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Exploration Of The Role Of Digital Tv In The Language Development Of 5–6-Year-Old Children: A Case Study At Tkn Pembina Dewi Kayangan

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Abstract

This study aims to describe and deeply analyze how teachers explore the use of digital TV, including Interactive Flat Panels (IFP), in developing the language skills of children aged 5–6 years. Furthermore, this research identifies the impact of using such media on children's language development at TKN Pembina Dewi Kayangan during the 2025/2026 Academic Year. This study employs a qualitative approach with a case study design. The research subjects included the principal, Group B teachers, and children aged 5–6 years. Data were collected through participatory observation, structured in-depth interviews, and comprehensive documentation. Data analysis refers to the Miles and Huberman interactive model, which consists of data condensation, data display, and conclusion drawing/verification. Data validity was ensured through source and technique triangulation. The results indicate that the exploration of digital TV was conducted by teachers through six systematic stages: selecting materials appropriate for children's cognitive development, using digital TV as an interactive medium, providing language stimulation (explanations, Q&A, vocabulary repetition), linking broadcast material to children's real-life experiences, conducting follow-up activities, and proportionally managing screen duration. Identified positive impacts include the acquisition of new vocabulary, a significant improvement in listening skills, progress in speaking and pronunciation skills, increased courage in expressing thoughts, and high motivation and engagement in learning. It is concluded that the use of digital TV is highly effective in stimulating early childhood language when systematically planned, tailored to developmental needs, and consistently accompanied by active teacher mediation.

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1. INTRODUCTION

Early Childhood Education (PAUD) is a crucial educational stage that lays the foundation for children's physical, motor, cognitive, socio-emotional, and language growth and development (Suryana, 2021). The age range of 5 to 6 years is often referred to as the golden age, when children's brain plasticity is at its maximum to absorb various stimuli from their environment (Hurlock, 2022). During this phase, language development is one of the most prominent aspects and requires appropriate stimulation. Optimal language development at ages 5–6 years is characterized by a rapid increase in vocabulary, the ability to construct more complex sentences, and improved listening and responding skills in two-way communication (Khadijah, 2021). This language ability is not merely a means of communication but also a primary foundation for

children to understand cognitive concepts, interact socially, and prepare for elementary school (Zubaidah, 2022).

In the era of Society 5.0, marked by the integration of technology into everyday life, learning media in early childhood education (PAUD) has undergone significant transformation (Hidayat, 2023). One technological development that has entered the PAUD classroom is digital television and Interactive Flat Panel (IFP). Following the government's Analog to Digital Television Broadcast Migration Program (Analog Switch Off) (Kominfo, 2021), the quality of educational broadcasts, both visual and audio, has improved drastically. According to a report by the International Telecommunication Union (ITU, 2023), high-resolution digital screen media used interactively have great potential to be an effective learning catalyst for early childhood. Mayer's (2021) Cognitive Theory of Multimedia Learning supports this, stating that a well-designed combination of visual and auditory input can facilitate more optimal information processing in the human brain.

However, the use of digital TV and IFP in the context of early childhood education (PAUD) is not without challenges. Excessive and undirected (passive) screen time is often associated with the risk of speech delay and decreased social skills (Lestari, 2024). Therefore, the presence of educators (teachers) as facilitators and mediators is crucial. In line with Vygotsky's (2022) scaffolding theory, children require adult intervention (Zone of Proximal Development) to translate digital information into meaningful understanding. Teachers should not simply turn on digital TV devices; they must explore their use through content selection, interaction management, and reinforcement of follow-up activities (Widiastuti, 2024).

Initial observations conducted by researchers on February 7, 2026, at the TKN Pembina Dewi Kayangan Kindergarten in North Lombok revealed an interesting reality. Researchers found a striking disparity (diversity) in the language development of 5–6-year-old children at the school. Some children were very proactive and confident in sharing their daily experiences with a rich vocabulary. However, on the other hand, several children tended to be passive, shy, and had limited vocabulary. Another interesting phenomenon observed was the influence of digital TV exposure at home; many children spontaneously imitated dialogue or jargon from the animated shows they watched, but their vocabulary mastery often focused solely on what they passively heard, without a deep understanding of the context (Rahayu, 2021).

