

The Impact Of Bible-Based Multisensory Instruction On Indonesian Toddlers

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Abstract - This study investigates the impact of multisensory Bible-based instruction on Indonesian toddlers aged 1–3. Conducted over 12 weeks at an Adventist Christian early childhood Sabbath school in Bandung, West Java. The study incorporated thematic storytelling, songs, and sensory play rooted in the "Alive in Jesus" curriculum which is based on multisensory teaching method. Data were collected through structured classroom observations and parental questionnaires. The findings revealed consistent engagement, enhanced vocabulary recognition, notable character development, and spiritual connection. Triangulation indicated alignment between observed behaviors and parental perception of cognitive and behavioral growth. These results support the feasibility and potential of multisensory instruction in early bilingual education.

Keywords: Multisensory Learning, EFL (English as Foreign Language), Bilingual Toddlers, Early Childhood Education, Vocabulary Development

I. INTRODUCTION

Early childhood (ages 1–3) is a critical period for vocabulary development, especially in bilingual environments. In Indonesia, where bilingualism (Bahasa Indonesia–English) is increasingly common, young learners benefit from learning environments that support dual-language acquisition through contextual exposure (Syafrizal et al., 2023; Yuniarti & Marlina, 2022). However, most early childhood programs still rely heavily on traditional verbal instruction.

Multisensory learning, which activates visual, auditory, kinesthetic, and tactile channels simultaneously, has been shown to improve vocabulary retention and learner engagement (Solichah & Fardana, 2024). This is particularly significant for toddlers, whose sensory integration skills are rapidly forming (Gazioğlu & Karakuş, 2023). Research suggests that pairing stories and songs with hands-on activities enhances not only vocabulary but also emotional and behavioral development (Geng et al., 2020; Rahmawati et al., 2023).

Faith-based learning—especially using Bible stories—has the additional benefit of moral and spiritual development. While studies have explored multisensory strategies in older

children (Mayer et al., 2021), there is limited research on toddlers, particularly in bilingual religious settings. This study addresses that gap by testing the feasibility and effectiveness of a multisensory, Christian-themed curriculum in promoting early English vocabulary growth.

While numerous studies have explored the benefits of multisensory instruction in early childhood education, most of them have focused on children aged 4 years and above, particularly in structured preschool or kindergarten environments. These studies often examine outcomes related to cognitive performance, such as letter recognition, phonemic awareness, or general language comprehension (e.g., Rifa'i & Budiarto, 2020; Gazioğlu & Karakuş, 2023). However, very limited research has been conducted specifically on toddlers aged 1 to 3 years, a developmental stage often considered too early for structured academic interventions—particularly in faith-based language learning contexts.

Moreover, while some research (e.g., Rahmawati et al., 2023) includes children with special needs in multisensory frameworks, it still rarely integrates spiritual formation, moral engagement, or socio-emotional character growth as part of the learning outcomes. Existing literature tends to treat these as secondary or incidental outcomes rather than core developmental goals.

This study bridges that gap by:

- This study targets a rarely studied age group (1–3 years) in structured yet flexible learning environments.
- Embedding moral and spiritual narratives (e.g., Bible stories, Christian values) as intentional tools for vocabulary development and emotional growth.
- By integrating classroom observation with parental insights, we can provide a comprehensive perspective on the transfer of learning between school and home environments.
- Focusing on spontaneous engagement and internalization, not merely retention or recall of vocabulary.

Thus, this research contributes to the field by demonstrating that faith-integrated, multisensory storytelling environments can not only enhance language development in very young children but also foster early signs of spiritual awareness, empathy, discipline, and focus—a combination rarely explored in prior academic work.

II. LITERATURE REVIEW

Recent studies confirm that multisensory methods are more effective than conventional method for L1 learners. Mayer et al. (2021) found that gesture-enriched teaching enhances vocabulary recall by activating motor pathways in the brain. Skipper et al. (2020) further demonstrated that visual and auditory co-processing strengthens neural language networks.

In Indonesia, Rifa'i & Budiarto (2020) and Rahmawati et al. (2023) provided evidence that multisensory instruction improves literacy outcomes in preschoolers and children with special

needs. Solichah & Fardana (2024) emphasized its relevance for early literacy and character building.

