


Musical Influence on Language Development: Comparing Popular and National Songs in Children

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A B S T R A C T

Music plays a crucial role in early childhood language development, yet comparisons between popular and national songs remain limited. This study employed a comparative intervention approach to examine the effects of song type on linguistic imitation and memory in children aged 5–6 years. Sixty children from five preschools in Jember City, Indonesia, were purposively sampled and divided into two groups of 30, exposed to either popular or national songs. Structured musical sessions, conducted twice weekly over four weeks, included guided listening, singing, imitation, and memory tasks. Children’s performance was observed using structured instruments and audio recordings. Data were analyzed with descriptive statistics and independent t-tests. Results showed that popular songs significantly enhanced linguistic imitation, while national songs improved memory retention. These findings highlight the role of song structure, repetition, and familiarity in shaping language and memory outcomes, providing practical guidance for early childhood educators to strategically integrate popular and national songs for cognitive, linguistic, and socio-cultural development.

Keywords: *Linguistic Imitation, Memory, Early Childhood Education, Language Acquisition, Song-Based Learning*

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INTRODUCTION

Early childhood language development is a critical foundation for cognitive, social, and emotional growth. Developing linguistic skills during the early years has been associated with later academic success, literacy, and social communication abilities (Whitehurst & Lonigan, 2001). One increasingly recognized method to support language development in young children is through music. Music provides a multisensory experience that can enhance vocabulary acquisition, phonological awareness, syntactic understanding, and listening comprehension (Patel, 2020; Peterson, 2023). In particular, songs allow children to engage with language in contextually meaningful and enjoyable ways, combining rhythm, melody, and repetition to reinforce memory and imitation skills. Prior research shows that rhythmic regularity supports phonological processing (Gordon et al., 2015), repetition enhances word learning (Thiessen & Saffran, 2007), and cultural familiarity increases children’s motivation and engagement with linguistic material (Campbell, 2018). Despite these insights, there is limited research comparing the effects of different song types—specifically popular versus national songs—on linguistic imitation and memory in early childhood. Most studies have examined the general influence of music without differentiating song types, leaving an important gap in both theory and practice.

Previous studies have highlighted music’s general benefits in language development. Peterson (2023) found that musical engagement helps children acquire new words and internalize phonetic patterns, facilitating both receptive and expressive language skills. Similarly, Agrawal (2024) emphasized that music supports cognitive processes such as attention, auditory discrimination, and sequencing, which are essential for effective language learning. Research in cultural psychology also demonstrates that children learn more effectively when linguistic input is embedded in familiar cultural forms (Campbell, 2018).

However, these studies did not examine whether different types of songs produce distinct effects, leaving unanswered questions regarding the comparative impact of culturally oriented versus entertainment-focused musical material. Murphy (2023) also noted that song selection in early childhood classrooms often relies on educator intuition rather than empirical evidence, underscoring the need for structured investigation into the effects of specific song types.

In Indonesia, and particularly in Jember, the coexistence of national and popular songs presents a unique context for studying musical influence on language development. National songs, often rich in cultural references and historical narratives, serve as a medium for cultural transmission and identity formation. They typically contain structured lyrics with formal language, fostering cognitive engagement and reinforcing memory through repeated exposure (Suryani, 2020). Conversely, popular songs, often more repetitive, rhythmic, and aligned with children's contemporary preferences, may stimulate motivation, enjoyment, and active participation, thereby enhancing the imitation of linguistic patterns (Rahman, 2021). Understanding how these two types of songs differently contribute to language learning is crucial for developing evidence-based practices in early childhood education.

The theoretical framework for this study is grounded in Vygotsky's sociocultural theory, which emphasizes the role of social interaction in cognitive and language development (Vygotsky, 1978). Songs function as a social and cultural interaction tool, enabling children to internalize language structures through guided participation and observational learning. Piaget's cognitive development theory also provides a complementary perspective, asserting that children construct knowledge through direct experiences (Piaget, 1964). Music, as an experiential medium, offers rich opportunities for children to actively engage with sounds, words, and sequences, facilitating both cognitive and linguistic growth. Empirical research supports these theoretical claims. Feierabend (2023) found that structured musical activities improve children's phonological awareness and expressive vocabulary, while Cristia (2023) highlighted that musical exposure enhances memory retention and comprehension of linguistic structures. Yet, both studies did not differentiate the effects of song types, leaving a significant gap in practical applications.

