Effectiveness of Using Audio Visual Media on Early Childhood Listening Ability

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Abstract
This research was motivated by children's low interest in learning, which can be seen from the large number of children who do not pay attention to the teacher when speaking in front of the class and do not understand the material being presented. This research aims to obtain empirical data regarding the influence of the use of audio-visual media on the listening abilities of young children at TK Putra VI Pasar Friday, Pondok Pinang, in the 2022-2023 school year. This research uses a quantitative approach with experimental methods. The research population included all students at Putra VI Kindergarten in Pasar Friday, Pondok Pinang, Kebayoran Lama District, South Jakarta. The research sample consisted of 10 students selected using random sampling techniques. This research involved pretest (before treatment) and posttest (after treatment) measurements. Data was collected using a questionnaire or questionnaire. Based on the results of the analysis, the data before treatment showed a mean of 23.3, a median of 26.5, a mode of 20.9, and a standard deviation of 5.35. After treatment, the data showed an increase with a mean of 27.4, median of 33.5, mode of 26.3, and standard deviation of 5.06. The results of the hypothesis test show that the value of tcount=3.15t \text{count} = 3.15tcount=3.15 is greater than ttable=1.83t \text{table} = 1.83ttable=1.83. Thus, H_1 is accepted and H_0 is rejected. This research concludes that there is a significant influence from the use of audio-visual media on the listening ability of children aged 5-6 years, Kindergarten Putra VI Pasar Friday, Pondok Pinang, Kebayoran Lama District, South Jakarta.

Keywords: Ability, Media, Audio Visual, Listening

INTRODUCTION

Listening ability is an important part of early childhood language development, which directly influences their speaking skills. Listening is a receptive skill that requires attention and concentration to understand the information received, and involves cognitive processes such as interpretation and analysis. Children with good listening skills tend to have more effective communication skills. Listening ability is an important part of early childhood language development which influences their speaking ability. This is in line with research by Kurniati (2017), which shows that listening skills are an integral part of communication skills in early childhood.

However, data shows that speech and language disorders, which are closely related to listening skills, are one of the challenges for children's growth and development in Indonesia. Based on the results of observations at Kindergarten Putra VI Pasar Friday Pondok Pinang Kebayoran Lama South Jakarta, it is known that most children aged 5-6 years have limited listening abilities. This can be seen from the child's lack of attention when the teacher speaks, difficulty understanding instructions, and low response to questions asked.

To overcome this problem, using appropriate learning media is one solution. Audio-visual media, such as interesting and interactive videos, have been proven to increase children's attention and facilitate effective learning. This media combines sound elements and moving images which can help children understand information better. Audio-visual media has been proven to increase children's attention and understanding of information, as found by Nurjanah and Anggraini (2020), where interactive media helps children focus during learning. As in Piaget's cognitive theory, it states that children who act as students need intermediaries or media that can make it easier for them to understand the material presented by the teacher and can increase children's willingness to learn which has an impact on children's activeness (Rosyanafi et al., 2018) and makes it easier for children to learn. knowledge (Khotimah, et al., 2021). The child's activeness and learning outcomes can be seen from the achievement of the child's ability indicators in

every aspect, including the child's language (expressive) abilities.

Several previous studies support the importance of this strategy. For example, Ita Apriliyani found that the Whole Language method could improve children's listening skills, while Abdul Rahmat used hand puppets as a medium to increase listening focus. Anny Doludea's research shows that the storytelling method using wayang puppets is also effective in stimulating children's listening abilities.

Based on this background, this research aims to explore the influence of the use of audio-visual media on the listening abilities of children aged 5-6 years, with a focus on the type of concentrative listening, namely listening with full attention to understand information in depth. The media used in this research is the Diva Video Series as a learning aid. The title of this research is: "The Effect of Using Audio Visual Media on the Listening Ability of Children Aged 5-6 Years at RA Az Zahra Kids Home School Sukatani Tapos."

