

Transformation of Middle Mathematics Learning With Character Education Online in South Tangerang

Indah Pertiwi¹

¹Universitas Pamulang, Indonesia

Email: ind4h.pertiwi@gmail.com

(Received: 2-10-2020; Reviewed: 24-10-2020; Revised: 28-10-2020; Accepted: 21-11-2020; Published: 8-12-2020)



©2020 –Daya matematis: Jurnal inovasi pendidikan matematika. Ini adalah artikel dengan akses

terbuka dibawah licensi CC BY-NC-4.0 (<https://creativecommons.org/licenses/by-nc/4.0/>)

Abstract

This study aims to describe the implementation of character education in mathematics learning in junior high schools in South Tangerang along with its supporting and inhibiting factors. This research is an evaluation research, using quantitative and qualitative approaches. The evaluation model used in this research is the sustainability evaluation model (discrepancy model). The subjects in this study were 18 junior high schools in South Tangerang to follow quantitative data and 6 junior high schools in South Tangerang to collect qualitative data. Data were collected through student questionnaires, teacher questionnaires, interviews, documentation and observation. Data were analyzed using quantitative analysis and categorization, while qualitative data were analyzed using qualitative descriptive analysis. The results of the evaluation can be removed as follows: First, the implementation of character education in mathematics learning in junior high schools in South Tangerang is in the poor category. Second, the supporting factors include: (1) vision and mission of the school; (2) there is a school agreement related to character building through learning; (3) support from school principals and vice principals; (4) good cooperation between the school environment and school members; (5) the condition of students who have good character basics; and (6) examples of positive teacher behavior as role models. While the inhibiting factors include: (1) teachers do not have an adequate understanding of the concept of character education, especially implementation in mathematics learning, and (2) teachers still experience difficulties in identifying values character of basic competence in mathematics; (3) teachers have not been able to properly implement integrated character education in mathematics learning; (5) incomplete facilities and infrastructure; (6) Teachers have difficulty implementing character education in courageous learning; (7) teachers have difficulty assessing character education in a bold manner; and (8) documentation of student attitudes is still weak

Key Words: character education, mathematics learning, evaluation

INTRODUCTION

Character education is an effort to help prepare the nation's generation with quality and ready to face future challenges. In 2010 the Ministry of National Education launched the National Policy for National Character Development for the year 2010-2025 which was motivated by the dire situation and condition of the nation's character, such as frequent violence and riots, ethics-filled democracy turned into a democracy that leads to anarchism, social and political politeness fades at various levels of social, national and state life, all of this shows the fading of the noble values of the nation. Therefore, the Minister of National Education of the Republic of Indonesia, starting from the 2011/2012 school year, applies character education as the basis for planning and implementing education at all levels of education. Character education becomes an integral part of the educational program so that the document character education program is integrated into the curriculum. The fact that there is currently the implementation of education is still not fully guided by the formulation of national education goals that are so comprehensive. This can be seen from the orientation of the schools which are still preoccupied with test scores. Therefore, education should be designed to lead students to cognitive value recognition, affective appreciation of values, and finally to real value practice, so that all subjects studied by students in schools must contain character education in the hope of bringing students to become humans. with character, no exception in mathematics.

Mathematics education can be viewed as a condition or trait and even values that are synergistic with character education. The planting of junior high school mathematics learning with character education has implications for the function of the teacher as the best facilitator so that students can learn mathematics optimally (Marsigit, 2013: 13). Teachers must be able to teach mathematics by integrating character values, because after students understand the character values developed in school, the next step is to accustom students to applying these character values. So far character education is only limited to a concept and has only touched on the level of recognition of norms or values, and not yet at the level of internalization and real action in everyday life. Mathematics teachers have an important role in managing the course of learning in the classroom. One of the important things for the teacher to pay attention to is the selection of learning methods. Teachers can develop various learning methods such as lectures, group discussions, guided discovery and so on. However, according to Titik, Zamroni and Darmiyati (2014: 182) the method of delivery is used only through lectures, and the method of assessment is carried out cognitively through the assessment of multiple choice questions, structured filling, and descriptions do not emphasize the process of character values. can be internalized in students

