



# CTL-BASED QUADRILATERAL POCKET MEDIA FOR GEOMETRY LEARNING IN JUNIOR HIGH SCHOOL

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## Introduction

Understanding geometry at the junior high school level is crucial for improving students' numeracy literacy and critical thinking skills. However, geometry learning is often abstract and lacks conceptual understanding of real-world experiences, resulting in many students struggling to grasp the properties of plane structures and their application in everyday life. To address this challenge, a Contextual Teaching and Learning (CTL)-based rectangular pocket media was developed that connects geometric concepts to students' real-world contexts.

The aim of the research is to develop and implement CTL-based rectangular bag media to improve the understanding of geometric concepts, numeracy literacy, and critical thinking skills of junior high school student.

## Methodology

The research was conducted using the ADDIE model (Research and Development). The subjects were 30 seventh-grade junior high school students in Pasuruan.

Figure 1. ADDIE Model in Media Development



Table 1. Research Instruments

Instrument	Assessment Instrument	Respondents	Assessment Scale
Validation Sheet	Media Validity	Subject Matter/Media	Scale 1-5
Teacher Questionnaire	Practicality and Effectiveness	Teacher	Likert Scale 1-5
Student Questionnaire	Practicality and Effectiveness	Student	Likert Scale 1-5
Observation Sheet	Learning Activities	Teachers, Students	Percentage of Activities

## Results

The learning media developed is a rectangular pocket containing activity cards and concept maps to help students explore geometric concepts. This media facilitates student discussion, exploration, and reflection, improving geometric understanding, active interaction, and critical thinking skills. The validity of this media reached 86.09%, and its practicality was assessed from the ease of use by teachers and students, respectively, 78% and 71.06%. Teacher and student activity increased to 80% and 84%, making learning more interactive. This media has proven valid, practical, and effective for junior high schools, so it is recommended for use in geometry learning.