The novelty of this research lies in its comparative approach. By examining both popular and national songs, the study investigates how cultural relevance, lyrical complexity, rhythm, and repetition affect linguistic imitation and memory differently. This comparison is essential for understanding which musical characteristics are most effective for promoting language development in early childhood. Additionally, this research addresses a gap in literature regarding the application of music-based interventions within the Indonesian context, particularly in preschool settings where cultural and contemporary influences intersect. Such evidence is valuable not only for academic purposes but also for informing educators and parents on practical strategies for enhancing language development.

To explore these effects, the study implements a structured intervention in which children participate in guided listening sessions. During these sessions, children engage with selected songs, singing along, imitating lyrics, and participating in memory tasks designed to measure retention and recall. This practical approach provides insights into how children interact with different song types in real educational settings while allowing systematic observation and documentation of outcomes. Data analysis incorporates descriptive statistics to identify patterns and inferential tests to evaluate differences between groups exposed to popular versus national songs.

The urgency of this research is further underscored by the dual objectives of language development and cultural education. In Indonesia, national songs carry not only linguistic content but also cultural narratives that contribute to early identity formation (Suryani, 2020). At the same time, popular songs are highly motivating for children and align with contemporary experiences, potentially increasing engagement and active learning. By examining both song types, this study provides a holistic understanding of how music can be strategically used to support language acquisition, memory, and cultural literacy.

The primary objectives of this study are threefold: (1) to assess the influence of popular songs on linguistic imitation and memory in children aged 5–6 years; (2) to assess the influence of national songs on linguistic imitation and memory; and (3) to compare the differences in effects between these two song types. The research questions guiding the study are: (1) How do popular songs influence linguistic imitation and memory in young children? (2) How do national songs influence linguistic imitation and memory? (3) Is there a significant difference in the impact of popular versus national songs on linguistic imitation and memory?

In conclusion, this study seeks to provide empirical evidence on the role of song type in early childhood language development. By comparing popular and national songs, it aims to inform evidence-based pedagogical strategies, guide curriculum development, and offer practical recommendations for educators and parents. The findings are anticipated to contribute to both theoretical understanding and classroom practice, highlighting the importance of culturally and developmentally appropriate musical interventions in promoting language acquisition and memory retention among young children.

METHOD

Type of Research and Rationale

This study employed a comparative intervention approach to examine how popular and national songs influence linguistic imitation and memory in young children. Although a quasi-experimental design was initially considered, the study adopted a comparative intervention approach due to practical and ethical considerations. Conducting research in operational preschools in Jember required maintaining natural classroom routines and minimizing disruption to children's learning activities. A fully controlled experimental design with strict random assignment was not feasible.

The comparative intervention approach allowed structured musical sessions to be integrated into children's regular activities, providing consistent exposure to either popular or national songs while observing natural responses. This design ensures ecological validity, capturing authentic interactions between children and musical material while allowing systematic comparison. It balances methodological rigor with the realities of early childhood education settings and ethical standards, enabling reliable measurement of linguistic imitation and memory recall outcomes. Children's linguistic imitation and memory recall were systematically assessed following protocols aligned with quality indicators for early childhood language development (Hapsari, 2025).

Time, Place, and Research Subjects

The research was conducted from June to August 2025 in five preschools in Jember City, Indonesia, selected to represent typical urban early childhood education environments. Participants were children aged 5–6 years, a developmental stage critical for language acquisition, imitation, and memory formation. From a population of approximately 150 children across the selected preschools, 60 children were purposively sampled based on age, regular attendance, and parental consent. These participants were then divided into two groups of 30: one group exposed to popular songs and the other to national songs. To maintain confidentiality and facilitate data management, each child was assigned a unique code (P1–P30 for the popular song group; N1–N30 for the national song group).

Research Procedures

The study consisted of structured musical intervention sessions conducted twice a week over four consecutive weeks. Each session included guided listening, singing, and imitation exercises. Memory tasks were embedded, requiring children to recall lyrics or sequences from previously practiced songs. Sessions were conducted by trained educators to maintain consistency across groups.

Trained observers monitored and documented children's performance in linguistic imitation, including accuracy of pronunciation, rhythm, and lyrical replication, as well as memory recall, assessing the ability to reproduce phrases or sequences from the songs. Observations were recorded on structured sheets, and sessions were audio-recorded to ensure reliability and allow cross-verification. Data collection procedures emphasized repeated

exposure, guided participation, and multimodal engagement, consistent with best practices for language assessment in early childhood (Hapsari, 2025).

