

# **Implementation of Character Education in Science Learning at SMP Negeri 3 Slawi Academic Year 2022/2023**

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**Abstract.** The study aimed to identify the characteristics of character education in science learning at SMP Negeri 3 Slawi, assess the implementation of character education in science learning, identify the supporting factors, and identify the inhibiting factors. Using a qualitative approach, data was collected through observations and interviews with informants. The findings revealed that character building at SMP Negeri 3 Slawi is based on a program by the Ministry of National Education, which includes 18-character values such as religion, honesty, tolerance, and discipline. Character education is implemented through various methods including habituation, exemplary modeling, and authentic assessment. Science learning at SMP Negeri 3 Slawi incorporates inquiry-based learning, problem-based learning, and direct experiential learning to instill character education. The study suggests optimizing the roles of educators in instilling character education through learning and extracurricular activities.

**Keywords:** Implementation of Character Education, Science Learning

## **1. Introduction**

The end goal of character education is to help kids reach their full potential academically while also shaping them into well-rounded individuals by the time they graduate. The Ministry of Education and Culture has set the following goals for character education: (1) nurturing pupils' spiritual and emotional potential so that they can grow into responsible global citizens with strong national identity and cultural values. (2) encouraging students to adopt practices that uphold national and international norms of conduct. (3) inspire the next generation to take up roles of leadership and responsibility. (4) helping pupils grow into self-reliant, imaginative, and patriotic individuals. fifthly, cultivating a national (dignified) attitude and a safe, honest, creative, and welcoming atmosphere in which students can learn is essential.[1].

"Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, noble character, and skills needed for themselves, society, nation, and state," it states in article 1, paragraph 1, of law no. 2, 2003 pertaining to the national education system. [1]. The basis for implementing character education in schools is also clearly stated in the Long-Term Development Program in the 2005-2025 National Plan (RPJPN), in which the government views character development as a unit. priority of the national development agenda.

The various problems faced are related to character education and national culture, including the evolution of life values, the loss of national cultural values, and the weakening of national, and ethnic culture due to the influx of many foreign cultures that are inconsistent with national character. As a result, there have been many incidents such as violence, brawls, pornography, and drugs. Thomas Lickona, written by [2]. Some of which must be vigilant on the verge of collapse are increased violence among adolescents, strong peer influence in violent behavior, many student brawls, decreased use of language and speech, increased self-destructive behavior themselves, such as drug, alcohol, and free sex use, eradication of bad moral principles, reduced work ethics, low respect for parents and teachers, weak sense of responsibility towards individuals and citizens, the culture of dishonesty and mutual suspicion.

The above conditions have encouraged various parties in different countries to carry out character education. The implementation of character education is based on three important reasons, namely:

- 1) the need for virtue to be a unified whole. To be a complete human being everyone must have courage, firm awareness, and the will to possess qualities such as honesty, empathy, benevolence, self-discipline, perseverance, and spiritual drive;
- 2) School is a good place to carry out the process of learning and value education; and
- 3) Character education is very important to build an ethical society.

Building a society that is noble, moral, ethical, and civilized on the foundation of Pancasila [1] relies heavily on character education. According [3], character education is additive to character education, which includes aspects of knowledge (perception), emotions (emotions), and action (action). Character education according to [4] is an effort to educate children to make the right decisions and apply them in everyday life, so that they can contribute to the environment and society.

Character values for character education include religious values, honesty, tolerance, discipline, hard work, creativity, independence, democracy, curiosity, enthusiasm, nation, love of the motherland, respect for achievement, friendship, love of peace, love of reading, care for the environment, concern for society and responsibility. In each subject, there are character values that are directed by educators and students in the application of character education. Character education is only applied to two subjects, religion and PKN (civic education), especially those related to the ethics and behavior of students. However, in reality, nurturing and building personality through these two objects is not enough.

The lack of optimal results of character education through religious subjects and PKN is caused by several things including;

- (1) these two subjects tend to provide valuable knowledge only through subjects/substances;
- (2) learning activities in these two subjects generally do not encourage the internalization of the values of each student which is sufficient for students to face strong characters;
- (3) it is not enough to just rely on the character development of students through these two subjects. Student character development must involve more subjects, even all subjects.

