



The Use of Audio-Visual Learning Media in Training Contexts: Impact on the Level of Understanding of Health Worker Trainees at the Makassar Health Training Center

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Abstract

This study aims to examine the use of audio-visual learning media in the context of training and its impact on the level of understanding of trainees. The type of approach used is descriptive quantitative using linear regression method. From the Krejcie and Morgan sampling table, based on a population of 1665 trainees who took place in November 2023, it was determined that the sample of this study was 310 randomly selected trainee respondents. Based on the results of research data analysis, it can be seen that the use of audio-visual learning media at the level of understanding of trainees is in the high category with a value of 58.7%. From the results of the cross table between the use of learning media and the level of understanding, namely the lower the use of quality learning media the level of understanding is in the medium category. The use of medium learning media and the level of understanding is also in the medium category and the higher the use of learning media, the more the level of understanding of the trainees. The implications of this research can be used as a reference for decision makers in institutions to improve the service process and improve learning facilities and human resource development, especially teaching staff to be able to improve competence and self-development.

Keywords: communication, learning media, audio visual, training

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1. Introduction

According to Barelson and Steiner as cited by Reed H et al, communication is the delivery of information, ideas feelings, skills, etc. with symbols, words, pictures, writings, and others [1]. While education is an important foundation in the development of individuals and society. In the era of rapidly developing information and communication technology, audio-visual learning media has become one of the communication tools in both education and training that is increasingly considered important in the teaching and learning process. Audiovisual learning media offers a variety of forms, ranging from learning videos, digital presentations, to interactive simulations, designed to increase trainee engagement and understanding. Media is one of the factors that influence the learning process in the classroom. This is because learning media is in the form of a tool and serves to

convey learning content [2]. Learning media can be interpreted as an intermediary for delivering information and messages between teachers and students. Audio-visual learning media is one of several types of media that integrally presents sound and visual elements in conveying information or messages. Audio-visual media is considered as media that has interesting and good characteristics [2].

Media is a message intermediary from sender to receiver [3]. From various opinions of experts, it can be concluded that learning media is a set of tools used by educators / teaching staff as message senders to convey messages to students / trainees in the learning process. Learning media is one of the factors that if chosen properly can affect the success of learning. Careful selection of learning media helps educators/teaching staff in delivering content, streamlining the teaching and learning process, and

ensuring the message can be fully understood as described. This helps to remember learning material better and maximize learning outcomes. Test results are used as a measure of success on the subject matter [4]. The use of learning media helps students become active in the teaching and learning process so as to produce better results [5]. Comprehension level is one of the key factors in the success of the learning process. Trainees who have a high level of comprehension tend to be more active, diligent and think critically in the learning process. However, the challenge of keeping trainees' comprehension in focus is one of the major tasks for educators/facilitators. The importance of teaching materials in the teaching and learning process can provide a relatively concrete experience, increase student motivation, and improve learning memory [6]. Therefore, it is important to understand how audiovisual learning media can play a role in improving trainees' understanding. Several studies have shown that the use of audio-visual learning media can enrich trainees' learning experiences, increase engagement and facilitate understanding of complex concepts.

As in the research study [4] states that learning with audiovisual media is better and more effective than learning with visual media in improving student learning outcomes. However, a deeper understanding of the extent to which the use of audio-visual learning media can contribute to improving trainees' understanding still needed. Research studies on audio-visual learning media have been widely researched before, but this study did not find similarities in the population and samples, namely training participants. Previous research includes: based on the results of research [4] It can be concluded that the learning outcomes in classes that utilize audio-visual media are more effective than classes that utilize media [7]. Researching the differences in the use of ICT-based audio-visual learning media (Information and Communication Technology). Simbolon conducted research on Grade 3 students of Belawan Elementary School where the teaching and learning process used ICT-based audiovisual learning media [8]. Discusses class VII students of SMPN 3 in Padang Panjang who developed a descriptive writing learning model using audiovisual media in Indonesian language subjects. [9] Examines research on exploring problem-based learning models (PBL) using audiovisual media to improve students' science learning outcomes and problem solving skills, and the results found are that student-learning outcomes can increase.

