Aulad: Journal on Early Childhood
ISSN: 2655-433X (Online)

Madurese Local Wisdom-Based Audiovisual Media For Enhancing Listening Skills In 5-6 Year Old

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DOI: 10.31004/aulad.v9i1.1477

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Abstract
Early childhood listening skills need to be developed through media that is contextual to the socio-cultural environment. This study aims to explore the use of audio-visual media based on Madurese local wisdom to develop the listening skills of 5-6 year old children. This descriptive qualitative study involved 43 children, 2 classroom teachers, and the principal of RA Al Munawarah Jungcangcang Pamekasan as informants. Data were collected through participatory observation, in-depth interviews, and documentation, and analyzed using the Miles and Huberman model. The results showed that audio-visual media containing Madurese folk tales, traditional songs, and traditional clothing improved children's focus, understanding of information, memory, and active participation. Implementation constraints included limited local content, technical problems, language barriers, and classroom management, which were overcome through content development and scaffolding reinforcement. The integration of local wisdom in audio-visual media effectively developed listening skills while strengthening children's cultural identity. Implications included the development of a digital repository of local content and the strengthening of teachers' technological-pedagogical competencies.

Keywords: *Audio-Visual Media, Madurese Local Wisdom, Listening Skills, Early Childhood*

Article Info
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Received 05 December 2025, Accepted 10 January 2025, Published 01 February 2026

1. INTRODUCTION

Listening skills are the foundation for children's language development, enabling them to form other language skills at later stages. Children aged 5-6 years are in a golden period of cognitive and linguistic development that requires appropriate stimuli to optimize their listening skills (Siti Isnaini & Nurazila Sari, 2025). The process of listening is not merely an activity of receiving information, but involves emotional and cognitive understanding of the message being heard, thus playing an important role in shaping children's communication and socialization skills (Siti Isnaini et al., 2024). However, listening learning practices in various early childhood education institutions still rely on a one-way verbal approach that does not actively involve children. This condition results in low child participation in listening activities due to the lack of learning media that can attract children's attention and stimulate their curiosity.

Despite its crucial role, listening skill development in early childhood education faces several challenges. Many kindergarten teachers still employ teacher-centered approaches with minimal use

of engaging learning media, resulting in passive learning environments that fail to stimulate children's auditory attention ((Tiden et al., 2025). The dominance of conventional verbal methods without audiovisual support has been shown to reduce children's motivation and participation in listening activities (Lepola et al., 2023). Furthermore, limited availability of culturally relevant listening materials disconnects learning from children's sociocultural contexts, making it difficult for children to construct meaningful understanding (Nur Istiqamah, 2024). Research indicates that inadequate integration of local wisdom in learning media results in diminished cultural identity among young children while simultaneously failing to optimize their listening comprehension (Suharti et al., 2025). Additionally, insufficient teacher competence in developing and utilizing technology-based listening media that incorporates local cultural values further exacerbates these challenges ((Arif et al., 2025; Maulina et al., 2022).

The use of audio-visual media has been proven effective in improving listening skills in early childhood because it integrates visual and auditory elements simultaneously (Mappapoleonro, 2024). This media facilitates children in capturing language patterns, improving focus, and strengthening information retention through multimodal representation (Castillo et al., 2023). Research Castillo et al., (2023) shows that audio-visual media can identify stages of children's language development and encourage children to express themselves with more confidence. However, the majority of audio-visual media used in early childhood education is still general in nature and not closely tied to the local cultural context where children live (Ramona & Cholimah, 2025). Media that does not reflect children's socio-cultural experiences can reduce the meaningfulness of learning and weaken children's emotional connection to the material being studied (Wahyuni et al., 2025). The gap between the content of learning media and the cultural reality of children creates a psychological distance that hinders the process of internalizing values and understanding the material.

The integration of local wisdom into learning media provides a solution to this problem by connecting children's learning experiences with their social and cultural environment. Local wisdom serves as a bridge that strengthens children's sense of belonging to their culture, increases their understanding of their surroundings, and builds stronger emotional ties to the learning material ((Elia, 2024; Sakti et al., 2024) reveals that audio-visual media based on local wisdom can create an engaging learning environment while integrating cultural values to support character building in children. Research Shakilla Aura et al., (2023) proves that the use of videos based on local wisdom successfully improves children's listening skills and socio-cultural awareness. These findings confirm that learning media that promote local cultural values not only improve academic abilities but also strengthen children's cultural identity from an early age.

Madura has a wealth of local wisdom that has the potential to be used as a source of audio-visual media content, ranging from folk tales and oral traditions to regional arts. The use of local wisdom in learning media is seen as a way to create meaningful learning experiences because they are relevant to the socio-cultural context of children (Jusriadi et al., 2025). RA Al Munawarah Jungcangcang Pamekasan has implemented Madurese local wisdom-based audio-visual media in listening learning activities for 5-6 year olds in an effort to optimize contextual language development. However, there has not been much research that explores in depth how the implementation of audio-visual media based on Madurese local wisdom contributes to the development of listening skills in early childhood, as well as how the dynamics of these learning practices take place in the field. This research is important considering the limited scientific documentation on the integration of Madurese local wisdom in early childhood learning media, so that an in-depth exploration of the practices that have been carried out at RA Al Munawarah can provide empirical contributions to the development of a local culture-based learning model.

