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Young Children's Experiences with Digital Songs in Oral Language Activities: A Qualitative Study in Jordan

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Abstract This study explored children's experiences of digital songs as resources for oral expression within a structured instructional intervention in early childhood. A qualitative design was used with 137 children aged 5–7 years from public, private, and international schools in Amman, Jordan. Data were collected through semi-structured interviews and analyzed thematically. Five interconnected themes emerged: Catalyzing verbal expression and oral language use, building confidence and willingness to participate in oral expression, exploring pronunciation and speech organization, fostering emotional engagement with digital songs, and extending song-related language activities into the home context. Children reported that digital songs provided opportunities to encounter, repeat, practice, and reuse familiar words and expressions through singing, interaction, and audiovisual input. Delivered in Arabic through platforms such as YouTube Kids and Lingokids, the songs addressed familiar contexts, including self-introduction, family, and social play. However, the findings reflect children's perceptions and reported experiences rather than objectively measured changes in language or affective outcomes. The study provides a child-centered account of digital song-based activities within an interactive oral-language learning context.

Keywords: *Children's experiences, Digital songs, Language learning, Oral language use, Language education*

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1. Introduction

Digital technologies have become woven into nearly every aspect of daily life, and early childhood classrooms have followed this shift with varying degrees of caution and enthusiasm (Finders et al., 2023; Lee & Liu, 2025; Wang et al., 2024). Early childhood teachers continue to explore ways of integrating digital tools while maintaining core educational aims, including interaction, connection, and meaningful communication. Within this context, digital songs have become increasingly

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visible in early childhood education. Although they are often used as supplementary or warm-up activities, digital songs combine melody, rhythm, language, and visual imagery, offering multisensory experiences that can engage children and encourage participation (Aleksic et al., 2024; Degrave, 2019; Lund, 2023).

The rhythmic and repetitive structure of digital songs can support vocabulary learning, language recall, and practice with basic sentence patterns, while visual cues may help children associate words with meaning (Albaladejo et al., 2018; Tegge, 2017). Many songs are based on familiar topics, such as greetings, hygiene, and weather, providing functional language in manageable and repeatable forms (Koops & Tate, 2021; Snow et al., 2021). When integrated purposefully into instruction, they can therefore create opportunities for children to encounter, repeat, and practice spoken language. However, evidence of potential language benefits does not by itself explain how children experience these activities or how singing, repetition, and interaction contribute to oral participation (Alisaari & Heikkola, 2017; McCormack et al., 2020).

This question is particularly relevant to oral expression because singing links language input with opportunities for language production. Children listen to language in meaningful contexts and reproduce it during and after the activity (Yu et al., 2022). The combination of rhythm, melody, repetition, and shared participation may create accessible opportunities for young learners to practice familiar words and expressions and use them in interaction (Powell & Somerville, 2020; Ruokonen et al., 2021; Vaiouli & Grimmet, 2020; Vaiouli & Kirsch, 2025). Oral expression is foundational to early childhood development because it enables children to interact with their environment, build relationships, and make sense of their experiences (Clinton et al., 2013; Newman et al., 2016; Wang & Liu, 2023; Wang et al., 2024; Zoggeler-Burkhardt et al., 2023). Confidence in speaking may also support literacy, reasoning, social interaction, and self-expression. These functions underscore the importance of providing young children with meaningful opportunities for sustained verbal participation (Partika et al., 2021; Wang et al., 2024).

Despite this potential, digital songs are not consistently used as central instructional resources in early childhood classrooms. Existing research has largely focused on language-learning outcomes, often measured quantitatively through vocabulary and phonemic awareness, or on teachers' perspectives. Less attention has been given to children's own accounts of how they experience song-based activities and how these experiences relate to oral participation and language use (Garton et al., 2011; Hamilton et al., 2024; Newman et al., 2016). A child-centered perspective is therefore needed to understand what children notice, do, and report when engaging with digital songs, rather than assuming that exposure to digital materials necessarily produces language gains.

This gap is particularly relevant in Jordan, where children encounter Modern Standard Arabic (MSA) alongside Jordanian colloquial Arabic in their everyday linguistic environments. This diglossic context is pertinent to oral expression because the language used in structured educational settings may differ from the variety commonly used in everyday interaction. In the present study, MSA was emphasized in the digital songs, structured instructional language, and target expressions. Children therefore encountered, repeated, and reused MSA expressions through singing and subsequent oral interaction. The Jordanian context is thus relevant not simply as the geographical setting of the study, but because the activities engaged children with a formal variety of Arabic within an environment characterized by the coexistence of formal and colloquial varieties.

Therefore, the present study addresses the limited qualitative evidence on how young children (aged 5–7 years) experience digital song-based activities as opportunities for oral-language participation, particularly within Jordan's distinctive linguistic context. Rather than examining whether digital songs produce measurable language gains, the study focuses on children's reported experiences of listening to, singing, repeating, practicing, and reusing language through these activities. These activities were implemented as part of a structured instructional intervention using digital songs to support oral expression. Accordingly, the study does not treat digital technology as an isolated causal factor; instead, it examines how children experienced song-based oral-language activities delivered through digital media. Against this background, the study was guided by the following research

question: How do young children describe their experiences and perceptions of engaging with digital songs for oral expression?

2. Theoretical Framework

Early language development is closely associated with children's participation in social interaction and meaningful communicative activities. The present study is grounded primarily in Vygotsky's (1978) sociocultural perspective, which conceptualizes learning and development as socially mediated processes shaped by interaction, shared activities, and cultural tools. From this perspective, children encounter and develop language through participation in socially organized activities in which they interact with others and use culturally available resources. Digital songs can therefore be understood as cultural and instructional tools that provide opportunities for children to encounter oral language through listening, repetition, participation, and interaction (Al-Barakat et al., 2025; Hawamdeh et al., 2025). This view is consistent with research suggesting that song-based activities can create repeated opportunities for young learners to engage with language through listening, singing, imitation, and participation (Alisaari & Heikkola, 2017; Cheng, 2025; Donohue & Schomburg, 2017; Powell & Somerville, 2020). The empirical literature further illustrates how song-based activities may contribute to particular aspects of language learning. Lawson-Adams et al. (2022), for example, examined preschool children's word learning through sung and rhythmically spoken songs and compared these conditions with picture-card instruction. Although receptive word learning did not differ significantly across conditions, both song conditions resulted in greater gains in children's depth of word knowledge than picture-card-only instruction. These findings suggest that songs can provide repeated and multimodal encounters with linguistic forms, while also indicating that their contribution may differ according to the aspect of language being examined.