Christian early education programs increasingly recognize the value of spiritual and moral frameworks in language instruction (Kristiansen & Haavind, 2021). However, few studies connect faith-based multisensory methods with measurable vocabulary gains in bilingual toddlers—a niche this study seeks to explore.

Recent research emphasizes the effectiveness of multisensory instruction in supporting early language acquisition, particularly vocabulary enhancement in young EFL learners. Mayer et al. (2021) demonstrated that gesture-enriched teaching activates motor pathways to improve vocabulary memory, while Skipper et al. (2020) found that combined visual and auditory processing bolsters neural language networks. These findings align with the Montessori philosophy, which advocates for hands-on, sensory-rich environments that stimulate multiple senses simultaneously to foster natural language development (Montessori, 1912). Similarly, multisensory Bible learning for toddlers immerses children in visual, auditory, and tactile experiences that accelerate English vocabulary growth by contextualizing words within meaningful spiritual stories.

Multisensory Bible learning also contributes to character development, a critical dimension in early childhood education emphasized by both Montessori and Ellen G. White. Montessori's method nurtures the "whole child" by integrating sensorial learning with moral and social values, fostering self-discipline and empathy (Lillard, 2019). Ellen G. White's writings highlight the role of spiritual education in shaping children's character, promoting virtues such as kindness, patience, and faith (White, 1903). Empirical studies in Indonesia (Rifa'i & Budiarto, 2020; Rahmawati et al., 2023) confirm that multisensory instruction enhances children's literacy and behavioral outcomes. Integrating Bible stories as multisensory learning content uniquely supports this holistic growth, as children internalize spiritual principles while engaging multiple senses.

Beyond cognitive and character aspects, the spiritual connection established through multisensory Bible learning is pivotal for toddlers developing a faith foundation. Kristiansen and Haavind (2021) observe that Christian early childhood programs benefit from embedding spirituality across all learning modes, deepening children's understanding and emotional attachment to biblical teachings. Multisensory engagement facilitates experiential faith formation by involving touch, sight, and sound, making Scripture tangible for young learners. This approach resonates with Montessori's view that spiritual education should be natural and experiential (Montessori, 1912), while Ellen G. White underscores nurturing the child's relationship with God as foundational for lifelong spiritual growth (White, 1903). Despite limited direct studies on bilingual toddlers, this emerging intersection highlights promising outcomes for vocabulary, character, and spiritual development in faith-based multisensory learning contexts.

III. MATERIALS AND METHODS

The Materials and Methods section outlines how the research was conducted and provides enough detail to allow replication or critical assessment. This section serves as the blueprint of

the study, ensuring transparency and academic rigor. It must be written clearly, logically, and precisely. To guide authors in presenting this section effectively, the methodology should clearly address the following core components in a logical and organized manner:

1. **Research Design:** The study employed a qualitative research design, specifically using a descriptive and exploratory approach. This design is appropriate for the research objective, which was to understand how multisensory instruction—particularly through Bible stories, songs, and tactile activities—affects early English vocabulary development, engagement, and spiritual growth among toddlers. A qualitative approach allows for rich, contextual insights into how children interact with learning materials and how parents perceive changes in their children's behavior and language use. The exploratory nature of the study aligns with its pilot-project status, aimed at identifying emerging patterns rather than testing pre-defined hypotheses.
2. **Participants/Data Sources:** The study involved 11 Indonesian children aged 1 to 3 years from an early childhood Christian Sabbath school located in Bandung, West Java. The sampling technique was purposive, selecting participants who were actively engaged in the Alive in Jesus curriculum and whose parents consented to participate in the research. All participants were typically developing and came from similar socio-cultural and religious backgrounds. Ethical procedures were strictly followed. Institutional approval was obtained, and written informed consent was secured from each child's parent or guardian. Participant identities were anonymized to protect confidentiality, and all observations and questionnaire responses were handled with ethical sensitivity and in accordance with child research protocols.
3. **Tools and Instruments:** Two primary data collection instruments were employed in this study: classroom observation checklists and field notes, and parental questionnaires. The classroom observations documented weekly child interactions, vocabulary usage, gesture-based communication, and emotional or spiritual responses during multisensory Bible-based lessons. Meanwhile, the parental questionnaires served as a structured qualitative feedback form, capturing parents' perspectives on their children's vocabulary growth, emotional reactions, and behavior observed at home. The instructional content was based on the Alive in Jesus curriculum, which provided a set of lesson plans, English Christian songs, visual props, tactile tools such as sensory bottles and textured cards, and storybooks—these functioned both as teaching aids and observational stimuli. No analytic software was used during this process; all tools and instruments were analog and tailored for small-scale qualitative research involving very young children.
4. **Procedures:** The study was conducted over 12 consecutive weekly sessions, each centered around a different Bible story theme (e.g., Walking on Water, Peace Be Still). In every session, 2–3 English vocabulary words were introduced and reinforced through multisensory activities that engaged various learning modalities. Visual stimuli included picture cards and props, auditory learning was supported through relevant English Bible songs, kinesthetic engagement was facilitated by story dramatizations and gesture-based role play, and tactile experiences were offered through manipulatives such as soft cloths, stickers, and glitter bottles. Each session involved guided observation by the researcher and informal teacher notes, focusing on key behaviors like vocabulary recognition, gesture

