
DRAMA-BASED MATHEMATICS LEARNING MODEL FOR CHARACTER BUILDING OF STUDENTS IN ELEMENTARY SCHOOL

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ABSTRACT

Keywords: mathematics learning; character building; drama education.

Facing the problem of the Indonesian nation which is being hit by a 'moral crisis', the concept of the national education curriculum contains a lot of character education concepts. This is a new challenge so that teachers immediately change the 'mindset' that originally the purpose of teaching to produce intelligent humans, to having to prioritize teaching to form character. Mathematical characteristics are abstract sciences, but the process of understanding must be conveyed through concrete media. In addition, the psychological development of elementary school children is in the urge to want to play and do fun activities. This research aims to get findings of mathematics learning models in elementary schools to form character. This drama-based learning model has been found with learning stages through the planning, implementation, and evaluation stages. At the planning stage, the teacher prepares a drama script theme on daily life events related to mathematical topics and character value competencies to be developed. At the implementation stage, students role-play according to the theme of the drama script. As for the evaluation stage, the teacher conducts assessments during learning or student activities.



Introduction

Implementing mathematics learning integrated with character development is currently needed (Firmansyah et al., 2020). For character values to be truly integrated into learning, teachers must be creative in choosing learning models (Zafirah et al., 2018). Indeed, to improve the quality of mathematics learning, every material must be related to the context of children's daily lives (Sulistiyani & Deviana, 2019).

Drama can be used as a medium to form social consciousness, as seen in the process of extracting story ideas. In addition, it can generate responsibility as a member of society, as seen in production processing that cooperation is needed for the success of a drama performance (Suprajitno, 2017). As we can see drama is a manifestation of real life, which is then acted out so that it can be applied in real life in society (Huda et al., 2015). This is in line with learning mathematics, which is to prepare children to be ready to face changes in the living environment. Therefore, it will be effective if drama becomes a medium for learning mathematics (Bahari, 2018).

The nature of drama is that it contains games, therefore it is very effective when used as a learning medium. In addition, the drama also teaches processing taste and politeness (Purnama et al., 2020). Thus, drama art which is used as a medium for learning

mathematics, in addition to being able to form character, will also be able to learn fun for students, especially in elementary schools.

Teachers are considered to need to be skilled in making lesson plans because teachers have a role in managing learning (Erwinsyah, 2017). It has been indicated that teachers are less competent in making lesson plans (Faradilla et al., 2018). According to Feri et al. (2017), there are several problems for teachers in managing the learning process, namely: (1) not yet competent in compiling themes and syllabus; (2) not yet competent in implementing effective learning; (3) not yet competent in carrying out optimal evaluations; and (4) the absence of proper supervision from school leaders.

In managing the learning process, pay attention to the following: (1) planning, teachers pay attention to the needs of students and follow the development of science; (2) learning objectives are properly formulated; and (3) evaluation is carried out at the beginning, ongoing and end of learning. (Mutia et al., 2016) Thus, to shape the character of students, teachers must pay attention to the learning process from the beginning to the end of learning.

Research Methods

This research uses theoretical-hypothetical methods, through stages: (1) preliminary studies; (2) literature review; (3) design learning models; (4) validation consisting of content validation and implementation validation; and (5) develop learning models. So basically this research is literacy research, but it is preceded by the emergence of problems from the findings of preliminary studies.

In the preliminary study, researchers surveyed elementary school teachers, especially when they were in charge of teaching mathematics. The results of the lecture are a reference for finding drama-based mathematical learning models for character building. The subjects of the study were elementary school teachers in Subang Regency, by taking random samples. After conducting preliminary studies, then conduct research on the next stages.

Results and Discussion

In preliminary research, it has been found that primary school teachers are not ready to teach mathematics for character building. The unpreparedness of teachers can be seen from the lack of insight into character education, managing the learning process, and some of the obstacles they face such as those related to the lack of facilities and support from school leaders.

The table below illustrates the incompetence of teachers in teaching character-building-based mathematics in elementary schools. This data is the result of preliminary research on teachers in Subang Regency.

Table 1
Incompetent Teachers in Teaching Mathematics Based on Character Building

Learning Stage	Learning Activities
PLANNING	In the Learning Implementation Plan (RPP), most teachers do not set goals that include character values. But some include many character values at once in one RPP, for example, honest character building; Tolerance; social care; religion; and love of the environment.
IMPLEMENTATION	Most teachers only give examples of how to answer math problems, for example, $1/2 + 1/4 = 2/4 + 1/4 = 3/4$ and students memorize the ways the teacher solves problems. Some teachers do not connect the notion of fractional numbers with their use in everyday life, The teacher does not observe things related to the attitude of the learners.
EVALUATION	Almost all teachers only give math problems on fractional number topics, for example, $1/3 + 1/6 = \dots$, $2/3 + 2/5 = \dots$ or $3/4 + 1/5 = \dots$, the teachers do not measure character development through attitude indicators.

Mathematics Learning Process for Character Building

The human character will have strength in facing problems in living life (Astuti D S I; Purbani W, 2012). Thus, in the process of learning mathematics consider several important aspects, namely: (a) internalizing character values that are relevant to the needs felt by students and needs in society; and (b) integrating mathematical topics in problems related to community life around the school environment, family and community.