Currently the world of education is also affected by the Covid-19 pandemic. The Minister of Education and Culture through Circular Number 36962 / MPK.A / HK / 2020 decided to move the face-to-face learning process into online learning. Online learning increasingly requires teachers to be able to innovate in implementing character education. The main mission of education is not only to make students smart in terms of intellect but also of good character. This mission must still be carried out regardless of the learning method used conventionally or online learning.

Based on these situations, this study aims to describe (1) the implementation of junior high school mathematics learning with online character education in South Tangerang, and (2) the supporting and inhibiting factors for implementing junior high school mathematics learning with online character education.

RESEARCH METHODS

This research is an evaluation research. Evaluation research is the description of a program and measuring it based on certain criteria. The evaluation model used in this study is the discrepancy model. The discrepancy model is a program evaluation that compares what should and is expected to happen (standard) and what actually happens (performance), so that it can be seen whether there is a discrepancy between the standards set and the actual performance. Program evaluation is carried out by measuring the amount of achievement in each component. The results achieved by a program component are compared with the results that should be achieved / criteria. The conclusion is based on a comparison between the research results and the predetermined criteria so that it can be seen whether there is a discrepancy between the established criteria and the results achieved. This discrepancy model will describe the implementation of junior high school mathematics learning with character education in South Tangerang. The gap between the criteria and its implementation is seen based on planning, implementation, and learning assessment.

Based on the type of research and data sources used, this study uses mixed methods. The mixed approach is a research approach that combines or associates qualitative and quantitative forms (Creswell, 2012: 5). Collecting quantitative data in this study is expected that researchers can collect information about the implementation of junior high school mathematics learning with character education for junior high schools in Yogyakarta City in the form of numbers as the manifestation of observed symptoms. Furthermore, qualitative research produces descriptive data in the form of written or spoken words from respondents who are observed holistically. The variables in this study include planning, implementation and learning assessment. Furthermore, data collection techniques in this study include quantitative data collection techniques with questionnaires and assessment sheets, and for qualitative data used interviews, documentation and observation.

RESULTS AND DISCUSSIONS

Implementation of junior high school mathematics learning contains character education including planning, implementation and assessment.

1. Planning for learning mathematics contains character education, Planning for mathematics learning with character education consists of two indicators, namely: (1) making a syllabus containing character values as a reference in developing lesson plans and; (2) making lesson plans containing character values as a learning guide that meets the process standard. This variable is measured using a teacher questionnaire as well as a syllabus and lesson plan assessment sheet. Mathematics learning planning containing character education is designed for online learning due to the situation and conditions of the Covid-19 pandemic so that educational planning also adjusts. Teacher questionnaires were given to 18 respondents, namely 18 junior high school mathematics teachers in South Tangerang, both public and private.
2. The implementation of mathematics learning contains character education. The indicators for implementing mathematics learning with character education consist of three indicators, namely (1) carrying out opening activities in accordance with the lesson plans that contain character values; (2) carry out core activities in accordance with the RPP which contains character values; (3) carry out closing activities in accordance with the lesson plan which contains character values. The implementation of mathematics learning with character education in its current conditions must be done online in accordance with the Circular of the Minister of Education and Culture Number 36962 / MPK.A / HK / 2020. This variable was measured using a teacher questionnaire and a student questionnaire, followed by observations supported by interviews.
3. Assessment of mathematics learning contains character education. Assessment of mathematics learning containing character education consists of three indicators, namely (1) assessing learning outcomes so that the level of competence of students can be known; (2) using a variety of learning outcome assessment techniques, both test and non-test; (3) conduct an assessment of the character education process / outcome. Assessment of mathematics learning with character education is also carried out online. This variable was measured using a student questionnaire and a teacher questionnaire, then conducted observations and interviews. The results of the analysis of the research on the implementation of mathematics learning in junior high schools with character education in South Tangerang were in the poor category as a whole. The results of the analysis were obtained by comparing the acquisition scores with a table of program success criteria.

