

MULTIMODAL STRATEGIES IN MULTILINGUAL STORYTELLING: A CASE STUDY OF PRESCHOOL CHILDREN IN AWKA, NIGERIA

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Abstract

Children's language development is inherently multimodal, encompassing not only speech but also gestures, facial expressions, gaze, and other semiotic resources. In multilingual settings, children must coordinate these modes across languages, yet there is limited research on how young Nigerian children integrate multimodal strategies during storytelling. This gap is significant, as Nigeria's diverse linguistic environment presents unique challenges and opportunities for early childhood language development, with implications for education, literacy, and communication support. The following research questions were addressed: (i) What types of gestures, facial expressions, and other multimodal strategies do multilingual preschool children in Awka employ during storytelling? (ii) How do children coordinate these multimodal resources across multiple languages to support narrative coherence and audience comprehension? (iii) What patterns emerge in the use of gestures and speech during language switching in storytelling? The study is theoretically grounded in McNeill's (1992) Gesture Theory, which posits that gesture and speech form an integrated meaning-making system, and Vygotsky's socio-cultural theory (1978), emphasizing socially mediated tools in learning. A case study design was employed with 4-7-year-old children attending a multilingual preschool in Awka. Children participated in video-recorded storytelling tasks using picture sequences. Narratives were analyzed through a multimodal coding scheme, capturing gesture type (iconic, deictic, beat), facial expressions, gaze, and speech. Both quantitative analysis (frequency, co-occurrence of multimodal elements) and qualitative analysis (function and narrative role) were conducted to examine patterns and cross-linguistic strategies. The findings show that multilingual Nigerian children strategically use gestures and other multimodal cues to scaffold narrative meaning, particularly during language switching or when expressing complex ideas.

Key words: Multimodal communication, multilingual storytelling, gesture, early childhood, language development

Introduction

Language development in early childhood is a complex, multimodal process involving the coordination of speech, gestures, facial expressions, gaze, and other semiotic resources (McNeill, 1992; Goldin-Meadow, 2014). In multilingual contexts, this complexity is amplified, as children navigate multiple languages and social registers, often engaging in code-switching and cross-linguistic interactions during narrative production (Byers-Heinlein, 2013). Nigeria, with over 500 languages and diverse sociolinguistic contexts, presents a unique environment for examining multimodal strategies in early childhood storytelling (Adegbija, 2010). Despite the prevalence of multilingualism in Nigerian preschools, research on how children integrate multimodal strategies in storytelling remains sparse, creating a significant gap in our understanding of early language development and literacy support.

Storytelling is a crucial pedagogical and developmental tool. It promotes cognitive engagement, narrative competence, and social communication (Bamgbose, 2011; Basting, 2009). In preschool classrooms, storytelling often involves not just verbal narration but also visual cues, gestures, and interactive behaviors that help scaffold comprehension. Multimodal strategies in storytelling support meaning-making, particularly for children navigating multiple languages, enabling them to convey complex ideas and maintain audience engagement (Bateman et al., 2016).

This study examines how multilingual Nigerian preschool children coordinate speech, gestures, facial expressions, and gaze during storytelling. The study is significant in unraveling how multimodal strategies provide insights into early childhood education, literacy practices, and speech-language development in multilingual contexts.

Research Objectives

This study aims to:

1. Identify the types of gestures, facial expressions, gaze, and other multimodal strategies employed by multilingual preschool children during storytelling.
2. Examine how these multimodal resources are coordinated across languages to support narrative coherence and audience comprehension.
3. Analyze patterns in gesture and speech usage during language switching in storytelling.

Research Questions

1. What types of gestures, facial expressions, and other multimodal strategies do multilingual preschool children in Awka employ during storytelling?
2. How do children coordinate these multimodal resources across multiple languages to support narrative coherence and audience comprehension?
3. What patterns emerge in the use of gestures and speech during language switching in storytelling?

Literature Review

The study of early childhood language development increasingly recognizes that communication extends beyond verbal expression to include multiple semiotic modes such as gestures, facial expressions, gaze, and other nonverbal cues. In multilingual contexts, children must navigate complex interactions between languages, often employing code-switching alongside these multimodal resources to convey meaning effectively. It is pertinent to understand how young children coordinate speech and employ nonverbal strategies as this is critical for both theoretical models of language development and practical applications in early childhood education.