Building on this evidence, song-based activities can be understood as forms of mediation through which children encounter, reproduce, and reuse language in meaningful contexts. Children may first encounter linguistic forms through songs, reproduce them through singing and repetition, and subsequently use familiar words and expressions during interactions with teachers and peers. In this process, mediation may occur through the songs themselves as well as through teacher guidance, peer participation, and follow-up oral activities (Al-Barakat et al., 2026; Al-Hassan et al., 2012). The relevance of songs to language learning is also supported at the broader evidence level by Odo's (2022) quantitative meta-analytic review of 28 studies involving 1,864 participants, which reported an overall positive effect of instructional songs on second-language vocabulary learning. However, the magnitude of the effect varied according to factors such as educational level, instructional duration, song characteristics, control condition, and learners' first language. These findings reinforce the value of considering songs within their instructional and social contexts rather than treating them as uniformly effective across settings.

The sociocultural explanation of how children engage with language can be further developed by considering what they do with the language encountered through these activities. Halliday's (1985) functional perspective conceptualizes language as a resource for making meaning and accomplishing social purposes. From this perspective, children use language to perform functions such as greeting, requesting, describing, responding, interacting, and expressing feelings (Bataineh et al., 2025). This perspective is particularly relevant to the present study because children's experiences are examined not only in terms of exposure to words and expressions, but also in terms of their reported use and reuse of language in communicative situations.

The relationship between the two perspectives is therefore sequential and complementary. Vygotsky explains how children encounter and develop language through socially mediated participation, whereas Halliday explains how that language is used to construct meaning and accomplish communicative purposes. In this sense, the functional perspective extends rather than replaces the sociocultural explanation. Language encountered through songs becomes meaningful when children use it in interaction, for example, when responding to questions, describing experiences, expressing feelings, or participating in exchanges with others. Halliday's framework is therefore employed as a complementary interpretive perspective rather than as a separate coding system.

This integrated view also provides a basis for understanding the specific role of the digital format. Digital songs can combine spoken language with visual representations, movement, rhythm, and repeated exposure, potentially connecting linguistic expressions with images, actions, and familiar situations (Castro Huertas & Navarro Parra, 2014; McCormack et al., 2020; Su et al., 2023). Empirical research involving digital song-based activities provides additional context for this interpretation. Widhiprasetya et al. (2021), for example, conducted a quasi-experimental study with kindergarten pupils comparing YouTube songs and flashcard games for vocabulary instruction while also considering parental involvement. The study found no significant difference between the two instructional media in vocabulary learning, while parental involvement was associated with the effectiveness of the instructional activities. This finding suggests that digital songs are better understood as instructional resources whose contribution is shaped by the social and pedagogical conditions in which they are used, rather than as independent technological interventions.

Accordingly, the digital dimension is not treated as an additional theoretical perspective. Instead, digital songs represent the instructional and cultural medium through which the sociocultural and functional processes described above are enacted. They provide linguistic input and multimodal resources, while singing, repetition, teacher guidance, peer interaction, and follow-up activities create opportunities for children to participate in socially mediated language experiences and to use language for communicative purposes. This positioning allows the digital component to remain closely connected to the central theoretical argument rather than becoming a separate conceptual strand.

These processes, however, do not occur in isolation; they take place within particular social environments. Bronfenbrenner's (1979, 1994) ecological perspective therefore extends the framework by addressing the contexts in which children's socially mediated and communicatively meaningful language experiences occur. Children's immediate environments, particularly school and family, provide settings in which language can be encountered, practiced, and reused. This contextual dimension is relevant to the present study because some children reported continuing song-related activities with family members beyond the classroom. Such accounts indicate that children may experience continuity between classroom activities and other immediate social settings. Nevertheless, this interpretation is limited to children's reports and does not establish direct or sustained family participation.

The ecological perspective is also relevant to the linguistic context of the study. Children in Arabic-speaking environments may encounter Modern Standard Arabic (MSA) alongside regional varieties of Arabic across different communicative settings. The language used in structured educational contexts may therefore differ from the language children commonly encounter in everyday interaction (Davis, 2018; Garton et al., 2011). In the present study, MSA was emphasized in the digital songs, structured instructional language, and target expressions, providing opportunities for children to encounter and practice formal Arabic within socially interactive activities. The linguistic environment thus forms part of the context within which the sociocultural and functional processes described above are experienced.

Taken together, the framework can be understood as a connected explanatory sequence: Vygotsky explains how language experiences are socially mediated; Halliday explains what children do with language within those experiences; and Bronfenbrenner explains where these processes are situated. Digital songs provide the instructional and cultural medium that connects these dimensions. This relationship moves the framework beyond a collection of separate theoretical perspectives and provides a unified account of children's experiences with digital songs. Empirical evidence further supports this integrated interpretation by indicating that song-based activities may be associated with aspects of vocabulary learning and depth of word knowledge (Lawson-Adams et al., 2022; Odo, 2022), pronunciation (Baills et al., 2021), and digitally mediated language-learning activities among young children (Widhiprasetya et al., 2021). These findings do not establish that digital songs independently produce particular language outcomes; rather, they demonstrate why the social, communicative, instructional, and contextual dimensions of children's experiences warrant consideration.

Against this integrated theoretical background, the present study examines children's experiences and perceptions of using digital songs for oral expression within a structured instructional intervention. The intervention comprised ten instructional units, each delivered through two 35-minute sessions within the children's regular classroom schedule. The framework guides the interpretation of children's experiences of participation, language use, pronunciation, willingness to speak, emotional engagement, and song-related activities beyond the classroom. Consistent with the qualitative nature of the study, the analysis focuses on children's experiences without assuming direct causal effects of digital songs on oral-language development.