For example, when teaching basic mathematics lessons on the triangle, it is not enough for students to simply memorize the formula for the area of a triangle is $1/2$ an x-height, and learn to calculate it. However, they must understand the relationship between the understanding of the triangle area formula in real life in the community in the future. In addition, the most important thing is the impact on the development of the child's attitude after skillfully calculating the area of the triangle. After children follow the broad learning process of the triangle, for example, the child's character becomes formed into a meticulous and honest character. This character development must be observed by the teacher.

Managing Drama-based Mathematics Learning

Managing drama-based mathematics learning for the character development of students in elementary schools, in principle, is learning using drama scripts as the main medium. The script can be prepared by teachers or in collaboration with expert playwrights. However, it is different from drama scripts in general because the theme of

the script must contain several aspects that are relevant to the learning objectives. When playing drama using the script, the psychological condition of students is that they are having fun. When children are practicing play, they are unwittingly in the process of understanding mathematical concepts while internalizing character values. In addition, the theme of the drama script tells about daily life which is indicated to be often experienced by children of elementary school age.

In the learning process when students play drama, to achieve learning objectives with several objectives as follows:

1. By playing drama learning becomes fun;
2. Students are given attitude learning, which is sharpening of taste
3. The concept of mathematical topics is associated with the events of everyday life;
4. Learners are given the knowledge that 'dishonest' is a bad deed that can harm themselves and others; and
5. Learners are given knowledge about the concept of mathematical topics, namely fractional numbers.

About the concept of fractional numbers, learners come to understand that the definition of the number $\frac{1}{4}$ is "one of four parts". For more details, it is illustrated in the image below.

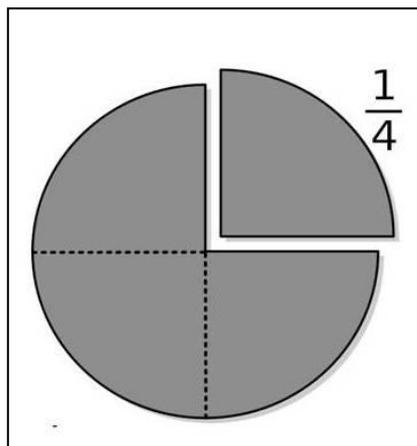


Figure 1: The Concept of One-Quarter Fractional Number

Management of drama-based mathematics learning for the character-building of students in elementary schools through the stages of planning, implementation, and evaluation. The three stages are a system, if one is not done then the learning objectives will not be achieved.

Planning Phase

The preparation of the teacher is as follows:

1. Formulate the character competencies of students to be developed.
2. Determine mathematics teaching materials related to the compatibility planned to be developed.

3. Compile assessment instruments and prepare drama scripts to be given to each group, for example from 40 students divided into 8 groups.

Implementation Phase

In the initial learning process, the teacher assigns students to play drama activities in their respective groups. Each group was given a drama script with a different theme. Furthermore, in the process of implementing this learning through the following stages:

1. Students discuss to divide roles and learn the content of the script;
2. Learners begin to act playing roles that correspond to the content of the script. At this stage, they try to act like they fit the character of the actors in the script. For example, how is the expression of regret experienced by a child who has behaved dishonestly to his mother?
3. When students are playing drama, teachers observe and record the behavior of students individually and in groups, especially focusing on attitudes and behaviors that are by the indicators of character competency values developed and formulated in learning objectives.
4. Students are given practice math problems with topics that are relevant to the character values developed and that are by the learning objectives. For example, to develop honest character and tolerance of students, the relevant topic is 'Fractional Numbers'.

Evaluation Phase

To assess the character development of students, conservation techniques are used. Assessment is carried out during the learning process when students do drama activities and exercises to solve math problems.

Below is an example of the results of a teacher's assessment of one of the students during the mathematics learning process. The purpose of this assessment is to determine the development of disciplinary character. The score is determined as follows.

- Score 1 – 5: Not Appeared (BM)
- Score 6 – 10: Starting to Appear (MM)
- Score 11 – 20: Start Consistently (MK)
- Score 21 – 25: Already Consistent (SK)

Table 2
Examples of Assessors of Student Character Development

Student Name: Dani Setiawan
 Attitude Competence: Discipline Character
 Mathematical Topics: Operations on Fractional Numbers
 Day / Date: Thursday, January 1, 2018

NO	INDICATOR	SCORE SCALE					JML
		1	2	3	4	5	

1	Carry out activities according to instructions from teachers and group leaders	V	3
2	Obey all rules made based on the results of group member agreement	V	2
3	Dress neatly by school rules	V	2
4	Do assignments according to the teacher's instructions	V	5
5	Pay close attention to something described by the teacher	V	3
TOTAL SCORE			15

Assessment Conclusion: The development of the disciplinary character of a student named Dani Setiawan has been indicated to be consistent (MK).

Conclusion

The characteristic of mathematics is abstract science, but in the process of understanding it must be conveyed through concrete media. This is very understandable because children of primary school age's cognitive development is still concrete. In addition, the psychological development of elementary school students is still in the urge to want to play and do fun activities. Learning mathematics in elementary school to please children and at the same time form character, can use a drama-based mathematics learning model. The learning model in question is carried out through the planning stage, implementation stage, and evaluation stage. At the planning stage, the teacher creates a drama script themed on daily life events related to mathematics subject matter and character development value competencies. At the implementation stage, children role-play according to the theme of the drama script. As for the evaluation stage, the teacher conducts assessments during learning or student activities.

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