Jurnal Pendidikan Amartha
Jurnal Pendidikan Amartha
Vol. 2 No. 1 May 2023
P-ISSN: 2964-7916 E-ISSN: 2964-1675

Mathematics Learning Planning in the Independence Curriculum

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Abstract
Mathematics is a very important subject at every level of education in every country. This is proven by making mathematics a basic competency in PISA (program for international student assessment). Based on the results of the 2019 PISA, the ability of Indonesian students to score below the OECD average in reading, mathematics and science. It can be concluded that the reading and mathematics abilities of students in Indonesia still need to be improved, so it is necessary to strengthen literacy and numeracy through effective mathematics learning plans. The purpose of the research is to explain the planning of learning mathematics in the independent curriculum. This research is a qualitative research with a case study. Data collection techniques using observation, interviews and documentation. Data validation uses technique triangulation and source triangulation. Data analysis used interactive data analysis from Miles Huberman. The results showed that the planning of learning mathematics begins with the analysis of learning outcomes, determining learning objectives, determining the flow of learning objectives and making teaching modules.
Keywords: Planning, Learning Mathematics, Independent Curriculum

INTRODUCTION

Mathematics is one of the important subjects at every level of education in every country. This is proven by making mathematics an important component in PISA (program for international student assessment) which was attended by 78 countries. Fenanlampir (2019) revealed that PISA is a comprehensive evaluation in proving the feasibility of mathematics and science education in a country. The PISA program is focused on reading literacy, mathematical literacy and scientific literacy. Based on the results of the 2019 PISA, the ability of Indonesian students to score below the OECD average in reading, mathematics and science. It can be concluded that the reading and mathematics abilities of students in Indonesia still need to be improved, so that literacy and numeracy are needed to be strengthened.

Based on the results of the PISA research in 2019 it shows that the results of the assessment of Indonesian students in the field of mathematics and literacy are in 69th position out of 79 countries (Sahyar et al, 2019). This ranking process then developed into the center of world attention. Countries that are in the top ranking are considered as countries that can be used as the best educational models in the world and have a positive impression in the international environment. Meanwhile, countries that are at the lower level will be considered not successful in organizing education according to international standards.

This condition is getting worse with the arrival of the COVID-19 pandemic which encourages students to study from home. The unpreparedness of teachers in learning technology innovations, especially mathematics during the period of learning from home resulted in a decrease in students' learning abilities (learning loss). Judging from these facts, an effort is needed from the government to be able to overcome the learning loss that is spreading among students and can slowly improve the quality of education in Indonesia.

The curriculum is one of the important elements that must exist and be implemented in an educational unit or institution. Curriculum design is very important because it regulates objectives, content, learning materials or teaching materials and how to apply them so that learning objectives are achieved. The independent curriculum is a new generation in responding to the challenges of education in the current era. essential material suitable for achieving learning objectives. For this reason, researchers are interested in studying the independent curriculum further by focusing on planning mathematics learning in the independent curriculum in elementary schools.

RESEARCH METHODS

This study used a qualitative research method with a literature study approach. Qualitative research is research that examines social events and activities. Researchers conduct research to analyze events or activities related to the people in them by using certain linguistic terms (Deni Sopiansyah et al: 2022). Meanwhile, literature study is a study that is analyzed in depth based on written materials that have been published, be it journals, books, magazines, newspapers, etc. (Deni Sopiansyah: 2022).

RESEARCH RESULTS AND DISCUSSION

Learning mathematics is an interaction between learning components to develop students' thinking skills in problem solving. Learning mathematics provides opportunities for students to participate actively, ask questions, express opinions to develop their mathematical abilities. Utilization of various types of models, strategies and learning methods adapted to the material to be delivered.

In the process, learning mathematics in elementary schools often becomes a frightening specter for students which raises various problems or problems in learning activities. The various problems that arise can arise from various factors not only from the students themselves, but also from teachers who use good lesson plans so that there is a lack of lesson preparation. The existence of a lesson plan allows the teacher to prepare the lesson as well as possible and consider many aspects in the classroom so that learning becomes more effective and enjoyable for students. The independent curriculum has several changes in its planning as follows:

1. Analysis of Learning Outcomes. Analysis of learning outcomes is carried out before the semester starts so that when students return to school activities, the teacher is ready with the arrangement of the material to be delivered. This analysis is at the same time part of the teacher's efforts to make material boundaries so that they remain in accordance with the basic abilities of students. The material in learning outcomes is divided into elements which are the subject matter. There are 5 elements in the achievement of learning mathematics, namely whole numbers, measurement, algebra, geometry and statistics. These five elements become the subject of discussion for other related materials. In practice, Learning Outcomes are arranged per learning phase. The preparation of this per phase is a learning simplification step aimed at students to have flexible time in carrying out learning.
2. Determination of Learning Objectives. In contrast to the learning outcomes that have been patented by government policies, learning objectives are determined by each teacher. Teachers are given the freedom to determine, create and even arrange their own goals for learning mathematics. Each child has their own abilities and has their own interests and talents. Providing freedom for teachers to create their own learning objectives is one step in overcoming learning loss, because teachers better understand students in their respective classes.

3. Creating Teaching Modules. The teaching module is the same as the RPP which is designed before learning. Teaching modules are made for each learning objective that has been designed. The goal is that each learning objective can be fully conveyed to the maximum.

CONCLUSION

Based on the results of the research and discussion that have been described by previous researchers, the following conclusions can be drawn: The planning of learning mathematics in the independent curriculum begins with an analysis of the learning outcomes of each phase at the elementary school level. This analysis is carried out to map the mathematical material that will be used in the stages of each phase. The goal is to avoid unnecessary repetition of material and to maximize lesson hours for materials that require more time. After that, make learning objectives for each material and sort them based on Bloom's taxonomy. The flow of learning objectives that have been prepared are then made into teaching modules for learning preparation.

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