Early Childhood Listening Ability

a. Understanding Listening Ability

Ability is a person's ability to carry out certain actions that are obtained through innateness and training (Munandar). In language development, there are two main types: receptive language (receiving, such as listening and reading) and expressive language (produce, such as speaking and writing). These two types of abilities complement each other and are important for children's communication development.

According to the Big Indonesian Dictionary, listening is listening with attention to what is said or read. Anderson defines listening as the activity of listening actively with understanding, attention, and appreciation. This process involves connecting sounds with meaning and interpreting the information heard.

Tarigan emphasized that listening is the activity of listening to verbal symbols with attention to understanding the message and meaning of communication. Meanwhile, Pramila added that listening includes the ability to be aware of, pay attention to, and interpret sounds or information received. Thus, listening allows someone to understand information meaningfully and thoroughly.

Meanwhile, according to Hirsch, listening is a neural response and interpretation to sounds that involves understanding, searching for meaning, analysis, and combining with previous experiences. This process strengthens understanding of the information received. Listening skills include listening attentively, understanding, remembering, analyzing and interpreting information. The development of listening skills is influenced by the child's environment and social experiences.

b. Listening Stages

Listening is a gradual process, starting from listening to responding. The stages of listening include: Listening: Capturing the sound or information conveyed, understanding: Understanding the content of the conversation, Interpreting: Interpreting the information received, evaluating: Assessing the speaker's opinions and ideas.

Responding: Giving responses according to understanding and judgment. Ruth G. Strickland added nine types of listening, ranging from periodic listening to active listening, which reflects the level of seriousness in listening and understanding the conversation.

c. Purpose of Listening

Tarigan stated that the main purpose of listening: is to learn and gain knowledge, Enjoy the beauty of audials, such as music or poetry, Evaluate the information heard, Appreciate works of art or discussions, convey ideas fluently, differentiate sounds, especially in learning foreign languages, solve problems and convince yourself of an opinion. Apart from that, it can also be said that the purpose of listening includes: Learning: Gaining knowledge from conversation; Enjoy: Appreciate the beauty of the audial; Evaluation: Assess the information received; Appreciating: Appreciating a

work of art or discussion; Conveying ideas: Conveying ideas appropriately; Differentiating sounds: Important in learning a foreign language; Solve problems: Get valuable feedback.

d. Listening Function

Listening has important functions, both in everyday life and in children's language development, including: Basic language learning: Children learn language by listening first, Written language development: The ability to listen supports learning to read and write, Supports other language skills: Increase vocabulary and communication skills, Facilitate communication: Understand the content of conversations for effective interaction, Increase knowledge: Get new information through news, lectures or discussions. Apart from that, it was also added that the function of listening is also Listening has important functions in children's lives, including: The basis for learning language: Children learn language by listening; Written language development: Listening supports reading and writing skills; Support other language skills: Expand vocabulary and speaking skills; Facilitate communication: Understand the meaning of speech for effective communication; Increasing knowledge: Obtaining information from various sources, such as news and lectures. So, it can be said that listening is the process of listening attentively, understanding and interpreting the information received. Hirsch calls it a neural response that involves understanding, searching for meaning, and merging with previous experiences. Listening skills develop through practice and are influenced by the environment and social experiences.

e. Listening Stages

The listening process consists of several stages: Listening: Capturing sounds or information, understanding: Understanding the content of the conversation, Interpreting: Interpreting the information received, evaluating: Assessing the speaker's opinions and ideas, responding: Providing responses based on understanding and assessment.

Ruth G. Strickland also mentions nine types of listening, ranging from periodic listening to active listening, which reflects the level of depth of attention in listening.