The empirical conditions at TKN Pembina Dewi Kayangan require innovative pedagogical interventions from the school. Given that this institution has begun adopting digital TV and IFP devices as learning media, it is crucial to examine how these modern media are explored didactically to bridge the gap in children's language skills. Previous studies conducted by Nurkhasanah (2023) and Pratama (2022) have indeed discussed audio-visual media, but their focus on exploring specific steps teachers take in utilizing IFP/Digital TV as interactive means of language stimulation in a semi-urban area like Kayangan, North Lombok, is still very limited.

Compared systematically with prior studies, Nurkhasanah (2023) examined the influence of audio-visual media on children’s vocabulary acquisition using a quantitative correlational design, while Pratama (2022) described the general utilization of Interactive Flat Panels as an innovative learning medium without detailing the step-by-step mediation process undertaken by teachers. Sari (2025) evaluated the effectiveness of educational digital TV for language learning but did not specifically map the pedagogical stages through which teachers mediate its use. These studies, therefore, leave largely unaddressed how teachers sequentially explore and mediate digital TV/IFP use in a semi-urban PAUD setting such as Kayangan, North Lombok—the gap the present study seeks to fill.

Based on the urgency and research gap, this research was conducted to examine this phenomenon in depth. Two main research questions are the focus of this research, namely: (1) How do teachers explore the role of digital TV in developing the language of 5–6-year-old children at TKN Pembina Dewi Kayangan? and (2) What is the impact of this digital TV exploration on various aspects of language development of 5–6-year-old children? The results of this research are expected to contribute to enriching the scientific treasury of PAUD, especially

regarding digital media literacy (Sari, 2025), as well as become a practical reference for educators and education policymakers at the regional and national levels.

2. RESEARCH METHODS

This research is a qualitative study using a case study design. The choice of a qualitative approach was based on the researcher's need to understand, explore, and describe in depth the phenomenon of digital TV utilization in its natural setting, without any variable manipulation (Sugiyono, 2023). The case study design was used because the focus of this research is to highlight a specific phenomenon (bounded system) occurring in one specific location, namely the TKN Pembina Dewi Kayangan (Arikunto, 2022).

This research took place at TKN Pembina Dewi Kayangan, geographically located in Karang Lede Hamlet, Kayangan District, North Lombok Regency. The research was scheduled to take place from February to July 2026 (even semester of the 2025/2026 academic year). The research subjects were determined using a purposive sampling technique, with the criteria being informants who were considered to have the best understanding of the conditions and were directly involved in the learning process. The research subjects consisted of the Principal of TKN Pembina Dewi Kayangan, the Class Teacher who taught in Group B, and 18 children aged 5–6 years in that group.

Primary and secondary data collection was conducted through three main techniques. First, participant observation, in which researchers went directly into the classroom to observe interactions between teachers, children, and digital TV/IFP media. The instrument used was an observation guide sheet. Second, structured and in-depth interviews. Interviews were conducted with the principal and teachers using interview guides to explore philosophy, planning, exploration strategies, and obstacles faced. In addition, simple questionnaires/informal interviews were also used with children to determine their emotional responses. Third, documentation. Researchers collected supporting documents such as Daily Lesson Implementation Plans (RPPH), teaching modules, attendance lists, and photographs documenting classroom learning activities.

To provide greater transparency, each instrument was developed around explicit indicators and item counts. The observation guide sheet covered three main indicators reflecting the teacher's exploration stages—content selection, interactive stimulation, and follow-up reinforcement—operationalized into 15 observable items informed by Mayer's (2021) multimedia learning principles. The interview guide consisted of 12 open-ended items distributed across four indicators: instructional philosophy (3 items), planning (3 items), exploration strategies (4 items), and obstacles encountered (2 items). The informal questionnaire administered to children comprised 5 simple items measuring emotional responses, namely enthusiasm, comfort, and willingness to interact during digital TV sessions.

The collected data were then analyzed using an interactive qualitative data analysis model developed by Miles, Huberman, and Saldana (2024). This analysis included three simultaneous activity flows, namely: (1) Data condensation, namely the process of selecting, simplifying, and focusing raw data from field notes; (2) Data display, namely organizing data into a systematic narrative text; and (3) Conclusion drawing and verification. To ensure the validity of the data (trustworthiness) in this study, the researchers applied a credibility test through triangulation techniques. Source triangulation was carried out by comparing information from the principal, teachers, and students. Meanwhile, technical triangulation was carried out by cross-checking interview data, observation findings, and printed/digital documentary evidence.

