International Journal of Education Humanities and Social Science

ISSN: 2582-0745
Vol. 8, No. 03; 2025

DESIGNING PROBLEMS CONTAINING PRACTICAL SITUATIONS IN TEACHING NUMBERS AND OPERATIONS FOR 5TH GRADE STUDENTS

Duong Lam Thuy
Faculty of Primary Education, TNU - University of Education, Vietnam

https://doi.org/10.54922/IJEHSS.2025.1007

ABSTRACT

In the context of modern education, the objective is not merely to transmit knowledge but also to enable learners to effectively apply the acquired knowledge and skills to real-life situations. To achieve this goal, teachers are required to innovate their teaching methods, fostering students' self-directed learning, critical thinking, and capacity for exploration. This study focuses on the design of mathematics problems embedded in real-world contexts, specifically within the topic of Numbers and Calculations in Grade 5. The paper introduces the Realistic Mathematics Education (RME) approach—an instructional method that emphasizes learning mathematics through meaningful, real-life situations. Accordingly, the article analyzes the aims, roles, and benefits of using real-world problems in the new general education curriculum. It also clarifies the concepts of "situation" and "reality" from philosophical, educational, and social science perspectives. These discussions aim to support teachers in developing engaging and relatable lessons, thereby enhancing teaching effectiveness and fostering students' competencies—particularly within the current context of educational reform.

Keywords: Realistic Mathematics Education (RME); Contextualized Mathematical Problems; Development of Mathematical Competency; Primary School Students.

1. INTRODUCTION

In the context of modern education, the development of mathematical problems connected to real-life contexts has emerged as a significant trend. This approach not only helps students better understand the practical value of the subject but also provides opportunities for them to develop essential life skills. Particularly at the primary education level—where students begin to form foundational knowledge—integrating real-world contexts into mathematics instruction is of critical importance.

One of the most prominent approaches in this field is Realistic Mathematics Education (RME), developed by Hans Freudenthal, a Dutch mathematician and mathematics educator. RME originated from Freudenthal's ideas and research during the 1960s and 1970s in the Netherlands. He believed that mathematics should not be taught merely as a system of abstract concepts, but rather as a human activity that should be learned through meaningful, real-life contexts. According to this view, students are encouraged to construct mathematical understanding actively and independently through interaction with reality.

The RME approach emphasizes learning mathematics through real-world situations, enabling students to understand and apply mathematical knowledge in a natural and creative way. Its core principle is that mathematical problems and scenarios should be closely related to everyday life,

ISSN: 2582-0745
Vol. 8, No. 03; 2025

helping learners recognize the relevance and usefulness of mathematics in their daily experiences [3], [4].

RME has transcended its Dutch origins and become an internationally influential methodology, with wide application in countries such as the United States, Indonesia, the United Kingdom, South Africa, Australia, and many others.

In Vietnam, the Realistic Mathematics Education (RME) approach began to gain attention in the early 2000s, primarily through academic research and international educational cooperation projects. Vietnamese educational researchers have explored RME as an innovative approach to improving mathematics instruction. Numerous studies have since been conducted to examine RME's principles and their applicability within the Vietnamese educational context. Given the global trend toward practical competency-based education, RME holds strong potential as a transformative method for mathematics education reform in Vietnam.

Consequently, in teaching mathematics to upper primary students, the design of real-life contextual problems serves as a vital bridge between abstract mathematical knowledge and real-world situations. This helps students gain a deeper understanding of the meaning and application of what they learn in school.

2. RESEARCH RESULTS

2.1. The Objectives of Connecting Mathematics with Real-Life Contexts in General Education

Mathematics originates from real-life practices, and it is precisely reality that forms the foundation for the formulation, development, and refinement of mathematical theories. Therefore, integrating mathematics with real-world contexts in school education plays a vital role. This connection not only helps students recognize the practical value of mathematics in everyday life, but also makes the subject more accessible, relevant, and meaningful.The core objective of linking mathematics with real-life contexts is to bring mathematical knowledge closer to students' daily lives while equipping them with the ability to use mathematics to solve real-world problems.