use, turn-taking, and emotional expressions. At the end of the 12-week cycle, parents completed a questionnaire reflecting their observations of children's learning and behavioral changes at home, providing complementary insight to the classroom data.

5. **Analysis Techniques:** Data were analyzed using qualitative content analysis, with classroom observation notes coded thematically based on recurring behaviors. These included vocabulary usage—such as correct naming of objects and word repetition—observable character traits like empathy and sharing, and spiritual indicators such as referencing Jesus or mimicking prayer and moral behaviors. Parental questionnaire responses were analyzed using thematic triangulation to identify overlapping patterns between classroom behavior and home-based reports, including instances of children singing English songs at home, discussing Jesus, or demonstrating improved focus and emotional regulation. The analysis produced five key themes: Vocabulary Development, Character Growth, Engagement, Attention & Focus, and Spiritual Connection. These themes were then compared with findings from previous studies (e.g., Mayer et al., 2021; Gazioglu & Karakuş, 2023) to contextualize the uniqueness and relevance of the results, particularly in the context of very young children under the age of three.

IV. RESULTS AND DISCUSSION

Vocabulary Development

Recent research shows that children aged 1 to 3 years are capable of actively developing vocabulary, especially when exposed to a consistent and contextually rich learning environment. Early childhood children begin producing their first words around 12 months of age, and by 24–36 months of age, they show significant increases in vocabulary size and the ability to combine words into simple phrases (Fenson et al., 2020; Roseberry et al., 2023). A study by Bergelson and Amatuni (2022) revealed that repeated exposure to words in interactive contexts supports stronger word retention and recognition. Furthermore, multisensory learning approaches—which combine visual, auditory, kinesthetic, and tactile input—have been shown to improve focus, engagement, and the speed of vocabulary acquisition in young children (Wang et al., 2021; Hirsh-Pasek et al., 2024).

With this theoretical foundation in mind, the following section will present findings from 12 weeks of classroom observations and parent questionnaire responses. This analysis aims to explore how a structured multisensory approach through stories and songs with spiritual themes can strengthen children's English vocabulary development in the early phase of their language growth.

One of the key findings from classroom observations was a significant increase in children's English vocabulary acquisition through thematic activities based on songs and chants. Children actively uttered key words such as,

Table 1. Vocabulary Lists

Introduction to Vocabulary Development Using Multisensory	
"He cares for you 1 Peter 5 : 7"	"Seashells" "Sabbath"
"Clap Hands"	
"Fish"	"God"
"Boat"	"Loves"
"Ocean"	"Me"
"Bread"	"Good Morning"

while singing songs or engaging in role-play. This response demonstrated that they not only heard but also understood and used vocabulary in meaningful contexts. This was reinforced by feedback from parents who stated that their children had improved their understanding and recognition of the meaning of words learned in class.

This finding is consistent with a study by Mayer et al. (2021), which confirmed that the use of gestures in second language learning can strengthen vocabulary retention through activation of motor pathways in the brain. In the context of this study, the use of songs and hand gestures in classroom activities serves as a concrete example of this approach, strengthening children's ability to remember and pronounce words.

Additionally, to support the previous classroom findings on vocabulary development, qualitative feedback from parents provides valuable confirmation of children's language growth at home. One respondent reflected,

"Anak lebih mengerti dan tahu pembelajarannya"

(translated: "Children understand and know their learning better" – Respondent 3)

This simple yet powerful statement encapsulates how the children began to not only recognize individual vocabulary items introduced during the class but also comprehend their functional use within the thematic stories and daily contexts.