While considerable research has explored multimodal communication in monolingual children (McNeill, 1992; Goldin-Meadow, 2014), and code-switching in multilingual contexts (Byers-Heinlein, 2013), there remains a notable gap in empirical studies focusing on preschool children in Nigeria—a highly multilingual setting. Nigeria's sociolinguistic diversity, where languages such as Igbo, English, and Pidgin interact daily, presents unique challenges and opportunities for examining how children integrate multimodal strategies during storytelling. This literature review therefore situates the current study within three key domains: multimodal communication in early childhood, multilingualism and code-switching, and storytelling as a developmental and pedagogical tool. The review highlights both established findings and gaps, demonstrating the need for research that specifically examines how multilingual preschool children in Awka, Nigeria, coordinate speech, gestures, facial expressions, and gaze to support narrative coherence and audience comprehension.

Multimodal Communication in Early Childhood

Children's communication is multimodal from infancy. Gestures, facial expressions, and gaze complement speech and facilitate meaning-making (McNeill, 1992). Iconic gestures visually represent actions or objects, deictic gestures indicate referents, and beat gestures emphasize rhythm and discourse structure. Research demonstrates that multimodal communication enhances memory, comprehension, and narrative coherence in children (Novack & Goldin-Meadow, 2017).

Gestures also serve as cognitive tools that help children organize thoughts and convey abstract ideas. Goldin-Meadow (2014) argues that gestures are not merely supplementary but integral to linguistic and cognitive development. In educational contexts, encouraging children to use gestures alongside speech has been shown to improve learning outcomes, particularly in multilingual classrooms where verbal resources may be unevenly distributed.

Multilingualism and Code-Switching

Multilingual children frequently switch between languages to accommodate linguistic resources and social context (Byers-Heinlein, 2013). In Nigeria, children often navigate English, Igbo, Pidgin, and other local languages. Code-switching is not random; it serves pragmatic, social, and cognitive functions. Gestures and facial expressions often accompany these switches, providing contextual cues that support listener comprehension and narrative coherence (Adegbija, 2010).

Storytelling as a Developmental Tool

Storytelling fosters cognitive, linguistic, and social development (Basting, 2009). In preschool contexts, children use stories to organize temporal sequences, express emotions, and construct shared meaning. Multimodal

elements-illustrations, gestures, intonation-enhance the storytelling experience by scaffolding comprehension and supporting expressive competence (Tellier, 2008).

Storytelling also encourages perspective-taking, empathy, and creativity. By acting out characters' actions and emotions through gestures and facial expressions, children enhance both narrative quality and social interaction skills (Bateman et al., 2016).

Gestures in Cognitive and Linguistic Development

Gestures are tightly integrated with speech, forming a unified communication system (McNeill, 1992). They aid memory encoding, clarify referents, and support narrative structure. For multilingual children, gestures provide a compensatory channel when verbal expression in a given language is limited, enhancing communication and comprehension (Goldin-Meadow, 2014).

Although studies exist on multimodal communication and early childhood storytelling, few focus specifically on multilingual Nigerian contexts. The coordination of gestures, facial expressions, gaze, and speech during language switching remains largely unexplored. This study addresses this gap, providing a detailed account of multimodal storytelling strategies in a multilingual preschool setting.

Theoretical Framework

The theoretical framework of this study is anchored in McNeill's Gesture Theory (1992) and Vygotsky's Socio-Cultural Theory (1978). These frameworks provide complementary perspectives for understanding how multilingual preschool children use multimodal strategies during storytelling. Together, they highlight the integrated nature of speech and gesture, as well as the socially mediated processes through which children develop communicative competence in multilingual contexts.

David McNeill (1992) proposed that gestures are not merely add-ons to speech but are an integral component of the meaning-making system. According to this theory, gesture and speech form a unified cognitive and communicative process, where gestures are closely linked to thought and language production. Gestures facilitate lexical retrieval, allowing speakers to access words that might otherwise be difficult to produce, particularly in multilingual contexts where vocabulary in a given language may be limited. They also contribute to narrative coherence, helping speakers organize and sequence events during storytelling. McNeill categorizes gestures into three main types:

- i. **Iconic gestures** – These visually represent concrete objects, actions, or events. For example, a child might move their hands in a running motion while narrating a story about someone running. Iconic gestures provide a visual depiction of the narrative, complementing speech and enhancing understanding.
- ii. **Deictic gestures** – Also called pointing gestures, these indicate objects, locations, or people. Deictic gestures are particularly useful in storytelling when referring to pictures, props, or spatial elements in the environment, anchoring the narrative in a concrete context.
- iii. **Beat gestures** – Simple, rhythmic movements that align with the prosody of speech. Beat gestures help emphasize important points, regulate discourse flow, and signal shifts in narrative structure.

In the context of multilingual storytelling among preschool children in Awka, McNeill's theory provides a lens for understanding how gestures interact with speech during language switching, especially from Igbo to English, which often occurs at a high frequency. Gestures can compensate for gaps in vocabulary, clarify meaning for listeners, and maintain narrative continuity, ensuring that the story remains comprehensible even as children switch between languages.