Further research on [10] exploring problem solving skills with the application of audio-visual media in a problem-based learning model, found that there was development in grade XI students at MAN 3 Yogyakarta who used audio-visual learning media [11]. Examined learning with audiovisual media supported by social media during the teaching and learning process can improve reading comprehension and the quality of students applied to four randomly selected high schools in two educational provinces in The Gambia to differentiate research samples with subjects in grade 11 remaining the same. From the research results [12] get the results that the educational media that has been designed shows an increase in knowledge that is more in student respondents, the results show that audio-visual groups are more effective than providing material from subjects in the form of pamphlets on respondents of 240 secondary school students in Birjand proven to get better results. While in research [13] with respondents from 122 KS3 Holocaust *Maryam et al., 2024*

English students (English System Grade 9, 13 years), the results of the study found that presenting material to students in the form of audio-visual videos can increase student knowledge in class and connect media material with factual knowledge even if presented in the form of watching Disney cartoons.

It can re-imagine historical events that have existed making students easier to understand. The use of learning media at the Makassar Health Training Center is currently good. All training classes have audio-visual learning media provided by the central curriculum and module development team. However, not all materials are available in audiovisual learning media, only one or two materials per training class. One of the benefits of using audiovisual learning media as a dialog between educators/teaching staff and trainees greatly contributes to achieving effective learning objectives, increasing trainees' interest and understanding. The relevance of the theory in this study is the theory of individual differences, where in the theory of individuals as members of the mass media target audience selectively, pay attention to messages, especially if they related to their interests, consistent with their attitudes, in accordance with the beliefs that are supported by their values. So that his response to these messages is changed by his psychological order. So, the effect of mass media on mass audiences is not uniform but diverse because individuals differ from each other in their psychological structure [14].

This study aims to investigate the role of audio-visual learning media in improving trainees' understanding. By gaining knowledge of the relationship between the use of audio-visual learning media and increased understanding, it is expected to provide valuable insights for the development of more effective and trainee-oriented learning strategies. The importance of communication in a training where there is a teaching and learning process relates to how communication can facilitate learning, build positive relationships, stimulate interest in learning, and increase understanding. This can be seen in the teaching and learning process of a training course. Since communication is important in achieving learning objectives, this study has investigated how audio-visual learning media is used at the Makassar Health Training Center to provide more insight to educators/facilitators, training organizers and decision-making officials in improving learning methods to increase better results for the current learning system. This can be the basis for decision-making officials in the institution to improve the daily service process and improvement of learning facilities as well as the development of human resources, especially teaching staff to be able to improve competence and self-development.

2. Participants and Methods

The population in this study were trainees who took place in November 2024. The list of training during November 2023 at Makassar Health Training Center is as follows: From the table 1, there are 22 training classes with 6 different types of training. The research questionnaire statements according to the variables of the influence of the use of learning media (X) and the level of understanding (Y) are presented in the tables below. From the total population of 1665 trainees according to the table above, testing of questionnaire instruments was carried out on 10% of the total 310 respondents, namely at least 31 people. The research has conducted two tests, namely the validity test and reliability

test on the questionnaire, which will be used as a research instrument. This test was conducted on 31 trainee responses while taking place in the fourth week of October 2023. The training class selected for the instrument test in the teaching and learning process uses audio visual learning media. The test sample is a trainee not included in the research population. The results of the two tests on the questionnaire instrument along with a description of the test results can be seen in the table below.