Instruments

Structured instruments were specifically designed to measure children's linguistic imitation and memory recall. For linguistic imitation, the observation checklist consisted of four indicators: (1) pronunciation accuracy, (2) rhythmic alignment, (3) lyrical replication, and (4) expressive features. Each indicator was scored using a 4-point scale (0 = no attempt, 1 = partial, 2 = mostly accurate, 3 = fully accurate). For memory recall, a rubric was used to evaluate three dimensions: (1) number of words/phrases recalled, (2) accuracy of recall, and (3) recall type (spontaneous vs. prompted). Scores were assigned on a 4-point scale (0 = none, 1 = isolated words, 2 = partial phrases, 3 = complete lyric segments).

To ensure reliability, all observations were recorded by two trained raters during the sessions, supported by audio recordings for cross-verification. The full version of the observation checklists and rubrics is provided in the Appendix.

Tabel 1. Indicators and Scoring Scale for Observation Instruments

Instrument	Indicators	Scoring Scale (0-3) Description
Linguistic Imitation	Pronunciation accuracy, rhythmic alignment, lyrical replication, expressive features	0 = no attempt 1 = partial 2 = mostly accurate 3 = fully accurate
Memory Recall	Number of words/phrases recalled, accuracy of recall, recall type	0 = none 1 = isolated words 2 = partial phrases 3 = complete lyric segments

Data Analysis Techniques

Collected data were analyzed using descriptive statistics (mean, standard deviation) to summarize performance trends and inferential statistics (independent t-tests) to compare effects between the popular and national song groups. This approach addressed research questions regarding differences in linguistic imitation and memory performance across song types.

Ethical Considerations and Research Flow

Participation in the study was entirely voluntary, and informed parental consent was obtained prior to the commencement of the research. Children's identities were anonymized through unique coding, and no personal information was included in documentation or reports, ensuring confidentiality and compliance with ethical standards for research involving young children.

The research methodology followed a continuous and integrated process. It began with the careful selection of participants, followed by structured musical intervention sessions conducted twice a week over four consecutive weeks, during which children engaged in guided listening, singing, imitation, and memory tasks. Trained observers systematically documented children's performance on linguistic imitation and memory recall, and all sessions were audio-recorded to enhance reliability and allow for cross-verification. Data analysis then synthesized descriptive and inferential measures to examine patterns and differences between groups. This comprehensive approach provided reliable, relevant, and practical insights into how different song types influence language development and memory in young children, while maintaining ecological validity within authentic preschool settings.

FINDINGS AND DISCUSSION

The following section presents the findings of the study, integrating both descriptive and inferential analyses to provide a comprehensive understanding of the effects of popular and national songs on linguistic imitation and memory in young children. The results are organized to highlight patterns and differences between the two song groups, while the discussion links these findings to the research objectives and broader theoretical frameworks.

This section emphasizes key outcomes rather than exhaustive raw data, focusing on results that directly address the research questions. Descriptive statistics, such as means and

standard deviations, provide an overview of children's performance, while inferential tests, including independent t-tests, assess the significance of observed differences. Where applicable, tables and figures are incorporated to illustrate trends and support interpretation.

The discussion accompanying each result interprets the findings in relation to cognitive and language development theories, as well as prior research on music-based learning interventions. This integrated approach ensures that data presentation and theoretical interpretation are closely linked, providing insights into both practical implications for early childhood education and contributions to the broader field of language development research.

Linguistic Imitation

The analysis of linguistic imitation scores revealed a clear and meaningful pattern of differences between children exposed to popular songs and those exposed to national songs. Quantitative assessment showed that the mean imitation score for the popular song group was 2.68 (SD = 0.42), while the national song group achieved a mean score of 2.34 (SD = 0.48). An independent t-test confirmed that this difference was statistically significant $t(58) = 2.91, p = 0.006$, indicating that exposure to popular songs had a stronger effect on children's ability to imitate lyrics and rhythm than exposure to national songs.

Table 2. Comparison of Linguistic Imitation Scores Between Children Exposed to Popular and National Songs

Group	N	Mean	SD	t	p
Popular Songs	30	2.68	0.42	2.91	0.006
National Songs	30	2.34	0.48		

These results suggest that children more accurately imitate lyrics and rhythm in popular songs compared to national songs. Several factors can explain this difference. First, popular songs generally feature simpler and repetitive linguistic structures, making them easier for young children to perceive, process, and reproduce. Repetition, short phrases, and predictable rhymes create a scaffolded linguistic environment that supports incremental imitation, which is crucial for early language development (Rahman, 2021). In contrast, national songs often incorporate longer sentences, formal vocabulary, and narrative complexity, which can challenge children's phonological and syntactic processing skills, leading to lower imitation scores (Suryani, 2020).