The results of the analysis of the implementation of junior high school mathematics learning with character education were obtained through teacher questionnaires and student questionnaires. In Table 2, the results of the analysis show that the implementation of junior high school mathematics learning with character education in South Tangerang which is carried out online based on a teacher questionnaire obtained an average score of 58 with a low category. It can be seen that the results are 60 for public schools and 56 for private schools in the poor category. Meanwhile, the implementation of junior high school mathematics learning with character education in South Tangerang based on a student questionnaire obtained an average score of 59 in the poor category. It can be seen that the results are 60 for public schools and 58 for private schools in the poor category. Character education evaluation data in mathematics learning planning were obtained through a teacher questionnaire followed by an assessment of the syllabus and lesson plans.

a. Teacher's Questionnaire.

The teacher's questionnaire consisted of 11 statements, namely 6 statements about the syllabus and 5 statements about the lesson plans. The results of the evaluation of the teacher's questionnaire regarding the planning of junior high school mathematics learning with character education in South Tangerang were as a whole included in the sufficient category, meaning that the teacher had made a mathematics learning plan but still experienced difficulties in preparing character education in planning mathematics learning.

Based on the results of the analysis of character education in planning mathematics learning for junior high schools in South Tangerang, it was obtained an average score of 64 in the sufficient category. It can be seen that the results obtained are 66 for public schools and 62 for private schools with sufficient categories.

b. The assessment sheet

After taking the teacher questionnaire data, a crosscheck was carried out on character education in planning mathematics learning. Researchers conducted an assessment of the syllabus and lesson plans that the teacher had made as a crosscheck of the results of quantitative data obtained from teacher questionnaires. The syllabus assessment sheet consists of 28 items, while the RPP assessment sheet consists of 32 items. Assessment sheets were provided for 18 sample schools through the syllabus and lesson plans that had been made by the teacher. Evaluation on mathematics learning planning by implementing character education shows that the lesson planning carried out by the mathematics teacher is in the sufficient category, meaning that the syllabus and lesson plans that have been made by the teacher have displayed character values but have not been integrated into mathematics subject matter because the teacher has difficulty identifying and mapping character values that correspond to the material.

Based on the results of the analysis of the syllabus assessment sheet, it was obtained an average score of 62 in the sufficient category. It can be seen that the results obtained are 64 for public schools with a moderate category and 60 for private schools with a poor category. Based on the results of the analysis of the RPP assessment sheet, it was obtained an average score of 62 in the sufficient category. It can be seen that the results obtained are 67 for public schools with a poor category and 52 for private schools with a moderate category. Based on the results of the teacher's questionnaire and the syllabus and lesson plan assessment sheets, it is concluded that character education in mathematics learning planning is in the sufficient category.

4. Implementation of learning mathematics contains character education

Quantitative data on character education evaluation in the implementation of mathematics learning in South Tangerang were obtained through teacher questionnaires and student questionnaires. The teacher's questionnaire consisted of 39 statement items, namely 6 statements about opening activities, 27 statements about core activities, and 6 statements about closing activities. This teacher questionnaire was given to 18 junior high school mathematics teachers in South Tangerang. The results of the evaluation of the teacher questionnaire about character education in the implementation of junior high school mathematics learning in South Tangerang are generally in the poor category, meaning that the teacher is still experiencing difficulties in implementing junior high school mathematics learning with character education, especially if it is implemented online.