The 2018 General Education Mathematics Curriculum, guided by the orientation of being "streamlined, practical, and modern," emphasizes the importance of applicability and real-life integration in mathematics teaching. The curriculum encourages connecting mathematics with modern developments in the economy, science, social life, and pressing global issues such as climate change, sustainable development, and financial literacy. One of the key goals of the curriculum is to create opportunities for students to experience and apply mathematics in practical contexts, thereby enhancing their problem-solving competencies.

The use of real-world situations in mathematics instruction aims to establish a learning environment where students engage with realistic problems through concrete examples. This approach not only supports students in mastering mathematical concepts but also helps them recognize the presence of mathematics in everyday life and its potential applications. Consequently, when designing real-life situations, teachers should select familiar and relatable contexts to make mathematics learning more practical and meaningful. At the same time, this approach stimulates students' interest and motivation by allowing them to explore what they "see and hear" in daily life through the lens of mathematics.

ISSN: 2582-0745
Vol. 8, No. 03; 2025

2.2. Mathematical Problems Containing Real-Life Situations

2.2.1. Real-Life Situations

The concept of a "situation" has been explored and defined by many authors and researchers from various perspectives, depending on their disciplinary context and focus. According to Hoang Phe (2002), "A situation is the entirety of events occurring at a specific location and time, which requires individuals to think, act, respond, and find solutions." From this perspective, a situation presents challenges that require the involved person to act, make decisions, or solve problems. Nguyen Ba Kim (1997) argues that "a situation is a complex system consisting of a subject and an object. The subject is typically a human, while the object is a system—a collection of elements and the relationships among them."

The concept of "reality" (thuc tien) is also a central topic in philosophy, social sciences, and other fields. From a philosophical viewpoint, "Reality refers to the totality of historically and socially grounded human activities. Simply put, it includes everyday human actions that sustain societal existence. These are sensory-material activities through which people interact with and transform the objective world to serve their needs. Reality includes not only productive labor but also political, scientific, and other forms of activity." Pham Thi Hai Chau (2004) defines a real-life situation as "a situation that contains practical elements and requires people to act in order to address the problems that arise." Similarly, Nguyen Tien Trung (2019) defines a real-life situation as one that includes practical components and compels individuals to act to solve emerging issues.

Thus, a real-life situation refers to a scenario grounded in realistic contexts, illustrating issues that are familiar and closely connected to everyday life. In teaching, such situations are selected by teachers from real human activities, including household tasks, labor, production, and also daily learning and recreational activities. These are situations that students may have experienced or can imagine, visualize, or test in real life.

In classroom practice, real-life situations are carefully selected and structured in alignment with lesson objectives to support students in constructing deep mathematical understanding. As a result, real-life contexts generate engagement and motivation in students, especially in primary mathematics education. They have a positive impact on the learning process, encouraging autonomy, self-constructed knowledge, and providing ample opportunities for competence development—thus aligning with the goals of mathematics education reform in general education.

2.2.2. Mathematical Problems Involving Real-Life Situations

Various authors have offered differing perspectives on the concepts of "mathematical problems" and "real-life mathematical problems." According to Nguyen Ba Kim, a mathematical problem is a situation in which the solver must identify unknown elements based on the given data. G. Polya defines a problem as a need or demand that requires a conscious search for an appropriate means to achieve a clearly defined goal that is not immediately attainable. From these viewpoints, a "problem" can be understood as a scenario that requires learners to mobilize their cognitive abilities—not merely by applying theoretical knowledge mechanically, but also by adapting and connecting that knowledge to specific contexts.

Regarding the concept of "real-life problems," Bui Huy Ngoc asserts that these are problems in which the assumptions or conclusions are associated with practical, real-world elements. Similarly, Phan Thi Tinh emphasizes that real-life problems are those in which the assumptions or conclusions contain components related to real-life activities.

