

First Language Acquisition Stages in Indonesian Children: A Case Study

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ABSTRACT

This study examines the early stages of first language acquisition in an Indonesian child using Yule's developmental framework. Employing a qualitative case study design, the study observed a child, referred to as Y, from 9 to 15 months of age in her natural home environment. Data were collected through naturalistic observation, field notes, and documentation of caregiver-child interactions. The findings show that Y's language development was consistent with early prelinguistic milestones, particularly cooing, babbling, responsiveness to caregiver speech, and emerging sound-meaning associations. During the cooing stage, she produced vowel-like sounds that indicated early vocal engagement. These vocalizations gradually developed into babbling, marked by repeated consonant-vowel patterns such as "da-da," "ba-ba," and "ta-ta-ta." Some forms, including "tata" and "yayah," appeared in meaningful social contexts, such as responding to family members. However, they are best interpreted as proto-words or prelexical communication rather than fully established one-word utterances. The study concludes that early first language acquisition is a gradual process shaped by biological maturation, caregiver input, and repeated social interaction. The findings highlight the importance of naturalistic interaction in supporting children's early communicative development.

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INTRODUCTION

Language is a fundamental system of communication used by humans to express complex thoughts, ideas, and emotions. According to Chomsky (1965), humans are born with an innate, biological capacity to acquire and use language, a concept he famously terms "Universal Grammar." This theory posits that while specific languages are acquired from an individual's surroundings, the foundational structural blueprint and aptitude for language are hardwired into the human genetic endowment. This innate tendency enables children to construct a robust linguistic system and acquire their native language rapidly during early childhood without formal instruction (Chomsky, 2002). Therefore, language acquisition is best understood as a process of growth and maturation of a biologically designated capacity, activated and shaped by appropriate external circumstances.

Building on this nativist foundation, the study of First Language Acquisition (FLA) investigates the systematic stages through which children naturally develop this linguistic competence. This subconscious process unfolds through a series of universal, predictable milestones: moving from prelinguistic communication and cooing to babbling, and eventually to

the emergence of words and complex sentences (Yule, 2010). Throughout these stages, infants are adept at decoding the complex grammatical structures and phonological patterns of their native tongue. This is achieved through their innate capacity for pattern recognition, which allows them to infer linguistic rules from the verbal input and interactions provided by their caregivers (Brown, 2007).

While these developmental milestones are universally recognized, empirical case studies focusing on Indonesian children within their natural domestic environments remain essential to provide localized, empirical insights. This study addresses this context by observing Y, an Indonesian infant whose linguistic journey was tracked starting from the crucial baseline age of nine months. At nine months old, a child typically occupies the critical developmental threshold of early reflexive vocalization and the onset of the cooing stage (Yule, 2010). Investigating Y at this precise age allows for a meticulous, longitudinal documentation of how prelinguistic sounds gradually transform into structured, meaningful speech within an Indonesian-speaking household.

Consequently, this qualitative case study aims to analyze the specific prelinguistic progressions, focusing on the transitions through cooing, babbling, and early sound–meaning association demonstrated by Y. By examining her phonetic outputs and verbal interactions within her immediate environment, this research seeks to illustrate how her innate biological capacity interacted with parental input to build early communicative competence, culminating in early proto-word-like vocalizations such as “yayah” and “tata.”

REVIEW OF LITERATURE

Linguistics and Its Interdisciplinary Link to Psycholinguistics

Linguistics is the scientific study of language as a structured system of human communication, encompassing its internal properties and its use across various social contexts (Richards & Schmidt, 2010). As a formal discipline, linguistics investigates how language functions as a uniquely human medium for expressing thoughts, exchanging complex information, and transmitting cultural knowledge. According to Brinton (2000), the field covers multiple core structural components: phonetics (the physical production of speech sounds), phonology (the cognitive organization of sound patterns), morphology (the internal structure of words), syntax (the rules governing sentence formation), semantics (the study of literal meaning), and pragmatics (the interpretation of meaning in context). These subfields enable researchers to analyze language both as an autonomous system and as a reflection of human cognition.

