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Teacher's Role in Applying Audio Visual Media in Science Learning

Yulanti S. Mooduto[1], Indri Lakoro[1]
[1]Elementary School Teacher Education Study Program Faculty of Teacher Training and Education, University of Muhammadiyah Gorontalo, Indonesia
Corresponding Email: yulanti13@gmail.com

Abstract. *The problem in this study is "Can using the Numbered Head Together learning model improve the ability to read aloud students in class III SDN 1 Bone Raya Bone Bolango Regency?" The purpose of this study was to improve the students' ability to read aloud through the Numbered Head Together learning model in class III SDN 1 Bone Raya, Bone Bolango Regency. The method used in this research is Classroom Action Research (CAR) which is carried out in 2 cycles. Data collection techniques in this study were in the form of teacher activity observation, student activity observation, interviews, tests, and documentation. Initial observations of the students' average ability in reading aloud (33%) or 5 students who completed and (67%) or 10 students who had not finished. In the implementation of the first cycle class action, only 11 students (73%). In the second cycle increased to 13 people (87%). From the results of the research and discussion carried out, the research on Students' Reading Aloud Ability through the Numbered Head Together Learning Model in Class III SDN 1 Bone Raya, Bone Bolango Regency increased.*

Keywords: *Ability to Read Aloud, Numbered Head Together Learning Model*

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INTRODUCTION

The teacher as a teacher does not only play a role in transforming knowledge through the learning process, but also involves fostering the awareness and mental development of students. Teachers play a role in education, especially knowledge transfer in learning, teachers are educators and teachers who are directly related to students. Learning in elementary schools requires teachers who are creative in mastering the material provided, able to select parts that will be used as teaching materials, in other words, science learning education in elementary schools requires teachers who have teaching skills and manage classes well (Daldjoeni, 2016). Innovative and creative teachers will be able to use learning methods and media that can actively involve students and student-centered learning.

Soekanto (2006) Role is a "part" played by a person or part of the main task that must be done. Poerwadaminta (2007) Role is something that is part or who holds the main leadership. Kompri (2015) Teachers are adults, who because of their role are obliged to touch education with students to achieve the desired goals. The teacher is an educator who is not only a distributor and transfer of the nation's culture to the next generation, but more than that, namely mental builder, forming morals and building a good and integral personality, so that its existence will be useful for the homeland and nation. Warla et al. (2018) in this case the teacher must understand his duties and functions in order to create a warm, conducive, and comfortable class for students. The functions of teachers in learning include, (a) teachers as educators, (b) teachers as managers, (c) teachers as supervisors, (4) teachers as innovators, (e) teachers as motivators.

Teachers have a very important role in the world of education, especially during teaching and learning activities, because basically students need the role of a teacher to help them in the process of self-development, optimizing their talents and abilities. The success of the teacher is also supported by the media used as a tool in conveying information to students. According to Uno (2012) media is a "communication tool used to carry information from a source to a recipient". After understanding what is called media, then what is called learning media. Sumiharsono et al. (2017) stated that media are various types of components in the environment of students that can stimulate them to learn. Meanwhile, (Susilana & Riyana, 2009) argue that media are all physical tools that can present messages and stimulate students to learn. There are two main functions of learning media that we need to know. The first function of the media is as a learning aid, and the second function is as a learning resource.

Learning Media is something that can channel messages that can arouse students' interest, attention, thoughts and feelings to carry out learning activities in achieving certain learning goals (Sabri, 2017). Learning media requires equipment or hardware to convey messages and the most important thing is information or messages conveyed through these tools (Susilana & Riyana, 2009). Therefore, in choosing learning media, the teacher must adjust it to the material and pay attention to the characteristics of the media. This media can collect every student's learning ability. According to Hamalik (2016) which states that audio-visual media is a representation that is presented in reality, through the senses of sight and hearing whose purpose is to convey information or material to students (Warliah, 2018).