Previous studies on listening skill development in early childhood have explored various approaches but with different emphases. Maureen et al., (2018) investigated digital storytelling to support literacy development in preschool children, yet their focus remained primarily on reading and writing skills rather than specifically targeting listening comprehension through culturally contextualized content. Putranti (2025) explored the integration of local wisdom through ethnopedagogy in early childhood education but emphasized character development and moral value transmission rather than specific language skill enhancement through audiovisual technology. Meanwhile, Fathurrochman et al., (2025) examined the integration of local wisdom in elementary

school curricula across three distinct cultural contexts in Indonesia, identifying various integration models and their impact on cultural identity, but did not specifically address audiovisual technology application for listening skill development in early childhood settings. Meanwhile, Alelaimat et al., 2020) studied preservice teachers' preparedness for technology and digital media integration in early childhood education, revealing positive perceptions but less satisfactory preparation levels, without addressing the systematic integration of regional cultural content in digital media design. This present study offers novelty by systematically combining audiovisual technology with Madurese local wisdom, including folklore, traditional songs, and cultural visualizations specifically designed to develop listening skills while simultaneously strengthening children's cultural identity, an integration that has not been comprehensively explored in previous research.

This study aims to explore the use of audio-visual media based on Madurese local wisdom to develop listening skills in 5-6 year old children at RA Al Munawarah Jungcangcang Pamekasan. Specifically, this study examines how the media is applied in the learning process, the impact it has on children's listening skills, and the obstacles faced by teachers in its implementation. The results of this study are expected to contribute theoretically in the form of a deeper understanding of the effectiveness of audio-visual media based on local wisdom in improving the listening skills of early childhood. Practically, this study is expected to serve as a reference for educators and early childhood education institutions in developing learning media that is not only pedagogically effective but also culturally relevant and supports the preservation of local culture from an early age.

2. METHODS

This study employs a qualitative approach with a descriptive design to explore the use of audiovisual media based on Madurese local wisdom in developing listening skills of children aged 5-6 years at RA Al Munawarah Jungcangcang Pamekasan. The qualitative descriptive design was chosen because it enables researchers to provide a comprehensive and accurate description of phenomena as they naturally occur without imposing predetermined theoretical frameworks or attempting to establish causal relationships. This approach allows for detailed documentation and interpretation of how audiovisual media based on Madurese local wisdom is implemented in actual classroom settings, capturing teachers' instructional practices, children's responses, and contextual factors that characterize the listening learning process. Unlike other qualitative approaches that focus on theory generation or deep interpretation of meaning, descriptive qualitative research prioritizes staying close to the data and presenting findings in everyday language that accurately represents participants' perspectives and experiences. The study was conducted from October 2025 to November 2025, with the location selected based on the institution's ongoing efforts to integrate Madurese local wisdom into their curriculum, making it an appropriate setting for observing this educational practice.

Data collected in this study comprised three main types: (1) observational data on children's listening behaviors and teacher-child interactions during learning activities using audiovisual media based on Madurese local wisdom; (2) interview data from key informants regarding learning planning, implementation strategies, perceived effectiveness, and challenges encountered; and (3) documentary data including photographs, videos of learning activities, daily lesson plans, and learning modules. The research subjects consisted of 43 children aged 5-6 years in Group B, while informants included the school principal, two classroom teachers, and one assistant teacher. Children were selected as subjects because they are in the optimal phase of language development and represent the direct recipients of the audiovisual media intervention. The principal provided institutional perspectives on policies supporting local wisdom integration, classroom teachers offered insights into pedagogical planning and implementation, and the assistant teacher contributed observational data on children's developmental responses during the learning process. The researcher functioned as the primary instrument, conducting weekly visits to the research site to observe learning processes, interact with teachers and children, and collect supporting documents while maintaining an open and transparent position known to all research subjects to build trust and obtain authentic data.

Data were collected through three complementary techniques: participatory observation, semi-structured interviews, and documentation, as illustrated in Table 1. Participatory observation employed a structured observation sheet with specific indicators including: (a) attention focus

measured by duration of visual attention to the media and responsiveness to audio stimuli; (b) information comprehension assessed through children's ability to retell content and answer comprehension questions; (c) memory retention evaluated by recall of story elements and cultural vocabulary; (d) active participation observed through verbal responses, physical engagement, and peer interactions; and (e) cultural recognition demonstrated by identification of traditional elements presented in the media. Semi-structured interviews utilized an interview guide with key themes covering: learning objectives and planning processes, media selection and adaptation strategies, teachers' perceptions of media effectiveness, children's developmental progress, and implementation challenges. The interview guide included probing questions to explore informants' experiences and perspectives in depth, allowing for flexible yet focused data collection. Documentation was systematically collected using a documentation protocol that catalogued: visual records of learning activities (photographs and videos), instructional planning documents (RPPH and learning modules), and children's work samples that demonstrated listening comprehension outcomes.

