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The Use of Audio-Visual Methods to Improve Language Development of Children with Speech Delay Aged 5–6 Years: A Classroom Action Research in Early Childhood Education

Author

Yuli Rusita

Early Childhood Education Teacher, PAUD Mentari Bengalon, Sepaso Selatan Village,

Bengalon District, East Kutai Regency, East Kalimantan, Indonesia

Email : yulirusita@gmail.com

Abstract

This study aims to improve the language development of children with speech delay aged 5–6 years through the implementation of audio-visual learning methods in early childhood education. Language development is a fundamental aspect of early childhood growth and serves as a foundation for cognitive, social-emotional, and academic development. However, some children experience speech delay, which may hinder their ability to communicate effectively. This research employed a Classroom Action Research (CAR) design conducted in two cycles, each consisting of planning, action, observation, and reflection stages. The participants were two children aged 5–6 years identified as experiencing speech delay at PAUD Mentari Bengalon. Data were collected through observation checklists based on developmental indicators and analyzed descriptively using percentage improvements across cycles. The findings indicated a consistent increase in children's language development from the pre-cycle stage to Cycle I and Cycle II. The use of audio-visual media, such as instructional videos and picture cards, was found to enhance children's vocabulary acquisition, pronunciation, attention, and motivation to participate in

learning activities. The study concludes that audio-visual methods are effective in supporting language development in children with speech delay and recommends their integration into inclusive early childhood learning practices.

Keywords: audio-visual method; language development; speech delay; early childhood education; classroom action research

A. Introduction

Early Childhood Education (ECE) plays a crucial role in shaping children's overall development, particularly during the early years often referred to as the "golden age." This period, spanning from birth to six years old, is characterized by rapid growth in cognitive, physical, social-emotional, and language domains. Among these aspects, language development holds a central position, as it enables children to communicate, express ideas and emotions, and engage in meaningful social interactions. Well-developed language skills also serve as a foundation for later academic success, including literacy and problem-solving abilities.

Children aged 5–6 years are expected to demonstrate significant progress in both receptive and expressive language skills. At this stage, children typically possess an expanding vocabulary, can form simple to complex sentences, and are able to participate actively in conversations. Nevertheless, not all children experience language development at the same pace. Some children encounter speech delay, a condition characterized by slower-than-expected development of speech and language abilities compared to peers of the same age.

Speech delay in early childhood may manifest in limited vocabulary, unclear articulation, difficulty forming sentences, or challenges in understanding verbal instructions. Various factors contribute to this condition, including limited language stimulation, excessive

exposure to digital devices, inappropriate parenting patterns, hearing impairments, and other developmental or environmental factors. Without appropriate intervention, speech delay can negatively affect children's social interactions, self-confidence, and readiness for formal schooling.

In early childhood education settings, teachers play a strategic role in providing appropriate stimulation and intervention for children experiencing speech delay. One effective approach is the use of instructional methods that engage multiple senses, such as audio-visual methods. Audio-visual learning integrates sound and visual elements, enabling children to simultaneously hear and see information presented during instruction. This method is particularly beneficial for children with speech delay, as it offers concrete representations of language concepts, supports imitation, and enhances attention and motivation.

Previous studies have demonstrated that audio-visual media can improve vocabulary mastery, pronunciation, and expressive language skills in children with speech delay. Videos, animations, and picture-based media accompanied by sound provide contextual learning experiences that are more engaging than conventional verbal instruction alone. In addition, audio-visual methods can reduce boredom and increase children's active participation in classroom activities.

Based on preliminary observations at PAUD Mentari Bengalon, two children aged 5–6 years were identified as experiencing speech delay. These children showed limited ability to express words, name objects, and respond verbally during learning activities. This condition prompted the need for a systematic intervention to improve their language development. Therefore, this study was conducted to investigate how the implementation of audio-visual learning methods could enhance the language development of children with speech delay through a Classroom Action Research approach.

B. Literature Review

1. Language Development in Early Childhood

Language development in early childhood refers to the process by which children acquire the ability to understand and use language as a means of communication. This process encompasses receptive language skills, which involve understanding spoken language, and expressive language skills, which involve producing speech to convey meaning. Language development is closely related to cognitive growth, social interaction, and emotional regulation.