Figure 3. Bar Chart of Media Validity, Practicality, and Effectiveness

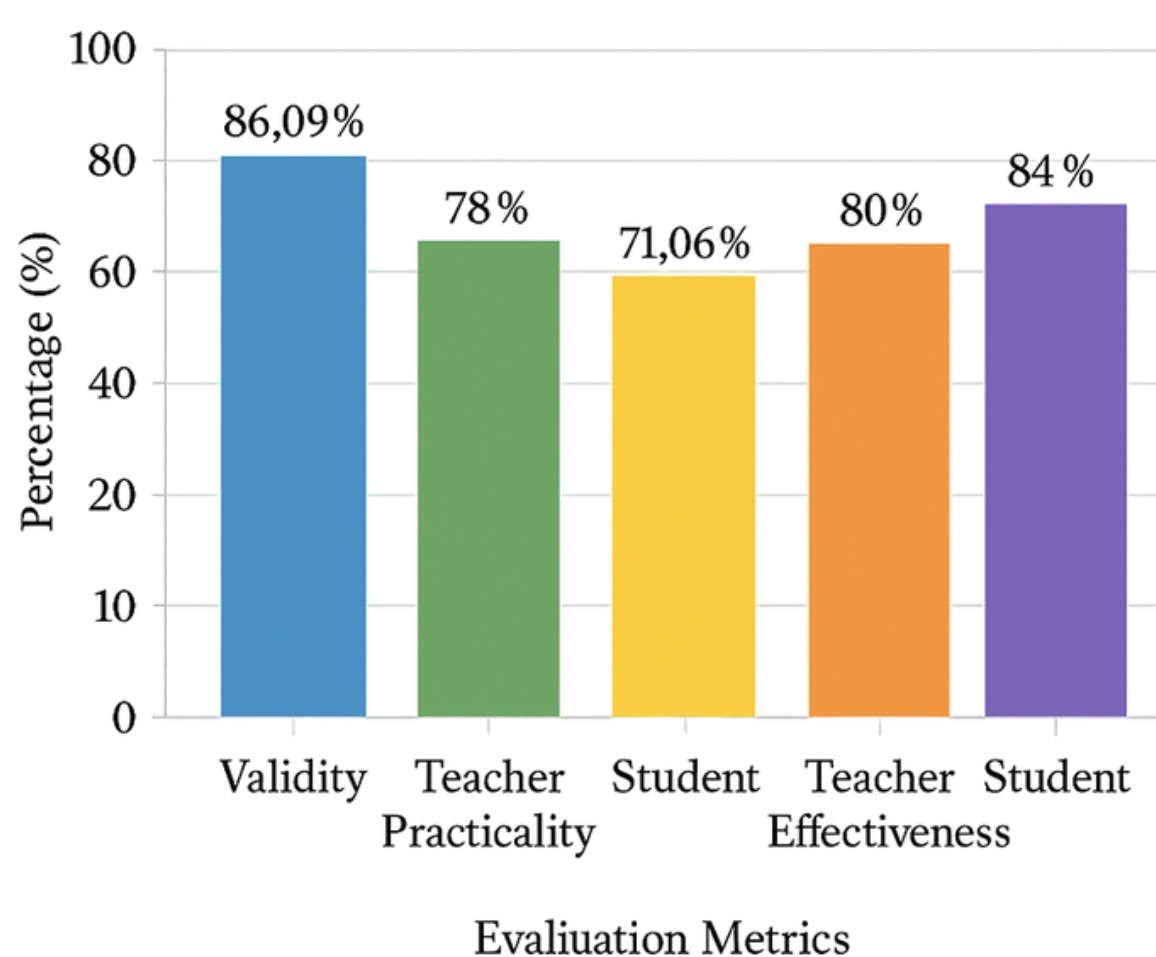
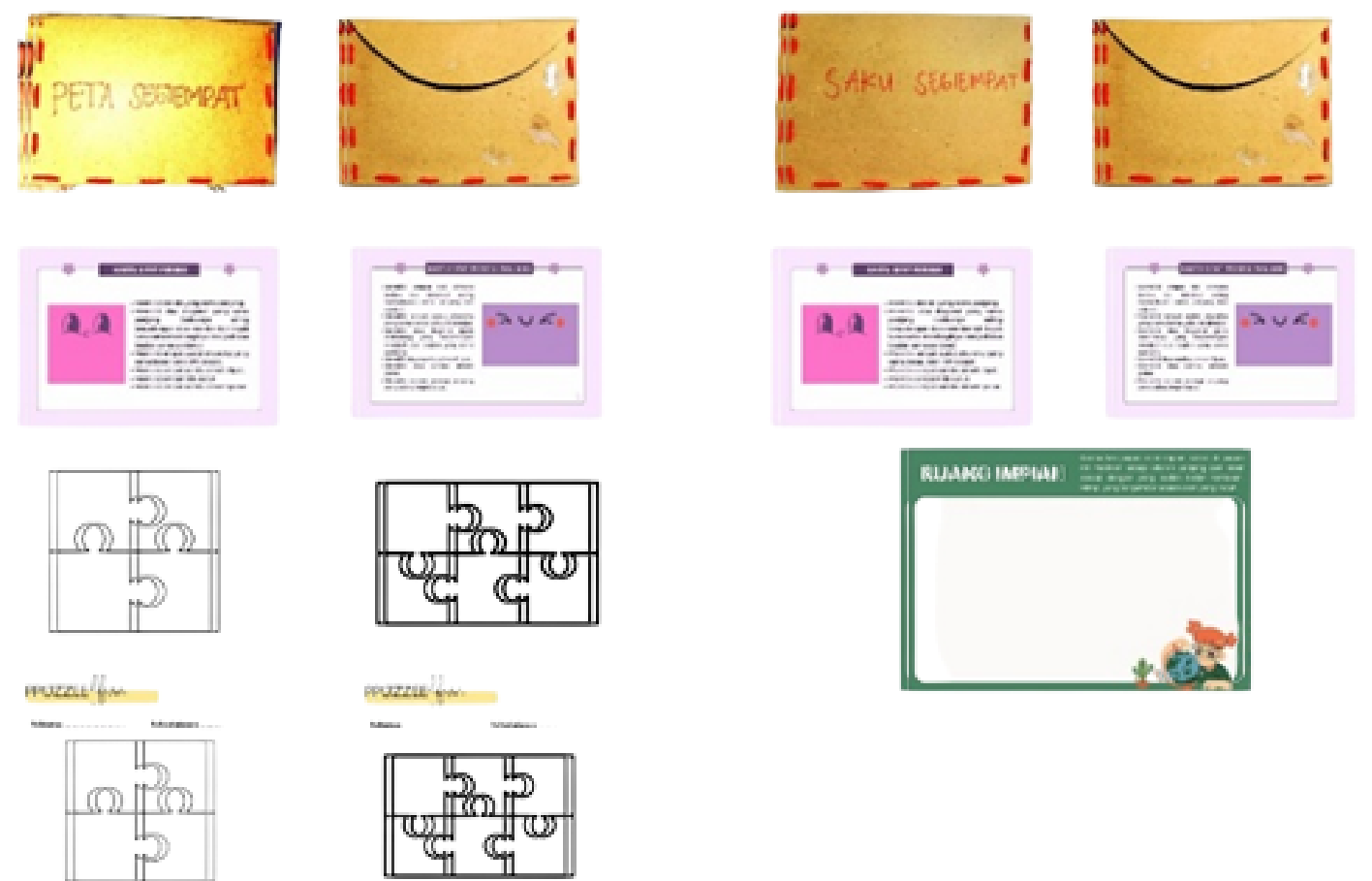


Figure 2. Early Prototype to Prototype 1



## Conclusion

The rectangular pocket media, equipped with activity cards and concept maps, has been proven to facilitate the exploration of geometric concepts, such as squares, rectangles, and other geometric shapes relevant to everyday life. By integrating CTL principles, this media successfully bridges the gap between abstract mathematical concepts and students' real-life experiences, thereby increasing students' understanding, engagement, and interest in geometry.



## References