3. Results and Discussions

Audio-visual media serves as a teaching aid to enhance learning. Audio-visual media has spatial qualities that can help increase knowledge in conducting learning activities. Audio visual has the advantage of being able to make learning objectives easier to understand. In contrast to other learning materials, audiovisual materials with moving images and sound effects tend to stick in the minds of students and arouse their curiosity. Audiovisual media serves as a teaching tool to enhance learning. Audiovisual media has spatial qualities that help increase students' attention and motivation when conducting learning activities. Audiovisual media has the advantage of making learning objectives easier to understand. Nurhayati said that in contrast to other educational materials, audiovisual materials equipped with videos and sound effects are more memorable and stimulate students' curiosity [15]. From the results of research on the influence of audio-visual learning media above, the level of use and level of understanding in this study is measured based on 3 categories, namely. Low if the value obtained is from 10 – 23. Medium if the score is from 24 – 37. High if the score is 38 - 50. As for the results obtained from this study, there is an influence on the use of learning media with the level of understanding of the trainees, which can be seen from the following table: Table 6 shows that most respondents used audiovisual learning media in the high usage category. Specifically, participants rated about 62.9% of the total number of respondents in the high category. This indicates a clear preference among participants towards the use of audiovisual learning media as learning aids. This high level of use also indicates that participants are able optimally utilize the media to achieve a deep and effective understanding of the training materials presented. From table 7, it can be seen that the majority of participants in the study had a level of understanding in using audio-visual learning media in the high level of use category. Specifically, around 58.7% of the total number of respondents were in the high category. This means that more than half of the trainees have a level of understanding in using audio-visual learning media with a high level of proficiency. This indicates a significant preference from participants in accepting the benefits of using audio-visual learning media as a learning tool. This high understanding also indicates that participants are able to take maximum advantage of the media to gain a deep and effective understanding of the training material presented. From the table 8, it can be concluded that the lower the use of learning media, the level of understanding is in the medium category. The use of learning media is moderate; the level of understanding is also moderate. In addition, the higher the use of teach media, the higher the level of understanding. The following is a summary model table and coefficients of the effect of using audio-visual learning media on the level of understanding of the trainees as follows. From the table 9, it

is known that the R_Square value is 0.808. This means that the effect of learning media (X) on the level of understanding (Y) is 80.8% while the remaining 19.2% is the influence of other variables not included in this study. From the processed results of the spss table 10, it can be concluded that from this regression model, it is obtained that the level of understanding of the trainees is 1,962 units without being influenced by the learning media. If the effect of learning media increases by 1 unit, there is a positive increase in the level of understanding by 0.934 units. H₀: there is no effect of learning media on the level of understanding of trainees. H₁: There is an effect of learning media on the level of understanding of trainees. Alpha: 5%. The sig value from the table 10 (coefficients) = 0.00 < 0.05 then reject H₀. There is an effect of learning media on the level of understanding. Table 11 is a cross table of the level of understanding of trainees and characteristic data from the research results, namely: gender, age, length of service, latest education, agency origin, type of work/profession, learning style and training method as follows. Based on the output of the cross table 11, it can be seen that the assessment of the level of understanding in using audio-visual learning media in the low category in male gender no one gave an assessment while in female gender with an assessment of 1.4%. The total assessment of the level of understanding of using audio-visual learning media in the low category is 1.3%. While the assessment of the moderate category of understanding level in the male gender amounted to 28.6% and the female gender amounted to 41.1%. The total assessment of the level of understanding using audio-visual learning media in the medium category was 40%. Furthermore, the high category of understanding level in male gender was 71.4% and female gender was 57.4%. The total assessment of the level of understanding using audio-visual learning media in the high category was 58.7%. The conclusion from the table 11 is that the dominance of the low category in the female gender is 1.4%, the moderate category is still dominated by women by 41.1%, while the high category is dominated by the male gender by 71.4%. Based on the output of the cross table 12, it can be seen that the level of understanding in using audio-visual learning media in the low category at age ≤ 30 years is 1.4%, age 31-40 years is 1.1%, 41-50 years is 2% and ≥ 51 years no one gave an assessment. The total assessment of the level of understanding of using audio-visual learning media in the low category was 1.3%. While the medium category assessment at age ≤ 30 years was 42.5%, age 31 - 40 years was 36.2%, age 41 - 50 years was 49% and age ≥ 51 years was 42.9%. The total assessment of the level of understanding using audio-visual learning media in the medium category was 40%. Furthermore, the assessment of the high category at age ≤ 30 years was 56.2%, age 31-40 years was 62.6%, age 41-50 years was 49% and age ≥ 51 years was 57.1%. The total assessment of the level of understanding using audio-visual learning media in the high category was 58.7%. The conclusion in the table 12 is that the dominance of the low category at the age of 41 - 50 years with an assessment of 2%, the medium category is also at the age of 41 - 50 years by 49%, and the high category is dominated at the age of 31 - 40 years by 62.6%.