The results of the teacher's questionnaire were also supported by student questionnaires. Character education evaluation data in the implementation of mathematics learning obtained through a student questionnaire consisted of 36 statement items, namely 6 statements regarding opening activities, 21 statements regarding core activities, and 9 statements regarding closing activities. This student questionnaire was given to 685 respondents from 18 junior high schools in South Tangerang. The sample for public schools is 358 students and private schools 327 students. The results of the evaluation of the student questionnaire regarding character education in the implementation of junior high school mathematics learning in South Tangerang were overall in the poor category. The following is a table of the results of the acquisition of character education values in the implementation of junior high school mathematics learning in South Tangerang.

Based on the results of the character education analysis in the implementation of junior high school mathematics learning in South Tangerang based on the teacher's questionnaire, it was obtained an average score of 55 in the poor category. It can be seen that the results obtained are 57 for public schools and 53 for private schools in the poor category. While the results of the analysis of character education in the implementation of junior high school mathematics learning in South Tangerang based on student questionnaires obtained an average score of 51 in the poor category. It can be seen that the results obtained are 53 for public schools and 49 for private schools in the poor category.

Mathematics learning assessment contains character education

Character education evaluation data in the assessment of mathematics learning were obtained through teacher questionnaires and student questionnaires. The teacher's questionnaire consisted of 13 statement items, namely 6 statements about the assessment of learning outcomes, 4 statements about assessment techniques, and 2 statements about the assessment of character education results.

This teacher questionnaire was given to 22 junior high school mathematics teachers in South Tangerang. The results of the evaluation of the teacher's questionnaire regarding the assessment of mathematics learning in junior high schools with character education in South Tangerang were in the low category as a whole, meaning that teachers still experienced difficulties in assessing mathematics learning with character education, especially if carried out online.

The results of the teacher's questionnaire were also supported by student questionnaires. Character education evaluation data in the assessment of mathematics learning obtained through a student questionnaire consisted of 14 statement items, namely 10 statements regarding learning outcomes assessment, and 4 statements regarding the assessment of the character education process / outcome. The results of the evaluation of a student questionnaire regarding the assessment of mathematics learning in junior high schools with character education in South Tangerang were overall in the poor category. The following is a table of the results of the analysis of mathematics learning assessment for junior high schools with character education in South Tangerang.

Based on the results of the analysis of the assessment of mathematics learning in junior high schools with character education in South Tangerang, based on the teacher's questionnaire, the average score was 57 in the poor category. It can be seen that the results obtained are 59 for public schools and 55 for private schools in the poor category. Meanwhile, the results of the analysis of the mathematics learning assessment of junior high schools with character education in South Tangerang based on student questionnaires obtained an average score of 54 in the poor category. It can be seen that the results obtained are 56 for public schools and 52 for private schools in the poor category.

This qualitative data is a crosscheck of character education in the implementation of mathematics learning which is carried out by conducting classroom observations because the implementation of character education is also carried out in teaching and learning activities, in accordance with each subject, including mathematics lessons. Class observations were carried out in 6 schools with different types and strata. Observations were made to determine whether the implementation of SMP mathematics learning with character education has been optimal.

Based on the results of observations, it can be seen that character values are also embedded in mathematics learning. However, based on classroom observations that have been made, it does not appear that the teacher emphasizes certain values. Character education has not been fully integrated through mathematics learning because most teachers are still focused on delivering material. Based on interviews with several math teachers, this happened because the teachers were still adapting to online learning.

In addition, other observations were found that almost all mathematics learning processes in the classroom were not carried out as arranged in the lesson plans, even some teachers did not refer to them. Even though the lesson plans explicitly state the stages of activities and character values that will be instilled in students. The learning implementation includes three stages, namely preliminary activities, core activities and closing activities. However, observations in the field show that not all mathematics teachers carry out all stages of these activities. According to information obtained from teachers through interviews, learning is carried out as needed because online learning times are shorter so they are often not in accordance with the RPP. With this online learning teachers still have difficulty delivering material and finding the right way to instill character education.

