

## ***Literature Study: Utilization of Audio-Visual Media in Science Subject Matter for Junior High School Students***

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### **Abstract**

*This study was conducted to find out about the literature study of the use of audio-visual media in the science subject matter of junior high school students. The strategy used uses the systematic literature review (SLR) method. This research is based on the advantages of knowing the advantages, shortcomings and influence of audio-visual media as a learning medium. The collection of various journals and books on audio-visual media as a reference was obtained through the website publish and perish found 8 journals published in the last 7 years from 2022. The results of this study are audi-visual media influential to improve student learning outcomes from several studies.*

**Keywords:** Media, Literature and Audio-Visual Studies

### **1. INTRODUCTION**

Education refers to: a) spiritual values, b) personality values of discipline and respect, c) ethical and moral values, d) values of social care, e) value the need for value. Tolerance and peace-loving friendship must be supported and infused by the younger generation (Ridwan, 2020). Education is an activity that involves many people, including students, educators, managers, communities, and parents of students (Ulliyana, 2019). Education is a process of interaction between teacher and student that helps students develop their potential (Mutia et al., 2018).

Learning is the process of interaction between students and teachers using learning resources in a learning environment. Learning aims to help students gain a variety of experiences, and based on those experiences, student behavior, including knowledge, skills, values, or norms that act as controllers of student attitudes and behavior, achieved both in quality and quantity (Fakhrurrazi, 2018). The success of the learning process in teaching and learning activities is influenced by several factors, including teachers, students, curriculum, learning environment, and learning resources (Mutia et al., 2018).

Science subjects play a very important role in improving the quality of education which aims to equip students with the ability to: (1) deepen the understanding of various natural phenomena, scientific concepts and principles; (2) cultivate curiosity, positivity, and awareness of the interconnectedness of the relationship between science, the environment, technology, and society; (3) conduct scientific research to promote scientific thinking, action, behavior and communication skills; (4) raising awareness of participation in the protection, protection and preservation of the environment and natural resources; (5) Raising awareness to recognize nature and all its laws as one of God's creations; (6) improve scientific knowledge, concepts, and skills as a basis for further education to the next level (Dewi, 2020).

The achievement of these educational goals is far from expected. This can be seen from the students' perception of the science subject itself. There is a tendency for students to consider that science is an uninteresting, complicated subject and seems to be a rote subject, so that students understand science by memorizing existing concepts. One of the factors that cause students to have an unpleasant perception of science is that science is taught starting from a theory that is far from the student's real experience, then it is required to analyze the surrounding problems (Dewi, 2020).

The success of a teacher to meet the objectives of science learning requires a thorough preparation (Dewi, 2020). Media is the delivery of a message from the sender to the recipient of the message. More specifically, media thinking in the teaching and learning process is generally characterized as a realistic visual or electronic device for collecting, manipulating, and coordinating visual and linguistic data (Rusby et al., 2017). Learning media as a process of delivering learning messages between the giver and the recipient of the message.

The use of media is one of the key factors in the learning process in schools. The use of media is considered important because it supports the achievement of learning objectives. To improve the learning process effectively and functionally, it is very important to use the functions of the learning media. Providing learning media is one of the tasks of the teacher, because the use of media in the learning process aims to improve the digestibility of information or learning materials provided by students (Aulia, 2019). The use of learning technology is getting stronger in line with the development of information and communication technology (ICT) which has penetrated people's lives. Learning using ICT is often referred to as e-learning which is a learning process through the use of technology or the internet in particular or computer-based learning (Rorimpandey et al., 2017).

Asyhar (2011) Dividing the types of learning media into four parts, namely (1) visual media, (2) audio media, (3) audio-visual media, (4) and multimedia. One of the learning media that is developing today is audio-

visual media (Purwono, 2018). Audio-visual media is a medium that conveys messages or information by displaying elements of image and sound together.

Audio-visual media is also one of the alternative means of carrying out a technology-based learning process. Audio-visual technology-based learning can be used as an alternative means of optimizing the learning process, because several aspects include: a) it is easy to package in the learning process, b) it is more interesting for learning, and c) it can be edited (improved) at any time. By utilizing computer technology, it is hoped that audio-visual learning can be used to deliver more interesting subject matter, including visualization of teaching materials, so that it is more attractive among students (Aulia, 2019).