Listening ability can be synthesized as follows:

Anderson states that listening ability is the ability to listen with full understanding, attention and appreciation; **Dance** explains that listening ability is the process of listening to verbal symbols with full attention, understanding, appreciation and interpretation to obtain information, capture messages and understand the meaning of communication conveyed by the speaker through speech or spoken language; **That's why** defines listening ability as the ability to be aware of and pay attention to the sounds or words heard as well as interpret the sounds or information received; **Hirsch** states that listening ability is a neural response and interpretation to sound, which includes understanding, searching for meaning, selecting meaning, remembering, attending to, analyzing, and combining it with previous experience.

The Nature of Audio-Visual Media

Media comes from Latin *medius* which means intermediary or messenger. In the Big Indonesian Dictionary, media are communication tools such as newspapers, radio, television, and others. According to Gerlach & Ely, media are people, materials, or events that create conditions for students to acquire knowledge and skills. Heinich defines media as communication channels such as films, television and computers, while Rita states that media are physical tools that present messages to stimulate learning. In general, media is a means that channels information from the sender to the recipient of the message, facilitating understanding and stimulating the learning process.

Media Benefits

Kemp and Dayton revealed several advantages of using media in learning, namely: Delivery of material is more standard, because

all students receive the same message; Learning is more interesting and interactive, keeping students' attention; The quality of learning increases with clear integration of words and images.

Learning can be done anytime and anywhere; Increase students' positive attitudes towards learning. Reduce the teacher's burden in explaining the material. Meanwhile, Sudjana and Rivai added the following benefits of media: Increasing students' learning motivation and attention; Makes it easier to understand the material; Increasing the variety of teaching methods; Encourage students to be more active in learning.

Types of Media

Types of media can be divided into four categories, including Visual Media: Relying on the sense of sight, such as photos, drawings and posters; Audio Media: Relies on the sense of hearing, such as music, voice, and radio broadcasts; Audio Visual Media: Combining sound and images, such as film and television; Multimedia: A combination of different types of media, such as the internet and distance learning.

Media Audio Visual

Audio-visual media combines sound and images to convey messages more effectively. Sapto Haryoko explained that this media has audio (sound) and visual (image) characteristics, which show real experiences to students. Hills added that this media uses the senses of sight and hearing. Audio visual media is divided into two types: Silent Audio Visual: Displays still images and sounds, such as a sound frame film. Motion Audio Visual: Displays moving images and sound, such as films or video cassettes.

In terms of source, audio visual media is divided into: Pure Audio Visual: Sound and images come from one source, such as a film or video cassette. Impure Audio Visual: Sound and images come from different sources, such as a sound frame film with a slide projector and tape recorders.

Various Types of Audio-Visual Media

You can see various types of audio-visual media, including films: a series of moving images with sound, attracting attention and increasing understanding; Television: Broadcast programs that combine visual and audio elements with a wide range; Video Cassette: A recording of images and sound that can be played back, simpler and more practical than film. The advantages of audio-visual media are that the disadvantages include sound quality problems and higher costs.

RESEARCH METHOD

This research uses quantitative experimental methods to test the effect of audio-visual media on listening ability. The experimental method aims to determine the effect of the independent variable (audio-visual media) on the dependent variable (listening ability) under controlled conditions. The research design used is *One-Group Pretest-Posttest Design*, where one group is tested with a pretest, given treatment, and tested again with a posttest. Observations were carried out twice: before and after treatment, to compare the changes in results that occurred (O_2 - O_1).

Population, Sample, and Sampling Techniques

The population of this study was 29 group B students aged 5-6 years at RA Az Zahra Kids Home School, Sukatani, Tapos, Depok (2020-2021). The samples taken were 10 students using the technique *random sampling*.

Research Instrument

Research instruments are used to understand, and interpret information).

The observation instrument is a checklist sheet to assess children's listening skills, on a scale of 1-5: Strongly Disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly Agree = 5.

Conceptual and Operational Definitions

Variable X (Audio Visual Media) is Conceptual: Information conveying media that combines audio (sound) and visuals (images). Operational: Use of audio-visual media in learning through animated videos which include watching, listening, question and answer and conclusion activities.