Based on the output of the cross table 13, It can be seen that the assessment of the level of understanding of using audio-visual learning media in the low category for a tenure of < 6 years is 1.8%, a tenure of 6 - 10 years no one gives an

assessment, for a tenure of > 10 years. There is an assessment of 1.5%. The total assessment of the level of understanding of using audio-visual learning media in the low category was 1.3%. While the assessment of the medium category in the work period < 6 years amounted to 35.1%, the work period of 6 - 10 years amounted to 33.8%, the work period > 10 years amounted to 47.3%. The total assessment of the level of understanding of using audio-visual learning media in the medium category was 40%. Furthermore, the category of high use in the work period < 6 years amounted to 63.2%, the work period of 6 - 10 years amounted to 66.2%, the work period > 10 years amounted to 51.1%. The total level of understanding in the high category was 58.7%. The conclusion in the table 13 is that the dominance of the low category in the working period < 6 years is 1.8%, the medium category in the working period > 10 years is 47.3%, and the high category dominated by the working period of 6 - 10 years by 66.2%. Based on the output of the cross table 14, it can be seen that the level of understanding in using audio-visual learning media in the low category according to the last level of education at the S3, S2, SMA and SMP levels. No one gave an assessment, only at the last level of education at the S1 level there was an assessment of 2% and D3 by 0.8%. The total level of understanding in the low category is 1.3%. While the assessment of the medium category at the last level of education S3 was 100%, S2 was 50%, S1 was 37.5%, D3 was 44.8%, SMA was 20% and SMP had no assessment.

The total level of understanding in the medium category is 40%. Furthermore, the high category at the last level of education S3 no assessment, S2 by 50%, the last education S1 by 60.5%, Diploma degree by 54.4%, SMA by 80% and SMP 100%. The total level of understanding in the high category was 58.7%. The conclusion in the table 14 is that the dominance of the low category in the last education of S1 is 2%, the medium category is also at the last education level of S3 by 100%, while the high category is dominated by SMP by 100%. Based on the output of the cross table 15, it can be seen that the level of understanding in using audio-visual learning media in the low category according to the origin of the health service agency, clinic, state health polytechnic, independent practice and UPT. The Ministry of Health did not give an assessment, for the origin of the health center agency gave an assessment of 3.3%, hospital by 1.3%. The total use of learning media in the low category was 1.3%. While the assessment of the medium category at the origin of the health service agency was 40%, the clinic was 50%, the state health polytechnic was 40%, independent practice did not provide an assessment, the puskesmas was 56.7%, and the hospital was 40.6% and UPT. Ministry of Health was 71.2%. The total use of learning media in the medium category was 40%. Furthermore, the category of high use at the origin of the health service agency was 60%, clinics were 50%, state health polytechnic were 60%, independent practice was 100%, health center were 40%, and hospitals were 58.1% and UPT. Ministry of Health was 82.8%. The total use of learning media in the high category was 58.7%. The conclusion in the table 15 is that the dominance of the low category at the origin of the health center agency is 3.3%, the medium category at the origin of the health center agency is 56.7% and the high category is dominated by the origin of the independent practice agency by 100%. Based on the output of the cross table 16, it can be seen that the level of understanding in using audio-visual learning media in the low category according to

the type of work /profession of midwives is 1.3%, cleaning service, doctors, dentists, lecturers, health epidemiologists, nutritionists, servants, security, administrative staff and surveillance no one gave an assessment. Only in the type of work / profession of nurses who gave an assessment of 2.5%. The total use of learning media in the low category was 1.3%. While the assessment of the medium category in the type of work/profession in midwives was 41.8%, cleaning service was 11.1%, doctors were 36%, dentists and surveillance both had no assessment, lecturers were 50%, health epidemiologists were 66.7%, nutritionists were 50%, nurses were 44.3%, attendants were 33.3%, security was 37.5% and administrative staff were 10%.

The total use of learning media in the medium category was 40%. Furthermore, the high category in the type of work / profession in midwives was 57%, cleaning service was 88.9%, doctors were 64%, dentists and surveillance had the same value of 100%, lecturers were 50%, health epidemiology was 33.3%, nutritionists were 50%, nurses were 53.2%, service personnel were 66.7%, security was 62.5%, and administrative staff were 90%. The total level of understanding in the high category was 58.7%. The conclusion in the table 16 is that the dominance of the low category in the type of work / profession of nurses is 2.5%, the medium category in the type of work / profession of health epidemiology is 66.7% and the type of work / profession of dentists and surveillance dominate the high category by 100%. Based on the output of the cross table 17, it can be seen that the level of understanding in using audio-visual learning media in the low category according to the auditory learning style is 1.1%, kinesthetic is 1.8% and visual is 1.2%. The total use of learning media in the low category was 1.3%. While the assessment of the medium category in the auditory learning style was 37.2%, kinesthetic was 38.2% while in visual was 42.2%. The total use of learning media in the medium category was 40%. Furthermore, the category of high use in auditory learning styles was 61.7%; kinesthetic was 60% while visual was 56.5%. The total use of learning media in the high category was 58.7%.