Regarding the weaknesses above, therefore character-building is needed in all subjects, one of which is science subjects. The main goal of science education is to produce individuals who have scientific knowledge. Science literacy includes knowledge of scientific endeavors and fundamental aspects of science, namely scientific concepts and principles, scientific laws and theories, as well as engineering techniques, and research abilities. Having a basic knowledge of science is very important to form scientifically intelligent human beings. People with scientific knowledge can use basic aspects of science to solve problems

in their daily lives and make decisions for the public and private good. Science education can primarily be used to equip students with knowledge and process skills, but can also be used to build character (attitudes and values). Thus, science education can be used as a means to increase students' knowledge and skills, and can also be used to develop students' personalities. Therefore, character education must be increased in intensity and quality at all levels and all levels of education, through its integration into all school subjects in general, learning, especially science subjects. IPA is a scientific discipline that studies nature systematically [5].

According to Powler [6], IPA is a science that studies systematic natural phenomena and regularly arranged objects, which are generally accepted as a collection of observations and experiences. Science is also considered a reflection of the relationship between products of value knowledge, scientific methods, and attitudes expressed in the research process. As stated by [7] science is a process of activities carried out by scientists to gain knowledge and attitudes toward the activity process. This is the nature of the natural sciences which are not only a collection of factual knowledge to be memorized but also an active process of discovery by using the mind and attitude to study it.

In Permendiknas Number 22 of 2006 concerning Content Standards it states that science subjects in SD/MI/SMP aim for students to have the following abilities:

1. Gaining faith in the greatness of God Almighty based on the existence, beauty, and orderliness of His creation.
2. Develop knowledge and understanding of useful and applicable scientific concepts in everyday life.
3. Develop curiosity, a positive attitude, and awareness of the interrelationships between science, environment, technology, and society.
4. Process development skills in natural environment investigation, problem-solving, and decision making
5. Increase awareness to participate in the maintenance, protection, and preservation of the natural environment.
6. Increasing awareness to respect nature and all its laws as one of God's creations.
7. Increase scientific knowledge, concepts, and skills as a basis for continuing education to the next level of study.

The nature of knowledge as an attitude that embodies the values that accompany or arise in the implementation of a scientific process can be called a scientific attitude. These values include curiosity, openness, logical thinking, critical thinking, creativity, innovation, honesty, discipline, independence, responsibility, and not giving up. The essence of science has four main elements.

- (1) Attitude: curious about things, natural phenomena, organisms, and cause-and-effect relationships, new problems arise that can be solved well; open science.
- (2) Process: the process of solving problems according to the scientific method; The scientific method includes preparing hypotheses, planning experiments or experiments, evaluating, measuring, and drawing conclusions.
- (3) Products: in the form of facts, principles, theories, and laws.
- (4) Application: the application of the scientific method and scientific concepts in everyday life.

These four elements are characteristic of a whole science, and cannot be separated from one another. In the science learning process, is necessary to appear four elements, so that students can experience the whole learning process, understand natural phenomena through problem-solving activities, and scientific methods, and imitate the way scientists

work to discover new facts. IPA has a long and successful track record of creating new knowledge applicable to a wide range of human experiences and driving technological progress.

Science learning is a learning process that emphasizes natural phenomena and the interrelationships between these symptoms so the science learning process does not only emphasize cognitive aspects but also includes attitudes, processes, products, and applications that must be implemented [8]. [9] argue that learning science requires the ability to connect concepts and extract evidence. The science learning process must emphasize providing direct experience to develop competencies in scientific discovery and understanding nature. Scientific learning focuses on inquiry and action to help students gain a more meaningful understanding of the natural environment. The scientific learning process provides opportunities for students to engage in all of their process skills. For example, when a student is experimenting, the student is carrying out the experimental steps, namely collecting data. When a child obtains data, the child must be honest with the data obtained, meaning that the child may not manipulate the data even though the data obtained is not by theory. Experiments, if not based on honesty, will lead to death. If students can explain this attitude, then honesty will always support their attitudes in everyday life, which will be carried over into adulthood, and will shape the character of students. With an honest attitude, the culture of cheating will decrease. When conducting experiments, students form groups, which will encourage students to interact and work together with their peers. This activity will build the communication personality of students. Scientific learning plays a role in instilling personality education values that every student must have after completing the learning process.

