



Analysis of Needs for the Development of Audiobooks Based on Realistic Mathematics Education for Fourth-Grade Elementary School Students

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Abstract

The purpose of this study was to describe the need for the development of an Realistic Mathematics Education (RME)-based audiobook for fourth-grade elementary school students. This study focused on two aspects, namely (1) the interest of fourth-grade students in learning mathematics; and (2) the need of RME-based audiobook media by fourth-grade teachers. The participants of this study were 135 students and 12 teachers of grade IV at four elementary schools in the Merauke area, Indonesia. Using a qualitative methodology, the data were collected through questionnaires, interviews, and documentation. The results of the study revealed that the interest of fourth-grade students in learning mathematics was still lacking. The teacher's way of teaching was considered unattractive and the mathematics learning materials delivered by the teacher were difficult to understand. Meanwhile, the need of RME-based audiobook media by the fourth-grade students and teachers was quite urgent. It was because 79% of the teachers had never used audiobook media when teaching mathematics. In

addition, 53.7% of the teachers had never taught mathematics using the RME approach.

Keywords: *development, audiobooks, realistic mathematics education.*

Abstrak

Tujuan dari penelitian ini adalah untuk mendeskripsikan kebutuhan pengembangan audiobook berbasis RME untuk siswa kelas IV SD. Penelitian ini difokuskan pada dua aspek, yaitu (1) minat siswa kelas IV dalam pembelajaran matematika; dan (2) kebutuhan media audiobook berbasis RME oleh guru kelas IV. Partisipan penelitian ini adalah 135 siswa dan 12 guru kelas IV di empat sekolah dasar di wilayah Merauke, Indonesia. Menggunakan metode kualitatif, data dikumpulkan melalui kuesioner, wawancara, dan dokumentasi. Hasil penelitian mengungkapkan bahwa minat siswa kelas IV dalam pembelajaran matematika masih kurang. Cara mengajar guru dinilai kurang menarik dan materi pembelajaran matematika yang disampaikan guru sulit dipahami. Sementara itu, kebutuhan media audiobook berbasis RME oleh siswa dan guru kelas IV cukup mendesak. Hal ini dikarenakan 79% guru belum pernah menggunakan media audiobook saat mengajar matematika. Selain itu, 53,7% guru belum pernah mengajar matematika dengan pendekatan RME.

Kata kunci: *pengembangan, buku audio, pendidikan matematika realistik.*

INTRODUCTION

Every country in this world has a different level of civilization. One of the efforts to enhance the progress of its civilization is by improving the education sector. In Indonesia, education is defined as a conscious planning through learning processes to cultivate the students' potential. Therefore, they can develop better personality, self-control, intelligence, noble character, and spirituality so that they can become useful to their religion, society, nation and state (National Education System Law, 2003).

Based on that definition, one of the ways to achieve the ideal goals is through the teaching of mathematics. Hutagalung (2020) argues that mathematics is a scientific discipline that deals with the study of abstract forms and structures and the relationships between them. Thus, to understand the structure and its relationship, it is necessary to master the concepts contained in mathematics itself. With these demands, the researchers assume that learning mathematics will stimulate the students' mindsets so that it can train their intelligence.

In an effort to obtain adequate intelligence, a high-quality learning process of mathematics is needed (Elleuch & Jarboui, 2018; Poobrasert & Satsutthi, 2020). Mathematics has so far been viewed as a frightening subject. But actually, it needs to be seen in a more comprehensive manner. It is because learning is a process influenced by many factors related to learning conditions. One of these factors is the use of learning media. According to Yuliawati et al. (2020), media is anything that can be used as a means of delivering messages. Therefore, media can stimulate the students' thoughts, feelings, and willingness to create a learning process. Learning media can add new information that allows students to achieve the learning objectives that have been set. It is hoped that the use of media can provide convenience both for students and teachers. It means that, on the one hand, the use of media will make students interact directly with the subject of study, making it easier for them to understand the learning materials. On the other hand, the use of media can represent things

that cannot be conveyed by the teacher through verbal communication, so that the obstacles faced by students in understanding information can be overcome (Rohani, 2019).