Audio-visual media is a medium for conveying information that has audia (sound) and visual (image) characteristics. This type of media has better capabilities, because it includes both characteristics. Furthermore, audio-visual media is divided into two, namely: a) Silent audio-visual, which is media that displays sound and still images such as sound slide films, sound frame films, and sound printing; b) audio-visual motion, i.e. media that can display moving sound and image elements such as sound films and video cassettes (Aulia, 2019).

According (Purwono, 2018) and (Yuliantini & Suhardi, 2018), Their research shows that student learning outcomes improve after using audiovisual media. Following the increase in learning outcomes, student involvement in understanding and guidance will increase. In addition, the Percentage of Minimum Completeness Criteria (KKM) increased from 70% to 100%. The use of audiovisual media can improve students' ability to solve environmental problems, which is indicated by an average cycle of 75.18 to 82.35.

Therefore, the researcher will make an article with the title " Literature Study: Utilization of Audio-Visual Media in Science Subject Matter for Junior High Sch ool Students" which will later provide an overview and reference regarding the selection of the right journal, making it easier for writers or researchers to find the right reference in the field of science learning media for junior high school students.

## 2. RESEARCH METHODS

This type of research uses qualitative research using the Systematic Literature Review (SLR) method. It is a research or development methodology that is carried out to combine or analyze research on a specific topic (Triandini et al., 2019). *Systematic Literature Review* (SLR) has several objectives analyze, identify, review, or assess surveys on a specific topic when certain when given survey questions related to the topic. The literature comes from accredited national journals on the old google scholar with. the collection of various journals and books on audio-visual media as a reference was obtained through the website publish and perish found 8 boundary journals publication of the last 7 years of publication from 2022. The technique of literature study uses synthetic matrices based on reference sources, sample types, methods, interventions, and findings.

The results of several previous research edits were used to draw the following conclusions: (1) The feasibility of audiovisual learning media. (2) Response to audiovisual-based learning media. (3) Learning outcomes after using audiovisual learning media.

## 3. RESULT AND DISCUSSION

A total of 8 national journals have been reviewed based on reference sources, types of samples, research methods, interventions provided to the findings. The review process aims to find and analyze the benefits of audiovisual media with other learning media in improving the skills of students Junior High School (SMP).

Media is part of the components of the learning system. With the advancement of information technology, teachers provide the learning material must be more advanced. Applying learning media must be able to be done by teachers in a fun, interesting and appropriate manner with learning needs so that students easily understand and accept the learning that the teacher provides (Titin & Kurnia, 2022).

In reviewing the literature on the use of audiovisual media learning, it can be said to be feasible. The feasibility of using audio-visual media in Natural Science subjects, pays attention to the competency standards in these subjects, which are contained in the 2013 curriculum.

**Tabel 1. Journal Review**

| Referral Sources    | Sample   | Research methods   | Intervention                               | Result   |
|---------------------|--|--|--|--|
| Bambang, L. (2015). | Class students VIII A with 28 students consisting of of the 17 female students and 11 male students. | Method used in this study is a quantitative descriptive method | Application of Audio-Visual Teaching Media | The application of Audio-Visual Teaching Media can increase student motivation and learning the results of learning human motion systems in class VIII A of SMP GKST Imanuel Palu. |

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| Dewi, R. S. (2020)                               | Students of Class IX-B MTs Negeri 5 Jambi City odd semester of the 2018/2019 Academic Year with a total of 32 students. | Method used in this study is a quantitative                                       | Using audio-visual media-assisted LKS   | The results of this study show that the use of student worksheets (LKS) assisted by audio-visual media in science learning can be used to improve student learning outcomes   |
| Memel, J., & Qurbaniah, M. (2019).               | Students in class VII of SMP Negeri 1 Sajingan Besar  | Quasi Experimental Design Method with Nonequivalent Control Group Design design.. | Use audio-visual media on environmental pollution materials   | The research results showed that the average learning outcomes of the experimental class were 73,382 while the control class is 61,470. Based on the results of the U-Mann Whitney test obtained Zhitung (32,500) > Ztabel (- 6.732), so that it can be concluded that there are differences in the learning outcomes of students who are taught using audio-visual media and LKS |
| Siboro, T. D., & Purba, S. T. (2022).            | The sample of this study was 64 students.   | Quantitative method with the design of One Group Pretest Posttes                  | Learning outcomes test consisting of pretest-posttest and questionnaire to find out the use of audio-visual media | The results of hypothesis testing using the t test obtained a calculation (2.22) > ttabel (2.00) at the level of significance $\alpha=0.05$ then $H_0$ was rejected and $H_a$ was accepted, meaning that there was a significant influence on the learning outcomes of students using audiovisual media in the era of the covid 19 pandemic                                       |
| Purwono, J. (2014).                              | Students at SMP Negeri 1 Pacitan  | Qualitative approach  | Use of Audio-visual Media on Natural Science Subjects   | Percentage of Completion Criteria Minimum (KKM) student learning outcomes after the use of audio-visual media has increased, compared to before Use of audio-visual media   |
| Yenni, Y., Syamswisna, S., & Marlina, R. (2018). | The class used as an experimental class is class XI MIA 1 and the control class is class XI MIA 4.                      | Experimental research method.   | The use of audiovisual learning media for cell material.  | Learning using audiovisual media has an influence of 0.69 or contributes 25.49% to student learning outcomes in the material of class XI MIA cells of SMA Negeri 6 Pontianak  |
| Rulia, M., Suyanto, E., & Hilal, I. (2017).      | Class VII SMP   | Classroom Action Research   | Utilization of audio-visual media   | - Improving speaking skills in aspects of pronunciation, vocabulary, structure, sentences, and styles of students after learning by utilizing audio-visual media.<br>- Observed improvements include students' ability to demonstrate and student activity during learning  |
| Syahrin, A., & bin As, A. (2021).                | 125 high school students, class XI  | Experimental research method.   | Learning using audiovisual media  | The interventions provided provide improved speaking skills and motivation of   |