3. Methodology

3.1. Research Design

This study adopted a qualitative, constructivist design to explore young children's experiences with digital songs as mediational tools for oral language use and participation. Ten instructional units were embedded in the early childhood curriculum and centered on familiar real-life scenarios using Arabic-language digital songs selected from child-friendly platforms, including YouTube Kids and Lingokids. Reviewed by specialists in early childhood and language education, the songs were selected for their developmental appropriateness, thematic relevance, and linguistic value. They functioned as integral components of the instructional process, providing multimodal linguistic input and opportunities for socially situated oral expression.

3.2. Participants

The study involved 137 Jordanian children aged 5–7 years who were enrolled in Kindergarten 2 (KG2) and Grade 1 in schools located in urban areas of Amman. Of these, 68 children (49.6%) were aged 5–6 years and enrolled in KG2, while 69 (50.4%) were aged 6–7 years and enrolled in Grade 1. The sample included 70 boys (51.1%) and 67 girls (48.9%). To capture variation across educational settings, participants were recruited from public, private, and international schools: 45 children (32.8%) from public schools, 50 (36.5%) from private schools, and 42 (30.7%) from international schools. In terms of curricular orientation, 95 children (69.3%) attended schools implementing the national Jordanian curriculum, while 42 (30.7%) attended schools following international curricula. These characteristics provided variation across educational settings while maintaining a focus on children within the targeted developmental and educational stages. Detailed demographic and educational characteristics are presented in Appendix 1.

Participants were recruited through convenience sampling. Schools were approached through existing coordination arrangements, and participation depended on their willingness, availability, and readiness to participate. The inclusion of public, private, and international schools reflected the availability of participating schools and the intention to capture variation across educational settings rather than establish comparisons among school types or curricula. Within participating schools, children were invited if they met the following criteria: enrollment in KG2 or Grade 1, age between 5 and 7 years, previous exposure to Arabic digital songs in educational or learning contexts, and parental consent. Children's willingness to participate was respected throughout data collection, and no child was required to participate against their preference.

The diversity of the sample and the qualitative nature of the study also informed the determination of the final sample size. The final sample size was determined through an iterative qualitative process rather than statistical calculation or a predetermined numerical target. The relatively large number of interviews reflected the heterogeneity of the sample across age groups, educational levels, school types, and curricular contexts and allowed the researchers to examine children's responses across these varied settings until no substantially new patterns emerged. Interviews were conducted and reviewed progressively during data collection. After approximately 130 interviews, subsequent interviews repeated established codes and patterns and were no longer generating substantially new themes relevant to the research question. This point was considered the achievement of thematic saturation. Seven additional children who expressed strong interest in participating subsequently met all inclusion criteria and had parental consent; they were therefore included in the final sample of 137.

Their interviews continued to reflect the established thematic patterns and did not substantially alter the thematic structure or generate major new themes.

3.3. Implementation of Instructional Units

Interactive Arabic-language digital songs were integrated into ten instructional units based on familiar everyday scenarios, including self-introduction, family life, and social play. The intervention was implemented within the children's regular classroom schedule, with each unit delivered through two 35-minute sessions, resulting in a total of 20 instructional sessions. The units addressed familiar, developmentally appropriate topics drawn from children's everyday experiences. Digital songs were embedded within a broader instructional sequence that included guided oral activities encouraging children to use and adapt language beyond the song lyrics. Detailed information on the topics, songs, session duration, language objectives, classroom activities, and follow-up oral tasks is provided in Appendix 2.

The songs were selected using five criteria: age appropriateness, linguistic clarity, repetition of target vocabulary and sentence patterns, cultural familiarity, and potential for oral interaction beyond the lyrics. Additional considerations included vocabulary difficulty, pronunciation, song length, rhythmic structure, and opportunities for oral practice. Priority was given to simple, repetitive language that children could understand, reproduce, and adapt in familiar communicative situations. Topics included family, colors, routines, food, animals, emotions, and social interaction. To ensure the appropriateness of these materials, three specialists in early childhood and language education reviewed the songs and related activities for developmental appropriateness, linguistic clarity, vocabulary difficulty, pronunciation, cultural relevance, and alignment with the intended language objectives. Their feedback resulted in minor revisions to the oral prompts and classroom activities.

The intervention was implemented within the linguistic context of Jordanian Arabic-speaking children. Jordanian Arabic was naturally used during informal interaction, spontaneous responses, clarification, and peer communication, whereas MSA was emphasized in structured instructional language and target expressions where appropriate. Children's use of Jordanian Arabic was treated as part of their natural linguistic repertoire rather than as an error.

Within this linguistic context, the audiovisual materials were presented through child-friendly platforms such as YouTube Kids and Lingokids using a classroom screen. The instructional sequence combined audio and visual input, rhythm, repetition, singing, guided practice, and oral extension activities. Thus, children's experiences were examined in relation to the instructional sequence as a whole rather than attributed specifically to the digital format or songs in isolation. This sequence was applied consistently across the ten units. Each unit began with a brief Arabic-language warm-up to activate prior knowledge and introduce the topic, followed by song presentation and participatory singing. Children then engaged in oral activities extending beyond the lyrics, including role-play, question-and-answer exchanges, description, vocabulary practice, sequencing, and sentence adaptation. For example, they replaced familiar words in song-based sentences with other relevant words from their immediate context. The activities therefore progressed from listening and singing to guided language practice and the use of familiar expressions in new communicative situations.

To maintain consistency across schools, teachers received brief training and an implementation checklist covering topic introduction, song presentation, oral practice, and reflection. Classroom observations were used to monitor adherence to the core sequence. Teachers could nevertheless adapt their interactions to children's developmental needs and participation levels without altering the core procedures, thereby maintaining a consistent instructional structure while allowing appropriate classroom flexibility.