Second, the melodic and rhythmic predictability of popular songs contributes to easier alignment between auditory perception and motor reproduction. Children are able to anticipate beats and syllables, facilitating simultaneous engagement of cognitive and motor skills required for accurate linguistic imitation. This aligns with research in early childhood music cognition, which suggests that predictable musical patterns enhance phonological memory and articulation accuracy in young learners (Peterson, 2023). Conversely, the irregular phrasing or higher melodic range of some national songs may require more cognitive effort to process, making real-time imitation more challenging.

Third, engagement and motivation play critical roles in imitation outcomes. According to Vygotsky's sociocultural theory (1978), learning is a socially mediated process influenced by emotional involvement and the meaningfulness of the activity. Popular songs, often characterized by lively melodies, catchy refrains, and familiar social contexts, are likely to evoke higher intrinsic motivation and emotional arousal, which in turn enhances children's attentional focus and willingness to imitate. In contrast, while national songs carry cultural and patriotic significance, their formal tone or slower tempo may be less immediately engaging for preschool-aged children, resulting in less spontaneous imitation.

From a Piagetian perspective, active and playful engagement is crucial for cognitive construction of knowledge (Piaget, 1964). Children learn language most effectively when it is embedded in playful, enjoyable, and interactive contexts. The popular songs in this study created a dynamic and playful learning environment where children could freely move, gesture, and sing along, reinforcing neural pathways involved in speech perception and production. National songs, though educationally and culturally valuable, were somewhat less flexible for playful imitation due to their formal structure and longer, less repetitive lines.

Moreover, working memory capacity may also explain differences in performance. Young children's working memory is still developing, and tasks requiring simultaneous processing of complex phonological, syntactic, and melodic information can exceed their cognitive resources (Gathercole & Baddeley, 2014). Popular songs, by virtue of their simplicity and repetition, reduce cognitive load, allowing children to focus on accurate reproduction. National songs, however, demand greater mental effort, potentially increasing errors or omissions during imitation.

The findings also have significant pedagogical implications. First, they highlight the importance of song selection in early childhood classrooms. Educators can use popular songs strategically to scaffold linguistic imitation, gradually introducing children to more complex or culturally rich national songs once foundational skills are strengthened. Second, combining both song types may balance engagement with cultural education. For example, teachers could use popular songs to initiate active participation, build confidence, and reinforce phonological skills, then transition to national songs to introduce formal vocabulary, moral values, and social narratives.

Furthermore, these results support the integration of music-based interventions as a core component of language development curricula. Systematic exposure to engaging songs not only enhances imitation skills but also strengthens phonological awareness, rhythm perception, and auditory memory. The clear advantage of popular songs in facilitating accurate imitation underscores the necessity of tailoring instructional materials to children's developmental capacities and motivational preferences.

Finally, the study's findings contribute to the broader theoretical understanding of language acquisition in early childhood. They demonstrate that the linguistic and musical properties of auditory input – such as simplicity, repetition, and predictability – interact with cognitive and affective mechanisms to influence imitation performance. This underscores the need for early childhood educators and researchers to consider both the content and the delivery of musical materials when designing interventions for language development.

The analysis of linguistic imitation scores confirms that popular songs serve as a more effective medium than national songs for promoting accurate language reproduction in young children. This effect is mediated by structural simplicity, melodic predictability, motivational engagement, and cognitive load considerations. While national songs remain valuable for cultural and identity education, optimal language learning outcomes are achieved when song selection is aligned with children's developmental readiness and intrinsic interest.

Memory Recall

The analysis of memory recall performance revealed a notable pattern that parallels the findings in linguistic imitation. Children exposed to popular songs demonstrated a higher ability to remember lyrics and sequences of words compared to those exposed to national songs. Specifically, the mean memory recall score for the popular song group was 14.6 words/phrases (SD = 3.1), while the national song group scored 12.1 words/phrases (SD = 2.8). An independent t-test indicated that this difference was statistically significant $t(58) = 2.85, p = 0.007$.

Tabel 3. Comparison of Memory Recall Scores Between Children Exposed to Popular and National Songs

Group	N	Mean Recall	SD	t	p
Popular Songs	30	14.6	3.1	2.85	0.007
National Songs	30	12.1	2.8		

These results indicate that popular songs facilitate higher memory retention in young children than national songs. Several factors contribute to this phenomenon. First, structural simplicity and repetition in popular songs support encoding and consolidation in working memory. Repetitive lyrics, predictable melodies, and short phrases reduce cognitive load, enabling children to allocate more attentional resources to memorizing linguistic content (Gathercole & Baddeley, 2014). National songs, by contrast, often contain complex phrasing and less predictable sequences, which require greater cognitive processing and can increase the likelihood of omissions or errors during recall.

