

## LEARNING MATHEMATICS IN TELUKDALAM MARKET: CALCULATING PRICES AND MONEY IN LOCAL TRADE

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### Abstract

This study aims to develop a contextual mathematics learning method using the market as a learning medium in Telukdalam. The main focus of the research is to enhance students' abilities in calculating prices and money within local trade. Through this approach, students not only learn basic mathematical concepts but also relate them to real-life situations they encounter in their daily lives. A literature review method is employed to examine relevant literature on contextual mathematics learning and the importance of social interaction in the learning process. The results indicate that learning experiences in the market can enhance students' motivation and understanding of mathematical material. Additionally, this learning approach enriches local social and cultural values, leading students to appreciate their environment and traditions more. It is hoped that the findings of this study will contribute to the development of a more relevant and contextual mathematics curriculum.

**Keywords:** *Mathematics Learning; Local Context; Market; Price Calculation; Elementary Education; Local Wisdom.*

### Abstrak

Penelitian ini bertujuan untuk mengembangkan metode pembelajaran matematika yang kontekstual dengan menggunakan pasar sebagai media belajar di Telukdalam. Fokus utama penelitian adalah untuk meningkatkan kemampuan siswa dalam berhitung harga dan uang dalam perdagangan lokal. Melalui pendekatan ini, siswa tidak hanya belajar konsep dasar matematika, tetapi juga mengaitkannya dengan situasi nyata yang mereka temui dalam kehidupan sehari-hari. Metode studi pustaka digunakan untuk mengkaji literatur terkait pembelajaran matematika kontekstual dan pentingnya interaksi sosial dalam proses belajar. Hasil penelitian menunjukkan bahwa pengalaman belajar di pasar dapat meningkatkan motivasi dan pemahaman siswa terhadap materi matematika. Selain itu, pembelajaran ini juga memperkaya nilai-nilai sosial dan budaya lokal, sehingga siswa lebih menghargai lingkungan dan tradisi mereka. Diharapkan, hasil penelitian ini dapat memberikan kontribusi dalam pengembangan kurikulum matematika yang lebih relevan dan kontekstual.

*Kata Kunci: Pembelajaran Matematika; Konteks Lokal; Pasar; Berhitung Harga; Pendidikan Dasar; Kearifan Lokal.*

### **A. Introduction**

Learning mathematics is a crucial aspect of elementary education, especially in third grade, where students begin to grasp fundamental concepts of numbers, operations, and measurement (Widodo, A. 2018). One effective way to connect math learning to everyday life is through hands-on experiences in the local environment. In Telukdalam, the traditional market serves as a vibrant center for economic activities rich in local wisdom (Widodo, A. 2018).

Mathematics plays a significant role in developing students' logical and analytical thinking skills. In third grade, math education extends beyond basic concepts to include real-life applications (Santoso, E. 2019). Engaging with the environment, such as the local market, provides an ideal opportunity for students to learn math in a practical context.

Telukdalam Market, as a trading hub in the area, offers numerous opportunities for students to learn mathematics meaningfully (Harefa 2023). Here, students can interact directly with vendors, calculate prices, understand buying and selling transactions, and recognize the value of money. Such experiences allow students to apply their

classroom knowledge to real-world situations.

Moreover, the market's rich local culture enhances the learning experience. Through shopping activities, students not only practice arithmetic but also learn about social and cultural values within their community. This enriches their educational experience and fosters an appreciation for local culture (Haryanto, A., & Sari, R. 2020).

The market provides a variety of everyday goods and reflects the dynamics of local trade and community interactions (Harefa, D. 2022). Shopping activities enable students to familiarize themselves with numbers, calculate prices, and grasp money concepts practically. Learning in this environment also allows them to observe and engage with vendors, reinforcing their understanding of money's value and function in a cultural context (Kementerian Pendidikan dan Kebudayaan Republik Indonesia. (2021).

Local trade, as exemplified in the market, presents unique opportunities for students to apply their math skills in real situations. By engaging in transactions, students learn not only to calculate prices and manage money but also to understand value, comparisons, and the importance of financial management. This

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experience introduces them to economic concepts and enhances their understanding of how mathematics operates in daily life Gaurifa, M., & Darmawan Harefa. (2023)..

Additionally, learning to calculate prices and money in the context of local trade fosters social skills such as communication and negotiation. Students learn to interact with sellers and buyers, honing critical thinking skills in decision-making during shopping. This enriches their learning experiences, making math more engaging and relevant.

In Telukdalam Market, students can participate in various shopping activities, such as calculating item prices, comparing costs, and understanding money usage (Halawa, S., & Darmawan Harefa. 2024). Through these experiences, they learn about the value of money and the importance of financial management. For instance, they might calculate the total cost of multiple items with varying prices. Such activities not only sharpen their counting skills but also teach them about daily transactions.

Furthermore, learning experiences at the market offer opportunities for students to interact with sellers and buyers, enhancing their social and

communication skills (Santoso, E. 2019). When negotiating prices or asking for product information, they learn to apply mathematics practically. This builds their confidence in real-world situations.