One type of the learning media that can be used is an audiobook. It is a recording of a book (a voice book) being read out loud, either in the form of a scientific, fiction, or another book (Anwas, 2015). According to Anwas (2015), the use of audiobook media has good potential for educational purposes, especially for auditive materials. In the context of learning mathematics, the use of audiobook media has promising prospects. It is partly due to the characteristics of mathematics materials that in principle requires students to memorize. Thus, an extraordinary memory is needed. To have a good memory, students need to be trained continuously. This is why it is important to use audiobook media to make it easier for students to learn anytime and anywhere by listening to the contents of the books being studied (Bircham et al., 1997; Elgendy, 2020; Engelen, 2008). It is in line with what was stated by Oktaviani et al. (2022) in their research on audiobook media, it was found that the responses of third-grade students and teachers were 83.54% and 88.75% respectively. Those responses were included in the very practical category.

In addition to the use of the audiobook media above, the Realistic Mathematics Education (RME) approach can also be used in the learning process of mathematics. According to Chisara et al. (2018), RME is an approach to learning mathematics that departs from the reality and experiences of students. In other words, the RME approach provides space for students to discover and reconstruct mathematical concepts based on realistic problems presented by the teacher. It is usually called "learning by doing", so that the information obtained can be stored longer in the students' long-term memory. (Bakar & Ismail, 2019; Cheng et al., 2022; dos Santos, 2017; Fadilah et al., 2021; Lee & Galindo, 2021).

There are many relevant studies regarding audiobook media, although they are not exactly the same as the audiobook concept. Previously, the use of audiobook media is for subjects or students with special needs, so it is quite rare to find the use of audiobook media for normal subjects or students. It is what later became a novelty in this research. The first relevant research was conducted by Putri (2020) about android-based Euclid geometry learning application for the blind. The research is considered relevant because the concept of Euclidean Voice used is almost exactly the same as the audiobook concept, namely as a type of voice-based learning media.

In the Putri's (2020) study, it was found that the use of the Euclidean Voice application was quite effective. It could optimally increase the students' understanding of the Euclidean Geometry materials. In addition, the users gave positive responses to learning mathematics at a higher level. Furthermore, the second relevant research was conducted by Catrining et al. (2018) about the effect of realistic mathematics education learning approach on interest and learning outcomes of mathematics. In Catrining et al. (2018) research, the results obtained are as follows: (1) there were differences in the students' learning interests taught by the RME approach and the students' learning interests taught by the conventional approaches; (2) the learning outcomes of students using the RME approach were also different from the learning outcomes of students using the conventional approaches; and (3) there were simultaneous differences in the interests and learning outcomes of students who used the RME approach with the interests and learning outcomes of students who used the conventional approaches.

The importance of using audiobook media and the influence of the RME approach made researchers interested in conducting research with the title "Realistic Mathematics Education (RME) Audiobook Development Needs Analysis for Grade IV Elementary School Students". The purpose of this study was to describe the need for the development of an RME-based audiobook for fourth-grade elementary school students. This study focused on two aspects, namely (1) the interest of fourth-grade students in learning mathematics; and (2) the needs of RME-based audiobook media by fourth-grade teachers.

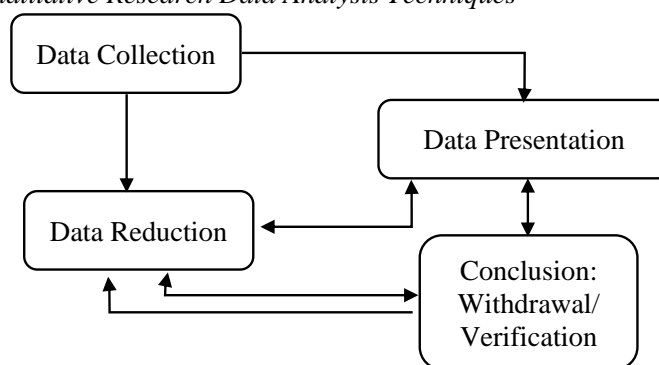
METHODS

Employing a qualitative research design, this study sought to shed light on the meaning of a learning condition directly experienced by students and teachers in natural settings. According to Anggito and Setiawan (2018), qualitative research is research that places more emphasis on understanding the problems in social life based on actual, complex and detailed conditions. The participants of this study were 135 students and 12 teachers of grade IV at four elementary schools in the Merauke area, Indonesia. In this study, the data were collected using questionnaires, interviews, and documentation. The data collected were then tested for validity by triangulation. The triangulation was used as a comparison as well as a way for researchers to check the validity of the data so that errors that occurred during the data collection could be minimized (Moleong, 2016). In this research, the triangulation technique used was the data source triangulation.