Table 1. Research Instruments and Indicators

Data Collection Technique	Instrument	Indicators
Participatory Observation	Observation Sheet	1. Attention focus (visual attention duration, audio responsiveness) 2. Information comprehension (retelling ability, answering questions) 3. Memory retention (story recall, cultural vocabulary) 4. Active participation (verbal responses, physical engagement) 5. Cultural recognition (traditional element identification)
Semi-Structured Interview	Interview Guide	1. Learning planning (objectives, media selection) 2. Implementation strategies (media adaptation, classroom management) 3. Perceived effectiveness (listening skill development, cultural awareness) 4. Children's progress (behavioral changes, skill improvement) 5. Implementation challenges (technical, pedagogical, contextual)
Documentation	Documentation Protocol	1. Visual records (photographs, videos) 2. Planning documents (RPPH, learning modules) 3. Children's work samples (comprehension outputs)

As presented in Table 1, each data collection technique was supported by specific instruments with clearly defined indicators to ensure systematic and comprehensive data gathering that addressed the research focus on media implementation, impacts on listening skills, and implementation challenges. Data analysis using the Miles and Huberman model, which consists of four stages: data collection, data reduction, data presentation, and data verification (Lim, 2025). Data analysis used the Miles and Huberman model, which consists of four stages: data collection, data reduction, data analysis, and data interpretation. The data collection stage was carried out systematically through observation, interviews, and documentation to obtain comprehensive information about the use of audio-visual media based on Madurese local wisdom. The data reduction stage was carried out by sorting, focusing, and simplifying the raw data obtained from the field in accordance with the research focus on media use, the resulting impact, and the obstacles faced by teachers. The data presentation stage was carried out by systematically compiling information in the form of descriptive narratives and tables to facilitate understanding of the research findings. The data verification stage was carried out by drawing conclusions based on patterns and themes that emerged from the data presented to answer the research questions comprehensively.

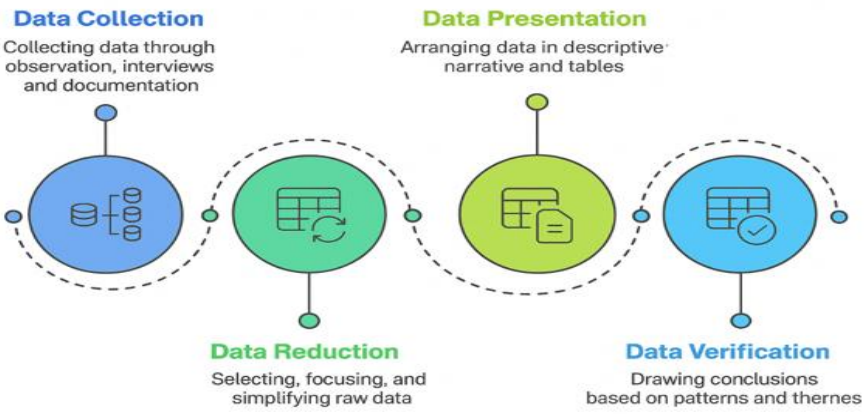

Figure 1. Miles and Huberman Data Analysis Process

The validity of the data in this study was ensured through credibility checks that included extended observation, increased persistence, and triangulation (Ahmed, 2024). The observation period was extended by prolonging the field research until the data obtained reached saturation point and no new information relevant to the research focus was found. Persistence was improved by conducting more careful and continuous observations to ensure the consistency of the data obtained and to identify errors in data collection and interpretation. Triangulation was carried out in three ways, namely source triangulation by comparing data from the principal, classroom teachers, assistant teachers, and children's responses; technique triangulation by comparing data from observations, interviews, and documentation; and time triangulation by collecting data at different times to ensure the consistency and validity of the research findings as a whole.

3. RESULT AND DISCUSSION

The Use of Audio-Visual Media Based on Madurese Local Wisdom to Develop Listening Skills

The application of audio-visual media based on Madurese local wisdom begins with presenting the learning theme to the children. Teachers prepare materials relevant to the theme of the surrounding environment, particularly the sub-theme of family, with content based on Madurese local wisdom such as traditional clothing, traditional songs, and Madurese folk tales. The classroom is arranged so that all children can see the television screen clearly and sit comfortably. Technical arrangements include adjusting the speaker volume so that the sound is clear but not too loud, adjusting the brightness of the television screen so that the images are visible, and setting the video duration to around 10-15 minutes to suit the attention span of 5-6 year old children. The teacher also gives a brief introduction before playing the video to build the children's enthusiasm and provide context about the content to be listened to. Table 2 shows the stages of using audio-visual media based on Madurese local wisdom in listening comprehension learning.