students in following the learning. Audiovisual media adds an interesting impression in learning

The results of the study above show that with quantitative descriptive methods in the Application of Audio-Visual Teaching Media can increase student motivation and learning as a result of learning human motion systems in class VIII A of SMP GKST Imanuel Palu (Bambang et al., 2015). Quantitative method with the design of One Group Pretest Posttest Learning outcomes test consisting of pretest-posttest and questionnaire to find out the use of audio-visual media shows that the use of student worksheets (LKS) assisted by audio-visual media in science learning can be used to improve student learning outcomes (Dewi, 2020).

The Quasi Experimental Design method with the design of Nonequivalent Control Group Design, using audio-visual media on environmental pollution materials shows that the results of the U-Mann Withney test of  $0.000 < 0.05$  show that there are differences in learning outcomes in the use of audio-visual media and LKS. Based on observations during the learning process, it can be seen that the learning atmosphere of the experimental class using audio-visual media occurs there is interaction between teachers and students well (Memel & Qurbaniah, 2019). Quantitative method research with the design of One Group Pretest Posttest using a learning outcomes test consisting of pretest-posttest and questionnaire to find out the use of audio-visual media shows the acyl of hypothesis testing using the t test obtained thitung  $(2.22) > ttabel (2.00)$  at the level of significance  $\leq 0.05$  then  $H_0$  is rejected and  $H_a$  is accepted meaning that there is a significant influence on student learning outcomes using audiovisual media in the era of the Covid-19 pandemic (Siboro & Purba, 2022).

The use of Audio-visual Media in Natural Science Subjects shows that the Percentage of Minimum Completion Criteria (KKM) student learning outcomes after the use of audio-visual media have improved, compared before the use of audio-visual media (Purwono, 2018). Experimental research methods using audiovisual learning media cell material had an influence of 0.69 or contribute 25.49% to student learning outcomes in the material of class XI MIA cells of SMA Negeri 6 Pontianak (Yenni, 2018).

The use of audio-visual media shows an increase in speaking skills in aspects of pronunciation, vocabulary, structure, sentences, and styles of students after learning by utilizing audio-visual media. Observed improvements include students' ability to demonstrate and student activities during learning (Rulia et al., 2012). Research on learning experiments using audiovisual media. Interventions provided provide upskilling speaking and motivating students in following the learning. Audiovisual media adds an interesting impression in learning (Syahrin & Bin As, 2021).

Based on the foregoing, we can see that there are different types of audiovisual media for learning. Use of audiovisual learning has many advantages for students, one of which is when carrying out learning activities, The use of audio-visual learning media can attract students' attention so that they are motivated to learn, so as to support activeness and improve student learning outcomes.

#### 4. CONCLUSION

Audio visual media that can be applied in the learning process include the Application of Audio-Visual Teaching Media, Using LKS assisted by audio-visual media and Quasi Experimental Design Methods with a Nonequivalent Control Group Design design using audio-visual media on environmental pollution materials. Quantitative methods with the design of One Group Pretest Posttest, learning outcomes tests consisting of pretest-posttest and questionnaires to determine the use of audio-visual media can also be applied. As well as learning using film media, learning retelling methods using audio-visual media.

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