

Implementation of Character Education in the Mathematics Learning Process

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Abstract

The decline in the character of students today is due to the impact of the flow of globalization of information and technology such as no passion in learning, noisy when the teacher explains, low self-confidence, lack of sense of responsibility for the tasks given by the teacher, and tends to be passive so we need a new changes to implement character education in the mathematics learning process. This study aims to determine the implementation of character education in the mathematics learning process, to find out the obstacles to implementing character education in the mathematics learning process, and to find out strategies to overcome obstacles in implementing character education in the mathematics learning process in class X MAS Hajjah Amalia Sari Padangsidempuan. This research is a qualitative research with the approach used is descriptive ethnography. The primary data sources were the mathematics teacher and class X student of MAS Hajjah Amalia Sari Padangsidempuan. Data collection techniques are observation, interviews and documentation. The results showed that character education for students in class X MAS Hajjah Amalia Sari Padangsidempuan had been applied in the mathematics learning process. Specific findings obtained are a lack of student motivation, lack of enthusiasm for learning, lack of infrastructure and lack of time discipline. The strategy in overcoming these obstacles is to familiarize students with applying character values, providing good examples, giving warnings, making conditioning such as posters or slogans that show character values and completing infrastructure facilities that can build character education values in the mathematics learning process.

Keywords: *Character Education; Mathematics Learning Process; Character Values.*

Abstrak

Terjadinya penurunan karakter siswa di masa sekarang ini dikarenakan adanya dampak dari arus globalisasi informasi dan teknologi seperti tidak ada gairah dalam belajar, ribut ketika guru menjelaskan, rendahnya sikap percaya diri, kurangnya rasa tanggung jawab atas tugas yang diberikan guru, dan cenderung pasif sehingga diperlukan suatu perubahan baru untuk mengimplementasikan pendidikan karakter dalam proses pembelajaran matematika. Penelitian ini bertujuan untuk mengetahui implementasi pendidikan karakter dalam proses pembelajaran matematika, mengetahui hambatan pengimplementasian pendidikan karakter dalam proses pembelajaran matematika, dan mengetahui

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strategi mengatasi hambatan dalam mengimplementasikan pendidikan karakter dalam proses pembelajaran matematika di kelas X MAS Hajjah Amalia Sari Padangsidempuan. Penelitian ini adalah penelitian kualitatif dengan pendekatan yang digunakan adalah etnografi deskriptif. Sumber data primernya ialah guru matematika dan siswa kelas X MAS Hajjah Amalia Sari Padangsidempuan. Teknik pengumpulan data yaitu observasi, wawancara dan dokumentasi. Hasil penelitian menunjukkan bahwa pendidikan karakter untuk siswa di kelas X MAS Hajjah Amalia Sari Padangsidempuan telah diterapkan dalam proses pembelajaran matematika. Hasil temuan khusus diperoleh kurangnya motivasi siswa, kurangnya semangat belajar, kurangnya sarana prasarana dan kurangnya kedisiplinan waktu. Strategi dalam mengatasi hambatan tersebut ialah membiasakan siswa dalam menerapkan nilai karakter, memberikan keteladanan yang baik, memberikan teguran, membuat pengkondisian seperti adanya poster atau slogan yang menunjukkan nilai karakter serta melengkapi sarana prasarana yang dapat membangun nilai pendidikan karakter dalam proses pembelajaran matematika.

Kata Kunci: *Pendidikan Karakter; Proses Pembelajaran Matematika; Nilai Karakter.*

INTRODUCTION

Education is a form of experience that lasts throughout life in the family environment, community and school environment. Education can also be interpreted as a forum for students which is carried out formally so that students have the ability to develop their potential. In the Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System CHAPTER 1 Article 1 it is stated that education is a conscious and planned effort in realizing the learning atmosphere and learning process so that students actively develop their potential to have religious spiritual power, self-control, personality, intelligence, noble character, and skills through the learning process to face the future (Indonesia, 2006).

The recommendation to study can be carried out through education, in the educational process it is necessary to instill character values in the learning process (Surya & Rofiq, 2021). The implementation of the cultivation of values in the learning process can be done with habituation methods (Abidin, 2019), exemplary (Wardhani & Wahono, 2017), coaching (Pasaribu, 2021), and contextual (Maryati & Priatna, 2017) in various activities including extracurricular and intracurricular (Nurliyah et al., 2017).