Table 2. Stages of Using Audio-Visual Media Based on Madurese Local Wisdom

Stage	Activity	Duration
Preparation	Selection of videos based on Madurese local wisdom, device setup, classroom arrangement	10 minutes
Apperception	ntroduction to the theme, providing context, brief explanation of Madurese cultural content	5 minutes
Screening	Children watch videos containing folk tales, traditional songs, or an introduction to Madurese culture	10- 15 minutes
Discussion	The teacher asks the children questions about the content of the video, and the children retell the content of the video.	10 minutes
Reflection	Children express their feelings and understanding of the cultural values contained in the video	5 minutes

Source: Triangulation of data from participatory observation, in-depth interviews with teachers and school principals, and documentation of child development (October-November 2025)

Children's responses to audio-visual media based on Madurese local wisdom showed a significant improvement. Observations showed that children were more focused and enthusiastic when watching videos that featured elements of Madurese culture familiar to their daily lives. Children showed cheerful facial expressions, sparkling eyes, and leaned forward as a sign of interest in the video content. Some children spontaneously comment when they see traditional Madurese clothing or hear traditional songs that they have heard from their families. Interaction between children has also increased, as seen in verbal communication such as "*That's like grandma's clothes*" or *"I've heard this song before*." Teachers note that children find it easier to remember information conveyed through audio-visual media based on Madurese local wisdom.

Figure 2. Children Focused and Enthusiastic while Watching a Video Featuring Elements of Madurese Culture.
Source: Personal Documents

As illustrated in Figure 2, the implementation of Madurese local wisdom-based audiovisual media demonstrates high levels of child engagement during listening activities. The figure captures a typical learning session where children exhibit focused attention and enthusiastic participation while watching culturally-relevant content. The local wisdom content presented through the audiovisual media encompasses three main categories: folk tales (such as Joko Tole), traditional songs (such as Tanduk Majeng), and cultural artifacts (traditional Madurese clothing). The classroom observation depicted in Figure 2 reveals that the Joko Tole folk tale video elicited particularly positive responses from children. The narrative's accessible characters and straightforward storyline, combined with embedded moral values, enabled children to identify virtuous and malevolent characters while comprehending messages about honesty and kindness. The children's body language and facial expressions visible in Figure 2 indicate active cognitive processing and emotional engagement with the content. Furthermore, the traditional song Tanduk Majeng integrated into the audiovisual media stimulated children's interest in replicating the rhythmic patterns and accompanying hand movements demonstrated in the video. The collective viewing arrangement shown in Figure 2 facilitated peer learning and synchronized participation in these physical responses. The animated introduction to traditional Madurese attire including the sakera shirt for men, the marlena kebaya for women, and the odheng headwear provided children with visual-contextual knowledge of their cultural heritage in an age-appropriate format.

Post-screening activities are an important part of listening comprehension learning using audio-visual media based on Madurese local wisdom. Teachers conduct question and answer sessions with children about the content of the video to check their understanding and ability to remember information. Questions asked include "*Who are the characters in the story*?", "*What do the characters do*?", "*Why do the characters do that*?", and "*What is the message of the story*?". Most children were able to answer the questions correctly and even added details that were not asked, showing that they had listened carefully. Some children were asked to retell the content of the video in their own words, and the results showed that they were able to put the story together in a logical order even though they used simple sentences appropriate to their stage of language development.

The Impact of Using Audio-Visual Media Based on Madurese Local Wisdom to Develop Listening Skills

The implementation of audio-visual media based on Madurese local wisdom at RA Al Munawarah Jungcangcang Pamekasan has transformed listening skills learning practices for children aged 5-6 years. This study involved 43 children who had consistently participated in learning using audio-visual media containing Madurese local wisdom. Classroom teachers identified that before the use of this media, the listening characteristics of most children showed suboptimal patterns, marked by limited attention span, susceptibility to environmental distractions, weak verbal information retention, and minimal initiative to participate in learning activities. This condition became the background for teachers to integrate audio-visual media based on local wisdom as a more contextual learning strategy. Observations and documentation of development showed an improvement in children's listening skills after the use of audio-visual media, particularly in terms of focus, receptive information comprehension, and memory retention.

Table 2 Transformation of Children's Listening Skills through Audio-Visual Media Based on Madurese Local Wisdom