Parents reported that their children started using English words spontaneously during routine conversations at home, such as mentioning keywords like fish, thank you, or bye—all of which were embedded within the Bible story lessons. This implies that the multisensory approach, which included auditory repetition through songs, visual reinforcement with flashcards and props, and kinesthetic activities through role-play and movement, significantly enhanced the encoding and retrieval of vocabulary in meaningful ways.

These observations align with developmental language theories that highlight the role of contextualized and repeated exposure in solidifying early vocabulary (Hirsh-Pasek et al., 2024; Wang et al., 2021). When children are immersed in engaging multisensory activities that integrate visual, auditory, and tactile inputs, their cognitive association with the word's meaning becomes stronger and more durable. In this study, this was evidenced by children not only repeating target words but doing so with appropriate emotional tone and gesture—demonstrating both semantic understanding and pragmatic use.

The reinforcement at home, as noted by parents, indicates that the learning experience was not only effective within the classroom but also transferable and retained beyond instructional hours. Such transfer is a key indicator of vocabulary acquisition success, especially in early childhood, where meaning-making is best supported through rich sensory and narrative environments. Therefore, the convergence between teacher observation and parent reports strengthens the conclusion that multisensory story-based instruction effectively supports vocabulary growth in young learners.

Character Growth

Children between the ages of 1 and 3 years typically begin to exhibit early signs of character development, including the ability to engage socially, follow routines, regulate attention, and focus on structured activities. These foundational behaviors are essential for cognitive and emotional readiness, and are often cultivated through responsive environments and developmentally appropriate instructional practices. In this study, classroom observations revealed that toddlers participated enthusiastically in song-based activities, role-play scenarios, and tactile exploration, demonstrating high levels of engagement and sustained attention during multisensory tasks. Children waited for their turns during games. The children responded to cues such as "stop" or "repeat" and were able to follow multi-step instructions, indicating that they were developing discipline and behavioral regulation appropriate for their developmental stage.

These classroom behaviors were consistently mirrored by feedback from parents. For instance, parents noted that their children

“Jadi lebih semangat, aktif, dan bahagia”

(more enthusiastic, active, and happy) - Respondent 7

“jadi lebih fokus di sekolah sabat”

(became more focused at Sabbath school)- Respondent 5

Such comments reinforce the conclusion that the multisensory story-based instruction did not only stimulate cognitive and linguistic development but also fostered socio-emotional maturity.

When compared to prior studies, the findings align with Gazioğlu & Karakuş (2023) who reported that multisensory methods improved attention span and engagement in preschool learners. Similarly, Rahmawati et al. (2023) found that gamified multisensory approaches encouraged social discipline and emotional responsiveness, even among children with developmental delays. Although the current study focuses on typically developing toddlers, similar positive behavioral outcomes were evident—suggesting that early exposure to integrative, story-driven learning environments accelerates both language and character growth.

Moreover, Kristiansen & Haavind (2021) emphasized that spiritually grounded learning enriched children's emotional connection and moral awareness, which was also observed in this study. Children not only enacted roles from Bible stories with empathy (e.g., helping others, saying "thank you") but also began to express moral understanding, such as knowing when to share or how to respond to feelings of others—early indicators of emotional intelligence developing during toddlerhood.

In summary, both classroom data and parental reflections support the claim that children aged 1 to 3 can show early signs of engagement, discipline, attention, and character growth when learning environments are emotionally safe, multisensory, and grounded in values-based storytelling.

Spiritual Connection

Classroom observations over the 12-week program revealed that toddlers (aged 1–3 years) actively responded to spiritually themed songs, dramatizations of Bible stories, and symbolic gestures such as praying, helping, or expressing joy. Many children were observed imitating the character of Jesus, waiting for their turn in role-play scenes, and following sequences of the story with sustained attention. These behaviors suggest the emergence of engagement, inner discipline, and focus as early indicators of a budding spiritual awareness. As the support to the multisensory bible lessons, the method, provide art and craft activities to reinforce their understanding of the bible lesson, by creating an art that they can bring it home.