Beyond its internal domains, linguistics is inherently interdisciplinary. It frequently intersects with neighboring fields, giving rise to hybrid disciplines such as sociolinguistics, computational linguistics, and psycholinguistics. Bauer (2007) emphasizes that linguistics, as a multidisciplinary science, extends its analytical reach by collaborating with other academic areas to explore language from diverse perspectives.

One of the most vital interdisciplinary branches is psycholinguistics, which merges the structural insights of linguistics with the cognitive and behavioral methodologies of psychology. While linguistics focuses on analyzing the formal features of speech and text, psycholinguistics investigates how these abstract structures are psychologically processed, produced, and understood in real-time (Todd, 1987). It examines the mental mechanisms underlying linguistic competence—how language is stored in memory, retrieved during speech, and internalized during development.

The relationship between these two fields is particularly evident in the study of first language acquisition. This process, which refers to the natural development of a child’s native tongue, serves as a primary locus where theoretical linguistics intersects with psychological inquiry. While linguistics provides the necessary taxonomy to categorize the vocalizations and words a child produces, psycholinguistics explores how the infant brain decodes and internalizes those structures. Together, these complementary fields establish a holistic foundation for examining how children transition from prelinguistic infants into competent native speakers.

Exploring Psycholinguistics: Language Processing, Acquisition, and Neuro-Developmental Baselines

As a functional extension of linguistic inquiry, psycholinguistics seeks to model the exact cognitive and neurological operations that realize language in human behavior (Aitchison, 1998). According to Clark and Clark (1977), the discipline is anchored by three core operational domains: language comprehension, language production, and language acquisition. In the context of early childhood development, psycholinguistics focuses heavily on the latter, investigating the biological predispositions and environmental inputs that allow infants to subconsciously construct a complex linguistic system from birth.

A central area of investigation within psycholinguistics is the neurological basis of language localization. Historically, the study of how the human brain processes speech began with classical aphasiology and has since been refined by modern neuroscience. Contemporary English-language scholarship explains that Broca's area is associated primarily with speech planning and production, while Wernicke's area is linked to aspects of lexical recognition and language comprehension within a broader neural network (Ardila et al., 2016; Bernal et al., 2015). In typical infant development, this hemispheric specialization undergoes rapid neural pathway formation, which is heavily stimulated by early auditory experiences.

This biological timeline aligns with the Critical Period Hypothesis (Lenneberg, 1967), which posits that there is a biologically determined developmental window during which first language acquisition must occur naturally. While extreme cases of severe linguistic deprivation—such as the well-documented studies of isolated or feral children like Genie and Victor of Aveyron—underscore the catastrophic effects of missing this window, contemporary psycholinguistics emphasizes the reverse implication: the extraordinary neuroplasticity of the infant brain during its earliest months.

Rather than focusing on the failure of acquisition post-puberty, the focus shifts to the critical importance of the baseline period—the first year of life. During this early window, the infant brain is hyper-responsive to acoustic boundaries and parental interaction, laying down the phonological foundation for future speech. Therefore, exploring the early milestones of language acquisition within this neuro-developmental window provides vital insights into how biological maturation and external linguistic stimuli interact from the very beginning of human life.

METHOD

This study employs a qualitative case study design to examine first language acquisition in its natural context. A case study is appropriate for exploring language development in depth because it allows the researcher to investigate a phenomenon within real-life settings (Yin, 2018). In this research, the focus is placed on one child, Y, whose language-related behaviors were observed longitudinally through routine interaction in the home environment over a six-month period. This design enables the study to capture naturally occurring vocal and social responses during early development as the subject matures.

The analysis tracks the subject's chronological progression from a baseline age of 9 months (May 2024) up to 15 months (November 2024). Following Yule's (2010) framework, the scope of this study is strictly limited to developmentally appropriate prelinguistic milestones observed during this timeline, namely cooing, babbling, caregiver speech (motherese), and early sound; meaning associations. Since the subject is tracked within this early developmental window, later linguistic milestones; such as the advanced two-word stage, telegraphic speech, and the full establishment of structural morphology, syntax, and semantics; are not treated as finalized outcomes. By explicitly aligning the methodological timeline with Y's age progression from 9 to 15 months, the research ensures complete consistency between the methodological scope and the empirical data presented in the findings and discussion.