ISSN: 2582-0745
Vol. 8, No. 03; 2025

Thus, a real-life mathematical problem can be understood as a mathematical situation that is closely connected to daily life. It not only requires students to apply their mathematical knowledge but also challenges them to link and adapt that knowledge to specific real-world issues. Unlike straightforward theoretical exercises, real-life problems require students to go beyond mechanical problem-solving and engage in critical, flexible thinking to transform and adjust their understanding according to the situation at hand. Therefore, real-life problems are not merely tools for assessing mathematical proficiency; they also serve as means to develop problem-solving skills, foster creative thinking, and enhance students' ability to apply knowledge in everyday life. Through such tasks, learners gain a clearer understanding of the practical value of mathematics and are supported in developing the comprehensive competencies demanded by modern education.

2.2.3. Classification of Real-Life Situations in Primary Mathematics Education

Based on the degree of real-life integration, real-life situations in primary mathematics instruction can be categorized into the following types:

Type 1: Real-Life Situations Connected with Mathematical Models

This type involves scenarios in which the context is constructed based on generalized elements that are not necessarily familiar to students and are connected to the problem through a mathematical model. A key characteristic of this type is that the context does not offer students a clear visualization of the location, characters, or practical significance of the situation. As a result, students often do not perceive the relevance or value of the problem in their daily lives after solving it. The primary goal of such problems is to convey a mathematical concept or skill, with the real-life element serving only as a superficial illustration to show that mathematical knowledge can be applied to real-world situations.

Example:

Problem: "A store has 120 kilograms of rice. Each day, the store sells 15 kilograms of rice. How many days will it take to sell all the rice?"

Analysis:

Context: The scenario refers to a store selling rice but does not provide any specific details such as the store's location, who is selling the rice, or how it is related to the student. The context is vague and lacks connection to the students' real-life experiences.

Real-life element: The activity of selling rice is introduced to suggest a connection to real life, but it functions merely as an illustrative backdrop and does not help students clearly visualize the situation as something that might occur in their own lives.

Objective: The problem is primarily designed to introduce or reinforce division ($120 \div 15 = 8$ days). In this case, the focus is on conveying the mathematical content (division) through a simplified model. While students may arrive at the correct solution of "8 days," they are unlikely to gain a meaningful understanding of how this result connects to real-world scenarios.

In such cases, the context does not foster a meaningful connection between the situation and the learner; rather, it serves merely as a platform for applying a mathematical model (in this case, division). The real-life element is present only to support the transmission of mathematical knowledge and does not provide substantial practical value for students.

ISSN: 2582-0745
Vol. 8, No. 03; 2025

Type 2: Superficial Real-Life Situations

This type involves scenarios that may incorporate certain real-world elements but remain unfamiliar to students. The intention behind using such situations is often to make the problem more vivid or engaging, rather than to establish a meaningful connection with students' actual lives.

Example:

Problem: "An elephant eats 150 kilograms of grass over 3 days. On average, how many kilograms of grass does the elephant eat per day?"

Analysis:

Context: The scenario involves an elephant eating grass, which is a real phenomenon (an animal consuming food). However, for primary students—especially those living in urban areas or regions where elephants are not commonly seen—this context is not relatable or part of their daily experiences.

Real-life element: The use of the elephant is intended to make the problem more interesting and engaging, but it lacks genuine relevance to the students' own life experiences. It serves more as a decorative detail rather than a tool for fostering real-life understanding or application.

Objective: The primary purpose of the problem is to practice division ($150 \div 3 = 50$ kg), i.e., to teach the skill of calculating averages. The element of "the elephant" functions mainly as a narrative device to attract attention and does not contribute meaningful practical context for the students.

In this type of problem, the real-life aspect is introduced to increase the appeal of the exercise but does not foster familiarity or practical significance for students. The real-world component is superficial—designed to make the problem more engaging, without deeply connecting to the students' everyday realities.

