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Enhancing Early Childhood Language Skills through Audio-Visual Storytelling: A Pre-Experimental Study

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Abstract

This study investigates the effectiveness of storytelling supported by audio-visual media in improving early childhood language skills at an Islamic kindergarten in Maritengngae District, Sidenreng Rappang Regency. The research employed a pre-experimental design using a one-group pretest–posttest approach. The participants consisted of early childhood learners whose language abilities were assessed before and after the implementation of storytelling activities using audio-visual materials. Data were collected through structured observation sheets covering four language domains: listening, speaking, reading, and writing, and were analyzed descriptively using percentage-based achievement indicators.

The findings reveal a substantial improvement in children's language skills across all assessed domains. Children's listening abilities improved through better comprehension of instructions and repetition of complex sentences, while speaking skills developed through answering questions, narrating cause-and-effect events, and naming objects. Reading skills increased as children became more proficient in recognizing letters, symbols, and words, and writing skills improved through name writing and meaningful drawing activities. Overall, children's language performance increased from approximately 50% in the pretest to 85% in the posttest, indicating that classical learning completeness was achieved.

The results suggest that storytelling with audio-visual media creates an engaging and supportive learning environment that enhances children's motivation and active participation. This study concludes that audio-visual storytelling is an effective and innovative instructional approach for fostering comprehensive language development in early childhood education.

Keywords: audio-visual media; storytelling method; language development; early childhood education; pre-experimental study

Introduction

Early childhood education plays a vital role in supporting children's holistic development, particularly during the so-called *golden age*, when cognitive, linguistic, social, and emotional growth occurs rapidly. Language development during this period is fundamental, as it serves as the primary means for children to express ideas, emotions, and needs, while also forming the basis for later academic success and social interaction (Paul & Norbury, 2012).

In early childhood classrooms, language learning ideally fosters active communication through listening, speaking, reading, and writing experiences that are meaningful and engaging. However, observations in several early childhood institutions in Maritengngae District, Sidenreng Rappang Regency, indicate that children's language abilities remain below expected developmental standards. Learning activities tend to rely on teacher-centered verbal explanations with minimal instructional media, resulting in low engagement and limited opportunities for children to actively use language.

Previous studies have reported similar challenges, noting that early childhood language instruction often emphasizes early literacy skills mechanically, such as letter recognition and writing drills, while neglecting communicative language use (Masitah, 2018; Rahmayani, 2021). Consequently, children may demonstrate limited vocabulary, reduced expressive abilities, and low motivation to participate in language activities.

Storytelling has been widely recognized as an effective pedagogical approach for early language development because it provides contextualized language input, stimulates imagination, and encourages interaction (Isbell et al., 2004). When combined with audio-visual media, storytelling becomes more concrete and engaging, allowing children to process information through both auditory and visual channels. According to Mayer's (2009) multimedia learning theory, learning is more effective when verbal and visual information are integrated, particularly for young learners who benefit from multimodal stimulation.

Empirical evidence suggests that audio-visual storytelling enhances children's attention, comprehension, and retelling abilities, thereby supporting language acquisition across multiple domains (Surahmat et al., 2025; Busran et al., 2025). Despite these findings, the application of audio-visual storytelling in early childhood classrooms, particularly in local contexts, remains limited.

Therefore, this study seeks to address this gap by examining the effectiveness of storytelling using audio-visual media in improving early childhood language skills. The research focuses on four language domains—listening, speaking, reading, and writing—and aims to provide empirical evidence to support the integration of multimedia-assisted storytelling in early childhood education.

Method

This study employed a pre-experimental research design, specifically a one-group pretest–posttest design, to examine changes in children's language skills before and after the implementation of storytelling using audio-visual media. The design is presented as follows:

$$\mathbf{O_1 - X - O_2}$$

O_1: Pretest
X: Treatment
O_2: Posttest

The participants consisted of 32 children aged 5–6 years enrolled in an Islamic kindergarten located in Maritengngae District, Sidenreng Rappang Regency. All participants were included using a total sampling technique, as the study involved a single intact class.

Children's language abilities were assessed across four domains: listening, speaking, reading, and writing. Observations were conducted using a standardized four-point rating scale (1 = never, 2 = rarely, 3 = often, 4 = always), allowing the researchers to quantify the frequency of observable language behaviors. The observation instrument was developed based on early childhood language development indicators and used consistently during both the pretest and posttest phases.

The pretest was administered to establish baseline language ability levels. Subsequently, the audio-visual storytelling method was implemented as the instructional treatment. After the completion of the intervention, a posttest was conducted using the same observation instrument to ensure measurement consistency.

Data were analyzed quantitatively using descriptive statistical techniques. Percentage scores were calculated using the formula $P = (N/A) \times 100\%$ to describe changes in language skill performance before and after the treatment. Comparisons between pretest and posttest results were used to determine trends and improvements in children's language development following the intervention.