The results obtained regarding teacher-student interactions vary, but generally there is good communication between teachers and students, meaning that there is feedback between teachers and students. The intensity of feedback between students and teachers is influenced by the teaching style applied by the teacher and the conditions of the students. If the learning style carried out by the teacher is dominated by lectures, it can be seen that students are less active in their opinion and vice versa. In addition, student activity is also influenced by the condition of students. In high strata schools students are classified as active in their opinion even though the teacher does not provide feedback. In contrast to low strata schools, students will be active in learning if the teacher carries out a communicative dialogue. Furthermore, the ideal learning activity for character education is an active student learning approach. The learning method used by the teacher is expected to be able to

optimize student activity. Based on classroom observations that have been made, it was found that only a few teachers actually apply active and fun learning methods. The rest of the teachers still teach using conventional methods which are dominated by lectures and some even only through online assignments.

The habituation method is an effort to facilitate understanding of the character of students. The habituation method acts as a continuous exercise carried out by students so that they will become accustomed to character building, for example getting used to opening with greetings, starting with prayer, shaking hands, and arriving on time. Thus, it is hoped that students will become better at everyday life. In online learning, teachers have not been able to instill many characters in learning mathematics. Some of the characters applied by some teachers are only religious by starting and ending learning with prayer, discipline by joining online learning on time, being responsible for doing assignments, and collaborating by reminding each other of assignments and learning schedules. Based on interviews with teachers, information was obtained that time constraints meant that the cultivation of character education was not done optimally.

Based on the results of teacher questionnaires and student questionnaires supported by classroom observations and interviews, it is concluded that character education in the assessment of mathematics learning is included in the poor category, meaning that character education in assessing mathematics learning has not gone well because teachers still have difficulty assessing the character education that appears on students especially online assessments.

Some of the supporting factors experienced by mathematics teachers in implementing junior high school mathematics learning contain character education in the planning aspect, namely (1) the vision and mission of the school; (2) there is a school agreement related to the cultivation of character education through learning; and (3) support from school principals and vice principals.

Furthermore, the supporting factors experienced by mathematics teachers in implementing junior high school mathematics learning contain character education in the implementation aspect, namely (1) good cooperation between the school environment and school members; (2) the condition of students who have good character basics; and (3) examples of teacher positive behavior as role models. In mathematics learning, the role of the mathematics teacher as a supporter of the implementation of mathematics education is important. Teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating so that teachers must master teaching methods and be responsible for planning and implementing character education. The results of the observations show that the teacher's role in learning mathematics is sufficient, but they still experience difficulties in certain parts. Most of the teachers have also shown good behavior as role models for students, are able to communicate well with students, and provide maximum service to students. Of course, this condition must also be supported by the condition of the students. Students who already have a good character foundation will be easily directed and shaped by teachers in school.

The character education program is a renewal carried out in the field of education to achieve one goal, namely to build the character of the Indonesian nation. However, character education is not just a new trend in the world of education. The implementation of character education is a tangible manifestation of educational restoration, namely restoring its essence to develop a whole human being, namely education that forms superior human beings in knowledge and good morals. School is an environment that faces children and has the potential to educate their every mindset, heart and behavior. The teacher is someone who is close to students so that they can have a positive impact on the development of student character. Therefore, schools are expected to have a commitment and integrity to build the character of the nation's children through an educational process that is held either offline or online, one of which is in learning mathematics.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the analysis and discussion, the implementation of junior high school mathematics learning with character education in South Tangerang can be concluded as follows.