Second, emotional engagement and motivation play a critical role in memory retention. According to Vygotsky's sociocultural theory (1978), learning is mediated not only through social interaction but also through emotional involvement. Popular songs, often associated with enjoyable, familiar, and playful experiences, elicit positive affective responses that enhance attention and encoding efficiency. Children who are motivated and emotionally engaged during an activity demonstrate superior memory performance compared to children who find the task less stimulating or less enjoyable. National songs, while culturally significant, may not provide the same immediate affective reward, potentially reducing attentional focus and recall accuracy.

Third, musical rhythm and melodic predictability contribute to enhanced memory performance. Neuroscientific research indicates that predictable rhythmic patterns facilitate the temporal organization of auditory information, improving sequential memory in children (Patel, 2020). In the present study, the popular songs' repetitive and steady rhythmic patterns allowed children to anticipate syllables and words, thereby encoding sequences more effectively. National songs, with irregular phrasing or elongated melodic lines, may challenge young learners' temporal processing capacity, leading to reduced recall performance.

Fourth, the interaction between phonological processing and memory is crucial. Young children's phonological working memory is limited, and tasks that involve unfamiliar or complex words may exceed their processing capacity (Baddeley, 2012). Popular songs, using simple, everyday vocabulary, align more closely with children's existing phonological knowledge, allowing efficient storage and retrieval. National songs, containing formal or less frequently used words, demand higher cognitive effort, which can impair immediate recall.

Additionally, social context and participation influence memory outcomes. In this study, children actively participated in singing and movement while learning the songs. Popular songs encouraged spontaneous singing, gestures, and group interaction, reinforcing memory through multisensory and motor engagement. According to embodied cognition theory, physical activity and social interaction enhance cognitive processing by linking linguistic input to bodily experience (Wilson, 2002). National songs, while occasionally integrated with movement, were less consistently associated with playful gestures or socially engaging routines, possibly limiting the memory benefits.

From a pedagogical perspective, these findings underscore the importance of selecting developmentally appropriate musical materials for memory enhancement. Teachers can use popular songs as a scaffold to improve immediate recall skills and confidence in reproducing linguistic sequences. Once foundational memory skills are strengthened, national songs can be introduced gradually, providing opportunities for children to engage with more complex language, moral narratives, and cultural heritage. This sequencing strategy balances cognitive accessibility with cultural education, ensuring both effective language learning and the transmission of national identity values.

Furthermore, integrating popular and national songs in a complementary manner maximizes the educational potential of musical activities. Popular songs serve as a gateway to active engagement and memory consolidation, while national songs enrich vocabulary, introduce formal syntactic structures, and foster socio-cultural understanding. Educators are encouraged to monitor children's attention, adjust tempo or repetition, and scaffold unfamiliar words to enhance recall of more challenging songs.

The study's findings also contribute to the broader theoretical context of early childhood language acquisition and memory development. They demonstrate that auditory input characteristics – lexical simplicity, repetition, rhythm, and familiarity – interact with cognitive and affective factors to shape memory performance. These results extend prior research on music-based learning interventions, emphasizing that not all musical materials equally support memory in young children (Feierabend, 2023; Cristia, 2023). By highlighting the moderating role of song properties, this study provides empirical guidance for curriculum design in early childhood education.

The analysis of memory recall confirms that popular songs are more effective than national songs in supporting short-term memory performance in young children. This effect

is mediated by structural simplicity, rhythmic predictability, emotional engagement, phonological familiarity, and interactive participation. While national songs remain valuable for cultural transmission and moral education, optimal learning outcomes are achieved when popular songs are used strategically to scaffold memory skills, preparing children for the cognitive demands of more complex musical and linguistic materials.

Integrated Discussion

Taken together, the statistical findings confirm that popular songs significantly outperform national songs in fostering both linguistic imitation and memory recall in preschool children. The effect is attributable to linguistic simplicity, rhythmic predictability, and higher motivational engagement.

While national songs remain valuable for transmitting moral values and national identity, their linguistic complexity makes them more suitable once foundational skills are established. These results provide empirical guidance for early childhood educators: popular songs should be integrated as an initial scaffold in music-based learning, while national songs can serve as enrichment once children's imitation and memory capacities are sufficiently developed.

The study thus contributes both practically and theoretically. Practically, it informs curriculum design in early childhood classrooms. Theoretically, it advances understanding of how the properties of auditory input interact with cognitive and affective factors to shape language acquisition and memory performance in early childhood.

