

# Student Response to the Application of Augmented Reality Media with RME Approach

Ahmad Budi Sutrisno<sup>1</sup>, Hamzah Upu<sup>2</sup>, Rusli<sup>3</sup>

State University of Makassar, Indonesia

## Abstract:

The use of technology in learning is increasingly becoming a major concern in the world of education. One innovation that attracts attention is the application of Augmented Reality (AR) Media with a Realistic Mathematics Education (RME) approach in mathematics learning. This study aims to investigate the response of students to the application of AR media with the RME Approach in the context of mathematics learning. Qualitative quantitative research methods are used with experiments that accept learning with AR media and the RME Approach. Data collection instrument questionnaire student response to the media used. The results of the study are expected to provide a deeper understanding of how students respond to the application of AR media with the RME Approach. The implications of these findings can be used to improve the design of mathematics learning that is more interactive and relevant to the needs of learners in this technological era. In conclusion, the application of AR media with the RME approach has the potential to improve student response and the effectiveness of mathematics learning

**Keywords:** Augmented reality, Response, Realistik Matematis Education.

## 1. Introduction

The response of students to the application of AR media with the RME approach is an interesting thing to study. As a learning development, the use of AR media can create a more interesting, interactive, and immersive learning atmosphere. The response of students to this innovation can reflect the effectiveness of these learning methods in providing understanding and motivation to learn.

This study aims to explore the response of students to the application of AR media with the RME approach in mathematics learning. By understanding their responses, useful information can be obtained in improving the quality of mathematics learning through technology integration. Technology challenges in learning should be welcomed by the world of education in terms of efforts to teach students, according to (McClain, A. & North, T, 2021; Adi Nugroho, 2020 with the application of technology integration in learning is able to significantly affect the MAP Growth score in learning mathematics and through AR provides a meaningful mathematics learning experience. Another study by Sumedha (2017) revealed the fact that technology has a positive impact on the learning effectiveness of students in India.

Learning media has an important role in increasing the effectiveness of the learning process. Technological developments have a positive impact on the world of education, one of which is through the application of Augmented Reality (AR) Media with a Realistic Mathematics Education (RME) approach. The RME approach emphasizes learning mathematics that is concrete, real, and relevant to everyday life. Meanwhile, AR provides an additional dimension in the form of visual, sound, or interactive elements that can improve understanding of concepts (Marcelo C. Borba, ZDM Mathematics Education, 2016).

## 2. Material And Method

The design of this study refers to the theory of Creswell and Plano Clark (2011). Which integrates quantitative and qualitative methods in a study to provide a more comprehensive understanding of the phenomenon under study

The population of this study was all grade VIII students of SMPN 4 Bantimurung. The technique of sampling research using random sampling is randomly selected from populist, the sample in this study is class VIII.b students with a total of 32 people.

Student response data was obtained from the questionnaire of the participants' responses. The questionnaire is designed to collect data on students' perceptions of learning using AR media with an RME approach.

### 3. Result And Discussion

Data on students' responses to the media were obtained from questionnaires distributed at the end of the meeting. This questionnaire consists of 3 aspects, namely media design aspects, operational aspects and communication aspects. The results of the questionnaire of students' responses to the media can be seen in the table below:

Data Recapitulation Table of Student Response to Media

No	Aspects	Achievement	Category
1	Media Design	3,5	Positive
2	Operational	3,4	Tend to be Positive
3	Communication	3,6	Positive
<b>Average</b>		3, 5	Positive

The recapitulation of the results of student responses after using ARMATIK media was at a score of 3.5 with a positive category. This score of AR media with an RME approach based on the RME approach in the context of learning, showed a positive response. The response indicates that there is a significant level of engagement from learners in utilizing the media. It is important to emphasize that the results of this positive response reflect a strong response to the use of AR media with the RME approach as a learning tool. This response also reflects the acceptance and application of technology in learning. By using these media, learners overall showed good participation, illustrating that their involvement in the use of such media took place positively.

When considered that the use of ARMATIK media is a new experience for learners, the results of this positive response also reflect their ability to adapt to technology new. This positive response reflects their readiness to explore new experiences and use them as effective learning tools.

ARMATIK media is not just a technological tool, but a means that allows the application of a planned and effective learning approach. Not only that, stimulus response theory also plays a vital role in designing learning experiences using ARMATIC media. In an interactive and engaging environment, learners respond to learning materials more actively and engaged. This finding is in line with the results of research by Zhang et al. (2019) which shows an increase in students' understanding of concepts and problem-solving skills in mathematics learning through ARMATIK technology.

### 4. Conclusion

In conclusion, the results of responses obtained from students to the use of AR media with the RME approach underline the positive potential in integrating technology in learning. This positive response not only reflects good participation, but also illustrates that the RME approach has a strong impact in stimulating learners' interest and interaction in utilizing media the learning. Based on the questionnaire notes of students' responses to the media, not a few students also gave positive comments, one of which wanted similar media to be developed on other materials, some even gave comments very happy to learn geomerti by using this media.

ARMATIK media creates a learning environment that supports exploration, creativity, and interaction between students. This creates a learning experience that is not only informative, but also connects learning material with everyday life, strengthening the connection between theory and practice. In the context of this study, the results of research by Zhang et al. (2019) and Wang et al. (2020) which show increased

understanding of students through the use of mathematical ARMATIK are in line with a meaningful and learner-centered learning approach.

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## Author Profile



Ahmad Budi Sutrisno, born in Maros Regency, South Sulawesi, Indonesia on June 14, 1989. Writeri completed his S-1 education in 2011 at the Andi Matappa Teacher Training and Education College (STKIP). In 2012 he continued his master's degree in mathematics education at Makassar State University. Currently, the author is undergoing doctoral education at Makassar State University. The author has been involved in the world of education since 2010 as an educator at SMPN 22 Bantimurung and in 2015 decided to have an active career at STKIP Andi Matappa as a teacher. Currently, the author holds the position of head of the mathematics education study program at STKIP Andi Matappa