As one of the data collection techniques in this study, questionnaires (see Sugiyono, 2014) containing a set of questions/statements were spread to the respondents. The researchers sent the questionnaires to 135 students and 12 teachers of grade IV. Meanwhile, the interviews (see Sudaryono, 2016) were administered through conversation between the interviewer and the interviewee. In this study, the researchers interviewed four teachers of grade IV using the interview sheet instrument. In addition, the documentation (see Moleong, 2016) was conducted by collecting documents from the field. In this research, the documentation was gathered from the results of the questionnaires and interviews.

According to Moleong (2016), data analysis techniques in qualitative research are efforts made by researchers by organizing and sorting data so that it can be managed, synthesized, and described in reports. The data analysis technique used in this study followed the steps made by Miles and Huberman in Sugiyono,(2014), as described in Figure 1 below.

Figure 1
Qualitative Research Data Analysis Techniques



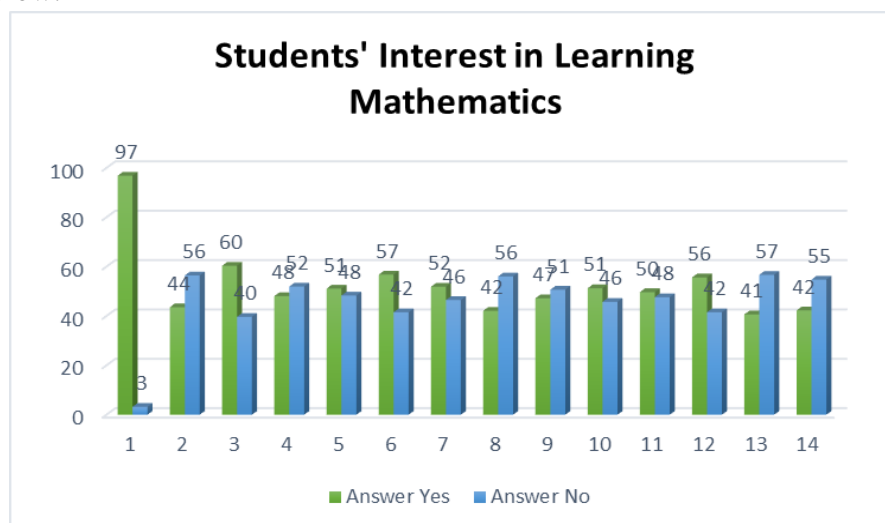
In the first stage (data collection), the researchers spread questionnaires to 135 students and 12 teachers of grade IV. The researchers then conducted interviews with one of the fourth-grade teachers, and collected supporting document files. The four schools involved were Elementary School of Inpres Polder Merauke, Elementary School of Inpres Mopah Baru Merauke, Elementary School of Wasur 2, and Elementary School of Muhammadiyah Merauke. The selection of this school was based on research objectives, so the technique of selecting this school was purposive sampling.

In the second stage (data presentation), the researchers presented, organized, and then sorted the data. This stage was administered to garner the essential data, making it easier for the researchers to implement next stage. In the third stage (withdrawal or verification), an important stage in qualitative research, the researchers organized, analyzed, and interpreted data in a systematic and objective way. By doing this stage well, the qualitative research results can provide a deeper understanding of the phenomenon under study.

RESULTS AND DISCUSSION

The Interest of Fourth-Grade Students in Learning Mathematics

The students' interest in learning mathematics was measured using a questionnaire consisting of 14 questions, 7 positive questions, and 7 negative questions. The following are questions about the students' interest in learning mathematics: (1) I pay attention to the teacher when explaining mathematics; (2) If a friend asks, I am happy to help explain to him; (3) If there are materials that I do not understand, I prefer to be silent; (4) I feel that learning mathematics at school is easier to understand than studying at home; (5) The teacher's explanation of the materials is too boring; (6) I feel lazy to follow the lesson because it is boring; (7) I prefer to talk rather than pay attention to the teacher when explaining math lessons; (8) I am enthusiastic about taking math lessons because mathematics is my favorite subject; (9) The teacher teaches mathematics in a fun way, (10) I feel that I cannot understand mathematics well; (11) I am more like to enter class before learning begins; (12) In my opinion, it is better to be late in submitting assignments even though not all have been resolved; (13) I always finish math assignments on time; (14) I think math is difficult to learn. The results of the questionnaire on the students' interest in learning mathematics are presented in Graph 1 below.