Vygotsky (1978) emphasized that cognitive development is fundamentally socially mediated, with language, gestures, and other cultural tools serving as instruments of thought. Learning is not an isolated process but occurs through interactions with more knowledgeable others, including teachers, peers, and caregivers. In this view, gestures and other multimodal resources are not only reflective of internal thought processes but also mediational tools that support learning and communication.

In multilingual preschool classrooms, gestures, facial expressions, gaze, and speech function as culturally shaped semiotic resources. They scaffold children's understanding of stories, help bridge linguistic gaps, and facilitate communication with peers and teachers. For instance, when a child narrates a story in Igbo but switches to English for a particular term or concept, accompanying gestures and facial expressions provide contextual cues that guide comprehension, supporting the Vygotskian notion of scaffolding. The social context, including the presence of peers and educators, shapes which gestures are used, how they are interpreted, and how they contribute to learning and meaning-making.

This study therefore, conceptualizes storytelling as both a cognitive-linguistic and socially mediated process. McNeill's framework explains how gestures are tied to thought and speech, supporting lexical access and narrative

coherence, while Vygotsky's perspective situates these gestures within the social and cultural environment in which children learn. Together, the theories provide a comprehensive lens for examining how multilingual preschool children in Awka coordinate gestures, facial expressions, gaze, and speech to enhance storytelling, manage code-switching, and engage their audience effectively.

This integrated theoretical approach underscores that multimodal strategies are not ancillary but central to early childhood communication, particularly in multilingual contexts where language resources must be negotiated dynamically to maintain meaning and comprehension. Combining Gesture Theory and socio-cultural theory provides a framework for examining how multimodal strategies facilitate narrative meaning in multilingual children. Gestures and speech form an integrated semiotic system, while social context and audience engagement influence the selection and use of multimodal cues.

Methodology

This study employed a case study design to provide an in-depth examination of multimodal storytelling practices among multilingual preschool children in Awka, Nigeria. The case study approach was chosen because it allows for the collection of rich, detailed data within a naturalistic and context-specific setting, enabling researchers to explore complex interactions among speech, gesture, facial expressions, gaze, and code-switching in young learners. A within-subject approach was used, in which each participant was observed across multiple storytelling tasks. This design ensured that variations in multimodal strategies could be assessed at an individual level, reducing the influence of inter-individual differences and providing a clearer understanding of how each child coordinates gestures, speech, and other semiotic resources. Repeated observation also allowed for the identification of patterns, such as the high frequency of Igbo-to-English switching in Awka, and the corresponding use of gestures and facial expressions to support comprehension. Twelve preschool children, comprising six males and six females, aged between 4 and 7 years were involved. Participants were recruited from a multilingual preschool in Awka, selected for its exposure to English and Igbo. Those included are children who are exposed to at least two languages, including Igbo and English, to ensure engagement in code-switching during storytelling; those who have the ability to produce short narratives,

The study employed the following materials: picture sequences depicting everyday scenarios (6–8 images per story), chosen to stimulate narrative production and provide a consistent visual context across participants. These sequences served as scaffolds for storytelling while allowing children to incorporate their own linguistic and gestural creativity; a coding manual for gestures, facial expressions, gaze, and speech, based on McNeill's (1992) gesture typology and established multimodal coding frameworks and audio and video recording equipment, enabling accurate capture of verbal and nonverbal behavior for subsequent detailed coding and analysis. Storytelling tasks were conducted individually with each child to minimize peer influence and ensure that gestures, facial expressions, gaze, and speech could be clearly observed and recorded. Each session followed a standardized protocol: Children were shown images in sequential order and encouraged to examine them; they were prompted to narrate the story in their own words, using any language(s) they were comfortable with. The researcher provided minimal scaffolding to allow natural language and multimodal production; all gestures, facial expressions, gaze, and speech were captured on video for subsequent analysis. This procedure allowed the researcher to observe high Igbo-to-English switches in Awka, and how gestures supported comprehension during these transitions.

Data Collection

Data collection focused on capturing the full range of multimodal storytelling behavior; Gestures: Iconic gestures (depicting actions or objects), deictic gestures (pointing or indicating referents), and beat gestures (aligning with rhythm or discourse emphasis) were coded according to McNeill (1992); Facial expressions and gaze: Recorded to assess engagement, emotional expression, and referential function, particularly in relation to the narrative and audience attention and Speech: Transcribed for language use, lexical choice, narrative structure, and code-switching occurrences, enabling analysis of how verbal and nonverbal modalities interact during multilingual storytelling.