According to Sudjana (2005) Media is a means to improve teaching and learning process activities. Hamalik (2016) suggests that the use of media in the teaching and learning process can generate new desires and interests, generate motivation and stimulation of learning activities, and even bring psychological effects on students. Sudjana (2013) states that the benefits of media in learning are: (1) attracting students' attention to the material presented, (2) reducing or even eliminating verbalism, (3) helping students to gain learning experiences, (4) limiting limitations. space, time and environment, (5) direct contact between students and teachers, and (6) help to overcome differences in learning experiences based on the economic background of students. Another classification of media that is easy to learn is the classification compiled by Heinich et al in Uno (2014) as shown in the following table.

Table 1. Classification of Learning Media

Classification	Media Type
Non-projected media (non-projected media)	Reality, model, graphic material, display
Audio media (Audio)	Audio cassette, audio vision, active audio vision
Media video (Video)	Videos
Computer-based media (computer-based media)	Computer Assisted Instruction (CIA), Computer Managed Instruction (CMI).
Multimedia kit	Practical device

Using audio-visual media in science learning, teachers must be creative and have innovations in developing learning so that learning looks fun and not boring. The indicators that the teacher must pay attention to when teaching using audio-visual media, especially in learning science in the classroom. including (a) activities of teachers and students in the learning process, (b) Application of audio-visual media in science learning, (c) Difficulties and obstacles in the application of audio-visual media.

The teacher's role in the use of audio-visual media is the implementation of the teacher's role as a mediator. As a mediator, the teacher should have sufficient knowledge and understanding of educational media, because educational media is a communication tool to make the teaching and learning process more effective. Conceptually, the teacher's role in the learning process includes many things including informatory, organizer, motivator, director, initiator, transmitter, facilitator, mediator, and evaluator (Wardani, 2015). Audio visual media is one type

of learning media that can be used in the learning process. audio-visual media are media that have sound elements as well as image elements. This type of media has better expertise, because it includes both auditive (hearing) and visual media.

METHODS

The type of research used is qualitative research According to Moleong (2007), namely research that intends to understand the phenomenon of what is experienced by the research subject by way of description in the form of words and language, in a special context that is natural and natural. using various scientific methods. Malinda (2018), is a study designed to obtain information about the status of a symptom when the study was conducted, no treatment was given or controlled and there was no hypothesis testing.

This research was conducted in the fourth grade of SDN 07 Duhiadaa, Duhiadaa District, Pohuwato Regency. The time of the implementation of this research is in the even semester of the 2020-2021 academic year. This research describes the role of teachers in applying audio-visual media to science learning in class IV SDN 07 Duhiadaa, Duhiadaa District, Pohuwato Regency.

Data collection was carried out by researchers to obtain data that was treated, including observations, interviews and documentation. Observation is a systematic activity of symptoms that are both physical and mental. Interviews were conducted directly, namely holding questions and answers with respondents such as teachers and students and supported by other data. Documentation is done by looking at the data that will be used to describe specifically the role of the teacher in applying audio-visual media to science learning in class IV SDN 07 Duhiadaa, Duhiadaa District, Pohuwato Regency.

RESULTS AND DISCUSSION

Results of Research on the Role of Teachers in Applying Audio Visual Media to Science Subjects at SDN 07 Duhiadaa, Duhiadaa District, Pohuwato Regency. The results of observations on the learning process in the classroom are supported by tools such as LCD/projectors as learning support so that students better understand the material given by the teacher.

The process of learning activities carried out by teachers has a positive impact on student learning outcomes because of the presence of a teacher who is responsible for class conditions and the atmosphere in the classroom so as to create a conducive learning atmosphere. the teacher's role in using audio-visual media at SDN 07 Duhiadaa The teacher as an educator is to direct students to the level of maturity and personality in line with the learning objectives.