The conclusion in the table 17 is that the dominance of the low category in the visual learning style is 1.8%, the medium category is also in the visual learning style by 42.2%, while the high category changes predominantly in the auditory learning style by 61.7%. Based on the output of the cross table 18, it can be seen that the level of understanding in using audio-visual learning media in the low category according to the blended training method no one gave an assessment, full classical by 2.5% and blended and full online training methods by 1.2%. The total level of understanding of using audio video learning media in the low category is 1.3%. While the medium category assessment in the blended training method was 45.5%, full classical was 32.5% while full online was 40.7%. The total level of understanding of using audio-visual learning media in the medium category is 40%. Furthermore, the high usage category in the blended training method was 54.5%, full classical was 65% while full online was 58.1%. The total level of understanding using audio-visual learning media in the high category was 58.7%. The conclusion in the table 18 is that the dominance of the low category of training methods is in full classical with an assessment of 2.5%, the medium category is in the blended training method of 45.5% and the high category is dominated by the full classical learning style of 65%.

Table 1. Training Schedule for November 2023

No.	Date of Pel. Activity	ACTIVITY NAME	Jml
1	Online Nov. 2 - 8. 2023, Classical 13 - 15 Nov. 2023	Training. Immunization Preventable Disease (PD3I) Surveillance for Surveillance Officers in Community Health Center Batch 1	30
2	Online Nov. 6 - 7. 2023, Classical 9 - 10 Nov. 2023	Training. Toddler Growth Monitoring for Health Workers Batch VI	25
3	Nov. 6 - 8. 2023	Mop. Newborn Screening Batch 38	100
4	Nov. 6 - 8. 2023	Mop. Newborn Screening Batch 39	100
5	Nov. 6 - 8. 2023	Mop. Newborn Screening Batch 40	100
6	Nov. 6 - 8. 2023	Mop. Newborn Screening Batch 41	100
7	Nov. 6 - 8. 2023	Mop. Newborn Screening Batch 42	100
8	Nov. 06 - 16. 2023	Training. Community Health Center Management Batch 1	25
9	Nov. 06 - 16. 2023	Mop. Health Center Management Batch 2	25
10	09 - 11 Nov. 2023	Mop. Newborn Screening Batch 43	100
11	09 - 11 Nov. 2023	Mop. Newborn Screening Batch 44	100
12	09 - 11 Nov. 2023	Mop. Newborn Screening Batch 45	100
13	09 - 11 Nov. 2023	Mop. Newborn Screening Batch 46	100
14	09 - 11 Nov. 2023	Mop. Newborn Screening Batch 47	100
15	Nov. 13 - 15. 2023	Mop. Newborn Screening Batch 48	100
16	Nov. 13 - 15. 2023	Mop. Newborn Screening Batch 49	100
17	Nov. 13 - 15. 2023	Mop. Newborn Screening Batch 50	100
18	Nov. 13 - 15. 2023	Mop. Newborn Screening Batch 51	100
19	Nov. 13 - 15. 2023	Mop. Newborn Screening Batch 52	100
20	Nov. 14 - 16. 2023	Training. PD3I Surveillance for Surveillance at Community Health Center	30
21	Nov. 20 - 24. 2023	Pel. BHD for Laymen Batch 1	30
22	Nov. 27. - 01 Dec. 2023	Pel. BHD for Laymen Batch 2	30
TOTAL			1665

Data: Training Calendar 2023

Table 2. Questionnaire statement of the influence of the use of learning media (X)