Graph 1. Students' Interest in Learning Mathematics

Based on the results of the questionnaire in the graph above, there are several aspects that can be analyzed, namely the students' perceptions of teachers, the enthusiasm for learning, the problem-solving skills, and the discipline in doing assignments. First, from the students' perceptions of the teacher, the majority of the students (97%) paid close attention when the teacher explained mathematics. However, some students (51%) thought that the teacher's explanation of the materials was too boring. In addition, more than half of students (60%) preferred to be silent when they did not understand the materials. It shows that although the teacher is considered effective in explaining, there are several factors that make the students less interested in learning mathematics or find it difficult to understand the materials being taught. One of the factors is that the teacher never uses innovative learning media. It is in line with research conducted by Anwar et al. (2022) which states that the use of instructional media is considered effective in increasing the students' interest in learning.

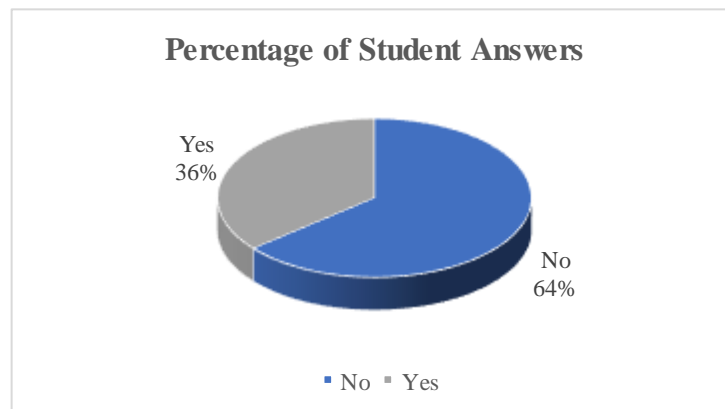
Second, in terms of enthusiasm for learning, only a small proportion of students (42%) felt enthusiastic when participating in mathematics because mathematics was their favourite subject. On the other hand, some students (57%) felt lazy to take lessons because they felt bored. It shows the importance of interesting and challenging learning for students so that they can continue to be motivated in learning. It is in line with a study conducted by Putri (2011) that teachers should use the RME approach to make learning more interesting and challenging for students. It is shown from the findings in her research that showed that all students were active during the learning process, and around 86.3% of students could take part in learning at a very good level.

Third, in terms of problem-solving skills, some students (51%) found it difficult to understand mathematics, while only a small proportion of students (47%) felt that the teacher teach mathematics in a fun way. It shows there is a need for effective and fun learning approaches, methods, and media to help students understand mathematical concepts better. It is in line with a study conducted by Ningsih (2022) that states that the application of audiobooks in learning mathematics can improve student learning outcomes and increase their involvement during online learning by 100%.

From the data, there are several factors that influence the effectiveness of learning mathematics, namely approaches, methods, or learning media that are effective and enjoyable. Those factors play a pivotal role in developing the student enthusiasm for learning, student perceptions of teachers, problem solving skills, and discipline in learning. Therefore, it is important for teachers and parents to work together to create a conducive learning environment and encourage students to develop a passion for learning and good problem-solving skills. One of them is by using learning media in the form of audiobooks based on RME.

Analysis of RME-Based Audio Media Needs from Fourth-Grade Students

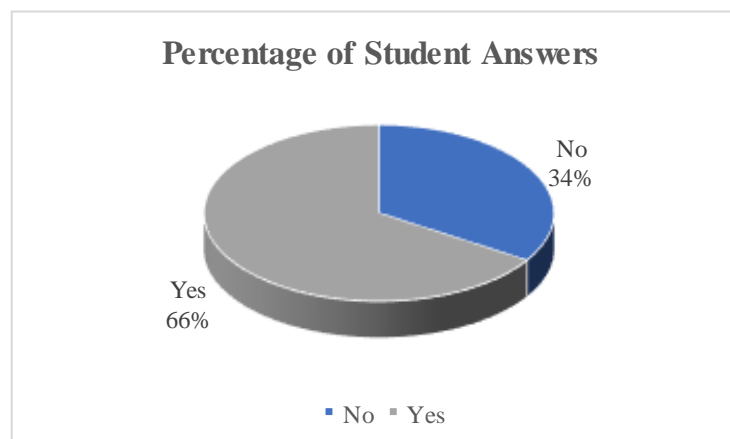
- a. The statement on the student questionnaire "Teachers teach mathematics in a fun way" can be seen in Graph 2 below.