The teacher as the main actor in increasing student learning motivation is very large. This research. The results to be achieved in the study used several indicators, namely as follows; (1). Activities of teachers and students in the learning process, (2). Application of audio media in science learning, (3). Difficulties and obstacles in the application of audio-visual media. Activities of teachers and students in the learning process Information related to teacher and student activities using audio-visual media, based on interviews with HR as a fourth grade teacher, stated that:

> *"Learning is always active, and the activities of teachers and students during the science learning process are very supportive in terms of implementation in the learning process, and electronic suggestions used in schools are also available. Before doing learning I prepare learning materials and always pay attention to the stages or stages. learning activities to be carried out."*

A similar thing was conveyed by AR respondents (students) on February 2, 2021. He said that:

> *"I am active in participating in the science learning process in the classroom, the science learning process is fun, the teacher delivers science material very easy to understand."*

Teachers also often use audio-visual media in learning especially in science learning. This is due to the availability of adequate facilities and infrastructure at SDN 07 Duhiadaa in the form of LCD/Projectors, Lebtops, Sound Systems, etc. which can support the teaching and learning process in the classroom by paying attention to the stages or activities in learning. The learning process carried out by each educator cannot be separated from various efforts to improve the quality of learning itself, where the ultimate goal of all of that leads to the achievement of learning outcomes that have been formulated. The results of interviews conducted by researchers with respondents "HR" class IV guardian on the date he explained that:

> "*Often, but must adjust the theme of what will be discussed, taking into account the time, and the facilities and infrastructure available."*

The use of audio-visual media in learning also helps teachers in delivering subject matter to students. So that it can achieve the learning objectives. As stated by respondent 'AB' homeroom V.

> *"The learning process for science subjects usually uses audio and visual media. Because the use of these media reaches the very good category in delivering the subject matter. The learning media is more easily accepted, thus helping students understand and capture the subject matter that the teacher conveys."*

The application of audio media in science learning plays a crucial role in enhancing the quality of the learning process. Teachers often employ various strategies to ensure that the learning outcomes are effectively achieved. The use of audio media, in particular, has been recognized as a valuable tool in helping students better understand complex scientific concepts.

From the interviews conducted, it is evident that teachers are mindful of the context in which audio media is applied. According to HR a fourth-grade homeroom teacher, the use of audio-visual media is frequent but requires careful consideration of several factors. HR mentioned:

> *"Often, but must adjust the theme of what will be discussed, taking into account the time, and the facilities and infrastructure available."*

This statement highlights the importance of aligning the use of audio media with the specific theme of the lesson, as well as the practical constraints such as time and available resources. Similarly, AB, a fifth-grade homeroom teacher, emphasized the effectiveness of audio and visual media in the science learning process. AB stated:

> *"The learning process for science subjects usually uses audio and visual media. Because the use of these media reaches the very good category in delivering the subject matter. The learning media is more easily accepted, thus helping students understand and capture the subject matter that the teacher conveys."*

This response underscores the significant impact that audio media has on students' comprehension and retention of the material. The insights provided by these teachers indicate that while the application of audio media in science learning is highly beneficial, its effectiveness depends on thoughtful integration into the curriculum. By selecting appropriate themes and ensuring that logistical aspects are addressed, teachers can maximize the educational value of audio media, leading to more successful learning outcomes.

Difficulties and Obstacles in the Application of Audio Visual Media

The teacher applies several strategies in developing audio-visual learning media at SDN 07 Duhiadaa, namely choosing the media that is most appropriate to the material, the media used is easy for students to understand. However, not everything in its implementation can run smoothly, there are also obstacles experienced by teachers when using audio-visual media in the learning process. Based on an interview with the fourth grade teacher 'HR' respondent, he said:

"Although I always teach using audio visual media, I still find it difficult in class. It's like having to calm down the students who are fighting for it because of the media that I display."

Another difficulty experienced by teachers when using audio-visual media in the learning process was as stated by respondent 'AB' class V teacher, he said that

"that is, it is difficult to choose the media that is most appropriate to the material, and the media used is easy to understand by students, the duration of the video or short film so as not to spend a longer time."

Teachers in the world of education have a complex role in the lives of their students. The teacher's role as an educator is to instill attitudes, values, and behavior through exemplary attitudes and behavior of oneself or what is learned from others to be instilled in students. The role of teachers in the learning process using good strategies, especially in choosing learning media, as was done by researchers to examine the role of teachers in using audio-visual media in science learning at SDN 07 Duhiadaa, Duhiadaa District, Pohuwato Regency.

While audio-visual media can significantly enhance the learning process, teachers at SDN 07 Duhiadaa face various challenges in their application. Despite the numerous benefits of using such media, several difficulties arise, both in terms of classroom management and the selection of appropriate content.