No	Statement
1.	I receive material with audio-visual learning media
2.	I like learning by using audio-visual learning media.
3.	Using audio-visual learning media creates a positive attitude towards a better way of learning
4.	The audio-visual learning media displayed is in accordance with the visualization of the message content presented from the training material.
5.	Audio-visual learning media can clarify the material presented by the facilitator.
6.	Using audio-visual learning media makes it easier for me to practice the material.
7.	I can position myself in the same situation as the material presented in the form of audio-visual learning media (especially videos).
8.	I can hear the effect sound (audio) clearly on audio visual learning media
9.	The display of audio-visual learning media is presented systematically in sequence
10.	Facilitator provides feedback after the delivery of material using media

Source: Research questionnaire

Table 3. Questionnaire statement of level of understanding (Y)

No.	Statement
1.	I find it easier to understand the material by using audio-visual learning media.
2.	Audio-visual learning media improves my thinking skills
3.	It is easier to do the tasks given with audio-visual learning media
4.	I find it easier to take notes on the material provided with audio-visual learning media
5.	Material with audio-visual learning media makes me able to listen well
6.	Using audio-visual learning media helps, you feel more confident to answer questions in class.
7.	I see that by using audio-visual learning media there is activeness in the classroom
8.	Using audio-visual learning media can present real examples in the classroom.
9.	Using audio-visual learning media makes it easier for me to remember the material
10.	Materials in the form of audio-visual learning media can shorten the time to learn and understand the material because it is easier to repeat if something missed.

Source: Research questionnaire

Table 4: Instrument validity test results

No.	Variables	Results
1.	Variable X = Effect of Learning Media	The results found to be valid because Sig is smaller than 0.05 so there is a correlation between the variable items and the total score, which indicates that the question items are valid.
2.	Variable Y= Level of understanding	The results were found to be valid because Sig was smaller than 0.05 so that there was a correlation between the variable items and the total score, indicating that the question items were valid.

The processed results of the SPSS application are in the attachment

Table 5: Instrument reliability test results

No.	Variables	Case Processing Summary	Reliability Statistics	N of Item = Analysis
		N Results	Cronbach's Alpha	
1.	X = Effect of Learning Media	31 Valid	.789	11 = The test results for variable X are reliable because the value found exceeds 0.6
2.	Y = Level of understanding	31 Valid	.790	11 = The Y2 variable test results are reliable because the value found exceeds 0.6

The processed results of the SPSS application are in the attachment

Table 6. Effect of using audio-visual learning media (X)

No.	Use of Learning Media		
	Category	Frequency	Percent
1.	Low	2	0.6%
2.	Medium	113	36.5%
3.	High	195	62.9%
	Total	310	100%

Source: SPSS V 26 output (Processed by researchers, 2023)

Table 7. Level of Understanding (Y)

No.	Comprehension Level		
	Category	Frequency	Percent
1.	Low	4	1.3%
2.	Medium	124	40%
3.	High	182	58.7%
	Total	310	100%

Source: SPSS V 26 output (Processed by researchers, 2023)

Table 8. Cross table of the level of understanding and the effect of using learning media

Level of Understanding * Use of Learning Media Cross tabulation					
No.	Variables	Use of Learning Media			Total
		Low	Medium	High	
1.	Comprehension Level	0	4	0	4
		0%	100%	0%	100%
		2	94	28	124
		1.6%	75.8%	22.6%	100%
		0	15	167	182
		0%	8.2%	91.8%	100%
Total		2	113	195	310
		0.6%	36.5%	62.9%	100%

Source: Excel Table Data (data processed)

Table 9. The effect of using audio-visual learning media on the level of understanding

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899 ^a	.808	.807	2.671

a. Predictors: (Constant), X

Source: SPSS V 26 output (Processed by researchers, 2023)

Table 10. The effect of using audio-visual learning media on the level of understanding

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.962	1.000		1.962	.051
	X	.934	.026	.899	35.951	.000

a. Dependent Variable: Y

Source: SPSS V 26 output (Processed by researchers, 2023)

Table 11. Cross-tabulation of gender and level of understanding

Gender * Level of Understanding Cross tabulation					
No.	Gender	Comprehension Level			Total
		Low	Medium	High	
1.	Male	0	8	20	28
		0%	28.6%	71.4%	100%
2.	Female	4	116	162	282
		1.4%	41.1%	57.4%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