Character education is a renewal in education with the aim of overcoming character problems in Indonesia in order to create meaningful learning. Schools have a very important role in the character building of students, where there are two conditions that can stimulate their development, namely discussions in a formal context (curriculum) and shaping school culture as a moral environment (Nucci & Narvaez, 2008). Character education serves to change behavior for the better, develop all the potential of students, and provide the cultivation of character values. Therefore, in implementing character education in schools, moral strengthening, emotional strengthening, and moral action are needed (Lickona, 2001).

The implementation of character education must include three design bases in its programming to run more effectively and fully, including 1) class-based character education design including class management, class consensus, and so on that are able to create a comfortable classroom atmosphere; 2) the design of character education based on school culture by forming an honest character; 3) community-based character education design (Ali, 2018). The implementation of character education in the mathematics learning process requires the application of character education development strategies in mathematics learning, including a) habituation, b) exemplary, c) conditioning. The strategy of integrating character education in mathematics learning needs to be applied, in order to develop the character values that students have.

Along with the development of the times that have entered the industrial era 4.0 which is characterized by the rapid development of information and technology and it affects school activities. Various information and the latest knowledge can be easily accessed by everyone who needs it. The industrial era 4.0 has an impact on education that has experienced great disruption so that the role of teachers as providers of knowledge is needed who must have the ability in information and communication technology (Wibowo, 2019), have a strong character (Retnaningsih, 2019). In learning, especially mathematics learning in the classroom, it must refer to strengthening character education, literacy, 4C, and higher order thinking skills (HOTS) where a teacher must be an example and

rolemodel, encourage, be able to develop students' potential, be able to solve problems, explore and investigate (Shadiq, 2019).

The results of preliminary observations show that character education has not been optimally applied in the mathematics learning process in Class X MAS Hajjah Amalia Sari Padangsidempuan. There is still a lack of discipline for students to go to perform fardhu prayers to the mosque in congregations, lateness of students to study to class, some students are often sleepy in class, do not do the tasks given by the teacher. In this article, the researcher describes the implementation of character education in Class X MAS Hajjah Amalia Sari Padangsidempuan.

RESEARCH METHODS

This research took place at MAS Hajjah Amalia Sari Padangsidempuan ward III Batunadua Julu Village. This research started from July 2020 to June 2021. This type of research is qualitative research with a descriptive ethnographic approach by describing the phenomena that occur in the group under study. The research procedure in this study was carried out through the pre-field, field, post-field, and report writing stages.

The subjects or informants in this study were Mathematics teachers and class X MAS students Hajjah Amalia Sari Padangsidempuan consisting of 5 men and 7 women as primary data sources. As a secondary data source is the principal and vice principal of MAS Hajjah Amalia Sari Padangsidempuan which consists of 5 men.

Data collection techniques are the most important step in research, because the purpose of research is to collect data. The data collection techniques in this study are observation, interviews, and documentation. For data collection through observation, use the grid contained in Table 1.

**Table 1. Character Education Observation Sheet Grid
In the Process of Learning Mathematics**

No	The Value of Character Education	Education Indicators	Observed Aspects
1	Religious	Admiring the greatness of God in the process of learning mathematics	Reading do'a before and after studying
		Admiring God's greatness for his ability to live as a member of society	Invite students to respect each other's religions Invite students to greet each other between students and each other
		Admiring the greatness of God because of the existence of religion which is the source of the order of people's lives	Female students shake hands with female teachers, as well as male students shake hands with male teachers. Perform congregational dhuha prayers Perform congregational dzuhur prayers
		Come on time when learning mathematics	Students arrive on time when the mathematics learning process. Teachers arrive on time when the mathematics learning process
2	Discipline	Study according to time	The teacher starts and closes the lesson according to the set time
		Do schoolwork on time	The teacher gives daily quizzes and checks and guides students in solving these math problems
		Implement school rules properly	The teacher wears inconspicuous clothes Teachers do not smoke in the process of learning mathematics