Variable Y (Listening Ability is Conceptual: The ability to listen and understand information attentively and analytically and Operational: Listening ability is measured

through understanding, evaluating and responding to the information provided, with indicators such as understanding, evaluating and responding to the information received.

Table 1. VARIABLE INSTRUMENT GRID Y

VARIABEL PENELITIAN	ASPEK	INDIKATOR	SKOR				
			1	2	3	4	5
Kemampuan Menyimak	Memahami	1. Menyebutkan judul cerita					
		2. Menyebutkan tokoh dalam cerita					
		3. Menceritakan kembali isi cerita					
	Mengevaluasi	1. Menyebutkan perbuatan baik yang dilakukan tokoh dalam cerita					
		2. Menyebutkan perbuatan buruk yang dilakukan tokoh dalam cerita					
	Menanggapi	1. Memberikan respon terhadap pertanyaan dengan cepat					
		2. Mengikuti perintah seperti yang ditampilkan dalam tayangan video					

Test Research Instruments

In quantitative research, research instruments must meet two main criteria: validity and reliability.

a) Validity Test and. Normality Test

Homogeneity Test

After the normality test, a homogeneity test is carried out to ensure that the data comes from a population with similar diversity. This test uses the Bartlett test with the formula:

x2=(ln⁡f0⁡10){B−∑(ni−1)log⁡f0⁡si2}x² = (\ln 10) \{ B - \sum (ni - 1) \log s_i^2 \}x2=(ln10){B−∑(ni−1)logsi2}

Statistical Hypothesis

The research hypothesis tests the influence of audio-visual media on the listening ability of children aged 5-6 years.

H_0 is accepted and H_1 is rejected if tcount>ttablet_{\text{count}} > t_{\text{tabel}}tcount>ttable, meaning that the use of audio-visual media increases listening ability.

H_0 is rejected and H_1 is accepted if tcount≤ttablet_{\text{count}} \leq t_{\text{tabel}}tcount≤ttable, meaning there is no significant influence of audio-visual media on listening ability.

Homogeneity Test

After the normality test, a homogeneity test is carried out to ensure the data comes from a population with similar diversity. This test uses the Bartlett test at a significance level of α = 0.05, with the formula:

x2=(ln⁡f0⁡10){B−∑(ni−1)log⁡f0⁡si2}x² = (\ln 10) \{ B - \sum (ni - 1) \log s_i^2 \}x2=(ln10){B−∑(ni−1)logsi2}

Test criteria:

H_0 is accepted if tcount>ttablet_{\text{count}} > t_{\text{table}}tcount>ttable, the data is homogeneous.

H_0 is rejected if tcount<ttablet_{\text{count}} < t_{\text{table}}tcount<ttable, the data is not homogeneous.

Hypothesis Testing

If the data is normal and homogeneous, a t-test is carried out to test the hypothesis, with the formula:

t0=MDSEmt0 = \frac{MD}{SE_m}t0=SEmMD

Statistical Hypothesis

The hypothesis proposed is the influence of audio-visual media on the listening ability of children aged 5-6 years.

H_0: $\mu_1 = \mu_2$ (no influence)

H_1: $\mu_1 \neq \mu_2$ (there is influence).

Test criteria:

H_0 is accepted if tcount>ttablet_{\text{count}} > t_{\text{tabel}}tcount>ttable, meaning that audio-visual media improves listening ability.

H_0 is rejected if tcount≤ttablet_{\text{count}} \leq t_{\text{tabel}}tcount≤ttable, meaning that there is no significant influence of audio-visual media on listening ability.

This research is experimental research involving data before the treatment (pretest) and after the treatment (posttest) using audio visual media through the method of storytelling and conversation. The treatment in this research is the provision of animated videos *Serial Diva*.