According to early childhood development theories, children acquire language through continuous interaction with their environment. They learn vocabulary, sentence structures, and pragmatic language use by listening, imitating, and engaging in meaningful communication with adults and peers. Adequate language stimulation is essential during early childhood to ensure optimal development.

2. Stages and Characteristics of Language Development

Language development follows a systematic and sequential pattern. Children progress from pre-linguistic stages, such as crying and babbling, to linguistic stages characterized by the use of words, phrases, and sentences. By the age of five to six years, children are generally able to use complex sentences, tell simple stories, and understand instructions involving multiple steps.

Key characteristics of language development include the gradual expansion of vocabulary, increasing sentence complexity, improved articulation, and the ability to use language appropriately in social contexts. Language development is influenced by both internal factors, such as biological maturation, and external factors, such as environmental stimulation and interaction quality.

3. Speech Delay in Early Childhood

Speech delay is defined as a condition in which a child's speech and language development progresses more slowly than expected for their chronological age. Children with speech delay may have difficulty pronouncing words, forming sentences, or expressing ideas verbally, even though their cognitive abilities may be within normal limits.

Several factors may contribute to speech delay, including limited verbal interaction, excessive screen time, hearing impairments, developmental disorders, and inadequate learning stimulation. Early identification and intervention are essential to prevent long-term impacts on children's academic and social development.

4. Audio-Visual Learning Methods

Audio-visual learning methods involve the use of instructional media that combine auditory and visual elements, such as videos, animations, and picture-based presentations with sound. These methods are designed to stimulate multiple senses simultaneously, thereby enhancing comprehension and memory retention.

In early childhood education, audio-visual media are particularly effective because young children learn best through concrete, sensory-rich experiences. For children with speech delay, audio-visual methods provide clear language models, visual cues, and repeated exposure to vocabulary and pronunciation, which support language acquisition.

5. Previous Research on Audio-Visual Methods and Speech Delay

Previous empirical studies have reported positive outcomes from the use of audio-visual media in improving language development among children with speech delay. Audio-visual interventions have been shown to increase vocabulary mastery, improve articulation, and enhance children's motivation to communicate. These findings

support the integration of audio-visual methods as an effective instructional strategy in inclusive early childhood classrooms.

C. Methodology

1. Research Design

This study employed a **Classroom Action Research (CAR)** design aimed at improving the language development of children with speech delay through the implementation of audio-visual learning methods. Classroom Action Research was chosen because it allows teachers to systematically identify learning problems in the classroom, implement targeted interventions, and evaluate their effectiveness through reflective cycles.

The CAR model applied in this study followed a cyclical process consisting of **four stages**: (1) planning, (2) action, (3) observation, and (4) reflection. The research was conducted in **two cycles**, with each cycle implemented over several learning sessions. The results of each cycle were used as the basis for revising and improving instructional strategies in the subsequent cycle. This iterative process ensured continuous improvement in teaching practices and learning outcomes.

The focus of the intervention was the use of **audio-visual learning media**, including instructional videos and picture cards, to stimulate receptive and expressive language skills among children with speech delay.

2. Research Setting and Participants

The research was conducted at **PAUD Mentari Bengalon**, located in Sepaso Selatan Village, Bengalon District, East Kutai Regency, East Kalimantan, Indonesia. The participants of this study were **two children aged 5–6 years** enrolled in Group B who had been identified as experiencing speech delay based on classroom observations and developmental indicators.

The participants consisted of **one male and one female child**. Both children demonstrated limited expressive language abilities, including difficulty naming objects, imitating words, and forming simple verbal expressions compared to their peers. Due to the specific focus on speech delay intervention, the study employed a **purposive sampling technique**, selecting participants who met the criteria relevant to the research objectives.

In addition to the children, the research involved collaboration with classroom teachers and a supervisor who assisted in observation and reflection processes to ensure the validity of the data collected.

3. Technique of Data Collection

Data collection in this study was conducted using systematic observation techniques. Observations were carried out during learning activities in each session of the research cycles to assess changes in children's language development.