			Check attendance before the learning process Providing penalties against students who do not follow the rules
		Able to solve math problems flexibly	Working on various ways of solving mathematical problems
3	Creative	Conducting questions and answers related to mathematics material with creative thinking	Able to solve math problems in different ways Students ask about material that is not yet understood
		Guiding students in understanding mathematics subject matter	Teachers provide advice for students to work hard in achieving achievements, especially in understanding mathematics lessons Provide motivation that there is nothing difficult in solving mathematical problems if students are diligent in doing questions and asking teachers and students who understand the problem
4	Work Hard	Building students' communicative attitudes in their opinions	The teacher asks the students to solve the math problem then presents it in front of other students
		Tidak putus asa dalam menghadapi kesulitan Not discouraged in the face of adversity	Guru meminta siswa berdiskusi dalam menyelesaikan permasalahan matematika The teacher asks the students to discuss solving math problems

		Pay attention to how active students are in mathematics learning	Provide daily quizzes in seeing students' knowledge in mathematics learning Ask reasons for students who are unable to follow the mathematics learning process
5	Curiosity	Ask how students understand the subject matter of mathematics	Teacher asks students to ask teachers or friends about subject matter that is not yet understood in mathematics lessons
		Looking for learning resources about the problem being studied	Assigning students to look for other learning resources
		Provide an assessment of each student's abilities	Teachers give appreciation such as applause to students who are active in the process of learning mathematics
6	Responsibility	Guiding students in understanding the learning material	Teachers control and guide when students have group discussions
		Students are responsible for the tasks assigned by the teacher	Students are active in collecting assignments assigned by the teacher
			The teacher gives a reprimand to the student who is not responsible for the assigned task
			Do tasks wholeheartedly
		Be accountable for choices and decisions made	Students are able to make informed decisions

Data collection through interview techniques, obtaining information or answers provided by informants by recording as a guide in compiling reports in

order to explore what kind of efforts the subject made in applying the values of character education in the mathematics learning process.

Other data collection techniques used are documentation used to complete the research in the form of photos (school profiles, when conducting observations and interviews), written documents (Learning Process Plans for teachers of mathematics subjects and student report cards), which are complementary to observations and interviews in conducting a study.

The technique of guaranteeing the validity of data in this study is to use credibility criteria by means of triangulation techniques, namely collecting data through passive participatory observation, interviews and documentation simultaneously against the same data source to see whether the three data collection techniques are consistent or contradictory.

Data processing and analysis techniques use Miles and Huberman models. The steps in data analysis are as follows:

1. Data Reduction

Data reduction is a selection process, focusing data from field notes both from observation, interviews and documentation.

2. Data Presentation

After the data is reduced, the next step is the presentation of the data.

3. Conclusion

Drawing conclusions is to provide conclusions to the final result and evaluation.

RESULTS AND DISCUSSIONS

1. Implementation of Character Education in the Mathematics Learning Process in Class X MAS Hajjah Amalia Sari Padangsidempuan

Based on the results of observations, that in the process of learning mathematics that the teacher has implemented character education such as reading do'a before and after learning, saying greetings, discipline in entering class, discipline in wearing school uniforms complete with attributes, creative, hard work, curiosity and responsibility in the mathematics learning process.

The implementation of character education is also contained in the Learning Process Plan (RPP) designed by MAS mathematics teacher Hajijah Amalia Sari Padangsidempuan.

a. The Value of Religious Character Education

Mathematics teachers and students of class X MAS Hajijah Amalia Sari implement religious values in the mathematics learning process such as marching in front of the classroom before entering the classroom, saying greetings when entering the classroom by lining up in front of the classroom then the teacher gave motivation that students are still grateful to be given the opportunity to study offline and grateful for the ability and reason that Allah SWT gave so that humans can judge where the right and where it's wrong.



Figure 1. Students Lined Up in Front of the Classroom Before Entering the Classroom

Another religious value in the mathematics learning process is that male students also shake hands with male teachers as well as female students shake hands with female teachers when entering the study room. There is mutual respect in students and greeting each other. Outside of the mathematics learning process, students also perform congregational dhuha prayers and congregational dzuhur prayers in mosques controlled by the teaching teacher.