Following completion of the ten instructional units, semi-structured interviews were conducted to explore children's perceptions and reported experiences. The instructional process therefore progressed from topic introduction and song engagement to guided participation and extended oral practice, followed by children's reflection. The interview accounts constituted the primary qualitative evidence and were subsequently analyzed thematically. Accordingly, digital songs were examined as

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one component of a broader pedagogical sequence involving singing, repetition, interaction, teacher support, and oral extension.

3.4. Instruments

To explore children's experiences and perceptions of the above-mentioned activities, a semi-structured interview guide was developed to examine oral-language participation, language use, pronunciation, willingness to participate, emotional engagement, and language use beyond the classroom. The interview guide was reviewed by three specialists in early childhood and language education for age appropriateness, linguistic clarity, and alignment with the research question. Their feedback resulted in minor revisions, including simplifying the vocabulary, reducing the number of prompts from twelve to eight, and arranging the questions from concrete to more abstract topics.

Following the expert review, a pilot study was conducted with 12 children from a non-participating school in Amman to assess question clarity, comprehension, and engagement. Based on the pilot, picture cards depicting key song scenes were added to support comprehension, and the interview duration was reduced to approximately 15 minutes to maintain attention and minimize fatigue. These procedures helped ensure that the guide was developmentally appropriate and effective in eliciting children's accounts of their experiences.

The final interview guide comprised eight questions that progressed from children's immediate experiences with the songs to their perceptions of oral-language use. Examples included: "Which song did you like the most, and why?", "Did the songs help you say new sentences or words?", "Do you speak more clearly after listening to the songs?", "Do you feel confident speaking in front of your classmates after these lessons?", and "How did you feel while listening to the songs?" To ensure that children could respond comfortably and openly, the interviews were conducted individually in a safe, quiet, and familiar setting. A teacher was present to provide familiarity and reassurance for the young children and to facilitate the smooth conduct of the interviews. However, the teacher did not participate in asking questions or commenting on the children's responses. To further minimize any potential teacher-related influence, the interviewers maintained a neutral and non-judgmental stance, avoided expressing approval or disapproval of children's responses, and encouraged them to express their views freely. No response was treated as right or wrong.

Given the participants' young age, all interviews were conducted in Arabic, their first language, to support comprehension, comfort, and linguistic authenticity. With guardian permission, the interviews were audio-recorded, transcribed verbatim, and cross-checked for accuracy. The transcripts were then translated into English for analysis and reporting. To enhance translation trustworthiness, two bilingual researchers independently back-translated the English versions into Arabic and compared them with the original transcripts to identify and resolve semantic discrepancies.

3.5. Procedure

3.5.1. Data Collection

Given the participants' young age and variation in developmental and educational levels, the data-collection procedures were adapted accordingly. Individual semi-structured interviews were considered developmentally appropriate because they provided children with a focused and supportive setting in which they could describe their experiences without the influence of peers. The interview protocol was adapted to children aged 5–7 years by using simple, concrete, and age-appropriate language. Questions progressed from children's immediate experiences with singing and listening to the digital songs to their reported use of words and expressions, perceptions of speaking and pronunciation, and emotional responses to the activities. Open-ended prompts encouraged children to describe their experiences in their own words and provide examples where possible.

To ensure that the interview procedures were appropriate for the participants' developmental levels, the protocol was pilot-tested with 12 children from a non-participating school. Picture cards were also used to support comprehension, while interviewers employed repetition, clarification, and age-appropriate paraphrasing when needed. All interviews were conducted in Arabic, the children's first

language, to facilitate their understanding and expression. These procedures helped accommodate differences in children's verbal and cognitive abilities across the 5–7-year age range.

Each of the ten Arabic digital-song units was delivered over two instructional sessions, with each session lasting approximately 35 minutes. Following completion of the instructional units, individual semi-structured interviews were conducted in quiet and familiar school settings while the activities remained fresh in the children's memories. Each child participated in one individual interview lasting approximately 15 minutes. The resulting interview data were subsequently subjected to thematic analysis to identify recurring patterns in children's reported experiences and perceptions.

This attention to developmental variation also informed the interpretation of the interview data. Given the inclusion of two educational levels and two age groups, children's developmental and educational levels were considered when interpreting their responses. However, the study was not designed to compare KG2 and Grade 1 or the individual age groups. Therefore, responses from both groups were analyzed within the overall thematic framework, consistent with the study's focus on shared experiences and perceptions rather than age-related differences in language, pronunciation, confidence, or interview performance.

3.5.2. Data Analysis

The qualitative interview data were analyzed using thematic analysis following Braun and Clarke's (2006) framework. The analysis was inductive, with initial codes, categories, and themes developed from meanings and patterns identified in the children's responses. The five analytical domains presented in Appendix 3 were not predetermined final themes; rather, they emerged during the initial organization of the data and provided a broad structure for grouping related codes and categories.

The two researchers who conducted the interviews independently analyzed the interview data. Following transcription, they read the transcripts several times to become familiar with the data and identify recurring patterns. Meaningful segments of the children's responses were assigned initial codes reflecting their content and meaning. Related codes were then compared and organized into broader categories, resulting in five analytical domains:

1. Catalyzing verbal expression and oral language use
2. Building confidence and willingness to participate in oral expression
3. Exploring pronunciation and speech organization
4. Fostering emotional engagement with digital songs
5. Extending song-related language activities into the home context

Building on these initial domains, the researchers reviewed the codes and categories across the transcripts to identify recurring meanings, patterns, and relationships. This iterative process moved from individual interview excerpts to initial codes, broader categories, and candidate themes, while keeping the interpretation closely grounded in the children's original accounts.

To ensure consistency throughout this process, both researchers independently developed and compared their coding and categorization. When discrepancies arose, they returned to the relevant transcript excerpts and discussed their interpretations in relation to the original context until consensus was reached. Inter-rater agreement was calculated using Cooper's (1981) agreement formula and reached 95%, while the remaining differences were resolved through discussion and consensus.