1. Implementation of junior high school mathematics learning with character education in South Tangerang is in the poor category with an average score of 58 based on a teacher questionnaire and 59 based on a student questionnaire.
 - a. Character education in the planning of junior high school mathematics learning in South Tangerang is in the moderate category. This means that the syllabus and lesson plans that have been made by the teacher have displayed character values but have not been integrated into mathematics subject matter because teachers have difficulty identifying and mapping character values that are in accordance with the material.
 - b. Character education in the implementation of junior high school mathematics learning in South Tangerang is in the poor category. This means that character education is not yet fully integrated through mathematics learning because most teachers are still focused on delivering material. Based on interviews with several math teachers, this happened because the teachers were still adapting to online learning.
 - c. The assessment of junior high school mathematics learning with character education in South Tangerang is in the low category. This means that teachers still experience difficulties in assessing mathematics learning with character education, especially if it is implemented online.
 - d. Supporting factors include: (1) vision and mission of the school; (2) there is a school agreement related to the cultivation of character education through learning; (3) support from school principals and vice principals; (4) good cooperation between the school environment and school members; (5) the condition of students who have good character basics; and (6) examples of positive teacher behavior as role models.
 - e. Inhibiting factors include: (1) teachers do not have an adequate understanding of the concept of character education, especially implementation in mathematics learning, and (2) teachers still have difficulty identifying character values from basic competencies in mathematics subjects; (3) teachers have not been able to properly implement integrated character education in mathematics learning; (5) incomplete facilities and infrastructure; (6) Teachers have difficulty implementing character education in online learning; (7) Teachers have difficulty assessing character education online; and (8) documentation of student attitude assessment is still weak because the teacher lacks understanding in designing the assessment and applying it in the assessment of integrated character education in mathematics learning.

REFERENCES

- Ahmadi, I.K., & Amri, S. (2014). *Pengembangan & model pembelajaran tematik integrative*. Jakarta: Prestasi Pustaka
- Ampel, J.A. (2009). *Character education: examining perception of elementary, middle, and high school teacher in a central florida school district*. Disertasi Doktor, tidak diterbitkan, University of Central Florida, Orlando.
- Arthur, J. (2003). *Education with character the moral economy of schooling*. New York: Routledge Falmer
- Creswell, J. W. (2012). *Research design: qualitative, quantitative, and mixed methoads approaches*. Thousand Oaks, CA: Sage Publications
- Kemendiknas. (2010a). *Panduan pendidikan karakter di Sekolah Menengah Peratama*. Jakarta: Direktorat Jenderal Manajemen Pendidikan Dasar dan Menengah.
- Kemendiknas. (2010b). *Pengembangan pendidikan budaya dan karakter bangsa*. Jakarta: Badan Penelitian dan Pengembangan Pusat Kurikulum.
- Marini, A. (2017). *Charakter Building Through Teaching Learning Process: Lesson in Indonesia*. International Journal of Sciences and Research. Vol 73 No 5 Mei 2017
- Marsigit. (April 2013). *Pendidikan karakter melalui pembelajaran matematika*. Makalah disajikan dalam Pidato Pengukuhan Guru Besar, di Universitas Negeri Yogyakarta
- Samani, M., & Hariyanto. (2013). *Konsep dan model pendidikan karakter*. Bandung: PT Remaja Rosdakarya.

- Sulistyowati, E. (2012). *Implementasi kurikulum pendidikan karakter*. Yogyakarta: PT Citra Aji Parama.
- Widyaningsih, T., Zamroni., & Zuchdi D. (2014). *Internalisasi dan aktualisasi nilai-nilai karakter pada siswa SMP dalam perspektif fenomenologis*. Jurnal Pembangunan Pendidikan: Pondasi dan Aplikasi, 2(2), 181-195
- Yaumi, M. (2014). *Pendidikan karakter: landasan, pilar dan implementasi edisi pertama*. Jakarta: Prenadamedia Group
- Zevika, M., Yarman, Yerizon. 2012. Meningkatkan Kemampuan Pemahaman Konsep Siswa Kelas VIII SMP Negeri 2 Padang Panjang Melalui Pembelajaran Kooperatif Tipe Think Pair Share Disertai Peta Pikiran. Jurnal Pendidikan Matematika. Vol. 1 No. 1 (45-50).