FINDINGS AND DISCUSSION

This case study focuses on Y, whose linguistic journey was observed longitudinally from a baseline age of nine months up to fifteen months old. She is being raised in a bilingual home in which English and Indonesian are used, although Indonesian is the dominant language in daily interaction. In line with Yule (2010), early first language acquisition is understood as a gradual developmental process shaped by chronological maturation and repeated social interaction with caregivers. In Y's context, this bilingual environment introduces a dual stream of phonetic inputs, which shapes the caregiver speech patterns (motherese) surrounding her. Rather than causing confusion, this exposure provides a rich acoustic landscape that primes her cognitive system for dual-pattern recognition. Throughout this observation window, Y transitions across key prelinguistic thresholds; her vocal behavior progresses from early cooing and babbling to initial sound-meaning associations, reflecting an integrated response to the linguistic stimuli of both languages without yet reaching fully formed adult lexical competence.

The observations suggest that Y is moving through the later part of the cooing stage and into the babbling stage. As described by Yule (2010), infants typically begin with vowel-like vocalizations and later produce more varied consonant-vowel combinations. At nine months, Y also appears increasingly sensitive to recurring sounds, routines, and interactional cues. However, given her age, these behaviors are more appropriately interpreted as early prelexical communication than as clear evidence of the one-word stage, which Yule (2010) places later, generally between twelve and eighteen months.

The Cooing Stage

Cooing is an early stage of infant language development characterized by simple vocal sounds. According to Yule (2010), babies start making sounds like “goo” or “gaa” at 2-3 months of age. By 4 months of age, they begin to move their tongue and palate to make consonant sounds such as “k” and “g”, resulting in a greater variety of sounds.



Figure 1. Y interacts with her grandmother

Observations from May 11, 2024 indicate that Y produced vowel-like sounds such as “aa” and “ee” while interacting with her grandmother. These vocalizations are consistent with what Yule (2010) describes as cooing, namely the production of simple, comfort-related sounds during the first months of life. Rather than demonstrating clear verbal understanding, Y's response can be interpreted as evidence that she was attending to social stimulation and participating in early vocal interaction. This interpretation is more consistent with a prelinguistic stage in which infants begin to engage with surrounding voices through sound play and auditory responsiveness.



Figure 2. Request to be carried by her mother

Further observations on June 11, 2024 show that Y had begun producing a greater range of sounds, including consonant-like vocalizations such as [g]. In Yule's (2010) account, this increasing variety reflects the infant's growing control over the vocal tract as development progresses beyond simple cooing. Although these sounds occurred while she was oriented toward her mother, they should be interpreted cautiously. The data suggest an emerging coordination between vocalization and social attention, but they do not by themselves establish a fixed linguistic meaning. Thus, this episode is best understood as evidence of developmental progress in vocal experimentation rather than as proof that Y intentionally used a specific sound to convey a specific request.

The Babbling Stage

The observation spanned approximately six months; however, sessions were not conducted on a regular weekly basis but were instead carried out through informal interactions during family gatherings. Data were captured through naturalistic observation and direct field notes. Babbling follows cooing and is characterized by repeated syllabic patterns and a wider range of consonant-vowel combinations. According to Yule (2010), this stage is an important part of prelinguistic development because infants begin to experiment with sound sequences that later support speech production. In this process, caregiver speech or motherese may function as an important source of input. Its exaggerated intonation, slower tempo, and repetition can help maintain the infant's attention and support interactive engagement, although it should be regarded as a contextual influence rather than as a developmental stage in itself.