Following agreement on the coding and categorization, the candidate themes were reviewed against the complete set of transcripts to assess their coherence, distinctiveness, and evidential support. Overlapping themes were refined or consolidated, whereas interpretations that lacked sufficient supporting evidence were revised or excluded. The final themes were then defined and named according to their central meanings and relevance to the research question. Importantly, although the final themes corresponded closely to the five analytical domains identified during the initial analysis (i.e., catalyzing verbal expression and oral language use, building confidence and willingness to participate in oral expression, exploring pronunciation and speech organization, fostering emotional engagement with digital songs, and extending song-related language activities into the home context),

this correspondence emerged from the iterative examination of the interview data rather than from predetermined themes. Thus, the final thematic structure was grounded in the children's accounts while maintaining a clear connection between the initial coding, category development, and final interpretation.

Finally, the refined themes were organized into a coherent account of the children's experiences and supported with illustrative interview excerpts. For descriptive purposes, frequencies and percentages were also calculated to indicate the distribution of each identified theme across participants. Each child was counted once for a given theme if evidence of that theme appeared at least once in the interview, regardless of the number of related coded statements or occurrences. The percentage was calculated by dividing the number of children whose interviews reflected a particular theme by the total number of participants (N = 137) and multiplying by 100. Because a child could reflect more than one theme, the frequencies and percentages across themes were not expected to sum to the total sample or to 100%, respectively. These values were used solely as descriptive indicators of the distribution of participants across themes and were not interpreted as quantitative measures of theme prevalence, statistical relationships, or intervention effectiveness. The interview analysis and the five analytical domains used to organize the data are summarized in Appendix 3.

Because qualitative interpretation involves researcher judgment, additional procedures were used to establish the trustworthiness of the findings. To establish trustworthiness, the study followed Lincoln and Guba's (1985) four criteria: credibility, dependability, confirmability, and transferability. These criteria were addressed through procedures applied throughout data collection, analysis, interpretation, and reporting.

Credibility was enhanced through expert review of the interview guide, pilot testing with children from a non-participating school, and checks of children's intended meanings through repetition, clarification, and age-appropriate paraphrasing during interviews. Two researchers independently coded the Arabic transcripts using a structured coding guide, compared their interpretations, and resolved differences through consensus.

Dependability was supported through consistent use of the interview protocol, coding guide, and implementation checklist, with classroom observations monitoring adherence to the instructional procedures. Analytic memos and journals documented key decisions and the development of codes and themes, providing a transparent record of the research process.

Confirmability was strengthened by repeatedly returning to the original Arabic transcripts when reviewing and refining codes and themes. Independent coding, reflexive memo-writing, and analytic journaling helped identify potential interpretive assumptions. Representative interview excerpts were retained and reported to demonstrate that the themes were grounded in children's responses.

Transferability was supported through detailed descriptions of the participants, settings, instructional context, interview procedures, and analysis. The study involved 137 children aged 5–7 years from public, private, and international schools in urban Amman, representing national Jordanian and international curricular contexts. These details allow readers to assess the applicability of the findings to comparable settings without implying statistical generalizability.

4. Results

The interview data were analyzed thematically to identify recurring patterns in the children's accounts. Five major themes emerged: Catalyzing verbal expression and oral language use, building confidence and willingness to participate in oral expression, exploring pronunciation and speech organization, fostering emotional engagement with digital songs, and extending song-related language activities into the home context. Table 1 presents these themes, together with the number and percentage of participants whose responses reflected each theme.

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Table 1
Themes Identified in the Children's Interview Responses

No.	Main Themes	(n)	(%)
1	Catalyzing verbal expression and oral language use	128	93.4
2	Building confidence and willingness to participate in oral expression	124	90.5
3	Exploring pronunciation and speech organization	119	86.9
4	Fostering emotional engagement with digital songs	116	84.7
5	Extending song-related language activities into the home context	103	75.2

4.1. Catalyzing Verbal Expression and Oral Language Use

This theme was reflected in the responses of 128 children (93.4%), who described the digital-song activities as opportunities to use spoken language by initiating, imitating, repeating, and extending words and expressions encountered in the songs. One child said, "*I sang like them… I said: Daddy brought me a balloon… like that!" ["غنيت مثلهم… قلت: أبي أحضر لي بالونًا… هكذا!"]*. This account illustrates the reported recall and reuse of a language pattern modeled in the song.

Children also described reusing song-related expressions in interactions with others. One child recounted, "*I told my sister: Sing with me… let's sing!" ["قلت لأختي: غني معي… هيا نغني!"]*, showing how language from the activity was used to initiate interaction. Another explained, *"The way the song goes, I said no. So, I'll fix it and say it right." ["هكذا تسير الأغنية، قلت لا. لذلك سأصححها وأقولها بشكل صحيح"],* indicating attention to the form of an expression and an attempt to reproduce it.

Repeated exposure was similarly evident in children's accounts. One child explained, *"I learned what rainbow means… in the song they said… red, orange… like that!" ["تعلمت ماذا تعني كلمة قوس قزح… في الأغنية قالوا: أحمر، برتقالي… هكذا!"]*. Another noted, *"I love saying: fishy in the water… and I say it again!" ["أحب أن أقول: السمكة الصغيرة في الماء… وأقولها مرة أخرى!"]*. Together, these accounts show how children described listening to, repeating, recalling, and reusing language encountered through the songs.

4.2. Building Confidence and Willingness to Participate in Oral Expression

Extending this reported use of language, this theme captured children's willingness to speak or sing in the presence of others. It appeared in the responses of 124 children (90.5%), who described oral participation with family members, peers, and classmates. One child shared, *"I sang in front of Mom and Dad… like this, loudly!" ["غنيت أمام أمي وأبي… هكذا، بصوت عالٍ!"]*. Another said, *"I told my friend, 'Listen to me sing.'… I wasn't scared," ["قلت لصديقي: اسمعني وأنا أغني… لم أكن خائفًا"]*. A third stated, *"I sang in class… everyone heard me!" ["غنيت في الصف… الجميع سمعني!"].* These accounts illustrate children's reported willingness to express themselves orally in social and classroom settings.