Table 12: Cross-tabulation of age and level of understanding

Age * Level of Understanding Cross tabulation					
No.	Age	Comprehension Level			Total
		Low	Medium	High	
1.	≤ 30 years	1	31	41	73
		1.4%	42.5%	56.2%	100%
2.	31 - 40 years	2	63	109	174
		1.1%	36.2%	62.6%	100%
3.	41 - 50 years	1	24	24	49
		2.0%	49.0%	49.0%	100%
4.	≥ 51 years old	0	6	8	14
		0%	42.9%	57.1%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

Table 13: Cross-tabulation of tenure and level of understanding

Tenure * Level of Understanding Cross tabulation					
No.	Length of Service	Comprehension Level			Total
		Low	Medium	High	
1.	< 6 Years	2	40	72	114
		1.8%	35.1%	63.2%	100%
2.	6 - 10 Years	0	22	43	65
		0%	33.8%	66.2%	100%
3.	> 10 Years	2	62	67	131
		1.5%	47.3%	51.1%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

Table 14: Cross-tabulation of latest education and level of understanding

Last Education * Level of Understanding Cross tabulation					
No.	Last education	Comprehension Level			Total
		Low	Medium	High	
1.	Doctoral degree (S3)	0	1	0	1
		0%	100%	0%	100%
2.	Master degree (S2)	0	7	7	14
		0%	50%	50%	100%
3.	Bachelor degree (S1)	3	57	92	152
		2%	37.5%	60.5%	100%
4.	Diploma degree (D3)	1	56	68	125
		0.8%	44.8%	54.4%	100%
5.	Senior High School (SMA)	0	3	12	15
		0%	20%	80%	100%
6.	Junior High School (SMP)	0	0	3	3
		0%	0%	100%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

Table 15: Cross-tabulation of agency origin and level of understanding

Agency Origin * Level of Understanding Cross tabulation					
No.	Agency Origin	Comprehension Level			Total
		Low	Medium	High	
1.	Health Office	0	2	3	5
		0%	40%	60%	100%
2.	Clinic	0	3	3	6
		0%	50%	50%	100%
3.	State Health Polytechnic	0	2	3	5
		0%	40%	60%	100%
4.	Independent Practice	0	0	1	1
		0%	0%	100%	100%
5.	Health Center	1	17	12	30
		3.3%	56.7%	40%	100%
6.	Hospital	3	95	136	234
		1.3%	40.6%	58.1%	100%
7.	UPT. Ministry of Health	0	5	24	29
		0%	17.2%	82.8%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

Table 16: Cross-tabulation of type of job/profession and level of understanding

Type of Job/Profession * level of understanding Cross tabulation					
No.	Job Type/Profession	Comprehension Level			Total
		Low	Medium	High	
1.	Midwife	2	66	90	158
		1.3%	41.8%	57%	100%
2.	Cleaning Service	0	1	8	9
		0%	11.1%	88.9%	100%
3.	Doctor	0	9	16	25
		0%	36%	64%	100%
4.	Dentist	0	0	1	1
		0%	0%	100%	100%
5.	Lecturer	0	1	1	2
		0%	50%	50%	100%
6.	Health Epidemiology	0	4	2	6
		0%	66.7%	33.3%	100%
7.	Nutritionist	0	3	3	6
		0%	50%	50%	100%
8.	Nurse	2	35	42	79
		2.5%	44.3%	53.2%	100%
9.	PRAMUBAKTI	0	1	2	3
		0%	33.3%	66.7%	100%
10.	Security	0	3	5	8
		0%	37.5%	62.5%	100%
11.	Administration Staff	0	1	9	10
		0%	10%	90%	100%
12.	Surveillance	0	0	3	3
		0%	0%	100%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

Table 17: Cross-tabulation of learning styles and comprehension levels

Learning Style * Comprehension Level Cross tabulation					
No.	Learning Style	Comprehension Level			Total
		Low	Medium	High	
1.	Auditory	1	35	58	94
		1.1%	37.2%	61.7%	100%
2.	Kinesthetic	1	21	33	55
		1.8%	38.2%	60%	100%
3.	Visual	2	68	91	161
		1.2%	42.2%	56.5%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

