improved by emphasizing character education (Muluk, 2019).

Received Date: 06/09/2022

Accepted Date: 11/10/2022

Publication Language: English

To cite this article: Iskandar, F., Sujanto, B., & Sumantri, M.S. (2022). Character education human nature based-curriculum in science learning of primary school. *International e-Journal of Educational Studies*, 6 (12), 184-190. <https://doi.org/10.31458/iejcs.1171845>

¹ Dr., Pasca Sarjana Universitas Negeri Jakarta, Indonesia, fuatiskandar_7527167503@mhs.unj.ac.id

² Prof.Dr., Pasca Sarjana Universitas Negeri Jakarta, Indonesia, bedjo_sujanto@unj.ac.id

³ Prof.Dr., Pasca Sarjana Universitas Negeri Jakarta, Indonesia, sumantri@unj.ac.id

* Corresponding Author e-mail address: fuatiskandar_7527167503@mhs.unj.ac.id

In the concept of Islamic education, character education is not contemporary because the spirit or core of Islamic education is character education which was originally known as moral education. Character education has never been neglected because Islam that was spread by the Prophet was Islam in the full sense, namely integrity in faith, good deeds, and noble character (Marzuki, 2015). Islamic education means the formation of the Muslim person. The content of the Muslim personality is the full practice of the teachings of Allah and His Messenger. However, the Muslim personality will not be achieved or nurtured except with teaching and education (Hairuddin, 2013).

Allah *subhanahu wa ta'ala* has created all his creatures based on their nature, in the form of potential and creativity that can be built, which has the possibility of developing and increasing so that their abilities far exceed their physical abilities (Suriadi, 2019). According to Abd al-Rahman al-Bani, quoted by an-Nahlawi, states that the task of Islamic education is to keep and maintain the nature of students, develop and prepare all their potentials, and direct that nature and potential towards goodness and perfection, and realize the program in stages (Al Nahlawi, 1996). The importance of inserting religious values (verses of Kauniyyah) in science learning can be based on several reasons: (1) The spiritual void in science education in schools and the scientific world must be avoided and solutions are sought; (2) Natural phenomena that exist and occur on the earth and sky are objects of scientific study and objects of contemplation of Allah Subhanahu wa ta'ala; (3) Science that "rejects" God can cause humans who "wrestle" with science to experience various multidimensional crises; (4) The presentation of science in textbooks (theories and explanations), which is based on materialism, has eliminated God as the creator; (5) The verses of the Qur'an (Kauniyyah) which are stated in the outline will be better understood if they are supported by an understanding of science; and (6) As an effort to "fence" science, so students do not fall into teachings that are contrary to creed and faith (Khoiri et al., 2017).

Based on explanation above, this study tries to formulate how the concept of human nature-based character education curriculum in Physics Science learning of Elementary Schools as by learning Physics Science students grow their characters in accordance with the nature of their creation, so they can become Servants of God wholly in accordance with the purpose of human creation on earth.

2. METHODOLOGY

This research used library research method. Library research is a study that limits the collection of materials through library collections without having to go out into the field (field research) (Zed, 2008). The data comes from related literature, where all data sources and materials used in this study are books, journals, and other written documents relevant to the theme of the study, related to the concept of character education based on human nature in learning Physics in Elementary Schools.

3. RESULTS and DISCUSSIONS

3.1. Character Education

Etymologically, the character comes from the Greek *charassein* which literally means to carve. Character is like carving gemstones or hard iron surfaces. The understanding then developed, the character is defined as a special sign or pattern of behavior (Judiani, 2010). In French, it is called *carakter* which means to make sharp or make deep. In English, it is called character which has the meaning: of character, nature, role and letters (Syarbini, 2016). In the Indonesian Dictionary, the word character is defined by character, psychological traits, morals, or manners that distinguish one person from another (National, 2008). Based on the concept of character, the term character education was first coined by German Pedagog F.W Foerster (1869-1966). Then, the terminology of character education was introduced since the 1990s where Thomas Lickona was considered the bearer,

especially when he wrote a book entitled *The Return of Character Education*, which was then followed by his book *Educating for Character: How Our School Can Teach Respect and Responsibility* (1991). Through these books, Thomas Lickona made the western world aware of the importance of character education (Syahri, 2019).