Taken together, the responses indicate that some children experienced the activities as opportunities to use spoken language and participate openly with others. These accounts describe children's reported experiences rather than objectively measured changes in confidence, fluency, pronunciation, or broader oral-language ability. Moreover, because the activities integrated digital songs with singing, repetition, teacher guidance, and social interaction, the data do not permit the contribution of digital technology alone to be determined.

4.3. Exploring Pronunciation and Speech Organization

This theme was reflected in the responses of 119 children (86.9%). Building on their reported oral participation, these children described experiences related to pronunciation and speech organization during the digital-song activities, particularly as they noticed and attempted to reproduce words as they heard them. One child explained, *"I used to say it wrong… but then I said it like in the song." ["كنت أقولها بشكل خاطئ… ثم قلتها كما في الأغنية"].* This account reflects an attempt to reproduce a word or expression based on the auditory model rather than objectively demonstrated improvement in pronunciation.

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Children also referred to the physical and auditory aspects of speech production. One child commented, *"When I sing, my mouth moves right!" ["عندما أغني، يتحرك فمي بشكل صحيح!"],* describing a perceived connection between singing and mouth movement. Another said, *"I say: airplane… not 'tatata'… because I heard it like that." ["أقول: طائرة… وليس 'تاتاتا' … لأنني سمعتها هكذا"].* Together, these accounts indicate reported attention to speech sounds, word forms, and their reproduction.

These experiences were linked to repeated listening and singing, through which children encountered recurring auditory and verbal models. However, the accounts represent the experiences of children who reported them and do not establish objectively measured gains in pronunciation, speech organization, fluency, or phonological development. Because the activities combined digital presentation with singing, repetition, auditory modeling, and social interaction, the contribution of digital technology alone cannot be determined.

4.4. Fostering Emotional Engagement with Digital Songs

Extending beyond children's reported linguistic experiences, this theme captured their emotional responses to the song-based activities. It was reflected in the responses of 116 children (84.7%), who described enjoyment, laughter, and movement while singing and listening. One child stated, *"I love it when I sing… I laugh," ["أحب عندما أغني… أضحك"].* Another explained, *"The song makes my tummy laugh," ["الأغنية تجعل بطني يضحك"],* while a third said, *"I sang and then danced… and I laughed!" ["غنيت ثم رقصت… وضحكت!"].* These accounts reflect reported enjoyment and positive emotional experiences among the children who described them.

This enjoyment was often associated with active and repeated engagement, including singing along, repeating familiar parts, and moving with the songs. Some children also described laughing and singing with peers or family members, indicating that emotional engagement could occur within shared social interactions. Unlike Sections 4.1 and 4.2, which focused on language use and willingness to participate, this theme concerned children's reported enjoyment, laughter, movement, and emotional engagement.

However, these accounts should not be interpreted as evidence that all children responded positively or that the activities produced measurable changes in motivation, anxiety, confidence, or other psychological outcomes. The digital songs were experienced together with singing, repetition, movement, teacher guidance, and social interaction; therefore, the qualitative data do not permit the contribution of any individual component to be isolated.

4.5. Extending Song-Related Language Activities into the Home Context

Extending the reported experiences beyond the classroom, this theme captured children's accounts of continuing song-related activities with family members at home. It was reflected in the responses of 103 children (75.2%). One child said, *"I sang with Mama… we sang together," ["غنيت مع أمي… غنينا معًا"],* while another reported, *"Daddy told me: sing me that song… and I did," ["قال لي أبي: غنّ لي تلك الأغنية… ففعلت"].* These accounts indicate that some children incorporated the songs into interactions with family members.

Children also described sharing the songs with siblings. One child recalled, *"I sang, and then my brother said, 'Wow! Sing it again!'" ["غنيت، ثم قال أخي: واو! غنّها مرة أخرى!"].* Another said, *"I told my sister: Sing with me… let's sing!" ["قلت لأختي: غني معي… هيا نغني!"].* These accounts illustrate reported instances of continuing or sharing the activities at home, but they do not establish that such engagement was regular or sustained.

Accordingly, the findings represent children's reports rather than independently verified home experiences. The study did not include parent or sibling reports, home observations, or recordings to verify the frequency or nature of these interactions. Nor do the data establish whether home singing was explicitly encouraged by the intervention or emerged spontaneously from children's experiences.

This interpretation is consistent with the broader nature of the intervention, in which digital presentation was combined with singing, repetition, interaction, and children's individual engagement. Thus, the

theme documents reported instances of extending song-related activities beyond the classroom rather than a verified home–school connection, family behavioral change, or an independent effect of digital technology.

5. Discussion

This study examined children's experiences of engaging with digital songs for oral expression. Five interconnected themes emerged: Catalyzing verbal expression and oral language use, building confidence and willingness to participate in oral expression, exploring pronunciation and speech organization, fostering emotional engagement with digital songs, and extending song-related language activities into the home context. Together, these themes show how children experienced digital songs as opportunities to encounter, practice, and use oral language within socially and emotionally engaging activities. The findings do not demonstrate measurable language development. Instead, they capture children's reported experiences of verbal expression, willingness to communicate, attention to pronunciation and speech organization, emotional engagement, and language-related activity beyond the classroom.

This pattern can be interpreted through Vygotsky's (1978) sociocultural perspective, particularly the concept of mediation. Digital songs functioned as linguistic and cultural tools, while teacher guidance, follow-up activities, and peer interaction provided contexts for listening, repeating, responding, and reusing familiar language. Thus, the songs operated as resources within socially mediated oral-language activities rather than as isolated sources of language input. This interactive context also helps explain why repetition emerged as a central feature of children's experiences.

Children's accounts suggested greater familiarity with words, phrases, and speech patterns through repeated exposure, while singing provided a structured context for recalling and reproducing familiar language. This interpretation is consistent with research linking rhythm, melody, and repetition with children's engagement in language-related activities and memory (Powell & Somerville, 2020). In the present study, however, repetition was embedded within a broader sequence of listening, singing, interaction, and oral practice. This sequence provides a plausible context for the children's subsequent reports of greater willingness to speak and greater attention to pronunciation and speech organization.