From the description above, it is clear that science learning can contribute to the formation of students' character. Character building is a program in educational institutions that has the role and function of character building for students. Strengthening character formation is one of the efforts made to stimulate the senses of students. At the same time as a step to align the heart, feelings, mind, and body so that they are in harmony with the philosophy of thought of the Indonesian people, namely Pancasila.

For the implementation of character education in schools to be successful, the main requirements that must be met include:

- (1) examples from teachers, employees, school leaders, and school policymakers,
- (2) character education is carried out consistently and continuously;
- (3) instilling the main character's values.

From the explanation that has been mentioned above, the need for learning design in schools, especially science subjects, in building children's character. This is to research conducted by [7] which states that the national commitment to the need for character education can be implemented by integrating character education into learning, one of which is science learning.

Integration of character education in the learning process is carried out starting from the planning, and implementation, to the learning evaluation stages. One of the approaches used to instill character education is the contextual approach. Learning design is useful for two things at once, namely teaching students to study natural phenomena by inquiry and developing the character values of science subjects which give the impression that science learning has character values that need to be found and promoted optimally in building student character. These values will be ingrained in students, which will eventually shape their character. Science education is an aspect of education that uses science as a tool to achieve educational goals in general and science education in particular. One of the goals

that can be achieved by science education is understanding science itself. Those are the things that underlie the researcher or the reason for the researcher taking the title of this thesis with the title Implementation of Character Education in Science Learning at SMP Negeri 3 Slawi for the Academic Year 2022/2023.

The objectives to be achieved in this research are as follows:

1. Knowing the characteristics of character education in learning science at SMP Negeri 3 Slawi.
2. Knowing the implementation of character education in learning science at SMP Negeri 3 Slawi.
3. Knowing the supporting factors in implementing character education in learning science at SMP Negeri 3 Slawi.
4. Knowing the inhibiting factors in implementing character education in learning science at SMP Negeri 3 Slawi.

## **2. Method**

A qualitative method was used for this investigation. In contrast to deductive methods, which begin with a hypothesis as a generalization to be tested for truth through collecting data that is special, qualitative research is inductive because it begins with a series of activities or processes of capturing information from natural conditions in the life of an object that is connected with solving a problem from both a theoretical and practical perspective.

This study took a qualitative technique since the researcher was interested in analyzing data from interviews, surveys, and field notes to better understand the state of natural artifacts. Qualitative research, as described by Sugiyono (2012), focuses on the method rather than the end result and gives more weight to interpretation. In the meantime, qualitative research is defined by Moleong (2013) as an approach to inquiry that seeks to comprehend phenomena as they are experienced by research participants. Holistically, by describing things in words and language, placing them in a unique natural environment, and applying a wide range of scientific techniques. Researchers in this study disclosed and expounded upon:

1. What are the characteristics of character education in learning science at SMP Negeri 3 Slawi
2. How is the implementation of character education in learning science at SMP Negeri 3 Slawi
3. What are the supporting and inhibiting factors in implementing character education in learning science at SMP Negeri 3 Slawi

## **3. Discussion**

The goal of character education at SMP Negeri 3 Slawi is to help students learn to distinguish between right and wrong, to set a good example, to hold on to the good and see it in their daily lives. Character education is more than simply facts and figures; it's also about instilling good habits in children so they can make decisions in accordance with the values that have come to define their identities. also, the mindsets of the kids. Eighteen core values, including "Religious," "Honest," "Tolerant," "Disciplined," and "National Education Goals," have been identified through the implementation of character education in educational units. Put in long hours, (Six) Original, (7) Nonpartisan, (8) Liberal, (9), (10), (11), (12), (13), (11) Patriotism; (12) High Regard for Personal Success; (13) Openness to Others and Communal

Spirit; (14) (14) Peace and Love Source: Pusat Kurikulum, Pengembangan dan Pendidikan Budaya dan Karakter Bangsa: Pedoman Sekolah. 2009:9-10. Objectives: (15) Enjoy Reading; (16) Care for the Environment; (17) Social Care; (18) Responsibility. Teaching good morals and values to today's youth is crucial because of the challenges posed by today's economy and society. Therefore, character education requires to (1) foster moral and character performance; (2) shape conscience; (3) instruct conscience and competence; (4) guarantee that character may be accepted and taught; and (5) quantify character assessment in the classroom (Davidson, 2014). Rather than being a one-time initiative, this instructional character must become ingrained in the culture of the institution (Lewis, Robinson, & Hayes, 2013). Schools, as part of the community that supports children in building and developing character education ideals, must become an integral element of the educational process. At order for character education to be successful in a school, a positive school culture must be established.