However, the practice of character education in Indonesia has been going on for a long time before Indonesia's independence, such as the education practice carried out by Ki Hajar Dewantara, R.A Kartini, K.H Hasyim Asy'ari, K.H Ahmad Dahlan, M. Natsir and other figures. At that time it was not called character education. Then, the term character education became popular in Indonesia around the 2000s, where a person who was instrumental and considered a pioneer of character education in Indonesia was Ir. Ratna Megawangi, Ph.D. (Syarbini, 2016).

According to Khan, character education is a process of activities carried out with all conscious and planned power and effort to direct students. Character education is also a process of activities that lead to improving the quality of education and developing a harmonious mind that always teaches, guides, and fosters every human being to have intellectual competence, character, and interesting skills. The values of character education that can be lived in this study are religious, nationalist, intelligent, responsible, disciplined, independent, honest, wise, respectful and polite, generous, helpful, mutual cooperation, confident, hard-working, tough, creative, leadership, democratic, humble, tolerant, solidarity and caring (Yahya, 2010).

Through character education, students will be able to independently improve and use their knowledge, study and internalize, and personalize character values and noble character, so they are manifested in daily behavior. At the institutional level, character education leads to the formation of school culture, namely the values that underlie behavior, traditions, daily habits, and symbols that are practiced by all school members and the community around the school (Fatimah & Kartika, 2013).

3.2. Curriculum

The curriculum is a system that has certain components. (Hamid, 2012), what components make up the curriculum system and the interrelationships between its components can be seen in the chart below:

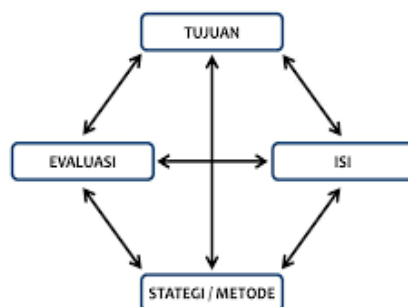


Figure.1. Curriculum components

The chart illustrates that the curriculum system is formed by four components, namely: the objective, the content, the method or strategy for achieving the objectives, and the evaluation. As a system, each component must be related to the other. When one of the components that make up the curriculum system is disturbed or not related to other components, the curriculum system as a whole will also be disrupted.

3.3. Human Nature (*Fitrah*) Concept

Fitrah can be understood from an etymological (*harfiyah*) and terminological (*ishtilah*) point of view, according to Langguling in (Suriadi, 2019), the origin of the word *fitrah* etymologically comes from Arabic, namely *fitrah* (فطرة), the plural form *fithar* (فطر) which means temperament,

character, incident, original, religion, creation. Experts explain the definition of *fitrah* as quoted in (Muliati, 2017) which explains and summarizes the meaning of *fitrah*, namely:

Fitrah means holy; *fitrah* means Islam; *fitrah* means recognizing the Oneness of Allah; *fitrah* means pure; *fitrah* means the condition of human creation that has a tendency to accept the truth; *fitrah* means basic human potential as a tool to serve and ma'rifatullah; *fitrah* means stipulations or occurrences of human origin regarding happiness and misguidance; *fitrah* means the natural nature of humans (human nature). The Islamic concept of *fitrah* is comprehensive, rooted in the idea that humans are born in a state of nature which is then influenced by existing circumstances (Bhat, 2016). *Fitrah* in the Qur'an can mean holy, pure, or even natural (Purnama, Aziz, Nurhusna, & Ulfah, 2020).

From the opinion above, it can be concluded that *fitrah* is the basic human potentials that have the nature of goodness and holiness to receive stimuli and influences from outside towards perfection and truth. The concept of *fitrah* demands that Islamic education be directed to rely on *at-tawhid*. This is intended to strengthen the relationship that binds humans to *Allah azza wa jalla*. What students learn should not conflict with these principles of monotheism. This concept of *at-tawhid* emphasizes the greatness of Allah that must be obeyed and considered in the Islamic education curriculum.

3.4. Fitrah-Based Character Curriculum in Science Learning

3.4.1 Objective component

The goals of Islamic education contain certain values according to their respective views which must be realized through a directed and consistent process using various physical and non-physical means. The goal or "target" or "intention" which in Arabic is called "*ghayat*" or "*ahdaaf*" or "*maqasid*" (H.M. Arifin, 2019). In the concept of character education based on nature, the purpose of the education curriculum that is carried out cannot be separated and must be in line with the purpose of the creation of humans themselves, namely as servants to worship *Allah ta'ala*.