The connection between repeated participation and oral expression was evident in children's accounts of their willingness to speak and their perceptions of pronunciation and speech organization. Some children reported that they became more willing to speak or could reproduce words more clearly after engaging with the songs. Previous research has similarly linked music-based activities with expressive participation, social engagement, and pronunciation-related learning (Davis, 2018; Juntunen, 2020; Kirsch & Aleksic, 2021; Ruokonen et al., 2021; Vaiouli & Grimmet, 2020; Vaiouli & Kirsch, 2025). Nevertheless, these accounts represent children's perceptions of their participation and speech rather than evidence of objectively measured changes in pronunciation, fluency, confidence, or language development.

Children's experiences also extended beyond reproducing language to using familiar expressions for communicative purposes. From Halliday's (1985) functional perspective, language serves as a resource for achieving purposes within social contexts. Children reported using song-related expressions with teachers, peers, siblings, and parents to initiate interactions, respond to others, and sustain shared activities. The songs were therefore experienced not only as sources of language to repeat but also as resources for meaningful communication. Because oral performance was not systematically assessed, these accounts do not establish broader functional language development.

Communication was closely accompanied by positive emotional engagement. Children described laughter, enjoyment, movement, and pleasure while singing and listening to the songs, consistent with previous research on emotional engagement in music- and language-related activities (Ruokonen et al., 2021; Vaiouli & Grimmet, 2020; Vaiouli & Kirsch, 2025). These responses suggest that emotional engagement formed part of the context in which children participated and used familiar language. They should not, however, be interpreted as evidence of changes in anxiety, motivation, or other psychological constructs.

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The emotional and communicative engagement associated with the songs sometimes continued beyond the classroom. Several children reported singing with parents or siblings at home, suggesting that familiar songs could become resources for language-related interaction in another immediate social context. This extension can be interpreted through Bronfenbrenner's (1979, 1994) ecological perspective, particularly the mesosystem, which concerns relationships among children's immediate environments. Although these reports suggest links between classroom and home experiences, they do not establish sustained family participation or a verified home-chool connection because the evidence was based solely on children's accounts.

Taken as a whole, the findings can be understood through the complementary perspectives of Vygotsky (1978), Halliday (1985), and Bronfenbrenner (1979, 1994). Vygotsky emphasizes mediation through social interaction and cultural tools; Halliday conceptualizes language as a resource for purposeful communication; and Bronfenbrenner highlights connections among children's immediate contexts. These perspectives collectively suggest that the significance of digital songs lies not in the songs themselves, but in how they were embedded within processes of language exposure, repetition, participation, communication, emotional engagement, and interaction across contexts.

This interpretation also defines the evidential boundaries of the study. Children described what they noticed, remembered, enjoyed, and believed they could do during and after the activities. These accounts provide valuable insight into children's experiences of digital song-based oral-language activities, but they cannot be interpreted as evidence of objectively demonstrated changes in vocabulary, pronunciation, fluency, confidence, or anxiety. The primary contribution of the study is therefore experiential: it documents how children perceived and described their engagement with oral language through digital songs across classroom and home contexts.

The findings nevertheless have practical implications for early childhood education. Digital songs may be particularly useful when embedded in sequences that progress from listening and singing to questioning, description, role-play, sentence adaptation, and peer interaction. Such activities can create repeated opportunities to reuse familiar language in meaningful contexts. Songs with clear language, repetitive structures, developmentally appropriate vocabulary, and culturally relevant content may further support participation. In the Jordanian context, teachers should also consider the relationship between MSA and Jordanian Arabic when selecting materials and designing opportunities for everyday communication. Songs may also be shared with families as optional resources for informal singing and conversation at home, without assuming that such activities will occur unless families are explicitly encouraged to engage with them.

These implications should be considered alongside several limitations. First, the absence of objective language measures and a comparison group limits conclusions about changes in vocabulary, pronunciation, fluency, confidence, or anxiety. Second, reliance on children's self-reports may have introduced influences related to age, memory, interpretation of questions, and social desirability. The presence of the teacher during interviews may also have affected children's responses, particularly when they were discussing classroom activities. These concerns were addressed through simplified, developmentally appropriate, open-ended questions and interviewer training intended to maintain a neutral stance. Third, translation from Arabic into English may have resulted in the loss of some linguistic or contextual nuances despite translation-checking procedures. Fourth, the combined use of digital songs, singing, repetition, teacher guidance, and follow-up activities prevented the contribution of individual components from being isolated. Finally, because the study was conducted in urban schools in Amman, the transferability of the findings to other geographic, socioeconomic, and educational contexts may be limited.

These limitations suggest several priorities for future research. Studies could combine children's perspectives with direct measures of oral language and comparison groups while retaining neutral, age-appropriate interview procedures. Interviews conducted without teachers present, together with teacher observations and family reports, could provide complementary perspectives and strengthen triangulation. Mixed-methods and longitudinal designs could examine children's reported experiences alongside observable changes in oral-language performance over time. Comparative studies could also distinguish the contributions of digital presentation, singing, repetition, and their combination by

examining digital and non-digital song activities. Finally, research in rural and linguistically diverse Jordanian contexts could clarify how setting, language practices, and educational conditions shape children's experiences of digital song-based oral-language activities.

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Data Availability

The datasets are not publicly available to protect participant privacy but are available from the corresponding author upon reasonable request and subject to ethical requirements.

Ethical Declaration

Ethical approval was obtained from the Research Ethics Committee at King Faisal University, Kingdom of Saudi Arabia (Decision No. KFU-REC-2024 Dec-EA000753), before data collection. The study was conducted in participating schools in Amman, Jordan, following the required site permissions. Written informed consent was obtained from the parents or legally authorized guardians of all children. Children were informed in age-appropriate language that participation was voluntary and that they could decline to answer or withdraw at any time. Confidentiality was maintained through pseudonyms, removal of identifying information, and secure data storage with access restricted to the research team.