Type 3: Real-Life Situations with Practical Contexts

This category refers to problems that are directly relevant or closely related to students' lives and meet the following criteria:

(1) Familiar and understandable environment: The contexts are drawn from everyday settings familiar to primary school students, such as family, school, or local community—places where students regularly engage in age-appropriate activities.

(2) Connection to relevant practical elements: The context clearly illustrates the purpose of solving the problem to meet a specific need or accomplish a real-life task. These activities not only help students practice mathematical knowledge and skills but also convey practical meaning, encouraging them to learn mathematics for real-life applications.

(3) Contains a problem that needs to be solved: The situation must pose a challenge that students cannot immediately solve or apply a known algorithm to. However, they should be able to understand the relationships within the situation, possess some relevant knowledge and skills, and believe that they can find a solution with effort.

Example: Problem: "During the past week, Lan's mother gave her 20,000 VND each day to buy bread for breakfast. Lan wants to save up to buy a comic book that costs 100,000 VND. How many days does Lan need to save, if she saves 5,000 VND per day from her bread money?"

Analysis:

Context: The situation involves saving money from daily breakfast spending—a familiar and relatable activity for primary school students. The context is close to students' real lives, as many

ISSN: 2582-0745
Vol. 8, No. 03; 2025

children are given allowance money by their parents or purchase their own breakfast. The idea of saving money to buy something desirable (like a comic book) is also common in their daily experiences.

Practical elements:

- Familiar environment: The scenario occurs within the family setting and involves daily activities (buying bread, saving money), which students can easily imagine and relate to.

- Relevant to student life: Solving the problem (100,000 ÷ 5,000 = 20 days) not only practices division skills, but also conveys a real-life lesson: saving money to achieve a personal goal. The result is meaningful for students and motivates them to apply mathematics in managing their own pocket money.

- Problem to be solved: Students do not immediately know how to calculate the number of days needed to save the required amount. However, with existing knowledge of division and an understanding of the concept of saving, they can reason through the problem and believe that they can arrive at the correct answer with effort.

Objective: This problem does more than just teach a mathematical skill; it helps students recognize the real-life application of that skill, thereby fostering interest and engagement in learning. The situation is realistic, relatable, and practically meaningful, encouraging students to apply mathematics in their everyday lives.

2.3. The Process of Designing Mathematical Problems Incorporating Real-Life Situations in Teaching Numbers and Calculations for Grade 5 Students

2.3.1. Principles for Designing Mathematical Problems Incorporating Real-Life Situations

2.3.1.1. The exercise system must align with the content and required learning outcomes of the Grade 5 Mathematics curriculum

When designing a system of exercises for Grade 5 students, it is essential to adhere closely to the required learning outcomes specified in the Grade 5 Mathematics curriculum. The exercises should be constructed at varying levels of difficulty—from simple to complex—to ensure appropriateness for students' cognitive development. Particularly, when developing mathematical problems based on real-life situations, it is important to base them on concepts students have already learned. The problems should reflect realistic scenarios that students may encounter in their daily lives. This connection between mathematics and real-life contexts fosters students' interest and engagement, deepens their understanding of mathematical knowledge, and enhances their ability to apply it effectively in practical situations.

2.3.1.2. The exercise system must ensure accuracy, scientific rigor, and modern relevance

Designing real-life-oriented mathematical exercises for primary education must satisfy three essential criteria: accuracy, scientific rigor, and contemporary relevance.

Accuracy is fundamental to ensuring that students understand concepts correctly and solve problems accurately. The problems should involve specific, reasonable, and realistic data. Furthermore, the solutions must be logical, verifiable, and clearly presented to help students distinguish between correct and incorrect responses.

Scientific rigor requires alignment with the official curriculum content. Each problem should be clearly structured, enabling students to distinguish given data from what is being asked, thereby promoting logical thinking and problem-solving skills.