Graph 2. Percentage of Student Answers to the Teacher's Teaching Method

Based on Graph 2, from the statement "Teachers teach mathematics in a fun way" that was conveyed, 64% of the students answered "no". It can be interpreted that most teachers are less skilled in teaching mathematics. Unpleasant learning ultimately has an impact on the students' interest. In order to be fun and interactive, teachers can use media when carrying out learning. It is in line with a study by Suriyanti and Thoharudin (2019) that states that the use of learning media will improve teacher skills in choosing and determining media based on learning materials and resources.

- b. Statements on student questionnaires "In my opinion, mathematics subject matter is difficult to learn".



Graph 3. Percentage of Student Answers to Understanding of Material

Based on Graph 3, from the statement "In my opinion, the subject matter of mathematics is difficult to learn" delivered, 66% of students answered "yes". It can be interpreted that the explanation of mathematics learning materials delivered by the teacher cannot be understood properly by most students. The students' poor understanding of the materials ultimately has an impact on the students' interest. In fact, to allow the students to understand the materials being explained, the teacher can use the media when delivering lessons. It is in line with a study by Gusmania and Wulandari (2018) that states that there is a

difference in effectiveness between learning that uses media and learning that does not use media on the students' understanding.

Analysis of RME-Based Audio Media Needs from Fourth-Grade Teachers

The results of the teacher's questionnaire related to learning mathematics are described as follows.

Table 1. The Results of the Teacher's Questionnaire Related to Learning Mathematics

No.	Statement	Answer Percentage			
		4	3	2	1
1.	As a teacher, I have used instructional media in the mathematics learning process.	54	38	7.7	0
2.	As a teacher, I feel that learning media can help and support the process of learning mathematics more effectively.	77	23	0	0
3.	As a teacher, I feel that it is easier for students to understand subject matter when using learning media.	62	38	0	0
4.	As a teacher, I feel that learning media in the form of audiobooks is more interesting than non- audiobook media.	15	77	7.7	0
5.	As a teacher, I have used learning media in the form of audiobooks in learning mathematics.	0	31	46	23
6.	I agree that learning media in the form of audiobooks have an attractive appearance.	62	31	7.7	0
7.	I feel that mathematics lessons will be interesting by using learning media in the form of audiobooks.	38	54	7.7	0
8.	I feel that learning media in the form of audiobooks will make students learn more independently.	15	62	23	0
9.	I feel that learning media in the form of audiobooks will make it easier for me to teach mathematics.	31	62	7.7	0
10.	As a teacher, I feel that learning media in the form of audiobooks are interesting. Such learning media will make students more enthusiastic in learning.	31	52	7.7	0
11.	I feel that media in the form of audiobooks are needed in learning mathematics	15	69	15	0
12.	I have never taught multiplication material using the RME approach in class.	46	7.7	31	15
13.	As a teacher, I find it difficult to instill understanding of concepts and solving mathematical problems in multiplication material due to limited teaching materials and media.	0	46	38	15

14.	As a teacher, it will be easier for me to instill the ability to understand concepts and solve problems through learning media.	38	62	0	0
15.	There is no learning media in the form of audiobooks used to improve the students' understanding of multiplication concepts.	61	23	15	0
16.	There is no learning media in the form of audiobooks used to improve the student problem solving skills.	59	23	10	7.7
17.	There is no learning media in the form of audiobooks used for improving the student learning interest.	54	23	15	7.7
18.	It is necessary to have mathematics learning media that can improve the conceptual understanding, the problem-solving skills, and the students' interest in learning.	77	23	0	0
19.	As a teacher, I need mathematics learning media in the form of audiobooks that can improve the students' understanding of concepts, the problem-solving skills, and the students' interest in learning mathematics	69	31	0	0

Based on the results of the teacher questionnaire in Table 1 above, it can be described that the majority of teachers agree or strongly agree with the use of instructional media in mathematics class. 54% of teachers had used learning media during mathematics lessons, and 77% believed that learning media could help and support more effective learning. In addition, 62% of teachers felt that students were better able to understand lessons when using instructional media. It is in line with a study conducted by Nurrita (2018); Nurmaulidina and Bhakti (2020) that states that by using learning media, students can understand the subject matter more easily.