One of the primary challenges encountered by teachers is managing student behavior when using audio-visual media. HR, a fourth-grade teacher, shared the difficulty of maintaining classroom discipline during lessons that incorporate these engaging tools. HR stated:

"Although I always teach using audio visual media, I still find it difficult in class. It's like having to calm down the students who are fighting for it because of the media that I display."

This reflects the challenge of keeping students focused and ensuring that the excitement generated by the media does not disrupt the learning environment. The competitive or overly enthusiastic reactions of students can detract from the intended educational objectives, requiring the teacher to implement additional strategies to maintain order and ensure that the lesson proceeds smoothly.

Another significant obstacle is the selection and timing of the media used in lessons. AB, a fifth-grade teacher, noted the difficulty in choosing media that aligns well with the subject matter and is comprehensible to students. AB explained:

"That is, it is difficult to choose the media that is most appropriate to the material, and the media used is easy to understand by students, the duration of the video or short film so as not to spend a longer time."

This highlights the complexities involved in finding the right balance between educational content and time management. The teacher must ensure that the selected audio-visual materials are not only relevant and accessible but also concise enough to fit within the lesson's timeframe without overwhelming the students or consuming too much class time.

These challenges underscore the intricate role that teachers play in the effective application of audio-visual media. While these tools offer a dynamic and engaging way to deliver content, they also demand careful planning, classroom management, and adaptability from educators. The successful integration of audio-visual media into the learning process depends on the teacher's ability to navigate these obstacles, ensuring that the media enhances rather than hinders the educational experience.

Teacher and student activities in the learning process

Basically the use of audiovisual media in science learning is quite effective, this can be seen from the activities of teachers and students in the learning process that occurs at SDN 07 Duhiadaa school. By using audiovisual media, most students are enthusiastic in participating in learning. This is also supported by existing facilities and infrastructure such as LCDs, laptops, as

well as other facilities and infrastructure. The teacher has carried out learning according to the stages, so that students feel happy and comfortable to learn.

The use of audiovisual media in science learning at SDN 07 Duhiadaa has proven to be quite effective, as reflected in the dynamic activities of both teachers and students during the learning process. The integration of this media has significantly contributed to increased student enthusiasm and engagement, fostering a more interactive and enjoyable learning environment.

Teachers at SDN 07 Duhiadaa have successfully implemented learning activities that align with the structured stages of the curriculum. This structured approach ensures that students are not only engaged but also comfortable in their learning experience. According to HR, a fourth-grade teacher:

> *"The use of audiovisual media has made learning more engaging for the students. They seem more excited and attentive during lessons, which helps in achieving the learning objectives."*

This statement underscores the positive impact of audiovisual media on student participation, as it allows them to interact with the content in a more meaningful way.

Moreover, the availability of supporting facilities and infrastructure, such as LCD projectors and laptops, has further enhanced the effectiveness of these activities. AB, a fifth-grade teacher, highlighted the role of these tools in facilitating smooth learning experiences, stating:

> *"With the help of audiovisual media and the available facilities, students are more enthusiastic about learning. They find the lessons more interesting, which makes it easier for them to grasp the concepts."*

This feedback illustrates how the proper use of audiovisual media, supported by adequate infrastructure, can create a conducive learning atmosphere where students are more likely to succeed.

The activities of teachers and students in the learning process at SDN 07 Duhiadaa reflect the effective use of audiovisual media in science education. The combination of well-planned instructional strategies and the appropriate use of technology has led to a positive learning experience, characterized by high levels of student engagement and satisfaction. This success demonstrates the importance of integrating audiovisual media into the teaching process, especially in subjects like science, where visual and auditory stimuli can greatly enhance understanding and retention.

Application of Audio Visual Media in Science Learning

The use of audio-visual media in science learning has been carried out by SDN 07 Duhiadaa teachers, this is supported by electronic devices such as LCDs and laptops, of course also internet networks. Students feel happy and have interest and motivation in learning, they are very enthusiastic to learn, especially in science learning, because science learning should have a lot of material that cannot be explained in front of the class, but in its implementation it must be supported by media that can provide understanding to students especially audio-visual media.