The primary data collection technique was the use of an observation checklist, which documented children's performance based on predetermined language development indicators. The checklist categorized children's developmental levels into four criteria commonly used in early childhood education assessment, namely:

- BB (Belum Berkembang / Not Yet Developed)
- MB (Mulai Berkembang / Beginning to Develop)
- BSH (Berkembang Sesuai Harapan / Developed as Expected)
- BSB (Berkembang Sangat Baik / Very Well Developed)

Observations focused on children's ability to name objects, imitate words, pronounce vocabulary related to learning themes, respond verbally to audio-visual stimuli, and participate actively in learning activities.

4. Instruments

The main research instrument used in this study was an **observation checklist** designed to measure children's language development progress. The checklist was developed based on early childhood language development indicators appropriate for children aged 5–6 years.

Supporting instruments included:

1. **Audio-visual learning media**, such as educational videos related to learning themes and picture cards representing objects, plants, and their parts.
2. **Lesson plans (RPPH)** prepared for each learning session, outlining learning objectives, activities, and assessment strategies.
3. **Field notes**, used by the researcher to record qualitative observations regarding children's engagement, motivation, and responses during learning activities.

These instruments were used consistently across both cycles to ensure comparability of data.

5. Technique of Data Analysis

Data analysis in this study was conducted using descriptive qualitative and quantitative techniques. Qualitative data from observations and field notes were analyzed by describing changes in children's language behavior, participation, and responsiveness during learning activities.

Quantitative data were analyzed by calculating the percentage of language development achievement for each child at the pre-cycle stage, Cycle I, and Cycle II. The percentage scores were used to identify improvements in language development across cycles.

The analysis results were then interpreted to determine the effectiveness of audio-visual learning methods in improving the language development of children with speech delay. Reflection results from each cycle were used to revise instructional strategies and improve the implementation of audio-visual media in subsequent learning sessions.

D. Findings and Discussion

1. Findings

The findings of this Classroom Action Research are derived from systematic observations conducted during the pre-cycle, Cycle I, and Cycle II. The observations focused on changes in children's language development following the implementation of audio-visual learning methods. Language development was assessed based on indicators appropriate for children aged 5–6 years, including vocabulary recognition, word imitation, pronunciation clarity, verbal responsiveness, and active participation during learning activities.

Language Development in the Pre-Cycle Stage

Before the implementation of the audio-visual learning method, the language development of both children was below the expected level for their age. Observations revealed that the children had limited expressive language abilities. They experienced difficulty naming objects, imitating words spoken by the teacher, and responding verbally to simple instructions. Their verbal responses were often

unclear and inconsistent, and communication was frequently supported by gestures rather than speech.

Quantitative analysis showed that the first child achieved approximately 50 percent of the expected language development indicators, while the second child reached approximately 60 percent. These percentages placed both children in the Beginning to Develop category. The findings confirmed that the children required targeted instructional intervention to support their language development.

a. Findings of Cycle I

In Cycle I, audio-visual learning methods were introduced through the use of instructional videos and picture cards related to the learning theme. Learning activities were designed to provide repeated exposure to vocabulary accompanied by clear visual representations and auditory models. Children were encouraged to observe, listen, and imitate words presented in the audio-visual media.

The observations in Cycle I indicated noticeable improvements in children's learning engagement and language behavior. Both children showed increased attention during learning activities and greater interest in the instructional materials. They began to imitate words more frequently and responded verbally to teacher prompts, although pronunciation and sentence formation were still limited.

In terms of quantitative improvement, the first child's language development increased to approximately 65 percent, while the second child reached approximately 70 percent. These results indicated a positive response to the audio-visual intervention, although the children had not yet reached optimal language development levels. The findings suggest that audio-visual media provided effective initial stimulation but required further refinement and consistent implementation to achieve more significant progress.

b. Findings of Cycle II

Based on reflections from Cycle I, several instructional improvements were implemented in Cycle II. These improvements included the use of more engaging and age-appropriate audio-visual materials, increased opportunities for verbal interaction, extended response time for children, and more intensive verbal

reinforcement. Learning activities emphasized vocabulary expansion, clearer pronunciation, and simple verbal expression related to the learning theme.

Observations in Cycle II showed substantial improvements in children's language development. Both children demonstrated increased confidence in speaking, clearer articulation, and more consistent use of vocabulary. They were more active in responding verbally during classroom interactions and showed greater willingness to initiate communication.