Regarding the use of audiobook media, the results show that 77% of teachers agreed that audiobook media could be more interesting than non-audiobook media, but only 31% used audiobook media in learning mathematics. In addition, 62% of teachers agreed that audiobook media could make learning more independent, and 69% of teachers thought that media in the form of audiobooks were needed to improve the students' conceptual understanding, problem-solving skills, and interest in learning. It is in line with a study conducted by Desriana and Budiningsih (2018) that states that audiobook media are effective in increasing the students' learning outcomes from around 52.87 to 74.48.

From the results of the questionnaire, it was also found that 46% of teachers had not taught multiplication using the RME approach due to a lack of teaching materials and media. However, 62% of teachers agreed that it would be easier for them to instill the ability to understand concepts and solve problems through learning media. Finally, 77% of teachers agreed that there was a need for RME-based audiobook learning media in mathematics classes that could increase the students' conceptual understanding, problem-solving skills, and student learning interest.

Furthermore, the results of interviews conducted with grade IV teachers at Merauke Elementary School regarding mathematics learning are described as follows.

Table 2. The Results of Interviews

Teacher name	Description of Interview Answers
HMN	<p>HMN, a teacher who has taught at IPM Elementary School for 10 years, conveys several things related to teaching experience and problems encountered in learning mathematics. HMN reveals that during teaching, he has undergone 3 curriculum changes. Before teaching, HMN always makes lesson plans as a guide in the learning process. He also usually discusses the lesson plan before teaching. The RPP made is developed in accordance with the independent curriculum guidelines. According to HMN, teachers must make lesson plans as guidelines in the learning process.</p> <p>Even so, HMN admits that he doesn't always use an innovative approach in the learning process. He is already familiar with the realistic mathematics education learning approach, but does not always use it. HMN also reveals that he has never used audio media in the learning process. Apart from that, HMN also admits that the children have difficulty in multiplication materials and need efforts to overcome the problem of the low multiplication ability. HMN suggests that one way to overcome this problem is to use learning media in the form of audiobooks.</p> <p>Overall, HMN is a teacher who understands the importance of making lesson plans as a guide in the learning process and usually discusses them before teaching. He also has knowledge of innovative approaches and realistic mathematics education learning approaches, although he does not always use them. Apart from that, HMN is also aware of problems in learning mathematics. He suggests the use of learning media in the form of audiobooks to help improve the students' multiplication skills.</p>
ELG	<p>ELG is a teacher who has been teaching for 5 years at IMB Elementary School and has experienced one curriculum change. Before teaching, Ibu ELG always makes lesson plans and usually discusses them before teaching. The lesson plan is made according to the 2013 curriculum guide. According to Ms. Elegia, teachers should make a lesson plan because it is useful as a guide. ELG admits that she does not always use innovative approaches and is not familiar with realistic mathematics education learning approaches and has never used them. ELG never uses audio media in learning. The children in her class have difficulties in multiplication materials and need efforts to overcome the problem of low multiplication ability. One way that can be done is to use learning media in the form of audiobooks based on RME.</p>

MSB	<p>MSB, is a teacher who has taught for 5 years at MMD Elementary School, conveys several things related to teaching experience and problems encountered in learning mathematics.</p> <p>MSB reveals that during teaching, he has undergone 2 curriculum changes. Before teaching, MSB always makes lesson plans as a guide in the learning process. However, he never discusses the lesson plans before teaching. The RR (learning implementation plan) that has been made is adopted from the existing RPP. According to MSB, teachers must make lesson plans as guidelines in the learning process.</p> <p>In addition, MSB reveals that the children have difficulty in multiplication materials and needed efforts to overcome the problem of the low multiplication ability. MSB suggests that one way to overcome this problem is to use learning media in the form of audiobooks.</p> <p>Overall, MSB is a teacher who understands the importance of making lesson plans as a guide in the learning process. However, he needs to improve his understanding of innovative approaches and realistic mathematics education learning approaches. Apart from that, MSB also acknowledges that there are problems in learning mathematics. He suggests the use of learning media in the form of audiobooks to help improve the students' multiplication skills.</p>
SRC	<p>SRC has taught at WSR Elementary School for 19 years and has undergone 2 curriculum changes. He always makes lesson plans before teaching and usually discusses the lesson plans before teaching. The RPP is developed in accordance with the 2013 curriculum guide and according to him, teachers must make RPP because it functions as a guide. SRC admits that he does not always use innovative approaches in learning and is not familiar with the Realistic Mathematics Education learning approach and has never used it. While teaching, he has never used audio media as a learning aid. The children in his class have difficulty understanding multiplication materials, so efforts are needed to overcome the low multiplication ability. One way that can be done is to use learning media in the form of audiobooks based on RME.</p>