Dimensions of Listening Skills	Characteristics of the Early Phase	Characteristics of the Late Phase	Interpretation of Development
Attention and Concentration	A small number of children (12 out of 43) were able to maintain stable attention; the majority were easily distracted by external stimuli; average focus duration was 5-7 minutes	The majority of children (35 out of 43) showed consistent attention; they were able to sit quietly with their gaze fixed on the screen; focus duration increased to 10-15 minutes	Culturally familiar content served as a perceptual stimulus that attracted children's visual and auditory attention; emotional resonance with local symbols prolonged the duration of concentration
Receptive Information Comprehension	A minority of children (8 out of 43) were able to answer comprehension questions; they had difficulty grasping implicit meanings; their responses tended to be fragmentary.	The majority of children (31 out of 43) gave comprehensive responses; they were able to explain the storyline and moral values; they were able to relate the story to their personal experiences	Cultural scaffolding facilitates deeper meaning construction; content that represents children's knowledge accelerates the receptive comprehension process
Memory Retention and Narrative Reconstruction	A small proportion of children (7 out of 43) were able to recount the content	More than half of the children (28 out of 43) were able to reconstruct the narrative coherently, remembering the characters, setting, conflict, and resolution of the story	Meaningful learning through culturally relevant content creates stronger results in long-term memory; children do not simply memorize but understand
Participation and Active Involvement	A minority of children (10 out of 43) showed initiative to participate; the majority were passive-receptive; there was minimal verbal and nonverbal expression	The majority of children (37 out of 43) were actively involved in the discussion; they asked spontaneous questions; imitated movements and songs; shared relevant experiences	Transformation from passive recipients to active constructors of knowledge; emotional engagement with the content triggered spontaneous verbal and nonverbal participation
Appreciation and Cultural Identity	Very few children (5 out of 43) were familiar with Madurese cultural symbols; their knowledge of folklore, traditional music, and traditional clothing was very limited	The majority of children (33 out of 43) were able to identify and explain elements of Madurese culture; use Madurese vocabulary; and show pride in their local culture	The enculturation process occurs organically through repeated exposure to cultural symbols; children develop cultural identity and appreciation for local wisdom.

Source: Triangulation of data from participatory observation, in-depth interviews with teachers and school principals, and documentation of child development (October-November 2025)

Observations of listening activities using audio-visual media show a substantial increase in the duration and quality of children's attention. Before the use of media, the average duration of children's attention ranged from 5-7 minutes with a high pattern of distraction; children easily shifted their attention to other objects or activities around the classroom. After the use of audio-visual media based on Madurese local wisdom, the duration of attention increased to 10-15 minutes with a more stable intensity of concentration. Children sat in a posture that showed engagement, remained silent with their gaze fixed on the screen, and maintained visual contact with the content displayed. Teachers observed that the combination of familiar visual elements, such as animated characters dressed in traditional Madurese clothing, geographical settings of beaches and rice fields resembling the surrounding environment, with auditory elements in the form of narration in the Madurese

dialect and traditional Madurese music, created a cultural resonance that deeply attracted the children's attention. The bright colors that dominate the visuals, dynamic animated movements, and rhythmic music serve as visual stimuli that attract the attention of children's auditory and visual senses. A teacher stated: "*When the children see the video, they immediately become quiet, their eyes focused on the screen. It's very different from when we just tell stories using books or just talk. Maybe it's because they see the characters wearing clothes like the ones they wear at school, and they also hear the songs they often hear at home*." (Interview, Grade A Teacher, October 15, 2025).

This phenomenon indicates that cultural familiarity in media content acts as a cognitive factor that facilitates the process of selective attention. Children are not only interested perceptually, but also cognitively involved because the content represents cultural schemas that they are familiar with in their daily lives. The principal added that the difference in children's attention is very noticeable when comparing the use of local audio-visual media with conventional media: "*If the media is from the general internet, children sometimes get confused because the context is far from their lives. But if they use videos that have Madurese elements, they are more comfortable and understand better.*" (Interview, RA Principal, October 18, 2025).

Figure 3. Learning Environment for Listening Using Audio-Visual Media Based on Madurese Local Wisdom
Source: Personal Documents

Figure 3 shows that children's ability to understand the information they hear improves after using audio-visual media based on local wisdom. This understanding is identified through the children's ability to answer questions related to the content, respond verbally and non-verbally to the narrative, and connect new information with their personal experiences. Content representing Madurese folklore, such as Joko Tole, the legend of Ratu Ayu, or narratives about the rokat tase' (sea alms) tradition, creates a cognitive bridge between children's prior knowledge and new information. Children not only hear unfamiliar stories, but also recognize characters, settings, and values that they are familiar with through transmission in their family and community environments. One teacher explained

> *"When I asked 'What happened to Joko Tole?', many children were able to answer because they had heard the story from their grandparents or parents. So the video reinforces what they already know a little bit."* (Interview, Grade B Teacher, October 16, 2025).

The children's ability to remember and retell information they have heard shows significant development. Teachers observed that children not only remember facts, but are also able to remember the moral values, characters, and cultural messages contained in the stories. A child named Fatimah (6 years old) was able to retell the story of Joko Tole in impressive detail

> "*Joko Tole is a good boy, he helped an elderly person who had fallen. Then he was given a gift by the elderly couple, so he became rich. His mother was very happy*" (Observation, October 20, 2025).

This retention ability shows that meaningful learning has taken place. Culturally and emotionally relevant content creates stronger information in children's long-term memory. Unlike mechanical memorization, children remember stories because they understand the context and can relate them to familiar values. The principal

added that some children even recounted the video content to their parents at home, which shows that the information had been well internalized

> *"Some parents said that their children kept talking about the video at home. In fact, their children taught their parents about Madurese folklore. This shows that the children really remembered and understood it."* (Interview, RA Principal, October 18, 2025).