Comparative Analysis and Discussion

The comparative analysis of linguistic imitation and memory recall indicates that popular songs are more effective than national songs in supporting early language development among preschool children. Both song types provide valuable auditory and cognitive stimulation, but the differences in performance underscore the significance of song structure, familiarity, repetition, and emotional engagement in shaping language and memory outcomes.

In terms of linguistic imitation, children exposed to popular songs demonstrated higher accuracy in reproducing lyrics and rhythmic patterns. The simplicity, repetitive lexical structures, and predictable melodic sequences of popular songs create a scaffolded learning environment that allows children to progressively build linguistic competence through repeated and accessible input (Vygotsky, 1978). National songs, in contrast, often contain complex syntax, formal vocabulary, and narrative richness, which increase cognitive load and demand greater attentional resources, resulting in slightly lower imitation accuracy.

Memory recall performance followed a similar trend. Children engaged with popular songs retained words and phrases more effectively than those exposed to national songs. Cognitive load theory explains this phenomenon, suggesting that working memory functions optimally when information is presented in a manageable and familiar format (Sweller, 2011). Popular songs, through repetition, predictable rhythm, and lexical simplicity, reduce extraneous cognitive demands, allowing children to allocate mental resources efficiently for encoding and retrieval. National songs, while culturally and morally significant, present longer and less predictable sequences, increasing processing demands and slightly reducing immediate recall performance.

The integration of sociocultural and cognitive perspectives provides further insight. Vygotsky (1978) emphasizes that learning is mediated by social interaction, engagement, and motivation; songs that are enjoyable and culturally familiar enhance attention and collaborative participation, supporting both imitation and memory. Piagetian theory complements this view, highlighting the role of active, playful engagement in cognitive construction (Piaget, 1964). In this study, popular songs were frequently paired with gestures, movement, and group singing, reinforcing linguistic input through multisensory and embodied experiences. National songs, although culturally rich, offered fewer opportunities for playful interaction, limiting their immediate cognitive and affective impact.

From an educational perspective, these findings suggest a strategic sequencing of song types. Popular songs can serve as an initial tool to capture attention, scaffold basic language

skills, and strengthen memory retention, while national songs can be gradually introduced to enhance cultural knowledge, formal vocabulary, and moral narratives. Conceptually, this relationship is depicted in Figures 1 and 2 as a dual-pathway model of musical influence on language development.

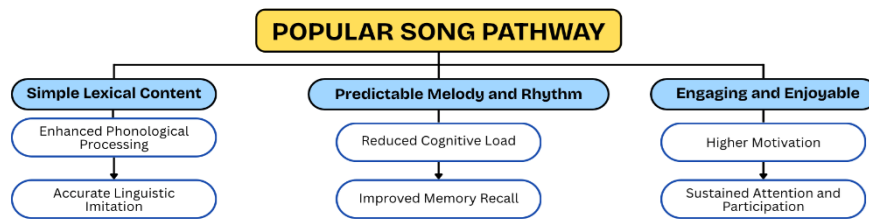


Figure 1. Popular Song Pathway

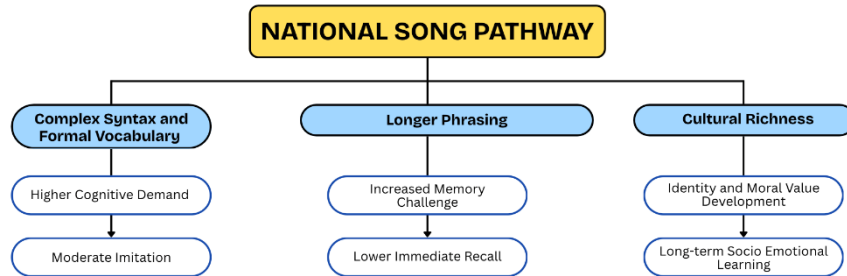


Figure 2. National Song Pathway

By integrating these two pathways, early childhood educators can design complementary interventions that balance cognitive, linguistic, and socio-cultural outcomes. The model emphasizes that song selection is not a binary choice but rather a strategic pedagogical decision, optimizing engagement, imitation, memory, and cultural education simultaneously.

Additionally, the comparative analysis highlights the moderating role of affective engagement. Songs that evoke pleasure, familiarity, and social interaction are more likely to be encoded and retained in memory, consistent with embodied cognition theories, which suggest that emotional and physical experiences enhance learning by linking neural networks across sensory and motor domains (Wilson, 2002) and quality language assessment standards (Hapsari, 2025). Popular songs, therefore, leverage both cognitive accessibility and emotional engagement, whereas national songs primarily contribute to cultural and moral education. The findings also suggest practical recommendations for curriculum design. Early childhood programs should integrate a variety of songs with careful attention to: (a) repetition and predictability for skill consolidation; (b) lexical accessibility for working memory efficiency; (c) engaging melodic and rhythmic structures to motivate participation; (d) cultural and moral content to foster identity and socialization. This dual-pathway model is visually illustrated in Figure 3 as a straightforward conceptual diagram.