ISSN: 2582-0745
Vol. 8, No. 03; 2025

Modern relevance entails embedding real-life situations that resonate with current life and societal trends. Topics such as technology use, smart consumption, energy conservation, or environmental protection can be integrated to increase the attractiveness and practicality of the problems. Additionally, the use of supporting tools such as images, charts, or educational software can help students approach problems more dynamically and effectively.

2.3.1.3. The exercise system must be appropriate to students' capacity

Suitability to students' abilities is a critical principle when designing mathematical exercises. This ensures that the exercises match students' cognitive levels, knowledge, and skills, enabling them to confidently solve problems without feeling overwhelmed. Accordingly, real-life-based mathematical problems should be constructed in ways that allow students to access and comprehend them easily. The real-life contexts should be familiar, facilitating students' ability to relate and find solutions. When students perceive that these problems are meaningful and applicable to real life, they will be more motivated and confident in addressing them.

2.3.1.4. The exercise system must be diverse

The construction of a system of exercises must include a variety of forms and implementation methods to support the development of different skills, avoid monotony, and stimulate creativity. Diversity in exercises can be demonstrated through the following aspects: tasks can be designed in multiple formats; problems should range from simple to complex, from basic to advanced; and the exercises should cover multiple aspects of real life, from common daily scenarios to more complex situations. This diversity enables students to better understand how mathematics can be applied in a wide range of practical contexts.

2.3.1.5. The exercise system must be relatable to students' everyday life

Incorporating real-life issues and situations into mathematical problems allows students to recognize the practical application of mathematics in daily life. It is necessary to draw on familiar and relevant scenarios that revolve around students' everyday experiences. When students see how mathematics can solve real-life problems, they are more likely to find the subject meaningful and develop greater interest and motivation in learning.

2.3.2. The Process of Designing a System of Mathematical Problems Incorporating Real-Life Situations

The design of mathematical problems grounded in real-life contexts can be conducted through the following steps:

Step 1: Identify the content and expected learning outcomes

Determining the content and specific learning objectives of the lesson serves as the foundation for designing real-life situations. Accurately identifying these intended outcomes is the initial step in the process of developing contextualized learning scenarios in general, and real-life-based exercises in particular. This step provides a clear orientation, ensuring that the situations are designed with precision, scientific rigor, and alignment with students' developmental characteristics.

Step 2: Select appropriate contexts and design real-life-based exercises

Teachers must carefully examine how the mathematical content to be delivered can be integrated into real-life scenarios. Each mathematical concept inherently lends itself to several potential

ISSN: 2582-0745
Vol. 8, No. 03; 2025

contexts in which it can be applied. Based on the lesson content as well as students' prior knowledge, lived experiences, and cultural backgrounds, teachers should select situations that are appropriate and accessible. The chosen scenarios should be familiar and relevant to students' everyday lives, potentially involving their personal, family, school, or community environments. These situations should be easily understood and relatable, making the mathematical content more accessible and engaging.

When designing the exercises, teachers should integrate realistic and relatable contexts that offer practical value to students' daily lives—such as real-world knowledge or life skills. This approach not only enhances the practicality of the problems but also fosters students' motivation and engagement.

Step 3: Develop solutions and revise scenarios (if necessary)

After the exercises have been designed, teachers must develop the corresponding solutions and conduct pilot testing with students to assess the effectiveness of the tasks. Key considerations during this stage include:

Are students enthusiastic about engaging with the scenario?

Are students able to address the problem requirements?

Can students model the mathematical problem from the real-life context?

Do students understand the mathematical concepts through the contextual situation?

Based on the outcomes of the trial implementation, teachers may need to revise the content and format of the scenarios as necessary. If the scenario proves unsuitable, the design process should be revisited, starting again from Step 1.