Allah ta'ala says in the Qur'an Surah Adz-Zariyat 56:

Translation: And I did not create the jinn and mankind except to worship me.

The verse above explains that the purpose of the creation of humans, namely to worship Allah in the position of humans as a servant, so the curriculum concepts created must all be in harmony and in line with the purpose of the creation of humans themselves, namely to worship and unite to *Allah ta'ala*. The purpose of education in general and Islamic education, in particular, is not only as a knowledge transfer process but also as a process of transferring Islamic values (Triwidyastuti & Siregar, 2018).

Based on the explanation above, the purpose of the human nature-based character curriculum in Physics Science learning is how to direct students to be able to worship and know their Creator, as explained by Arif: All subjects should insert and instill values of faith and piety (*imtak*) and noble character, including in science subjects (Arif, 2017).

3.4.2 Content/Material components

Curriculum content is a component related to the learning experience that students must have. The content of the curriculum concerns all aspects related to knowledge or subject matter which are usually described in the content of each subject matter given as well as student activities. The material for science education in Indonesia is contained in the Minister of National Education Regulation Number 22 of 2006 concerning Content Standards which states that science subjects in elementary schools aim to make students have the following abilities:

1. Gaining confidence in the greatness of God Almighty based on the existence, beauty, and orderliness of His natural creation.
2. Developing knowledge and understanding of science concepts that are useful and can be applied in everyday life.
3. Developing curiosity, positive attitude, and awareness about the interplay between science, environment, technology, and society.

4. Developing process skills to investigate the environment, solve problems, and make decisions.
5. Increasing awareness to participate in maintaining, safeguarding, and preserving the natural environment.
6. Increasing awareness to appreciate nature and all its regularities as one of God's creations.
7. Acquiring knowledge, concepts, and skills in science as a basis for continuing education to the next level.

All of these materials in the concept of human nature-based character education must be directed to students can become complete servants with faith and piety to their Creator, for example, as explained by (Fatimah & Kartika, 2013) regarding solar system material, it is very important when a teacher can integrate with religious character education. Because learning the solar system is taught about the arrangement of the extraordinary solar system. The arrangement of the solar system will not be orderly without God's intervention, so we can live in peace and not experience disturbances.

The characters that can be developed through the Physics Science curriculum material in elementary schools are: Characters that can be developed through learning Natural Sciences (IPA) are objectivity, accuracy, precision, the pursuit of truth, problem-solving, protect human life: safety and risk, humane, intellectual honesty, academic honesty, courage, low humility, decision-making, willingness to suspend judgment, scientific inquiry: being fair and just, questioning of all things, verifying, respect logic, integrity, diligence, persistence, curiosity, open-mindedness, critical evaluation of alternatives, and imagination (Arif, 2017). Furthermore, the learning material for Physics Science as explained by Aulia in her article includes four main elements which include attitudes, processes, products and applications. Each element means (1) Attitude: curiosity about objects, and natural phenomena, (2) Process: problem-solving procedures through the scientific method; (3) Products: in the form of facts, principles, theories, and laws. (4) Application: application of scientific methods and scientific concepts in everyday life (Rasyid, Alifah, & Fajar, 2019).

The material from the human nature-based character curriculum in physics learning is that students are not only taught about formulas and laws that move nature, or formulas that must be memorized every time they enter class, but need to teach the axiological values of life implied in the formulas. The existing formulas all lead to the formation of character and self-awareness as servants of the Creator.

3.4.3 Method/Strategy component

Methods and strategies are the third component of curriculum development. This component has a very important role because it relates to curriculum implementation. How good and ideally the goal must be achieved without the right strategy to achieve it. Then, the goal may not be achieved. Science learning can be done with various methods, approaches, and suitable learning models, namely through direct experience (learning by doing) because science is a part of human life where direct student-centered learning can strengthen students' memory (Putra, 2017).

The learning method in character building through learning Physics in elementary schools is active learning where the role of science learning in character building of students can be developed through active, creative, and innovative learning models with a learning process that is not only in the classroom but also carried out in the environment (nature). The interaction of students with the environment or nature is expected to produce behavioral changes for the better (Rasyid et al., 2019).