Based on the information provided, there are several facts that need attention. First, not all elementary school (SD) teachers in Merauke are familiar with RME or Realistic Mathematics Education. RME is an approach to learning mathematics based on real experiences and the daily environment of students. It suggests that there is a need to increase the teachers' understanding and awareness of this approach. It is in accordance with a study conducted by Iriana et al. (2022) that evaluates the implementation of RME in several elementary schools in Indonesia. The results of the research show that there is still a lack of knowledge and understanding of teachers regarding RME. Therefore, it is necessary to increase awareness and training for elementary school teachers in Merauke so that they can properly implement RME.

In addition, the students' multiplication abilities in these fields are still low. It indicates the need for improvement in the approaches, models, strategies, and methods of teaching mathematics currently used. One of the studies that support this statement is a study conducted by Pradana (2022) regarding the level of multiplication ability of students in remote areas in Indonesia. The research shows that factors such as a lack of real interaction with the materials, a lack of understanding of concepts, and ineffective teaching approaches

can lead to the students' low multiplication abilities. Therefore, it is necessary to improve the approaches, models, strategies and methods of learning mathematics to improve the students' multiplication skills in Merauke.

Furthermore, elementary school teachers in Merauke also do not know or have never used audio media in teaching mathematics. The use of audio media, such as audiobooks, can be an effective way to help students learn and understand the material being taught. According to research conducted by Aini (2020), the use of audiobooks in learning mathematics can increase the students' interest in and understanding of mathematical concepts. Therefore, teachers in Merauke need to be introduced to the use of audio media in learning mathematics to increase learning effectiveness.

In order to overcome these challenges, one effort that can be done is through the development of RME-based audiobooks (Jupri, 2018). The audiobook can be designed to cover the students' real experiences and environments in Merauke, so that students can be more engaged and understand mathematical concepts better. The RME approach emphasizes the use of real-world situations as a context for learning mathematics. Therefore, students can see the relevance and application of mathematical concepts in everyday life. By using an RME-based audiobook, students can listen to and visualize math stories related to their own environment and life in Merauke. It will make learning mathematics more interesting, relevant, and easily understood by students.

A study conducted by Jones et al. (2019) shows that the use of audiobooks in learning mathematics can increase the student motivation and engagement. In that study, the students who use audiobooks in learning mathematics have significant improvements in their understanding of mathematical concepts and problem-solving skills compared to the students who do not use audiobooks. In addition, RME-based audiobooks can also help students overcome difficulties in reading and understanding complex mathematical texts. Through audiobooks, students can listen to narratives accompanied by concrete examples and more detailed explanations, thus helping them understand difficult concepts. A study by Johnson et al. (2020) shows that the use of audiobooks in learning mathematics can improve the students' reading skills and help them overcome difficulties in understanding abstract mathematical texts. Thus, the development of RME-based audiobooks can be an effective solution in overcoming the challenges of learning mathematics in Merauke. Through this approach, the students can be more involved. They can understand mathematical concepts better, and see the relevance of these concepts in their daily lives.

CONCLUSION

Based on the results and discussion, the researchers conclude that (1) the interest of the fourth-grade students in learning mathematics is lacking. It is due to the unavailability of learning media in the form of audiobooks; and (2) the needs of RME-based audiobook media by the fourth-grade students and teachers is quite urgent. It is because the students have low interest in learning, understanding concepts, and solving mathematical problems. The teachers have never used audiobook media when teaching mathematics. They have also never employed the RME approach. Therefore, it is urgently needed to develop mathematics learning media in the form of audiobooks based on RME.

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