Quantitative analysis indicated that the first child's language development increased to approximately 75 percent, while the second child reached approximately 80 percent. These percentages placed both children in the Developing Very Well category. The findings demonstrate that consistent implementation of audio-visual learning methods, combined with reflective teaching practices, effectively supported language development in children with speech delay.

Overall, the findings across research cycles show a clear and progressive improvement in language development. The upward trend from the pre-cycle stage to Cycle II confirms the effectiveness of audio-visual learning methods as an instructional strategy for addressing speech delay in early childhood education settings.

2. Discussion

The findings of this study indicate that audio-visual learning methods play a significant role in improving the language development of children with speech delay aged 5–6 years. The improvements observed across research cycles support theoretical perspectives that emphasize the importance of multisensory stimulation in early childhood language acquisition.

Audio-visual learning provides children with simultaneous auditory and visual input, enabling them to associate spoken words with concrete visual representations. This approach is particularly beneficial for children with speech delay, who often struggle to process verbal information alone. Visual stimuli help clarify meaning, while auditory input provides accurate pronunciation models that children can imitate.

The gradual improvement from Cycle I to Cycle II highlights the importance of instructional consistency and reflective practice. While initial exposure to audio-visual media in Cycle I produced moderate improvements, more significant progress occurred in Cycle II as instructional strategies were refined. Increased repetition,

individualized attention, and positive reinforcement were key factors contributing to improved language outcomes.

Furthermore, the findings suggest that audio-visual learning methods not only enhance linguistic abilities but also support children's motivation and self-confidence. As children became more confident in their ability to speak, they participated more actively in classroom activities. This increased participation created additional opportunities for social interaction, which further reinforced language development.

The results of this study are consistent with previous research indicating that audio-visual interventions are effective in supporting expressive language development in early childhood. By providing meaningful and engaging learning experiences, audio-visual media help children with speech delay overcome communication barriers and develop functional language skills.

Although the study involved a limited number of participants, the findings offer valuable insights into practical instructional strategies for early childhood educators. The results demonstrate that audio-visual learning methods can be effectively integrated into daily classroom activities to support inclusive education practices and address individual learning needs.

In conclusion, the discussion underscores that the success of language intervention for children with speech delay depends not only on the instructional method but also on the teacher's ability to reflect on learning outcomes and adapt teaching strategies accordingly. Audio-visual learning methods, when implemented systematically and consistently, provide an effective approach to enhancing language development in early childhood education.

E. Conclusion

This study concludes that the implementation of audio-visual learning methods effectively improves the language development of children with speech delay aged 5–6 years in early childhood education settings. The findings of the Classroom Action Research demonstrate a consistent and measurable improvement in children's language abilities from the pre-cycle stage through Cycle I and Cycle II.

The use of audio-visual media provided meaningful multisensory learning experiences that supported both receptive and expressive language development. By

integrating visual representations with auditory input, children were able to better understand vocabulary, imitate pronunciation, and respond verbally during learning activities. These learning conditions were particularly beneficial for children with speech delay, who often experience difficulties processing verbal information in isolation.

The progressive improvement observed across research cycles highlights the importance of reflective and adaptive teaching practices. While initial implementation of audio-visual methods produced moderate improvements, further refinement of instructional strategies—such as increasing interaction time, providing positive reinforcement, and selecting engaging media—resulted in more significant language development gains. This finding emphasizes that effective intervention for children with speech delay requires consistency, repetition, and responsiveness to individual learning needs.

Beyond linguistic improvement, the study also found positive changes in children's motivation, confidence, and participation during classroom activities. As children became more confident in their ability to communicate verbally, they demonstrated greater engagement in learning and social interaction. These outcomes suggest that audio-visual learning methods not only support language development but also contribute to children's socio-emotional growth.

Although this study involved a limited number of participants, the results provide valuable practical insights for early childhood educators. The findings indicate that audio-visual learning methods can be effectively integrated into daily classroom practices as an inclusive instructional strategy to support children with speech delay. Future research may involve a larger sample size, longer intervention periods, or comparative studies using different instructional approaches to further explore the effectiveness of audio-visual methods in early childhood language development.

In conclusion, audio-visual learning methods represent a practical, engaging, and effective approach to enhancing language development among children with speech delay. When implemented systematically and reflectively, these methods can significantly contribute to improving communication skills and learning readiness in early childhood education.

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