Furthermore, according to (Muhamad Mustaqim, 2015), the application of character education in elementary schools can be done by several methods, namely: inculcation, modeling, facilitation, and skill building. A science teacher must provide as many opportunities as possible for students to think and use reasoning abilities. Students can do this by being directly involved in various activities, such as class discussions, problem-solving, or experimenting. In other words, students should not only be used as passive objects with the burden of memorizing various concepts and scientific formulas (Mundilarto, 2003). According to (Mansir, 2021) an effective method in the role of Religion and

Science Education in the formation of character building is the mixed method, by combining problem-solving methods, inquiry methods, and discovery methods. The role of educators in the formation of character building is very important. In addition, this method is the right method to be implemented in an educator, namely making himself a role model for students because an educator is a role model for the students. Based on the description and explanation above, it can be concluded that the method used in the concept of human nature-based character in science learning in elementary schools is how learning grows awareness of students about what is obtained in the learning process to become independent individuals, and make students creative and active in the learning process, all of which lead to the optimization of physical and intellectual functions to be able to become servants of the Creator as a whole.

3.4.4 Evaluation component

Evaluation is a component to see the effectiveness of achieving goals. In the context of the curriculum, evaluation can work to find out the goals which have been set, or it is used as feedback in improving the strategy that has been set. In the concept of character education based on human nature, the purpose of the evaluation is more emphasized on the mastery of attitudes (affective and psychomotor) rather than cognitive aspects (knowledge). In the Qur'an and hadith, there are many evaluation benchmarks, example, related to the implementation of the nature of faith, which is related to prayer that is done properly and correctly will be able to prevent someone from evil and evil deeds (Q.S Al-‘Ankabut : 45). The benchmarks related to morality, for example, a person who believes loves his brother as he loves himself; the benchmark for bad morality is as a characteristic of a hypocrite, namely: if he speaks, he lies; if he promises, he will break it, and if he is given a mandate, he will betray. The form of evaluation in the concept of human nature-based character in learning at elementary schools must be conceptualized and discussed together by the school and parents. The form can be in the form of a description that includes aspects: aspects of faith, aspects related to aqidah, worship, attitude (*adab* and *akhlaq*) material; learning aspects: aspects related to children's learning behavior and learning styles; talent aspect: aspects related to children's interests and talents during activities at home.

4. CONCLUSION

Based on the explanations that have been explained and described by the researchers, the concept of a human nature-based curriculum character in learning Physics at elementary schools is how curriculum materials can be used and directed as a means to build morals and noble character in accordance with the nature of their creation where students will know themselves and his creator. Through physical science learning, students will pay attention, think about, and reflect on God's creation in the universe both in the heavens and the earth, so a sense of love for God and his creation will be awakened as well as compassion and care for fellow living creatures and their environment.

Acknowledgment

Due to the scope and method of the study, ethics committee permission was not required.

5. REFERENCES

- Abdulloh Hamid. (2017). *Pendidikan karakter berbasis pesantren (Pelajar dan Santri dalam Era IT & Cyber Culture)* (Kedua). Imtiyaz.
- Akbar, S. (2011). *Revitalisasi pendidikan karakter di sekolah dasar*. Universitas Negeri Malang.
- Al Nahlawi, A. (1996). *Prinsip-prinsip dan metode pendidikan islam dalam keluarga, di sekolah dan Masyarakat*. Diponegoro.
- Arif, R. M. (2017). Implementasi pendidikan karakter dalam pembelajaran sains. *STILISTIKA: Jurnal Bahasa, Sastra, Dan Pengajarannya*, 2(1), 314-324. <https://doi.org/10.33654/sti.v2i1.385>
- Bhat, A. M. (2016). Human psychology (fitrah) from islamic perspective. *International Journal of Nusantara Islam*, 4(2), 61-74. <https://doi.org/10.15575/ijni.v4i2.1187>