Research Results Data

The description of the data from this research includes listening ability scores before and after treatment. Data were analyzed using

descriptive statistics, including minimum, maximum, average (mean), distribution (standard deviation, variance), as well as frequency distribution tables. For greater clarity, the research data are presented in the following frequency distribution table and histogram:

Table 2. Description of Listening Ability Data
Ability to Listen Before Treatment (Y_1)

Pretest (Y)		*Posttest* (Y)	
Jumlah responden (n)	10	Jumlah responden (n)	10
Skor tertinggi	32	Skor tertinggi	34
Skor terendah	15	Skor terendah	16
Rata-rata (mean)	23,3	Rata-rata (mean)	27,4
Nilai Median (Me)	26,5	Nilai Median (Me)	33,5
Nilai Modus (Mo)	20,9	Nilai Modus (Mo)	26,3
Simpangan Baku	5,35	Simpangan Baku	5,06

Ability to Listen Before Treatment (Y_1)
Based on data collected from 10 children as respondents, data was obtained on the group of children before being treated by watching the animated video Serial Diva with the highest score of 32; lowest score 15; average (mean) 23.3; median value (Me) 26.5; mode value (Mo) 20.9; and standard deviation 5.35. For more details, see the description of the data outlined in the form of a frequency distribution table as follows:

Table 3. Frequency Distribution of Children's Listening Ability Scores Before Treatment (Y_1)

Kelas Interval	Frekuensi Absolut (f)	Frekuensi Kumulatif (F)	Frekuensi Relatif (%)
15 - 18	1	1	10%
19 - 22	5	6	50%
23 - 26	2	8	20%
27 - 30	0	8	0%
31 - 34	2	10	20%
Jumlah	10		100%

The frequency distribution of listening ability scores before being given the treatment of watching the animated video Serial Diva is then presented in a histogram as in the following figure:
in the following picture:

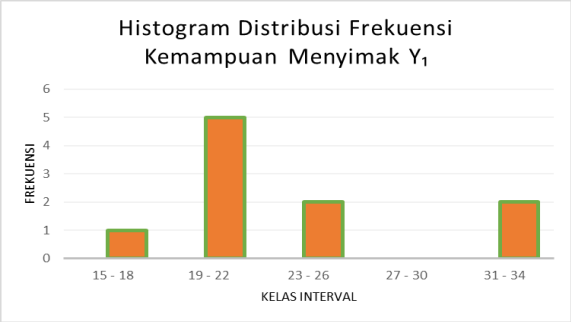

Figure 1. Frequency Distribution Histogram for Group Y_1

Results of Listening Ability After Treatment (Y_2)

From data obtained from 10 respondents, the results of listening ability after being treated with watching the animated video Serial Diva showed the highest score of 34, the lowest score of 16, average (mean) 27.4, median (Me) 33.5, mode 26.3, and standard deviation 5.06. More details can be seen in the following frequency distribution table:

Table 4. Frequency Distribution of Children's Listening Ability Scores After Treatment (Y_2)

Kelas Interval	Frekuensi Absolut (f)	Frekuensi Kumulatif (F)	Frekuensi Relatif (%)
16 - 19	1	1	10%
20 - 23	0	1	0%
24 - 27	4	5	40%
28 - 31	2	7	20%
32 - 35	3	10	30%
Jumlah	10		100%

The frequency distribution of children's listening ability scores after being treated with watching the Diva Series animated video can then be presented in a histogram as follows:

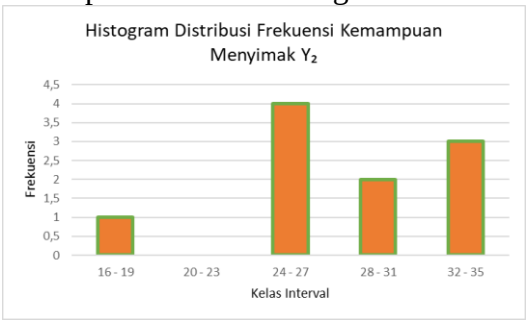

Figure 2. Frequency Distribution Histogram of Listening Ability Y_2

Validity Test Results After Treatment (Y_2)

The validity test results show that the calculated r before and after treatment is greater than the r table, so the questionnaire used is valid.