Figure 2. Students Perform Dhuha Prayers and Dzuhur Prayers

The results of an interview with a mathematics subject teacher, Syarif Hidayat Matondang M.Pd, stated that the value of character education has been implemented in the mathematics learning process including religion, discipline, creativity, hard work, curiosity and responsibility, linking the material with religious values and this has become a habit.

b. The Value of Disciplinary Character Education

Based on the results of observations, the discipline applied by the teacher came \pm 5 minutes after the student was in front of the class, checking the student's attendance, wearing a school uniform complete with attributes. Teachers also give punishment for reading the Quran to students who arrive late. Students also follow school rules well such as not wearing shoes in the classroom, and dressing according to school rules.

The results of interviews with mathematics teachers regarding the character of student discipline in the learning process stated that if students are late in following the mathematics learning process, the teacher gives punishment in the form of reciting verses of the Quran in front of the class, cleaning the page if the student's reasoning is not right. Instilling an attitude of discipline, the teacher also reminds students that students must arrive earlier than the teacher before starting the mathematics learning process.

c. The Value of Creative Character Education

According to the results of researchers' observations in the mathematics learning process, the educational value of the creative character of students and teachers can be seen that the teacher gives time to each student to do the practice questions both individually and in groups, after discussing the questions given by the teacher, the teacher asks the students to communicate them. The teacher also asks students to ask about material that is not yet understood in order to create an active classroom atmosphere and students will also start thinking.



Figure 3. The value of creative character education

The results of interviews with mathematics teachers about the value of creative character education are developing creative values by creating an active learning atmosphere, applying various learning strategies both in the classroom and outside the classroom, providing examples of mathematics problems with tricks to relate these problems to the Quran and Hadith to daily life, developing student creativity.

Based on the explanation above, the creative values applied by teachers in the learning process that teachers develop students' creative values by asking students to solve a mathematical problem according to the way of their respective students.

d. The Value of Hard Work Character Education

The attitude of the hard work of mathematics teachers and students in the learning process is to always provide motivation so that students do not despair in learning, especially learning mathematics, teachers provide math problems so that students' hard work is seen both by asking friends and asking teachers.



Figure 4. The Value of Hard-Working Character Education

Based on the results of interviews with mathematics teachers in implementing the value of hard work, namely motivating students that

mathematics is very close to daily life, the teacher reminds students that learning is worship in accordance with the intention that expects ridho from Allah SWT, and the teacher reminds the previous material before starting a new material.

e. The Value of Curiosity Character Education

Implementing an attitude of curiosity in the mathematics learning process, the teacher's curiosity towards problematic students such as students arriving late, the teacher asks what problems students face so that students arrive late following the learning process, the teacher also questions students who seem not excited, gives assignments to students, teachers carry out feedback for those who do not understand the subject matter.

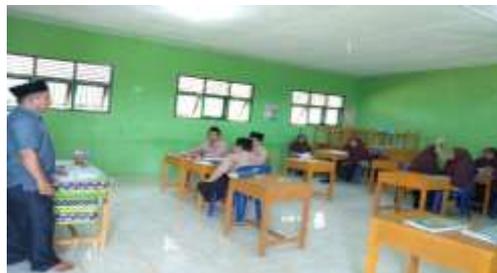


Figure 5. The Value of Curiosity Character Education

The value of the character education of curiosity implemented by the teacher is to trace the background of the problem student, both asking about it to the problem student and to the student's close friends and giving appreciation to outstanding students such as giving awards, charters and even giving education money.

f. The Value of Responsible Character Education

The value of character education the responsibility implemented by the teacher in the mathematics learning process is that the teacher sanctions students who do not submit assignments, the teacher gives an assessment of students by assessing based on student abilities and based on the character of each student, the teacher delivers the material fairly without leading to active students only, but the teacher asks students alternately to build student activity and give grades according to the character of each student, the teacher delivers the material fairly without leading to active students

only, but the teacher asks students alternately to build student activity and give grades according to the character of each student, the ability of students, teachers also guide students in conducting discussions.