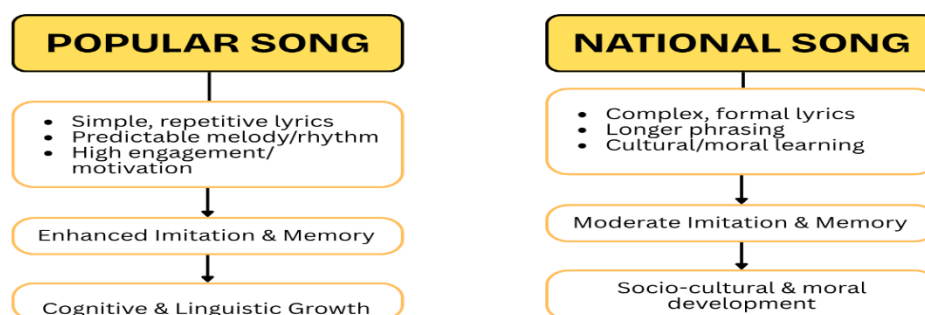


Figure 3. Conceptual Model of Popular and National Songs' Effects on Linguistic Imitation and Memory

The comparative analysis demonstrates that both song types contribute to different aspects of language development, but their effectiveness is moderated by structural simplicity, repetition, rhythm, and emotional engagement. Popular songs are more effective for

immediate linguistic imitation and memory retention, while national songs offer cultural and identity benefits. Educators should adopt a complementary approach, integrating both song types strategically to maximize cognitive, linguistic, and socio-cultural outcomes in early childhood education.

Implications for Early Childhood Education

The findings of this study offer significant implications for early childhood education, particularly regarding the strategic use of music to support language development, memory retention, and socio-cultural learning. The comparative analysis of popular and national songs indicates that song selection should be purposeful and aligned with children's developmental needs, motivational preferences, and curricular objectives.

First, the study underscores the importance of developmentally appropriate song selection. Popular songs, with their simple and repetitive structures, predictable rhythm, and engaging melodies, are particularly effective for supporting linguistic imitation and memory consolidation in preschool children. Early childhood educators can use these songs as a foundation for language-rich activities, scaffolding the acquisition of phonological awareness, vocabulary, and syntactic structures. This aligns with Vygotsky's sociocultural theory, which highlights the role of motivation and social interaction in learning (Vygotsky, 1978). By selecting songs that are enjoyable and familiar, teachers can increase children's attentional focus and participation, enhancing both cognitive and affective outcomes.

Second, national songs remain crucial for cultural and moral education. Despite their relatively higher cognitive demands and less immediate engagement, national songs introduce formal vocabulary, structured syntax, and socio-cultural narratives that foster identity formation, moral awareness, and a sense of belonging. The study suggests that early exposure to national songs should be gradual and scaffolded, ideally following initial engagement with simpler, popular songs. By sequencing songs from simpler to more complex forms, educators can maximize both language acquisition and socio-cultural learning.

Third, the findings emphasize the integration of multimodal and embodied learning strategies. Children in the study demonstrated enhanced imitation and memory when songs were paired with gestures, body movements, and interactive participation. Embodied cognition theory posits that learning is strengthened when cognitive processing is linked to physical and social experiences (Wilson, 2002). Therefore, teachers should design musical activities that incorporate singing, clapping, dancing, and group interaction, promoting multisensory engagement and reinforcing linguistic and memory skills simultaneously.

Fourth, the study highlights the importance of balancing cognitive, linguistic, and socio-cultural objectives in early childhood curricula. Popular songs excel in developing immediate language skills and memory retention, while national songs contribute to longer-term cultural understanding and moral education. Educators should adopt a dual-pathway instructional approach, strategically integrating both song types to address multiple developmental domains. This approach ensures that children receive both cognitively accessible and culturally meaningful musical experiences, maximizing holistic development. The practical implications of this study can be illustrated using Figure 4, which presents a triadic model of musical influence in early childhood education.