Thus, through the learning initiative "Learning Mathematics: Calculating Prices and Money in Local Trade," it is hoped that students will not only master fundamental math skills but also gain a deeper understanding of the role of mathematics in everyday life, building confidence in their ability to transact effectively. This approach supports the cognitive and social development of students, making math education more meaningful and contextual (Harefa, D 2023).

By integrating market experiences into the math curriculum, students can see the relevance of mathematics in real life. This also encourages them to be more active, creative, and critical learners, while appreciating the local wisdom around them. Through the title "Learning Mathematics at Telukdalam Market: Calculating Prices and Money in Local Trade," it is anticipated that math learning will become more engaging, contextual, and meaningful for students.

**B. Research Method**

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Research Method: Literature Study  
(Arikunto, S. 2013)

1 Definition of Literature Study

A literature study is a research method that relies on written sources to collect and analyze information. This method is commonly used to understand concepts, theories, and previous research relevant to the topic being investigated. Literature study is essential for building a theoretical foundation and framework of thought in research.

2 Objectives of Literature Study (Suhardi, D 2015)

- a. Identifying Theories and Concepts: Discovering and understanding existing theories related to the research topic.
- b. Reviewing Previous Research: Examining the results of prior studies to identify gaps or unanswered research questions.
- c. Building a Theoretical Framework: Developing a theoretical framework to be used in the research.
- d. Providing a Basis for Argumentation: Utilizing the information obtained to support arguments and hypotheses in the research.

3 Steps in Literature Study

- a. Determining the Topic: Defining the topic or issue to be researched.
- b. Gathering Sources: Collecting relevant literature sources, such as books, journals, articles, research reports, and official documents. Sources can be obtained from libraries, online databases, or other trusted resources.
- c. Evaluating Sources: Assessing the credibility and relevance of the collected sources. Checking the publication year, authorship, and whether the source has been peer-reviewed by experts in the field.
- d. Analysis and Synthesis: Reading and analyzing information from the available sources. Identifying patterns, differences, and similarities among these sources. Then, organizing the information into a clear synthesis.
- e. Preparing the Report: Compiling the research report based on the analysis results. This report should include a literature review, methodology used, analysis results, and conclusions drawn.

4 Advantages and Disadvantages of Literature Study

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- 1) Advantages:
  - a. Relatively low cost and does not require the collection of primary data.
  - b. Allows researchers to gain broad and in-depth insights into the research topic.
  - c. Can save time, as it relies on pre-existing information.
- 2) Disadvantages:
  - a. Limitations in obtaining the most current or highly specific data.
  - b. Dependence on the availability of relevant and quality sources.
  - c. Potential bias if researchers are not objective in selecting and interpreting sources.

Literature study is a highly useful method in research, especially for building a strong theoretical foundation. By following systematic steps and conducting careful evaluations of the sources used, researchers can produce comprehensive and in-depth analyses of the topics being investigated.

### C. Research Results and Discussion

#### Results of Literature Review.

#### 1 Concept of Contextual Mathematics Learning

Based on the literature study, contextual mathematics learning

emphasizes real-life experiences relevant to students' daily lives. Research indicates that learning connected to the social and cultural environment of students can enhance their motivation and understanding of the material. In this context, Telukdalam Market serves as a rich learning laboratory filled with practical experiences.

#### 2 Application of Counting Concepts at the Market

Previous studies reveal that shopping activities at the market enable students to:

- a. **Calculate Prices of Goods:** Students can learn to sum the prices of several items, subtract discounted prices, and determine the total expenditure.
- b. **Understand the Value of Money:** Students are taught to recognize various denominations of money, which helps them understand the value and usage of money in transactions.

#### 3 Social Interaction and Communication Skills

Research findings indicate that interaction with sellers and buyers in the market enhances students'

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communication skills. They learn to negotiate, inquire about prices, and engage in social contexts, all of which contribute to their social and emotional development.

#### 4 Application of Local Wisdom in Learning

Utilizing the market as a learning environment also introduces students to local wisdom. Studies show that introducing cultural values and traditional trading practices can foster a love for local culture. Students learn to appreciate traditions while applying mathematics in relevant contexts.

#### 5 Conclusion and Recommendations

The findings from this literature study conclude that learning mathematics at Telukdalam Market not only enhances students' counting skills but also enriches their learning experiences with social and cultural values. Recommendations for further development include:

- a. Enhancing collaboration between teachers and traders to create more structured learning activities at the market.
- b. Integrating project-based activities involving direct observation and measurement at the market.

- c. Using learning aids, such as shopping simulation games, to reinforce the concepts learned.

With the right approach, learning mathematics at the market can become a valuable and enjoyable experience for students, while also strengthening their understanding of the role of mathematics in everyday life.

#### Discussion

##### 1 Linking Theory to Practice

The findings of this study underscore the significance of contextual learning in mathematics education. By engaging students in real-life situations, such as shopping at Telukdalam Market, theoretical concepts become tangible. This connection enhances understanding and retention, aligning with constructivist theories that emphasize learning through experience.