Table 18: Cross-tabulation of training methods and level of understanding

Training Method * Level of Understanding Cross tabulation					
No.	Training Methods	Comprehension Level			Total
		Low	Medium	High	
1.	Blended	0	10	12	22
		0%	45.5%	54.5%	100%
2.	Full Classical	1	13	26	40
		2.5%	32.5%	65%	100%
3.	Full Online	3	101	144	248
		1.2%	40.7%	58.1%	100%
Total		4	124	182	310
		1.3%	40%	58.7%	100%

Source: Excel Table Data (data processed)

4. Conclusions

The conclusion is that the use of audio-visual learning media (X) effectively contributes to an increase in the level of understanding (Y2) of trainees. An increased level of understanding can strengthen the learning process and assist trainees in understanding the material taught. Provides support for learning approaches that use audio visual learning media to improve learning effectiveness as a more effective and interesting learning strategy by utilizing audio visual learning media as an effective tool. Individual differences theory highlights that each individual has different characteristics, experiences and learning tendencies. The results showed that trainees' responses to audio-visual learning media varied. Some trainees experience a significant increase in understanding, while others may not perceive a significant difference. Based on this theory, the research highlights the importance of using differential learning strategies by taking into account individual differences in the way they process information and learn respectively.

The results show that trainees with certain characteristics, such as gender, age factor, latest level of education, learning style, training methods used, type of profession/occupation or different levels of motivation, benefit more from the use of audio-visual learning media than others. Provide more audio-visual learning media to increase the effectiveness of the learning process. To support this, provide more training on technical skills to create audio-visual learning media and skills to use learning technology for facilitators so that facilitators can develop themselves, explore their creative ideas, and innovate in delivering learning materials. Creating interesting content so that facilitators can help trainees to be better in increasing enthusiasm and understanding the material. Hopefully the results of this study can be used as a reference for decision makers in institutions to improve the service process and improve learning facilities and human resource development, especially teaching staff to be able to improve competence and self-development.

References

- [1] H. Reed. (2005). Taxonomy of communication concepts. (2nd ed.). Papyrus
- [2] E.R. Wati. (2016). Variety of Learning Media. Jakarta: Pena words.
- [3] A. Arsyad. (2017). Learning media. Rajagrafindo Persada
- [4] H. Setiyawan. (2020). Pemanfaatan media audio visual dan media gambar pada siswa kelas V. Jurnal Prakarsa Paedagogia. 3(2).
- [5] N. Sudjana. (2009). Assessment of the results of the teaching and learning process. Bandung: Youth Rosda Karya.
- [6] I.G.A.I. Aryani, N.K.S. Rahayuni. (2016). Innovation of teaching and learning english applied to animal sciences' student with the combination of computer media and audio visual. International Journal of Linguistics, Literature and Culture. 2(1): 1-7.
- [7] N. Simbolon, M. Silitonga, E. Simanjuntak, T. Purnomo In *Development of Audio-Visual Learning Media IT-Based on Thematic Learning Primary Maryam et al., 2024*

- [8] N. Novelti. (2019). Development of the Descriptive Writing Learning Model using the Audio Visual Media (Korespondensi). International Journal of Recent Technology and Engineering. 8(3).
- [9] D. Sujana. M. Andika. (2021). Improving student science learning outcomes through problem based learning model assisted by audiovisual media. Ganesha University of Education. Singaraja.
- [10] W.A. Setyani, A.S. Darmawan In *The Implementation of Audio Visual Media in Problem Based Learning Model to Improve the Problem Solving Skills*, 6th International Seminar on Science Education (ISSE 2020).
- [11] O.O. Olagbaju, A.G. Popoola. (2020). Effects of Audio-Visual Social Media Resources-Supported Instruction on Learning Outcomes in Reading. International Journal of Technology in Education. 3(2): 92-104.
- [12] Z. Janbani, F. Osmani. (2023). Performance of two educational approaches in increasing knowledge of high-school students about COVID-19 during the first wave of pandemic. Evaluation and Program Planning. 100: 102327.
- [13] V. Ilin. (2022). The role of user preferences in engagement with online learning. E Learning and Digital Media. 19(2): 189-208.
- [14] O.U. Effendy. (2003). Science, theory and philosophy of communication. Bandung: PT. Rosdakarya Youth.
- [15] N. Nurhayati, S. Husain, S. Samad. (2022). Development of Audio-Visual Learning Media for Islamic Religious Education in High School. Asian Journal of Applied Sciences. 10(1): 53-58.