Reliability testing is carried out after the question items are declared valid. A questionnaire is said to be reliable if it has good measurement consistency when retested. A questionnaire is considered reliable if the reliability coefficient is > 0.60. The results of the reliability test on all data groups show a reliability coefficient > 0.60, which means the questionnaire used is reliable. The results of reliability test calculations using Cronbach's Alpha can be seen in the following table:

Table 5. Reliability Testing Results

Kelompok	Jumlah sampel	Koefisien reliabilitas	Ketentuan	Keterangan
Y_1	10	0,886	>0,6	reliabel
Y_2	10	0,87	>0,6	reliabel

From the results of the reliability test in the table above, it shows that α Y_1 > 0.6 and α Y_2 > 0.6, which means the questionnaire used is reliable.

Table 6. Recapitulation of Sample Normality Test Results using the Liliefors Test at the α = 0.05 level

Kelompok	Jumlah sampel	L hitung (L□)	L tabel (Lt; α=0,05)	Kesimpulan
Y□	10	0,0709	0,258	normal
Y□	10	0,119	0,258	normal

From the results of the normality analysis of the data in the table above, it shows that the price *p value* for all groups is > 0.05, so Ho is accepted or both data are normally distributed.

. Hypothesis Testing

After testing the normality and homogeneity of the data, hypothesis testing was carried out using the t-test to test the null hypothesis (Ho), which states that there is no effect of using audio-visual media on children's listening abilities.

Table 7. Hypothesis test results

Sumber Varians	t hitung	t tabel	Keterangan
Kelompok	3,186	2,262	H_0 ditolak

The test criteria used are H_1 accepted and H_0 rejected if t count > t table. Because H_0 is rejected, H_1 is accepted, which means there is a difference between the children's listening ability scores before and after being treated using audio-visual media.

Interpretation of Research Results

Based on the results of the homogeneity test that has been carried out, it is known that the average score of children's listening abilities after being given audio-visual media is higher than before using this media. These results indicate that the use of audio-visual media has a significant influence on the listening abilities of young children. Based on the results of statistical calculations, with tcount=3.186>ttable(0.05,9)t_{count} = 3.186 > t_{table} (0.05, 9)ttable=3.186>ttable (0.05.9) , there is a significant difference, so it can be concluded that there is an influence of the use of audio-visual media on children's listening abilities. This is in line with the findings of Nugraha, Marhaeni, and Tirtayani (2020), which show that audio-visual media is able to increase children's attention and understanding through multisensory stimulation.

Audio visual media is very suitable for use in the learning process in early childhood because it is able to activate the senses of hearing and sight simultaneously. This stimulation is important to support children's development, as stated by Rahmatillah, Luthfi, and Fauziddin (2018), who highlight that stimulation through sensory organs can improve children's cognitive and receptive abilities. One type of effective audio-visual media is film, which presents a series of stories with moving images and sound that attract children's attention.

Video serial *Diva* is an example of safe and effective educational media for early childhood. This video has content designed to

help children learn through simple but interesting stories, as explained by Kurniati (2017), that story-based media has a positive impact on children's communication and understanding skills.

CONCLUSION

This research was conducted at Puta VI Pasar Friday, Pondok Pinang, Kec. Kebayoran Lama children aged 5–6 years. The research aims to determine the effect of using audio-visual media on the listening skills of young children, which is important for language development, including speaking ability. Interesting media can improve children's listening skills.

Based on the research results, the average score for the listening ability of children who were treated (posttest) with audio-visual media in the form of the animated video Serial Diva was higher than before the treatment (pretest). Calculations show t count (3.186) > t table (2.262) at $\alpha = 0.05$, so that H_1 is accepted and H_0 is rejected. This shows that the use of audio-visual media influences children's listening abilities.

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