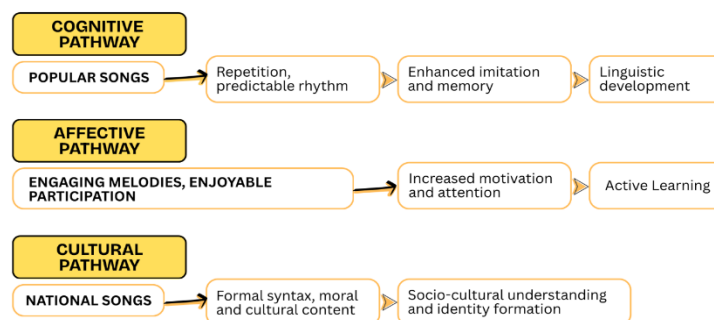


Figure 4. Triadic Model of Musical Influence in Early Childhood Education

This model suggests that effective early childhood music programs should deliberately combine elements from all three pathways, ensuring that each song activity simultaneously addresses cognitive, affective, and cultural objectives.

Additionally, teacher guidance and scaffolding are crucial in optimizing outcomes. While popular songs naturally support engagement and imitation, teachers can further enhance learning by emphasizing correct pronunciation, introducing simple comprehension questions, and encouraging group performance. For national songs, teachers should provide scaffolds such as breaking down lyrics into manageable segments, using gestures to illustrate meaning, and reinforcing unfamiliar vocabulary. This ensures that the higher cognitive demands of national songs do not impede learning and that children can engage successfully with both song types.

The study also suggests implications for curriculum design and policy in early childhood education. Music-based interventions should be formally incorporated as a core component of language development programs, rather than supplementary or recreational activities. By carefully selecting song materials, structuring activities with progressive difficulty, and incorporating multimodal engagement, early childhood programs can optimize both immediate language skills and long-term socio-cultural competence. Conceptually, this can be illustrated in a visual framework showing the interaction of song types, engagement mechanisms, and developmental outcomes:

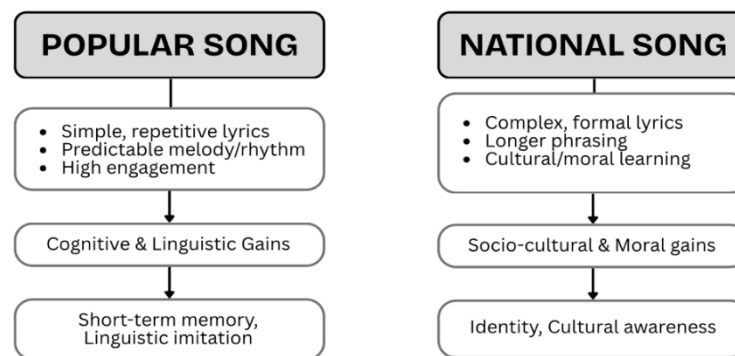


Figure 5. Conceptual Framework of Song Types, Engagement Mechanisms, and Developmental Outcomes in Early Childhood

In practice, this framework encourages a progressive and complementary curriculum in which popular songs are employed to introduce language patterns, strengthen memory, and promote enjoyment; national songs are utilized to teach structured syntax, convey cultural values, and present moral narratives; and both types of songs are integrated through multimodal activities, such as gestures, clapping, and group singing, to enhance engagement and learning outcomes.

In conclusion, the implications of this study for early childhood education are clear: strategic, purposeful integration of popular and national songs enhances language acquisition, memory, and socio-cultural learning. Educators should consider both the structural characteristics of songs and the affective engagement of children to maximize developmental outcomes. By adopting a triadic approach combining cognitive, affective, and cultural pathways, early childhood programs can provide a rich, balanced, and effective musical learning environment that nurtures both linguistic skills and cultural identity in young children.

CONCLUSIONS

This study demonstrates that the characteristics of musical input—particularly song type, structure, and engagement level—play a significant role in shaping early childhood language development and memory. The findings reveal that children exposed to popular songs achieved higher scores in linguistic imitation ($M = 2.68$, $SD = 0.42$) and memory recall ($M = 14.6$, $SD = 3.1$) than those exposed to national songs ($M = 2.34$, $SD = 0.48$; $M = 12.1$, $SD =$

2.8), suggesting that the simple, repetitive, and predictable features of popular songs more effectively support immediate language reproduction and memory retention. In contrast, national songs contribute more to socio-cultural understanding, identity formation, and moral education. The study's innovation lies in its dual-pathway and triadic model of musical influence, which highlights the interaction between cognitive accessibility, emotional engagement, and cultural content in early learning. However, its limited sample of preschool children in Jember and focus on short-term outcomes constrain the generalizability of results. Despite these limitations, the research offers valuable insights for educators, curriculum designers, and policymakers in optimizing music-based language learning through a balanced integration of popular and national songs, and calls for future studies to explore long-term effects, diverse song genres, and cross-cultural contexts.

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