- Fatimah, S., & Kartika, I. (2013). Pembelajaran ipa sekolah dasar berbasis pendidikan karakter. *Jurnal Al-Bidayah*, 5(2), 281-297. <https://jurnal.albidayah.id/index.php/home/article/view/125>
- H.M. Arifin. (2019). *Ilmu pendidikan islam-tinjauan teoritis dan praktis berdasarkan pendekatan interdisipliner* (Ke-8). PT Bumi Aksara.
- Hairuddin. (2013). Pendidikan karakter berbasis sunnah nabi. *Jurnal Al-Ulum*, 13(1), 167–190.
- Hamid, H. (2012). *Pengembangan kurikulum pendidikan* (ke-1). cv.pustaka setia.
- Judiani, S. (2010). Implementasi program penguatan pendidikan karakter di sekolah dasar melalui penguatan pelaksanaan kurikulum. *Jurnal Pendidikan Dan Kebudayaan*, 16, 280. <https://doi.org/10.26858/pir.v3i2.14971>
- Khoiri, A., Agussuryani, Q., & Hartini, P. (2017). Penumbuhan karakter islami melalui pembelajaran fisika berbasis integrasi sains-islam. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 2(1), 19-31. <https://doi.org/10.24042/tadris.v2i1.1735>
- Mansir, F. (2021). Aktualisasi pendidikan agama dan sains dalam character building peserta didik di sekolah dan madrasah. *J-PAI: Jurnal Pendidikan Agama Islam*, 7(2), 87–93. <https://doi.org/10.18860/jpai.v7i2.11704>
- Marzuki. (2015). *Pendidikan karakter Islam* (N. L. Nusroh (ed.); Pertama). AMZAH.
- Muhamad Mustaqim. (2015). Model pendidikan karakter terintegrasi pada pembelajaran di pendidikan dasar. *STAIN Kudus*.
- Muliati, I. (2017). Konsep fitrah dan implikasinya dalam pendidikan. In *Universitas Negeri Padang 5* (2), 223. Universitas Negeri Padang. <https://doi.org/10.31942/pgrs.v5i2.2611>
- Muluk, H. (2019). *Kacau, Pendidikan Dasar Kita Lebih Banyak Akademiknya Daripada Nilai Budi Pekerti*. Sekolahdasar.Net. <https://www.sekolahdasar.net/2019/02/kacau-pendidikan-dasar-kita-lebih-banyak-akademiknya.html>
- Mundilarto. (2003). Membangun karakter melalui pembelajaran sains. *Jurnal Pendidikan Karakter*, 20, 153-163.
- Purnama, S., Aziz, H., Nurhusna, L., & Ulfah, M. (2020). The concept of fitrah for children in ibn katsir's qur'an exegesis: a pedagogical implication in early childhood islamic education. *Jurnal Pendidikan Islam*, 9(1), 79–104. <https://doi.org/10.14421/jpi.2020.91.79-104>
- Putra, P. (2017). Implementasi pendidikan karakter dalam pembelajaran ipa di min pemangkat kabupaten sambas kalimantan barat. *JIP: Jurnal Ilmiah PGMI*, 3(1), 49–61. <https://doi.org/10.19109/jip.v3i1.1377>
- Rasyid, A. N., Alifah, I. N., & Fajar, D. M. (2019). Optimalisasi pendidikan karakter melalui pembelajaran ipa terpadu. *IAIN Jember*, 173-190. http://digilib.iain-jember.ac.id/1709/3/Buku_IPA-185-202.pdf
- Suriadi, S. (2019). Fitrah dalam perspektif al-quran (kajian terhadap ayat-ayat al-quran). *Muaddib : Studi Kependidikan Dan Keislaman*, 8(2), 143. <https://doi.org/10.24269/muaddib.v8i2.1424>
- Syahri, A. (2019). *Pendidikan karkter berbasis sistem Islamic boarding school* (Pertama). CV. Literasi Nusantara.
- Syarbini, A. (2016). *Pendidikan karakter berbasis keluarga* (Pertama). Ar-Ruzz Media.
- Triwidyastuti, T., & Siregar, M. (2018). The concept of islamic education development based on the theory of Fitrah. *Indonesian Journal of Interdisciplinary Islamic Studies*, 2(1), 31–52. <https://doi.org/10.20885/ijiis.vol2.iss1.art2>
- Widayanti, E. W. S. D. (2018). Penguatan pendidikan karakter berbasis religius. *CIASTECH*, 5(2). <https://doi.org/10.31479/citra.v5i2.28>
- Yahya, K. (2010). *Pendidikan karakter berbasis potensi diri*. Pelangi Publishing.
- Zed, M. (2008). *Metode penelitian kepustakaan*. Obor.