Mathematics and Society
University of Isfahan
http://math-sci.ui.ac.ir

Journal of Mathematics and Society
ISSN (print): 2345-6493, ISSN (on-line): 2345-6507
Vol. 8 No. 2 (2023), pp. 109-119.

http://ui.ac.ir

INTUITIVE THINKING IN MATHEMATICS EDUCATION

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Abstract. Mathematics and especially problem solving, has a major role in the growth of awareness and the emergence of potential human capabilities, and therefore it causes the development of human resources, which is the main goal of educational activities in every country. In this regard, sometimes a problem without algebraic reasoning or with boring algebraic reasoning, with the help of a geometric similarity and analogy, which is a kind of visualization, can be made so simple and beautiful that all aspects of the problem can be seen almost at a glance. If a student can show his thoughts in the form of pictures instead of thinking in words, then solving some abstract and distant problems will be easier and more pleasant for him. Therefore, illustration, explanation and intuition are important for teaching mathematics. Mathematics is the language of science and intuitive thinking of mathematics is the way to develop mathematics, and is accompanied by intuitive explanations and images in the primary course, and intuitive thinking is used in the goals of school mathematics education for thematic communication and connection. In this article, we will criticize and examine intuitive thinking by presenting some examples from textbooks.

Keywords: Formal logic, Intuitive thinking, Formal education, Informal education.

Communicated by Alireza Abdollahi.

Article Type: Research Paper.

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Received: 31/10/2022, Accepted: 17/09/2023, Published Online: 04-10-2023.

Cite this article: M. T. Heydari, A. Ebrahimi, Intuitive thinking in mathematics education, *Journal of Mathematics and Society*, **8** no. 2 (2023) 109–119.

http://dx.doi.org/10.22108/msci.2023.135589.1540 .

1. Introduction

The educational goals and its methods have many similarities in different countries of the world, and comparing the level of their achievement makes researchers aware of the influence of various factors involved in the teaching and teaching-learning process. They have, it has done. Some of these factors and elements such as textbooks and training programs are prepared by subject specialists and some other factors such as the shape and structure of the education system such as teaching hours and evaluation methods. Education is defined by education specialists. But some other factors are related to students' beliefs and expectations. And teachers are concerned about their roles and goals of educational activities. Teachers and students come to class with different interests, beliefs and motivations, and their beliefs and motivations have a determining effect on the teaching-learning process.

2. Main Resalts

Learning processes in mathematics has become a principle. Mathematics is a science that has internal order and harmony and is considered for the purpose of cultivating intellectual order and increasing the power of thinking and logical reasoning as well as mental creativity. In all courses, to solve the problem, processes such as drawing, transforming the problem into a simpler problem, transforming the problem into a sub-problem, deleting undesirable situations, etc. are emphasized. The thinking process of solving the problem is different for different people. In 1945, by writing the book "How to solve a problem", George Polia provided a model or framework for solving the problem. (See [9] and [7]). Polya tried to model the thinking of solving the problem. He proposed a four-stage model. In the process of solving these four stages, four steps are taken to solve a mathematical problem completely.

3. Conclusions

Everyone acknowledges the fact that education, especially math education, is very complicated and requires ability, skill along with patience and interest. This rule is used in the teaching resources of the general mathematics that "in most cases, approximate answers are more appropriate than exact answers." In this article, we will examine a strategy to achieve this goal. This approach has this feature that covers both types of general mathematical thinking. In fact, regarding this issue that "mathematical education is not equivalent to learning processes" and there should be a relationship between facts and mathematical education. If it is acceptable, and also to build a bridge between school and non-school mathematics and formal and informal education, we will pay. In other words, intuitive logic besides visual logic can be effective in teaching mathematics.

http://dx.doi.org/10.22108/msci.2023.135589.1540

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