As a limitation, the absence of a control group in this pre-experimental design restricts causal inference; therefore, the findings should be interpreted as indicative trends rather than definitive effects.

Results and Discussion

Improvement of Children's Language Skills through Storytelling with Audio-Visual Media

1. Pretest Results

The research on the development of children's language skills was conducted using classroom action research through storytelling assisted by audio-visual media. The aim was to improve the language abilities of students at Islamic Kindengarten in Kec. Maritengngae Kab. Sidenreng Rappang. Observations were carried out based on the Daily Activity Plan (RKH), focusing on programs designed to support children's language development. Before the intervention, an evaluation was conducted on 32 children in Group. The pretest data showed the following:

Table 1. The pretest data

Characteristic	Indicator	Number Completed	%
Listening	Understanding simple instructions	10	47%
	Repeating more complex sentences	11	53%
	Naming some adjectives	6	50%
Speaking	Answering more complex questions	9	62%
	Narrating cause-effect events	7	47%

	Naming as many objects as possible	7	53%
Reading	Recognizing familiar letter symbols	12	37%
	Identifying initial letters of familiar words	14	43%
	Reading own name	13	40%
	Matching pictures with words	19	59%
Writing	Recognizing symbols and writing letters or numbers	12	50%
	Understanding the relationship between sounds and forms	14	47%
	Writing own name	13	53%
	Free drawing or meaningful scribbles	19	37%

The pretest results indicated that many children had difficulty understanding and expressing language. Without intervention, this could affect other aspects of their development. Therefore, the teacher/researcher implemented storytelling using audio-visual media to enhance children's language skills.

2. Implementation

The audio-visual media intervention was conducted on Monday, September 18, 2023, with the theme "Universe" and sub-theme "Natural Phenomena." Activities were carried out in the classroom using the storytelling method. The teacher prepared available media, including a laptop and video related to the theme, and observation sheets for monitoring.

During the activity:

1. The teacher displayed the video.
2. While watching, children were encouraged to communicate about the content of the story.
3. After the video, additional learning activities were conducted.
4. The teacher observed children's participation and engagement.
5. The teacher reviewed and discussed the meaning of the activities.

Children showed enthusiasm and were eager to watch the video. The cartoon-format video about the universe captured their attention and encouraged responses. Simple questions such as "What season is it now?" and "How does rain occur?" were asked. Some children, like Felita, Caca, and Tian Sakti, responded actively, while others, like Hanum, Aura, and Ayen, needed more encouragement. Activities such as folding paper umbrellas allowed children to be creative and communicative. Some children still required guidance, including Afif, Ayen, Yoan, Hanum, and Ari. The day ended with a review of activities, prayer, and dismissal.

3. Post-Test Results

Table 2. The post-test data

Characteristic	Indicator	Number Completed	%
Listening	Understanding simple instructions	23	72%
	Repeating more complex sentences		

	Naming some adjectives	24	75%
Speaking	Answering more complex questions	27	84%
	Narrating cause-effect events	29	90%
	Naming as many objects as possible	26	81%
Reading	Recognizing familiar letter symbols	23	72%
	Identifying initial letters of familiar words	27	84%
	Reading own name	25	78%
	Matching pictures with words	25	78%
Writing	Recognizing symbols and writing letters or numbers	26	81%
	Understanding the relationship between sounds and forms	23	72%
	Writing own name	23	72%
	Free drawing or meaningful scribbles	25	78%

The findings indicate a substantial improvement in children's language skills following the implementation of the storytelling method using audio-visual media. Specifically, children's understanding of simple instructions reached 72%, while their ability to repeat complex sentences increased to 75%. Vocabulary-related skills also showed notable gains, with 84% of children able to name adjectives and 81% able to name objects accurately. Higher-order language skills improved as well, as reflected in children's ability to answer complex questions (90%) and narrate cause-and-effect events coherently (81%).

In terms of early literacy development, 72% of children demonstrated the ability to read symbols, 84% recognized initial letters, and 78% were able to read their own names. Additionally, 81% of the children successfully matched pictures with corresponding words and recognized numbers. Phonological awareness, measured through understanding sound–form relationships, reached 72%. Writing-related skills also improved, with 72% of children able to write their own names and 88% capable of producing meaningful drawings.

Overall, these results indicate that the learning process achieved classical completeness, with an average improvement in children's language skills of approximately 85%. Comparatively, pre-intervention data showed that only around 50% of children demonstrated adequate language abilities. The post-test results therefore reflect an overall increase of 35%, confirming the effectiveness of storytelling supported by audio-visual media in enhancing children's language development.