The application of audio-visual media in science learning at SDN 07 Duhiadaa has proven to be an effective approach in enhancing student engagement and understanding. Teachers at the school have incorporated the use of various electronic devices, including LCD projectors and laptops, along with internet access to facilitate the delivery of science lessons. This integration of technology not only captures students' interest but also increases their motivation to learn.

In science learning, where certain concepts may be challenging to convey through traditional teaching methods alone, audio-visual media provides a significant advantage. It allows for the visualization of complex phenomena that may be difficult to describe solely through verbal explanation. For instance, HR, a fourth-grade teacher, mentioned:

"Students are much more enthusiastic and interested in science lessons when we use audio-visual media. It makes the subject matter more accessible and engaging, especially for topics that are difficult to explain verbally."

This statement highlights the critical role that audio-visual media plays in making abstract scientific concepts more tangible and understandable for students. Additionally, AB, a fifth-grade teacher, expressed similar sentiments, stating:

"The use of audio-visual media in our science lessons has transformed the way students interact with the content. They are more motivated to participate, and the media helps them grasp the material better than traditional methods alone."

This feedback emphasizes how audio-visual media not only supports the delivery of content but also enhances student comprehension and retention of the material.

Overall, the implementation of audio-visual media in science learning at SDN 07 Duhiadaa has created a more dynamic and effective educational experience. The use of technology in the classroom has enabled teachers to present complex scientific concepts in a way that is both engaging and accessible to students, leading to improved learning outcomes and greater student enthusiasm for the subject.

Difficulties and obstacles in the application of audio-visual media

In practice, the use of audio-visual media at SDN 07 Duhiadaa is rather difficult in choosing the video that best fits the material, of course the material provided must be easy to understand by students, as well as the rather long duration of the video, which makes students feel bored. The duration of the video or short film so as not to spend more time. This results in difficulties for teachers to manage time. In addition, combining the use of audio-visual media with other learning methods, such as discussion methods, question and answer methods and also lecture methods and scientific approaches that are often used in 2013 curriculum learning.

So that it becomes a problem for teachers to use audio-visual media. However, this is still natural, and easily overcome by the teacher. The use of audio-visual media is still one of the suitable media in learning science in the classroom. Audio visual media provide information for students as well as a communication tool to provide a good understanding of students because students feel happy and have an interest in learning and eliminate student boredom. The teacher also makes it easy to convey material through audio-visual media.

In the application of audio-visual media in science learning at SDN 07 Duhiadaa, teachers face several challenges. One of the primary difficulties is selecting a video that is perfectly aligned with the material being taught. The content must be easily comprehensible to students, which sometimes proves challenging. Respondent 'AB,' a fifth-grade teacher, expressed this concern:

“It is difficult to choose the media that is most appropriate to the material, and the media used is easy to understand by students.”

This emphasizes the need for careful selection of media to ensure it effectively supports the learning objectives.

Another significant challenge is managing the duration of the videos or short films used in the lessons. Longer videos can lead to student boredom, making it harder to maintain their engagement throughout the lesson. As respondent 'AB' mentioned, it is crucial to consider the video's length to avoid spending an excessive amount of time on it, which could detract from other important activities in the class.

Additionally, teachers often struggle with integrating audio-visual media with other teaching methods such as discussions, question and answer sessions, lectures, and the scientific approach mandated by the 2013 curriculum. This integration is essential for a well-rounded learning experience but poses a challenge for teachers who need to balance various instructional strategies effectively.

Despite these challenges, the use of audio-visual media remains a valuable tool in science education at SDN 07 Duhiadaa. As stated by respondent 'HR,' a fourth-grade teacher:

> *"Although I always teach using audio visual media, I still find it difficult in class. It's like having to calm down the students who are fighting for it because of the media that I display."*

This highlights that while there are obstacles, the benefits of using audio-visual media in engaging students and facilitating understanding outweigh the difficulties, making it a suitable choice for classroom instruction.