2.3.3. Illustrative example

Designing exercises associated with practice in teaching the lesson: "Review of calculations with natural numbers" in grade 5

Step 1: Determine the requirements of the lesson

After completing the lesson, students need to meet the following requirements:

- Perform addition, subtraction, multiplication, and division of natural numbers.
- Solve problems associated with solving problems with up to four calculation steps related to calculations with natural numbers.
- Students have the opportunity to develop their ability to solve mathematical problems, their ability to think and reason mathematically.

Step 2: Select situations and design exercises associated with practice

When selecting and designing practical situations associated with lessons related to calculations with natural numbers for primary school students, teachers often associate numbers with practical contexts related to quantity, length, weight, or value... of certain objects in life.

You can choose situations such as:

- Shopping situations;
- Distance situations;
- Savings situations;
- Situations related to donation and charity activities.
- Quantity calculation situations, ...

Teachers need to choose the context as well as data that is appropriate for the number of millions so that the practical situation presented is reasonable and close to students.

* Choosing a shopping and donation situation:

ISSN: 2582-0745
Vol. 8, No. 03; 2025

Problem 1. During the cold winter, the 5th grade class donated money to buy 40 warm coats for children in difficult circumstances. Knowing that each warm coat costs 75,000 VND and the 5th grade class has a total of 120 students. If all students in the 5th grade donate the same amount of money, how much money does each student need to contribute to buy that number of warm coats?

Analysis:

The situation in this problem is a problem-solving situation: With the data presented in the situation, students cannot solve the situation immediately but need to apply the knowledge and skills they have learned to gradually deduce and solve the problem.

In this situation, students need to understand the relationship between the practical factors in the situation, which is the relationship between the number of warm coats and the price of each warm coat, the relationship between the total amount of money needed to buy enough warm coats and the number of students in grade 5. To solve the situation, students need to apply the multiplication and division they have learned to find the answer to the problem.

Step 3. Construct the answer

Total amount needed to buy 40 warm coats:

40 x 75 000 = 3,000,000 (VND)

Amount each student needs to contribute:

3 000 000 : 120 = 25,000 (VND)

Answer: 25,000 VND.

The situation in this problem is taken from the context of donating charity goods, a familiar activity that often takes place in schools as well as in Vietnamese society in general. This is a suitable situation for primary school students. Through solving problems related to reality, students will realize that, in addition to learning mathematical knowledge, they also need to apply that knowledge to solve other practical problems in life.

Through solving the above problem, donating warm clothes to children in difficult circumstances during the cold winter, students learn to care for the community, especially those in difficult circumstances. This is an act of showing love and responsibility towards fellow countrymen and society. This is also a way for students to understand that they can make other people's lives better, even with small actions. Moreover, participating in donations shows a sense of responsibility in contributing to the community. This is a lesson in social responsibility, helping students form the qualities of compassion and responsibility.

Problem 2. This year's spring fair is held to raise funds for charity to help students in difficult circumstances. Huong sells cakes at her booth. Each cake costs 30,000 VND. In the morning, Huong sold 15 cakes, and in the afternoon, Huong continued to sell 20 cakes. What is the total amount of money Huong earned from selling cakes during the whole day of the fair?

Analysis:

The situation in the problem is a problem: Huong participates in the spring fair to sell cakes to raise funds for charity, to help students in difficult circumstances. With the data presented in the situation, students need to apply the knowledge and skills they have learned to gradually reason and solve the problem.

In this situation, students need to understand the relationship between practical factors in the problem, which is the relationship between the number of cakes sold and the selling price of each cake. The problem requires calculating the total amount of money earned from selling cakes during the entire day of the fair, so students need to apply multiplication to calculate the amount of money

ISSN: 2582-0745
Vol. 8, No. 03; 2025

earned from each session (morning and afternoon) and addition to calculate the total amount of money earned throughout the day.

To solve the situation, students need to:

(1) Understand the relationship between the number of cakes and the selling price: Students will multiply the number of cakes sold by the selling price of each cake to find the amount of money earned from each session.

(2) Apply addition to calculate the total amount of money earned throughout the day: After calculating the amount of money earned from each session (morning and afternoon), students will add them together to find the total amount of money earned throughout the day of the fair.