3. RESULTS AND DISCUSSION

Teachers' Exploration of the Role of Digital TV

The results of the field research indicate that the integration of digital TV and Interactive Flat Panel (IFP) at TKN Pembina Dewi Kayangan was not done haphazardly, but through structured pedagogical planning. The Principal emphasized in an interview that, "The success of digital media depends entirely on the competence of the teacher who guides; TV is not a substitute

for teachers, but rather a stimulation tool." Observations and interviews with Group B Teachers revealed six strategic stages carried out by teachers in exploring the role of digital TV in developing children's language:

The first stage is Introduction and Material Selection. The teacher selects educational video content or apps that align with the current week's RPPH theme and align with the cognitive developmental stages of children aged 5–6 years (Suryana, 2021). The selected content must meet the criteria of being safe, free from violence, and containing rich vocabulary. At the beginning of the session, the teacher introduces digital TV as a "smart board" to focus children's attention.

The second stage is providing interactive language stimulation. During the broadcast, the IFP function is utilized to its full potential. Teachers do not allow children to watch passively. As observed in the 'Pets' learning session, teachers frequently pause the broadcast to highlight specific animals and then model the correct pronunciation of vocabulary (e.g., "Rabbit," "Jump"). This encourages children to collectively imitate the pronunciation (Nurkhasanah, 2023).

The third stage is Interaction and Questioning. After the presentation, the exploration continues with dialogic activities. The teacher asks open-ended questions, such as "How did the cat feel when it rained in the video?" This question forces children to reconstruct their visual memories and express them verbally, which is very effective in developing children's language syntax.

The fourth stage is Contextualization. To ensure meaningful learning, teachers guide children in connecting the content of the show to their real-life experiences at home (Yuliani, 2025). Children are encouraged to talk about their pets, creating a bridge between the virtual world of the screen and the child's cognitive reality.

The fifth stage is Reinforcement through Follow-Up. Exploration doesn't stop in front of the TV. Teachers initiate project-based activities such as drawing characters from videos, role-playing, or interactive word quizzes in the IFP. These activities internalize new vocabulary (receptive language) into expressive language.

The sixth step, the most essential for child safety, is Time Management. Recognizing the dangers of excessive screen time (Lestari, 2024), teachers limit screen time to a maximum of 15–20 minutes per learning cycle. The use of IFP is also staggered so that each child gets a turn to interact (touch the screen).

Beyond teachers' time management, children's emerging learning independence in this setting also appeared to be shaped by other factors. These include the intensity of parental guidance and screen-time habits at home (Rahayu, 2021), individual differences in temperament and prior exposure to digital media, and peer interaction during turn-taking on the IFP, which required children to practice patience and self-regulation while waiting their turn. This suggests that teacher-led time management functions as one component within a broader ecological system shaping children's independent language use, rather than as a stand-alone determinant.

The Impact of Digital TV Exploration on Children's Language Aspects

Optimizing the role of digital TV through the six stages of exploration above resulted in a measurable positive impact on the language development of 18 children in Group B. Triangulation data validated the emergence of four significant impacts:

1. Vocabulary Enrichment. The combination of moving visual elements, contrasting colors, and clear audio makes it easier for children to conceptualize new words. Children acquire vocabulary from animated dialogue and educational songs. Guided repetition by the teacher ensures that children's short-term memory is transformed into long-term retention.
2. Improved Listening Skills. Before mentoring, many children struggled to follow instructions. However, the engaging narrative of digital TV trains children's attention span. Children learn to follow a logical storyline, listen to dialogue between characters, and respond to teacher questions about story details with increasing accuracy.
3. Progress in Speech and Articulation Skills. Imitation is a basic instinct for children (Fadlillah, 2021). The quality of digital TV audio provides a model for precise pronunciation and articulation. Children who initially stuttered or had slurred speech gradually showed

improvement in their speech sound production. Furthermore, children began to be able to retell the content of broadcasts using simple sentences composed of a subject, predicate, and object (S-P-O).