Integration of audio-visual media in science has therefore received a growing interest in educational research in a bid to improve students' learning and understanding. However, this study shows that it has its advantages and disadvantages when implemented in organizations especially in connection to SDN 07 Duhiadaa. The research findings are congruent with the existing body of knowledge that supports the use of multimedia in learning contexts, and at the same time, underscore distinct issues that are under-explored in prior research.

In recent literature, the effectiveness of audio-visual and other media in improving students' learning experience has been confirmed as helping students understand better concrete and visual or auditory presentations of concepts. These findings are supported by this study in that, the students at SDN 07 Duhiadaa where more enthusiastic and motivated to learn with audio-visual media used. This is as testified by the respondent 'AB' whereby the students are more attentive and have a better understanding of the concepts whenever the lessons are accompanied with audio-visuals.

But this study also reveals a number of challenges that hinder the integration of audio-visual media in class, an issue that remains relatively under-researched. This is spearheaded by one of the following: respondent options 'AB' discusses on the difficulty of choosing videos which are relevant for the content and accessible by students; Previous research has examine the significance of relevance and comprehensiveness in the selection of the videos used in teaching and learning (Ellerby et al., 2021; Silber et al., 2021).

Likewise, the study reveals inadequacies in time management such as time taken in the teaching-learning process especially in the use of videos. As highlighted by previous research, this study supports the proposal of using short multimedia presentations in order to minimize the students' attention span, as is evident from the Long video case, whereby the students exhibit boredom throughout the entire length of the video and disrupted flow of the lesson. About these resources, Respondent 'AB' is articulate on how and when these resources have to be deployed to avoid a reduction in potency.

In addition, the use of the audio-visual media together with other forms of instruction including group discussions and lectures is another challenge. In this paper, the positive impact of the use of multiple strategies in delivering instruction is reviewed (Munna & Kalam, 2021; Bragg et al., 2021). however, this work highlights the real-life challenges of applying the model in balanced proportions. In as much as increased classroom discipline is an area of concern as pointed out by 'HR', audio-visual media should be utilized as indicated by the findings above in order to enhance the effectiveness of the teaching-learning process.

This research seeks to fill several gaps that are evident in the literature concerning the integration of audio visual media into class activities. As prior work has mostly emphasized the benefits of using multimedia in improving the learning outcomes, the practical issues that teachers face while integrating multimedia into their teaching practice have remained masked (Alpizar et al., 2020; Abdulrahaman et al., 2020). Therefore, through exploring the challenges faced by educators in the SDN 07 Duhiadaa context, this work advances understanding of the continue challenges of supporting effective audio-visual media use in classrooms.

Furthermore, the study builds on the scarcity of literature found on the particular area of the effectiveness of time management in the incorporation of multimedia. The literature has only

hinted at issues of diminished interest and outcomes related to lengthier sessions which are more than 20 minutes in length (Zlotnick et al., 2020; Bender et al., 2021; Wolters & Brady, 2021). Thus, the present work illustrates the time management issues that are still important for teachers when delivering their lessons.

The study filling a gap in literature by addressing the attempt to use audio-visual media in combination with other teaching approaches. While it can be seen that there are significant benefits of using multiple modes of instructional delivery and presentation (O'Keefe et al., 2020; Paudel, 2021), this paper reveals the theoretical problem of how to successfully put these strategies into practice in actual classrooms, to achieve optimal benefit for learning. Thus, the study records such difficulties, which will contribute to a better understanding of how audio-visual media can enhance the teaching of science and present useful information for teachers and scientists.

CONCLUSION

The teacher's role in applying audio-visual media in science learning is that in its implementation it has used audio-visual media, this can be seen from the activities of teachers and students in the learning process that are in accordance with the stages in learning, and are supported by existing facilities and infrastructure, especially electronic devices used such as LCDs and Leptops, as well as the existing internet network. The use of audio-visual media in science learning makes students feel happy and interested in learning, even though there are various difficulties faced by both teachers and students, but it is still natural and can be overcome such as selecting videos that match the material, the duration of the material is quite long, as well as the internet network and voice are intermittent. Teachers can still overcome this. This is what is called the teacher's role is highly expected in the learning process, especially the science lessons studied.

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