Children's active participation in listening activities increased dramatically after the use of audio-visual media based on local wisdom. Observations showed various forms of active participation emerging: (1) responsive verbal participation, where children answered the teacher's questions enthusiastically; (2) initiative verbal participation, where children asked questions or made comments without being asked; (3) expressive nonverbal participation, where children show emotional expressions such as laughter, admiration, or sadness according to the content; and (4) imitative participation, where children imitate the movements or songs shown in the video. A child named Rizky (5 years old) showed very active participation by asking, *"Teacher, does Joko Tole really exist? Where is his house, ma'am? I want to meet him."* (Observation, October 21, 2024). This question shows not only the child's cognitive involvement but also his emotional involvement with the story character. The child does not merely listen as a passive recipient of information but actively constructs meaning and connects it to the reality of his life.

One of the most significant impacts of using audio-visual media based on local wisdom is the improvement in children's ability to recognize and appreciate Madurese cultural symbols. Children demonstrated their ability to recognize Marlena dresses (traditional Madurese women's clothing), sakera shirts (traditional Madurese men's clothing), saronen musical instruments, and various traditions such as karapan sapi (bull racing) and rokat tase' (traditional dance). A child named Aisha (5 years and 11 months old) said: *"That dress is like the one I wore at the August 17th event, ma'am. It's called marlena, right, ma'am? It's beautiful, isn't it, ma'am?"* (Observation, October 22, 2025). This statement shows that the child not only recognizes it visually but is also able to make connections with the child's personal experiences and develop an aesthetic appreciation for local culture.

The process of constructing cultural identity occurs naturally through repeated exposure to cultural symbols in a fun learning context. Children do not feel forced to "learn culture," but naturally experience and appreciate culture through stories, music, and engaging visuals. This is in line with the concept of cultural transmission, which emphasizes the importance of relevant media and learning contexts in the process of cross-generational cultural inheritance.

Teachers' Challenges in Using Audio-Visual Media Based on Madurese Local Wisdom

The availability of audio-visual media content that truly reflects Madurese local wisdom and is suitable for early childhood is a major obstacle faced by teachers. Teachers find it difficult to find videos that meet the criteria of Madurese local wisdom-based content, appropriate duration for 5-6 year olds, language that is easy for children to understand, and good visual and audio quality. Most videos about Madurese culture available on the internet are intended for adult audiences, are long in duration, use refined Madurese language that is difficult for children to understand, and have visual displays that are not very appealing to children. Teachers must spend a considerable amount of time filtering content to find suitable videos or even have to make their own videos with limited skills and equipment.

Technical constraints are the second most common obstacle faced by teachers in using audio-visual media based on Madurese local wisdom. Poor audio quality due to substandard speakers makes it difficult for some children to hear the narration in the video clearly. Suboptimal room lighting, especially when lessons are conducted during the day in bright sunlight, makes the video display on the television screen unclear. The limited size of the television screen makes it difficult for children sitting in the back rows to see the details in the video. An unstable internet connection when teachers want to play videos from online platforms causes the video to be interrupted or the video quality to decrease. Teachers must make thorough technical preparations before teaching to minimize technical obstacles that can disrupt the learning process.

Language comprehension is the third obstacle encountered in the use of audio-visual media based on Madurese local wisdom. Some children who use Indonesian more at home have difficulty understanding the Madurese vocabulary used in the videos, especially cultural vocabulary that is rarely used in everyday conversation. Cultural expressions or dialogues in refined Madurese that are unfamiliar to children make it difficult for some children to understand the meaning being conveyed. Teachers must pause the video to provide explanations or clarifications about vocabulary or expressions that children do not understand. This process takes longer and can disrupt the flow of the story in the video, thereby reducing the effectiveness of learning.

Classroom management is the fourth challenge faced by teachers, especially when children respond differently to videos. Some children are very enthusiastic and spontaneously make comments or ask questions during the video screening, while others want to listen quietly without interruption. Teachers must balance giving children the opportunity to express their responses with maintaining a conducive classroom atmosphere for listening. Some children sitting next to or behind taller classmates have difficulty seeing the screen, which makes them restless and disruptive to their classmates. Teachers must arrange seating arrangements that take into account the height of the children so that everyone can see the screen properly.