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Appendices

Appendix 1

Demographic and Educational Characteristics of the Participants

Characteristic	Category	n	%
Age	5–6 years	68	49.6
	6–7 years	69	50.4
Educational level	Kindergarten 2 (KG2)	68	49.6
	Grade 1	69	50.4
Gender	Boys	70	51.1
	Girls	67	48.9
School type	Public schools	45	32.8
	Private schools	50	36.5
	International schools	42	30.7
Curricular orientation	National Jordanian curriculum	95	69.3
	International curriculum	42	30.7
Sampling procedure	Convenience sampling	137	100.0
Parental consent	Informed consent obtained	137	100.0

Appendix 2

Overview of the Ten Instructional Units

Unit	Topic	Digital Song	Duration	Language Objectives	Main Classroom Activities	Follow-up Oral Tasks
1	Self-Introduction	*Hello, Hello! What's Your Name?*	Two 35-minute sessions	Use greetings; state name and age; use simple self-introduction expressions	Warm-up conversation; song presentation; guided repetition; participatory singing; introduction practice	Children introduce themselves to a partner and answer simple questions about their names and ages
2	My Family	*My Family Song*	Two 35-minute sessions	Identify and name family members; use simple descriptive and possessive expressions	Picture discussion; song listening and repetition; family vocabulary practice; group singing	Children describe their families using short sentences and answer questions about family members
3	Colors and Objects	*I See Colors Everywhere*	Two 35-minute sessions	Identify common colors; combine color words with familiar nouns; produce simple descriptive sentences	Color recognition; song-based repetition; classroom-object identification; guided sentence production	Children describe familiar objects using color and noun combinations, such as "I see a red ball"
4	My Body	*Head, Shoulders, Knees and Toes*	Two 35-minute sessions	Identify common body parts; understand and produce simple action-related expressions	Singing with physical movements; repetition; body-part identification; teacher modeling	Children identify body parts and describe simple actions, such as "I can move my hands"
5	Daily Routines	*This Is the Way We Start Our Day*	Two 35-minute sessions	Use vocabulary related to everyday routines; sequence familiar actions; produce simple present-tense sentences	Song presentation; sequencing pictures; repetition; role-play of daily routines	Children describe familiar routines using short sequential sentences, such as "I wake up. I brush my teeth"

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Unit	Topic	Digital Song	Duration	Language Objectives	Main Classroom Activities	Follow-up Oral Tasks
6	Food and Drinks	*I Like Apples and Bananas*	Two 35-minute sessions	Name common foods and drinks; express likes and dislikes; use simple preference structures	Food-picture discussion; singing and repetition; preference questions; pretend-play activities	Children state food preferences and ask peers questions, such as "Do you like apples?"
7	Animals	*Old MacDonald Had a Farm*	Two 35-minute sessions	Name familiar animals; identify animal sounds; produce simple descriptive expressions	Animal-picture identification; song participation; sound imitation; question-and-answer activities	Children identify animals, imitate sounds, and produce simple descriptions, such as "It is a cow"
8	Weather and Seasons	*How's the Weather?*	Two 35-minute sessions	Use basic weather vocabulary; describe weather conditions; relate weather to familiar activities	Weather-picture discussion; song repetition; movement activities; classroom weather chart	Children describe the weather and relate it to activities, such as "It is sunny. I can play outside"
9	Feelings and Emotions	*If You're Happy and You Know It*	Two 35-minute sessions	Identify and express basic emotions; use simple emotion statements; respond to questions about feelings	Emotion-picture discussion; singing with actions; facial-expression activities; role-play	Children identify and express feelings and give simple reasons, such as "I am happy because I play"
10	Friends and Social Play	*The More We Get Together*	Two 35-minute sessions	Use language for social interaction; express preferences; invite and respond to peers; use cooperative expressions	Group singing; partner interaction; role-play; cooperative games; review of previously introduced expressions	Children engage in short peer conversations, invite classmates to participate, and describe shared activities

Appendix 3

Semi-Structured Interview Procedure and Coding Domains

Thematic Analysis Steps	Practical Application
1. Familiarization with the data	Reading interviews multiple times to understand children's experiences with digital songs. Notes were taken on children's reported experiences of verbal expression, pronunciation, emotional engagement, confidence, and family interaction.
2. Generating initial codes	Coding statements based on children's musical experiences: ❖ Participation in singing or reciting → Verbal expression & oral language use ❖ Performing songs or storytelling → Confidence & oral performance ❖ Pronouncing lyrics or structuring sentences → Pronunciation & speech organization ❖ Expressing emotions through music → Emotional resonance ❖ Singing with family members → Extended language use & social interaction
3. Searching for themes	Grouping initial codes into broader themes reflecting children's experiences of oral language use and participation: ❖ Catalyzing verbal expression and oral language use ❖ Building confidence and willingness to participate in oral expression ❖ Exploring pronunciation and speech organization

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Thematic Analysis Steps	Practical Application
	❖ Fostering emotional engagement with digital songs ❖ Extending song-related language activities into the home context
4. Reviewing themes	Ensuring that codes accurately reflect children's experiences. Themes were adjusted by merging or refining codes to enhance clarity and coherence.
5. Defining and naming themes	Defining each theme with reference to children's reported experiences of oral language use and participation: ❖ Catalyzing verbal expression and oral language use: Using song-related language in oral expression and interaction ❖ Building confidence and willingness to participate in oral expression: Reported willingness to speak or sing in front of others ❖ Exploring pronunciation and speech organization: Noticing and attempting to reproduce words and speech patterns ❖ Fostering emotional engagement with digital songs: Reported enjoyment, laughter, and movement during song-based activities ❖ Extending song-related language activities into the home context: Reported continuation or sharing of song-related activities with family members
6. Finalization	Presenting themes with illustrative excerpts from children's interviews. Findings were linked to sociocultural, ecological, and functional linguistic theories, highlighting how musical experiences function as multimodal and relational tools for communication.

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