4. Increased Motivation, Engagement, and Self-Confidence. Multimodal presentations on digital TV are highly effective in stimulating children's intrinsic motivation. Psychologically, children feel like they are playing (learning by playing). Of the 18 students observed, more than 80% demonstrated active participation. Previously quiet children began to raise their hands and express their ideas, proving that interactive media can alleviate communication apprehension.

Discussion, Limitations, and Implications

The findings at TKN Pembina Dewi Kayangan represent empirical evidence that aligns with Mayer's (2021) Cognitive Theory of Multimedia Learning. Mayer asserts that learners will learn more deeply from words and images combined than from words alone (the multimedia principle). In the context of early childhood education (PAUD), IFP facilitates dual-channel integration (eyes and ears), which prevents children from cognitive overload, provided the teacher manages the amount of information wisely.

Furthermore, this study demonstrates the sociocultural validity of Vygotsky's theory of the importance of scaffolding (Vygotsky, 2022). The teacher's role here is to act as a scaffold, connecting children's basic abilities to their maximum potential through digital media. Digital TV transforms from a passive instrument into a language booster thanks to the teacher's pedagogical mediation. As concluded by Pratama (2022) and Widiastuti (2024), the greatest danger of technology at an early age is not the technology itself, but rather the absence of adult guidance and support. Unguided screen time has the potential to trigger social isolation and the degradation of two-way communication skills.

Despite providing valuable findings, this study acknowledges several limitations. First, the research design, which employed a single case study approach in a single public kindergarten, limits its external validity to a broader population with different socioeconomic contexts. Second, because it relied purely on qualitative data, this study did not measure the effectiveness (effect size) of children's language development quantitatively or longitudinally. Therefore, the long-term effectiveness of IFP utilization requires further study.

Based on the discussion, there are practical implications that can be adopted. Institutionally, early childhood education (PAUD) schools need to develop Standard Operating Procedures (SOPs) or standard guidelines regarding digital content selection, maximum daily broadcast duration, and require ongoing in-house training for teachers in operating the advanced features of Interactive Flat Panels. Furthermore, synchronization with parents at home is also urgent; schools need to socialize the importance of parental guidance when children access digital TV or devices at home to create continuous language stimulation (Rahayu, 2021).

4. CONCLUSION

Based on the presentation of the results and data analysis, it can be concluded that the presence of digital TV and Interactive Flat Panel (IFP) at TKN Pembina Dewi Kayangan has been optimally utilized by educators as a language stimulation agent for children aged 5-6 years. This exploration of the role of digital media was executed through a series of mature pedagogical stages, starting from the selection of precise educational content, utilization of interactive functions, providing contextual language stimuli, to disciplined time management (limiting screen time). The resulting impacts have proven to be very positive and comprehensive, including escalation of vocabulary, sharpening listening skills, improving the quality of articulation and independent speaking, as well as increasing children's motivation and confidence in expressing ideas. The main conclusion is: Digital TV is a very effective catalyst for language development in PAUD when accompanied by didactic planning and proactive mentoring from teachers.

Based on these conclusions, several constructive recommendations are proposed. For educators (teachers), it is strongly recommended to continue enriching educational broadcast

references, integrating them structurally into the RPPH (Learning and Learning Plan), and increasing physical follow-up activities to balance digital interactions. For schools, it is necessary to formulate regulations for the equitable use of digital assets and initiate communication forums with parents regarding family digital literacy. For further researchers, there is a strong opportunity to expand this issue through quantitative, quasi-experimental research to test the significance of this method, or longitudinal research to capture children's language retention continuously across levels.

Beyond these technical recommendations, the findings also carry broader academic and practical implications. Academically, this study extends Vygotsky's (2022) scaffolding theory by providing empirical evidence that digital TV, when actively mediated by teachers, can function as a contemporary cultural tool that bridges children's independent and assisted performance, thereby enriching the sociocultural literature on technology-mediated early childhood learning. It also lends contextual support to Mayer's (2021) Cognitive Theory of Multimedia Learning by illustrating how dual-channel stimulation translates into observable language gains within an authentic classroom setting rather than a controlled experimental one. Practically, the six-stage exploration framework identified in this study offers TKN Pembina Dewi Kayangan and comparable PAUD institutions in semi-urban regions a replicable pedagogical model that can be adopted with minimal additional resources, providing a concrete, field-tested alternative to approaches that rely primarily on statistical benchmarking of digital media outcomes.

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