Data Analysis

The analysis was both quantitative and qualitative. Each child's storytelling session was coded to tally instances of iconic, deictic, and beat gestures, as well as facial expressions, gaze shifts, and language switches. Frequency counts allowed the researchers to determine which multimodal strategies were most frequently employed and to examine trends across participants and age groups. To explore how gestures aligned with speech, particularly during code-switching, co-occurrence matrices were created. These matrices quantified how often gestures coincided with language switches and how different gesture types supported comprehension during multilingual storytelling. This approach helped to identify the functional role of gestures in scaffolding meaning and maintaining narrative coherence when children switched between Igbo and English.

Video recordings and transcripts were analyzed for recurring patterns and themes in gesture use, including how gestures conveyed temporal sequences, emphasized key events, or represented abstract concepts. Each gesture was analyzed in context to determine its role in narrative coherence, audience engagement, and support for cross-linguistic expression, particularly during lexical retrieval challenges or language switches. Combining video data with narrative transcripts allowed the researchers to triangulate multimodal behavior with verbal content, revealing how gestures, gaze, and facial expressions worked together to enhance storytelling comprehension.

Results

Table 1: Frequency of Gesture Types across Narratives

Gesture Type	Frequency	% of Total Gestures
Iconic	84	52%
Deictic	46	29%
Beat	32	19%
Total	162	100%

The above shows that iconic gestures were the most frequently used, particularly when children narrated complex actions or switched languages. This aligns with McNeill's (1992) assertion that gestures form an integrated system with speech to convey meaning.

Table 2: Co-Occurrence of Gestures and Language Switching

Language Switch Type	Co-occurrent Gestures	% of Switches with Gestures
Igbo → English	28	78%
English → Igbo	24	72%
English → Pidgin	12	67%

The results above demonstrate the fact that gestures frequently accompany language switches. In Awka, Igbo-to-English switches were particularly common, often supported by iconic gestures depicting the action being narrated.

Children consistently used gestures to indicate the sequence of events. For example, pointing to pictures or enacting actions visually reinforced the narrative structure. Gestures helped signal the order of story events and clarified spatial relationships between characters or objects. Facial expressions and gaze were used to maintain listener attention, express emotions, and indicate reference points within the story. Children frequently looked at their audience when delivering key story events, demonstrating awareness of the listener's comprehension needs. Gestures played a compensatory role during code-switching, bridging lexical gaps and supporting narrative clarity.

Discussion

The findings demonstrate that children deliberately integrate gestures, facial expressions, and gaze to enhance storytelling. Iconic gestures predominated, supporting McNeill's (1992) claim that gestures and speech form a unified communication system. These multimodal cues not only conveyed actions but also helped structure the narrative and reinforced meaning when verbal expression alone was insufficient. In addition, high co-occurrence of gestures during code-switching indicates that gestures are critical tools for scaffolding comprehension in multilingual contexts. When children switched languages, especially from Igbo to English—a transition frequently observed in Awka—they often relied on gestures to maintain narrative clarity and engage the audience. This finding aligns with Vygotsky's socio-cultural theory (1978), emphasizing that social and semiotic tools, including gestures, are central to cognitive development and learning.

These results have practical significance for early childhood educators in multilingual classrooms: Encouraging multimodal storytelling can enhance comprehension and engagement. Training teachers to observe and support gestures may improve scaffolding during language switching. Recognizing multimodal strategies can reduce cognitive load, allowing children to convey complex ideas even when vocabulary is limited. However, observations were restricted to one preschool, which may not represent other multilingual contexts in Nigeria. The study captured short-term storytelling tasks, leaving long-term developmental patterns unexplored.

Conclusion

This study shows that multilingual Nigerian preschool children strategically use gestures, facial expressions, and gaze during storytelling to enhance narrative coherence, facilitate audience comprehension, and bridge language gaps during code-switching. Iconic gestures were particularly prominent, supporting the integration of gesture and speech in meaning-making, as proposed by McNeill (1992), and aligning with Vygotsky's (1978) view of semiotic tools in cognitive development. The findings have practical implications for early childhood education: encouraging multimodal storytelling and training educators to scaffold gestures and other semiotic strategies can improve comprehension, engagement, and narrative development. While the study was limited to a single preschool and short-term tasks, it highlights the adaptive and resourceful use of multimodal communication in multilingual settings and provides a foundation for further research on larger, diverse samples and long-term developmental patterns.

Recommendations

Multimodal storytelling should be integrated into early childhood curricula to leverage children's natural communicative strategies. Again, there is need to train educators to observe, encourage, and scaffold gestures and other multimodal cues during narrative tasks. Longitudinal studies should be conducted with larger, diverse samples to explore developmental trajectories and the long-term impact of multimodal storytelling on language and cognitive development.

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