Parental perspectives confirmed these observations. Several reported that their children had begun mentioning Jesus during home routines and asking questions about right and wrong, demonstrating not only cognitive recall but also emotional and spiritual engagement. As one parent noted,

"anak mulai mengenal Yesus sebagai Juru Selamat."

(children begin to know Jesus as Savior.)- Respondent 10

The respondent observed that the classroom experiences extended beyond academic memory, shaping the child's moral imagination and personal identity at home.

These findings support scholarly assertions that young children are capable of expressing spiritual sensitivity when learning environments foster safety, meaning, and connection. According to Mata-McMahon et al. (2024), spirituality in early childhood involves forming relationships—with people, with nature, and with God—and can be observed through children's questions, empathy, and symbolic play. Similarly, Casson et al. (2023) emphasize that spiritual environments—such as religious classrooms—help develop a sense of belonging, moral values, and early faith expression.

In harmony with these scholarly findings, Ellen G. White consistently emphasized the importance of spiritual instruction beginning in the earliest years of life. In *The Desire of Ages*, she writes, "Even a babe in its mother's arms may dwell as under the shadow of the Almighty through the faith of the praying mother" (White, 1898, p. 512). Furthermore, in *Child Guidance*, she states, "From their earliest years children should be taught to respect and reverence God" (White, 1954, p. 487). These insights affirm that toddlers are spiritually receptive and that early religious instruction—when given with love and consistency—can lay the foundation for lifelong moral and spiritual growth.

Thus, the combination of multisensory learning, narrative-based spiritual instruction, and active home reinforcement created a learning environment where children were engaged cognitively and began forming authentic spiritual connections. The convergence of teacher observations, parental feedback, and theological principles reveals that spiritual formation is both possible and fruitful even in children as young as one to three years old.

V. CONCLUSION

This study concludes that multisensory instruction—when integrated with spiritual storytelling—can significantly support the vocabulary development, character growth, and spiritual awareness of toddlers aged 1 to 3 years. The findings from classroom observations and parental questionnaires consistently show that even very young learners can demonstrate early literacy behaviors, sustained attention, emotional engagement, and meaningful interaction with moral and spiritual themes. Children not only retained key English vocabulary words presented through songs and dramatized Bible stories, but they also showed increased empathy, discipline, and personal connection to spiritual values. The alignment between school-based observation and home-based feedback strengthens the evidence that such an approach is both developmentally appropriate and pedagogically effective.

These findings carry important implications for early childhood educators, Christian education practitioners, and curriculum developers. First, they challenge the assumption that children under the age of three are too young for long structured language instruction or spiritual engagement. Instead, the results highlight the capacity of toddlers to absorb language and values when content is delivered through engaging, multisensory, and emotionally resonant formats. Second, the study suggests that faith-based language learning does not need to be delayed until formal schooling begins. In fact, the toddler years in this period represents a critical window during which symbolic play, imitation, and narrative immersion can establish strong foundations for both language acquisition and the formation of spiritual identity. This also implies that parents and teachers should collaborate closely, as the learning that begins in the classroom continues meaningfully at home.

Based on the outcomes of this study, it is recommended that early childhood programs—especially those in faith-based contexts—consider adopting multisensory and story-integrated learning models that emphasize visual, auditory, kinesthetic, and tactile elements. Educators should be trained not only in language development but also in multisensory method to embed spiritual and character themes into daily routines in age-appropriate ways. Future research should expand this pilot into longitudinal studies across larger populations to assess the long-term effects of spiritual-multisensory learning on academic and emotional development. Moreover, comparative studies involving secular contexts could further validate the holistic benefits of this method. Lastly, it is important for policymakers and school administrators to recognize the potential of values-driven early childhood education and support curricula that integrate multisensory in language, emotion, and faith in a cohesive, engaging manner.

AUTHORS' CONTRIBUTIONS

Author 1 was primarily responsible for conceptualizing the research design, developing the multisensory instructional framework, and conducting classroom observations over the 12-week period. This author also led the thematic coding of observation data and prepared the first draft of the findings and discussion sections.

Author 2 coordinated the ethical approval process, managed communication with participants' families, and designed the parental questionnaire instrument. In addition, this author handled the triangulation analysis, reviewed related literature, and contributed significantly to revising and refining the final manuscript for journal submission.

Both authors jointly contributed to the interpretation of results, formulation of conclusions and recommendations, and approved the final version of the article for submission.

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