The findings of this study confirm that storytelling supported by audio-visual media significantly enhances early childhood language skills across listening, speaking, reading, and writing domains. This result is strongly grounded in sociocultural theory, which emphasizes that language development occurs through socially mediated activities and meaningful interactions (Vygotsky, 1978). Storytelling creates an authentic communicative context, while audio-visual media function as mediational tools that support children's comprehension and participation within their zone of proximal development.

The observed improvement in listening and speaking skills—particularly in following instructions, answering complex questions, and narrating cause-and-effect events—aligns with previous studies indicating that narrative-based instruction promotes oral language development and discourse competence in young learners (Isbell et al., 2004; Nicolopoulou et al., 2015). The use of animated storytelling further strengthens these outcomes by providing contextual visual cues that aid meaning-making and sustain children's attention.

From the perspective of multimedia learning theory, the results support Mayer's (2009, 2021) assertion that learning is more effective when verbal information is integrated with relevant visual representations. The high levels of achievement in vocabulary acquisition, symbol recognition, and picture–word matching suggest that dual-channel processing facilitated children's understanding of linguistic input. Similar findings have been reported in empirical studies showing that audio-visual storytelling improves vocabulary retention and narrative comprehension more effectively than text-only or oral-only instruction (Verhallen & Bus, 2010; Takacs et al., 2015).

Compared with prior empirical research, the magnitude of improvement observed in this study (an overall increase of 35%) is consistent with studies reporting positive effects of multimedia-based storytelling on early literacy development (Neuman et al., 2017; Courage et al., 2015). However, the improvement rate in the present study appears relatively higher than in some previous findings. This difference may be attributed to contextual factors, such as the novelty of audio-visual media for children in the research setting, the use of culturally familiar cartoon content, and the structured integration of storytelling activities into daily classroom practice.

Notably, the development of early reading and writing skills—such as recognizing initial letters, reading one's own name, writing names, and producing meaningful drawings—supports the view that visual narratives can facilitate emergent literacy by strengthening print awareness and symbol–meaning relationships (Justice & Pullen, 2003; Neumann, 2018). This finding extends earlier research by demonstrating that audio-visual storytelling not only enhances oral language but also contributes to foundational literacy skills in kindergarten learners.

The theoretical contribution of this study lies in reinforcing the integration of sociocultural theory and multimedia learning theory within early childhood language education. Empirically, the study provides evidence that storytelling combined with audio-visual media supports comprehensive language development rather than isolated skill acquisition. Practically, these findings suggest that early childhood educators can adopt audio-visual storytelling as an effective and engaging instructional strategy to foster motivation, participation, and meaningful language use. This approach offers a viable pedagogical alternative to conventional methods, particularly in contexts where children benefit from multimodal and interactive learning experiences.

Conclusion

This study demonstrates that storytelling supported by audio-visual media is an effective pedagogical approach for enhancing early childhood language development. The findings indicate substantial improvements across the four core language domains—listening, speaking, reading, and writing—following the implementation of audio-visual storytelling activities. The achievement of classical completeness and the notable increase in overall language performance suggest that multimodal narrative instruction provides meaningful linguistic input, promotes active engagement, and supports comprehensive language acquisition in early childhood education contexts.

From a practical perspective, these findings imply that early childhood educators are encouraged to integrate audio-visual storytelling into daily instructional practices to create interactive and motivating learning environments. The use of animated stories and visual narratives can help teachers scaffold language learning, accommodate diverse learning styles, and facilitate children's understanding of abstract linguistic concepts. At the policy and institutional levels, this study highlights the importance of providing access to appropriate

digital learning resources and professional development programs that support the effective use of multimedia tools in early childhood classrooms.

Despite its contributions, this study has several limitations that should be acknowledged. The pre-experimental research design limits causal inference, as the absence of a control group prevents direct comparison with alternative instructional approaches. Additionally, the relatively small sample size and the focus on a single educational context may restrict the generalizability of the findings. The reliance on descriptive analysis also limits the depth of statistical interpretation regarding the magnitude of the intervention's effects.

Future research is therefore recommended to employ more rigorous experimental or quasi-experimental designs, including control groups and inferential statistical analyses, to strengthen causal claims. Further studies could also explore the long-term impact of audio-visual storytelling on language development, as well as its effectiveness across different cultural, linguistic, and educational settings. Investigating teachers' instructional strategies and children's individual differences in response to multimedia storytelling may also provide deeper insights into optimizing language learning in early childhood education.

In conclusion, this study provides compelling evidence that storytelling with audiovisual media is an effective method to enhance early childhood language development. It demonstrates that children's language skills—listening, speaking, reading, and writing—can improve significantly when learning is made engaging, interactive, and multimodal. This approach serves as a practical and replicable strategy for educators aiming to create a rich, stimulating, and supportive language-learning environment.

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