Based on the results of an interview with the principal of MAS Hajijah Amalia Sari Padangsidempuan, Mr. Syarif Hidayat Matondang, M. Pd, said that character education has been implemented in accordance with the objectives of the national curriculum, and all teachers have applied the values of character education by applying them slowly to students in the learning process, but the development has not reached 100%. The principal has urged and directed every teacher to implement character education in every learning process. Both through habits that are carried out every day and with exemplary examples that teachers reflect both during the learning process and outside of learning.

Based on the results of an interview with one of the students Alvin Malik, stated that mathematics teachers have already applied and reflected the values of character education in the learning process. The teacher fairly gives value to the students, the teacher instills an attitude of responsibility in the learning process, as well as always checks the tasks of the students.

The results of observations in the mathematics learning process, the results of interviews with mathematics teachers and class X MAS students Hajijah Amalia Sari Padangsidempuan, researchers found that there is a connection between observations, interviews and documentation that the value of character education has been implemented in the mathematics learning process, although it has not been fully applied by every student in daily activities.

2. Obstacles in Implementing Character Education in the Mathematics Learning Process of Students in Class X MAS Hajijah Amalia Sari Padangsidempuan

Based on the results of interviews with mathematics teachers, that obstacles in implementing character education values include:

a. Characteristics of different students

Different characteristics between one student and another student are the task of a teacher in understanding it.

b. Lack of student motivation

Lack of motivation of students in giving questions about the material being taught, even though the mathematics teacher has tried to explain the learning material well.

c. Infrastructure

There is still a lack of media or means in the mathematics learning process so that to build student creativity is still lacking. The math teacher only explains the material by using the blackboard.

d. Lack of time discipline

3. Solutions to Overcome Obstacles in Implementing Character Education in the Mathematics Learning Process of Students in Class X MAS Hajjah Amalia Sari Padangsidempuan

Based on the results of the researcher's observations, that the solutions carried out by mathematics teachers in overcoming obstacles include:

a. Understand the nature of each student in the learning process

b. Building infrastructure

c. Teachers better reflect that in solving mathematical problems there is not only one way to solve problems

d. The math teacher gives about 5 minutes after the learning process time starts

Based on the obstacles obtained by mathematics teachers in the mathematics learning process that other solutions that can be applied in overcoming various obstacles found are habituation such as providing punishment for students who do not value time, teachers must reflect noble morals such as not smoking in the classroom, wearing clean and decent clothes, and respecting time. The last solution is to give a reprimand to students who commit violations such as students who are not responsible for the mathematics tasks given by the teacher, because with written rules but if they

are not given a reprimand, it will be useless for a teacher's efforts in developing the educational values of student character.

As a mathematics teacher, instill the values of character education in the mathematics learning process by applying discipline, honesty, responsibility, religion, having curiosity, being friendly, and hard work in learning and trying. Based on things that are now happening among teenagers such as promiscuity, this happens as a result of the cultivation of character education values that are still lacking both inside school and outside of school.

The value of character education in class X MAS Hajijah Amalia Sari Padangsidempuan is also developed towards students outside of mathematics learning, because class X students are boarding school students so that the character value instilled by the teacher is partly attached to each student, but no matter how strong the efforts of the teacher in implementing character education for students, not all students immediately get used to the character value, but it takes a slow process for the value of character education to begin to be ingrained in the student.

Thus, new findings that can be obtained from this study that there are teacher strategies to overcome obstacles to implementing character education in the mathematics learning process, including teachers providing exemplary examples of students, reprimanding students if students commit violations, and providing habituation to students in applying character education values in everyday life.

CONCLUSION

Based on the results of the research and discussion in the previous chapter, the researcher drew the following conclusions: Character education in the process of learning mathematics in class X MAS Hajijah Amalia Sari Padangsidempuan has applied the values of character education, namely religious, discipline, creative, curiosity, hard work and responsibility. The obstacles found are the presence of different student characteristics, lack of student motivation, lack of infrastructure and lack of time discipline. The solution to overcome obstacles in

implementing character education in the mathematics learning process of students in Class X MAS Hajjah Amalia Sari Padangsidempuan is to pay more attention to student characteristics, complete infrastructure, give reprimands to students who lack time discipline, and reflect good examples and examples, make habituation and conditioning.

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