Table 3. Shows The Obstacles Faced By Teachers And The Solutions Applied In The Use Of Audio-Visual Media Based On Madurese Local Wisdom

Problem	Description	Solution
Content availability	Limited videos that are relevant to Madurese local wisdom and children's characteristics	Filtering content from various sources, modifying existing videos, creating simple videos yourself
Audio quality	Poor speakers resulting in unclear sound	Use external speakers with better quality, set the volume to the optimal level
Room lighting	Lighting that is too bright makes the screen unclear	Close the windows with curtains, set the learning schedule at the time of optimal lighting
Screen size	Children sitting behind have difficulty seeing details	Arrange seating in a circle or semicircle, positioning the television at an appropriate height
Internet connection	Unstable internet connection causes videos to disconnect	Download videos before class, save videos on your laptop
Language comprehension	Children have difficulty understanding the Madurese language in the video	Provide explanations before playback, pause the video for clarification, repeat important parts after playback

Source: Triangulation of data from participatory observation, in-depth interviews with teachers and school principals, and documentation of child development (October-November 2025)

The solution implemented by teachers to overcome content availability constraints is to filter content from various sources such as YouTube, social media, and Madurese cultural websites. Teachers modify existing videos by cutting out overly long sections, adding Indonesian subtitles to aid comprehension, or combining several short videos into one coherent video. Some teachers even create their own simple videos by recording folk tales narrated by community leaders or recording local cultural performances in the village. Collaboration with parents and community leaders is also carried out to obtain sources of information about authentic Madurese local wisdom that is suitable for early childhood. Solutions to overcome technical constraints include improving the quality of equipment and optimizing the learning environment. Schools strive to provide better quality external speakers so that the narration in the videos can be heard clearly by all children. Room lighting is adjusted by installing curtains on the windows to reduce excessive sunlight or by scheduling audio-visual media learning at times when room lighting is optimal. The television is positioned at an appropriate height and optimal distance so that all children can see clearly. The videos to be used are downloaded in advance and stored on a laptop to avoid problems with unstable internet connections during learning.

Solutions to overcome language comprehension barriers include pedagogical strategies before, during, and after the video screening. Before the video screening, teachers introduce key Madurese vocabulary found in the video through language games, pictures, or question and answer discussions. Teachers provide the context of the story and explain the cultural setting so that children have a knowledge schema to understand the video. During the video screening, teachers pause the video at parts that contain difficult vocabulary or cultural expressions to provide brief explanations. The video playback speed can be slowed down in parts with fast or dense dialogue so that children can grasp the meaning better. After the video screening, the teacher conducts a review by repeating important dialogues, reinforcing understanding of new vocabulary, and discussing the cultural values contained in the video. Solutions to overcome classroom management challenges include establishing clear rules and creating a conducive learning environment.

Research has found that audio-visual media based on Madurese local wisdom is effective in developing listening skills in children aged 5-6 years through the integration of culturally familiar visual and auditory elements. Children showed an increase in attention span when listening to content based on local wisdom compared to conventional media. Content featuring the Joko Tole folk tale, the traditional Tanduk Majeng song, and visualizations of traditional Madurese clothing created emotional resonance because they represented cultural schemas that children were familiar with in their daily lives. This cultural familiarity served as a cognitive

anchor that facilitated the process of selective attention, in contrast to general content whose context was far removed from children's experiences (Newland & Scott, 2022). The combination of bright colors, dynamic animated movements, and traditional Madurese music rhythms serve as visual stimuli that simultaneously attract children's visual and auditory attention. Meaningful learning occurs when the content of learning media is relevant to the social and cultural context of children, thereby creating deeper cognitive and emotional engagement (Vartiainen et al., 2019).

Audio-visual media based on Madurese local wisdom improves children's receptive information comprehension skills, enabling them to provide comprehensive responses to comprehension questions. This improvement occurs because the content represents children's prior knowledge of local culture, acquired through intergenerational transmission within the family. Folktales such as Joko Tole and the legend of Ratu Ayu are not entirely unfamiliar to children because they have heard them from their grandparents or parents, so the videos serve to reinforce and organize the fragmentary knowledge they already possess (Loka & Sabila, 2024). Cultural scaffolding formed through familiar content facilitates deeper meaning construction than completely new content. Children not only grasp factual information about characters and storylines, but are also able to understand implicit moral values such as honesty and kindness contained in the narrative (Goraya et al., 2025).

Children's memory retention and narrative reconstruction abilities improved substantially after using audio-visual media based on local wisdom. This improvement shows that meaningful learning has taken place; children did not simply memorize facts but understood the context and were able to reconstruct information in their own words. A child named Fatimah was able to retell the story of Joko Tole in detail, including the characters, conflict, and resolution of the story, even adding emotional interpretations of the characters' feelings. This phenomenon is in line with the dual coding theory, which states that information processed through visual and verbal channels simultaneously creates a stronger memory representation than unimodal presentation (Mayer, 2024; Monzel et al., 2022). Culturally relevant content creates emotional engagement that strengthens the encoding of information in long-term memory (Srdanović et al., 2025). Teachers' reports of children retelling video content to their parents at home indicate that the information has been internalized and become part of the child's personal narrative, rather than simply mechanical memorization that is easily forgotten.