*) Construct the answer

The amount of money Huong sold cakes for in the morning is:

15 × 30 000 = 450,000 (VND)

The amount of money Huong sold cakes for in the afternoon is:

20 × 30 000 = 600,000 (VND)

The total amount of money Huong sold cakes for during the whole day of the fair is:

450,000 + 600,000 = 1,050,000 (VND)

Answer: 1,050,000 VND.

In the process of solving the problem, students need to apply two basic math operations: multiplication to calculate the amount of money earned from the number of cakes sold and addition to calculate the total amount of money earned for the whole day. This helps students not only practice their calculation skills but also understand the relationship between factors in a real-life situation, thereby developing problem-solving skills. The situation of "Spring Fair" in the problem is organized not only for fun, but also has a profound meaning of raising charity funds with the aim of helping students in difficult circumstances. Through this problem, students not only strengthen their math and financial management skills but also develop a spirit of compassion, love and the ability to care for the community. These are important qualities that help them become responsible citizens who know how to share and help those around them. These lessons will contribute to shaping the personality and creating a solid foundation for students' maturity in the future.

3. CONCLUSIONS

From the analysis presented in the article, it can be affirmed that designing word problems linked to real-life situations in Grade 5 Mathematics instruction aligns well with the current educational direction aimed at developing students' competencies. Integrating real-life scenarios into the lesson content not only deepens students' understanding of the core concepts but also enhances their ability to apply knowledge in real-world contexts. The Realistic Mathematics Education (RME) approach offers a solid theoretical foundation for creating such problems. However, to effectively develop real-life context-based problems in teaching, teachers must possess strong subject knowledge, the ability to analyze the curriculum, and a thorough understanding of students' real-life experiences. This enables them to select and integrate suitable, relatable, and educationally meaningful situations

ISSN: 2582-0745
Vol. 8, No. 03; 2025

REFERENCES

[1] Ministry of Education and Training (2021), *Philosophy of Marxism-Leninism Textbook*, National Political Publishing House Truth.
[2] Pham Thi Hai Chau, *Designing Real-Life Contextual Situations in Primary School Mathematics Instruction*, Vietnam Journal of Educational Science, Issue 40, pp. 30-35.
[3] Freudenthal, H. (1968). "Why to Teach Mathematics so as to Be Useful?" *Educational Studies in Mathematics*, 1(1-2), 3-8.
[4] Freudenthal, H. (1973). *Mathematics as an Educational Task*. Dordrecht: Reidel Publishing Company.
[5] Nguyễn Bá Kim (2017), *Mathematics Teaching Methods*, University of Education Publishing House.
[6] Bui Huy Ngoc (2003), *Enhancing the Exploitation of Real-Life Content in Arithmetic and Algebra Teaching to Improve the Application of Mathematics in Real Life for Secondary School Students*, PhD dissertation in Education, Vinh University.
[7] Hoang Phe, (2003), *Vietnamese Dictionary*, Da Nang Publishing House.
[8] G. Polya (1975), *How to Solve It* (Hoang Chung - Le Dinh Phi - Nguyen Huu Chuong translation), Hanoi Educational Publishing House.
[9] Le Thuy Trang, Pham Anh Giang, and Nguyen Tien Trung, (2021), *Applying the Theory of Realistic Mathematics Education in Teaching: Some Challenges, Principles, and Recommendations*, Journal of Education, 494(2), 37–43.
[10] Nguyen Tien Trung, (2013), *Designing Geometric Teaching Situations for High School Students in a Way That Helps Them Construct Knowledge*, PhD dissertation, Hanoi University of Education.
[11] Phan Thi Tinh (2012), *Enhancing the Application of Mathematics in Real Life in Teaching Probability Statistics and Linear Programming to Mathematics Students at Hanoi University of Education*, PhD dissertation in Education, Vietnam Institute of Educational Sciences.