This requires the involvement of all elements in the school which include the principal, teachers, counselors, administrative staff and students. The interaction between these elements is expected to foster values such as leadership, exemplary, friendliness, tolerance, hard work, discipline, social care, environmental concern, a sense of nationality, responsibility and a sense of belonging. Learning in class, the teacher can start with an introduction to the values that will be developed during the learning process, then the teacher guides students to be actively involved throughout the learning process. This is done by conditioning students to formulate and ask questions, express opinions using polite words and sentences, seek to gather information from various sources, process information they already have, reconstruct data, facts or values, present the results of the reconstruction, cultivate values. culture and character in students. Learning Natural Sciences is a collection of knowledge and ways to obtain and use that knowledge.

#### 4. Conclusion

Based on observations and interviews with informants in the field regarding the implementation of character education in science learning at SMP Negeri 3 Slawi for the 2022/2023 academic year, several conclusions can be drawn, namely:

1. There are several steps taken in determining the characteristics of character education in science learning at SMP Negeri 3 Slawi, including first creating an atmosphere of character (full of values), creating an atmosphere of character that influences situations and conditions, places, models and their application. underlying value. First, the creation of a culture with vertical character. This activity can be realized in the form of a relationship with God Almighty, the second step is the creation of a culture of horizontal character. This step is carried out by positioning the school as a social intuition which, when viewed from the structure of human relations, can be classified into three relationships, superior-subordinate relationships, teacher-student relationships, professional relationships, equal or voluntary relationships based on positive values, such as brotherhood, generosity, honesty, mutual respect, and so on. These relationships are related to science learning which is an interaction that occurs between students, teachers and learning resources by combining various fields of science studies so that students study themselves and the natural surroundings as a whole through scientific methods to solve problems and apply them in everyday life. . The characters through science learning are sought to refer to the program launched by the Ministry of National Education as an effort to build a character-based school which includes 18 character values. The

characters that have been instilled through science learning are religious, honest, tolerant, socially concerned, disciplined, hard working, creative, independent, democratic, curious, appreciates achievement, communicative, loves peace, likes to read, cares for the environment, takes responsibility responsible, confident, and love the motherland. There are several character models instilled in Slawi 3 Public Middle School in science learning including habituation and exemplary methods, discipline habituation, asking questions, modeling, authentic assessment, and reflection.

2. Implementation of character education in science learning at SMP Negeri 3 Slawi based on character is implemented through models with inquiry learning strategies, science process skills, through a science approach, problem-based learning models, direct experiential learning models so that teachers as educators in learning activities carry out habituation, besides it provides extracurricular activities to instill character education in students.
3. Supporting factors in implementing character education in learning science at SMP Negeri 3 Slawi, namely the program that has been launched by the Ministry of National Education in building a character-based school and issued a code of conduct that applies to SMP Negeri 3 Slawi are also felt by students who integrate in learning science. Discipline at SMP Negeri 3 Slawi in supporting the formation of student character through discipline towards school rules is very much needed in science learning to encourage the comfort of the teaching and learning process in the classroom, all students are required to sit quietly participating in teaching and learning activities, the school also holds a discipline that is applied, familiarize students with mingling and being responsible for doing assignments in science subjects without choosing workmates, namely by always dividing discussion groups randomly and each student is given responsibility by the teacher in working on group assignments which later students must be responsible for the assignments given so that students have a mutual cooperation attitude, care and a sense of responsibility towards fellow students and the social environment at school.
4. So far, the inhibiting factors in implementing character education in learning science at SMP Negeri 3 Slawi have not encountered any obstacles in its implementation, including in learning science. The obstacles encountered in the formation of the character of SMP Negeri 3 Slawi in learning are due to the presence of students who lack self-confidence / low confidence, some students have low motivation in the learning process, it is also possible that this will also occur in science learning, some students are passive in participating in learning at the class and some students are indifferent to the rules in SMP Negeri 3 Slawi... displays or slogans related to the characters in SMP Negeri 3 Slawi.

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