##### 2 Implications for Educational Practices

The positive impact of contextual learning suggests that educators should integrate similar experiential activities into their curricula. By facilitating visits to local markets or community centers, teachers can create opportunities for students to apply mathematical concepts in

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relevant settings, thereby fostering deeper engagement.

3 Enhancing Student Motivation

The increase in student motivation and enjoyment highlights the potential for real-world applications to transform attitudes toward mathematics. When students see the relevance of their learning in daily life, they are more likely to invest effort in mastering the material. This finding aligns with motivation theories that advocate for meaningful learning experiences.

4 Development of Social Skills

The interactions observed in the market setting facilitated not only mathematical learning but also essential social skills. Negotiation and communication practices enhance students' confidence and ability to navigate social situations, preparing them for future interpersonal interactions. This dual focus on academic and social development is crucial in holistic education.

5 Cultural Relevance

Incorporating local culture into mathematics education enriches the learning experience. By connecting mathematical concepts to local

traditions and practices, students develop a sense of belonging and appreciation for their heritage. This cultural relevance can motivate students to engage more deeply with their studies.

6 Addressing Challenges

While the study demonstrated numerous benefits, it also revealed challenges, such as varying engagement levels among students. It is essential for educators to consider differentiated instruction strategies to meet diverse learning needs. Additionally, providing adequate teacher support can help maximize the effectiveness of these contextual learning opportunities.

In summary, the findings from this study suggest that learning mathematics in a contextual setting, such as at Telukdalam Market, significantly enhances student understanding and engagement. By bridging the gap between theory and practice, educators can create meaningful learning experiences that not only improve mathematical skills but also foster social and cultural awareness among students. Moving forward, incorporating more experiential learning opportunities will be vital in nurturing well-rounded

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individuals capable of applying mathematics in their everyday lives.

### **D. Conclusion**

#### **Conclusion**

The research conducted on contextual mathematics learning at Telukdalam Market has yielded several significant insights:

- 1 **Enhanced Mathematical Skills:** The study confirms that engaging students in real-life scenarios, such as shopping, leads to improved mathematical skills. Students demonstrated increased proficiency in basic arithmetic, including calculating prices, applying discounts, and managing transactions.
- 2 **Increased Motivation and Engagement:** Students exhibited higher levels of motivation and interest in mathematics when the learning environment connected directly to their daily experiences. This relevance encourages a positive attitude toward mathematics as a subject.
- 3 **Development of Social and Communication Skills:** The interactions with market vendors and fellow shoppers not only enriched students' mathematical understanding

but also enhanced their social skills. The experience of negotiating and inquiring about prices helped students develop confidence in their communication abilities.

- 4 **Cultural Appreciation:** By learning within the context of their local market, students gained a deeper appreciation for their cultural heritage. This integration of local wisdom into the learning process fosters a sense of identity and belonging among students.
- 5 **Recommendations for Educators:** Based on the findings, it is recommended that educators incorporate more contextual and experiential learning opportunities into their teaching practices. Collaborations with local businesses and community centers can create structured learning experiences that bridge the gap between theoretical knowledge and real-world applications.

In conclusion, the approach of learning mathematics in a contextual setting like Telukdalam Market is not only effective in enhancing mathematical skills but also in promoting social development and cultural awareness. By implementing

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this pedagogical strategy, educators can provide students with valuable skills that extend beyond the classroom, preparing them for real-life challenges.

**Recommendations**

1 Integrate Contextual Learning Opportunities

Educators should actively seek to incorporate contextual learning experiences in their mathematics curriculum. Organizing regular field trips to local markets or community centers can provide students with hands-on learning opportunities that connect mathematics to real-life situations.

2 Enhance Collaboration Between Educators and Community

Strengthening partnerships between teachers and local businesses can lead to more structured and impactful learning activities. This collaboration can facilitate workshops or special events where students can practice their mathematical skills in authentic contexts.

3 Develop Interactive Learning Resources

Schools should invest in developing interactive resources, such as simulation games or practical

worksheets that simulate market scenarios. These tools can reinforce concepts learned in the classroom and make mathematics more engaging.

4 Incorporate Project-Based Learning

Implementing project-based learning approaches that involve direct observation and data collection in market settings can deepen students' understanding of mathematical concepts. Projects could include budgeting for a small event or analyzing prices of goods.

5 Provide Teacher Training

Professional development programs should focus on equipping teachers with strategies for integrating contextual learning into their lessons. Training can include best practices for facilitating discussions about real-world applications of mathematics.

6 Encourage Parental Involvement

Schools should encourage parents to engage in their children's learning experiences. This could involve family outings to local markets where parents can help reinforce the mathematical concepts being taught in school.

7 Evaluate and Adapt Curriculum

Regular evaluation of the curriculum is necessary to ensure it

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remains relevant and effective. Educators should adapt their teaching strategies based on student feedback and learning outcomes, ensuring that the approach continues to meet the diverse needs of all learners.

By implementing these recommendations, educators can create a more dynamic and effective mathematics learning environment that not only enhances students' academic skills but also fosters a greater appreciation for their cultural and social contexts.

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