Children's active participation in listening activities increased substantially, indicating a transformation from passive recipients to active constructors of knowledge. This participation manifests itself in four forms: responsive verbal participation when answering teachers' questions, initiative verbal participation through spontaneous questions such as "*Does Joko Tole really exist?*", expressive nonverbal participation through emotional expressions appropriate to the content, and imitative participation by mimicking movements or songs in videos. Emotional engagement with the content triggers spontaneous verbal and nonverbal participation, in contrast to conventional learning, which tends to place children as passive recipients of information (Cekaite & Björk-Willén, 2018). The questions asked by children show not only cognitive involvement but also affective involvement, as children attempt to connect fictional narratives with real life. This process indicates that children actively construct meaning by integrating new information into their existing knowledge schemes, in line with the principle of constructivism, which emphasizes the active role of learners in the formation of knowledge.

This study provides empirical evidence that Madurese local wisdom-based audiovisual media serves as an effective pedagogical tool for developing listening skills in 5-6 year-old children, while simultaneously fostering cultural identity formation. The unique theoretical contribution of this research lies in demonstrating the synergistic interaction between dual coding theory and sociocultural constructivism within an authentic cultural learning context. Unlike previous studies that examined these frameworks separately, our findings reveal that the integration of culturally-resonant visual-verbal stimuli activates both cognitive processing mechanisms (attention, comprehension, retention) and affective-cultural dimensions (identity, belonging, aesthetic appreciation) simultaneously. Three distinct contributions emerge from this research. First, we provide a granular taxonomy of children's multimodal engagement patterns encompassing responsive verbal, initiative verbal, expressive nonverbal, and imitative participation which extends beyond the binary active-passive dichotomy prevalent in existing literature. Second, our study documents the specific cognitive pathways through which cultural relevance functions as a learning scaffold: children's ability to connect media content with personal cultural experiences creates what we term "experiential anchoring," facilitating deeper semantic processing and memory consolidation. Third, we identify a comprehensive framework of implementation challenges and adaptive strategies that practitioners employ when integrating local wisdom into digital learning environments, addressing a significant gap in the practical application literature.

4. CONCLUSION

Research has found that audio-visual media based on Madurese local wisdom is effective in developing listening skills in children aged 5-6 years through the creation of culturally relevant and meaningful learning experiences. Children showed substantial improvements in attention span, receptive information comprehension, memory retention, active participation, and recognition of local cultural symbols after learning using audio-visual media containing the Joko Tole folk tale, the traditional song Tanduk Majeng, and visualizations of traditional Madurese clothing. Culturally familiar content serves as a cognitive facilitator of selective attention and deep meaning construction, unlike conventional media whose context is far from children's experiences. Cultural scaffolding formed through content based on local wisdom strengthens information in long-term memory while encouraging children's active participation as active constructors of knowledge. The process of enculturation occurs naturally without formal coercion; children experience and appreciate culture through enjoyable learning, so that the inheritance of cultural values occurs naturally. These findings confirm that the integration of local wisdom into learning media not only optimizes cognitive-linguistic abilities but also strengthens children's cultural identity from an early age.

This study provides a theoretical contribution in the form of an in-depth understanding of the mechanisms of meaningful learning through the integration of local wisdom in audio-visual media for the development of listening skills in early childhood. This study fills a gap in the literature by exploring Madurese culture-based learning practices that have not been widely documented scientifically, unlike previous studies that tended to focus on general learning media without specific cultural dimensions. The findings on the role of cultural familiarity as visual and cognitive perception enrich multimodal learning theory by adding a socio-cultural dimension that has previously been overlooked. This study shows that dual coding theory needs to be expanded to consider cultural resonance as a factor that reinforces information in long-term memory. Practically, this research provides an implementation model for audio-visual media based on local wisdom that can be adapted by early childhood education institutions in various regions. The documentation of teachers' adaptive strategies in overcoming content availability constraints, technical problems, language barriers, and classroom management provides practical guidance for educators who want to integrate local wisdom into learning.

This study has limitations related to its single location context, limited variety of local wisdom content, and descriptive design that does not measure causal effects experimentally. The study was conducted in a single early childhood education institution, so the findings may not be fully generalizable to other socio-cultural contexts outside Madura or even to areas of Madura with different demographic characteristics. The variety of local wisdom content explored was limited to folk tales, traditional songs, and traditional clothing, and did not cover other aspects of local wisdom such as traditional games, cuisine, or cultural rituals, which also have the potential to be used as learning media content. The qualitative descriptive design used was able to explore the phenomenon in depth but could not measure causal effects or experimentally compare the effectiveness of local wisdom-based audio-visual media with conventional media. Future research should use a mixed methods or experimental design with variable controls to measure the impact more precisely, involve multiple sites in various cultural regions to increase the generalizability of the findings, and explore a wider variety of local wisdom content to identify the most effective cultural elements in supporting early childhood listening skills.

5. ACKNOWLEDGMENTS

The author would like to thank all those who have provided support and contributed to the completion of this article. I would like to express my deepest gratitude to RA Al Munawarah Jungcangcang Pamekasan for providing facilities and the opportunity to conduct this research. I would also like to thank my supervisor and classmates who have provided input, guidance, or constructive criticism during the writing process of this article. I hope this article can provide significant benefits to readers and scientific development in the field of Education.

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