Figure 3. A dialogue in babbling stage

On August 30, 2024, Y produced reduplicated syllables such as “da-da” and “ba-ba” while being held by her mother. These vocalizations are consistent with babbling as described by Yule (2010), in which infants combine consonants and vowels into repeated patterns without yet producing stable adult-like words. The episode indicates that Y was actively exploring

possible sound combinations and participating in vocal interaction with her caregiver. In this sense, the utterances may be viewed as part of her phonological development and as evidence of increasing participation in the social routines of communication.



Figure 4. Babbling while eating

A similar pattern was observed on November 19, 2024, when Y vocalized “wahh” and later produced “ta-ta-ta” during mealtime interaction. These sounds may be interpreted as further examples of babbling and vocal play occurring in a social setting. Consistent with Yule (2010), such vocal behavior is important because it provides infants with experience in using the voice during interaction, even when the sounds do not yet function as stable words. The event therefore illustrates the continuation of prelinguistic development rather than the production of clearly established lexical items.

While Yule (2010) categorizes these repetitive syllabic outputs as standard prelinguistic milestones, incorporating Michael Tomasello’s social-pragmatic framework provides a deeper insight into Yuriko’s vocal behavior. Tomasello (2003) argues that early language acquisition is driven by the child’s emerging capacity for ‘shared intentionality’ and reading communicative motives. When Yuriko produced reduplicated forms like ‘tata... tata... tata...’ as her sister departed, the utterance functioned beyond mere phonological play. Instead, it aligns with Tomasello’s concept of intention-reading, where proto-words are utilized as context-bound communicative tools to sustain social proximity and regulate interaction before the child develops fully internalized grammatical categories.

Motherese

In Yule (2010), motherese is discussed as a form of caregiver speech characterized by exaggerated intonation, slower tempo, repetition, and frequent questions. Its role in early language acquisition is not to mark a separate developmental stage, but to provide interactional input that helps infants attend to speech and participate in communicative routines. For this reason, the following observations are interpreted as evidence of the linguistic environment surrounding Y rather than as independent stages of acquisition.



Figure 5. Y is asking for help

In the October 28, 2024 observation, the caregiver used a soft, melodic, and repetitive speaking style while addressing Y. This interaction reflects the characteristics of caregiver speech described by Yule (2010). Although Y responded by crying, the exchange remains relevant because it shows that vocal interaction occurred within an emotionally supportive context. Rather than demonstrating linguistic failure or success, this episode highlights how caregiver speech functions as a source of attention-guiding input during moments of discomfort. Y's vocal response should therefore be interpreted as part of ongoing prelinguistic interaction rather than as a clearly structured verbal request.

In another observation on November 20, 2024, Y clapped after hearing the expression "hore." This behavior may suggest that she had become familiar with a recurring interactional routine in which a particular sound pattern was associated with a positive or playful context. However, it is not necessary to conclude that she fully understood the lexical meaning of the word. A more cautious interpretation, consistent with Yule (2010), is that Y was responding to repeated prosodic and contextual cues that had become salient through frequent exposure. Her later withdrawal from the interaction also indicates that infant responses are variable and influenced by factors such as attention, fatigue, and comfort.

A similar pattern appears in the November 22, 2024 interaction, in which the caregiver called Y's name using a soft and prominent intonation. Y paused and then smiled, suggesting that she was attending to the caregiver's voice and responding positively to the interaction. In terms of Yule's (2010) discussion of caregiver speech, this example illustrates how prosodic features may attract infant attention and encourage participation in early communicative exchange. Nevertheless, the interpretation should remain cautious: the observable evidence supports responsiveness to voice and interaction, but it does not allow definite conclusions about the infant's internal linguistic processing.

This pattern of interaction further reflects Gleason and Ratner (2005) emphasis on the structured nature of the linguistic environment provided by caregivers. They note that the exaggerated prosody and repetitive structures of motherese are not just acoustic stimuli; they serve as a scaffold for social routines that train the infant in conversational turn-taking. Yuriko's positive responses to expressions like 'hore' or the melodic calling of her name demonstrate how parental input serves as a cognitive bridge. This localized tracking is consistent with Soenjono Dardjowidjojo's (2000) landmark longitudinal study on Indonesian first language acquisition, which documented that Indonesian infants heavily rely on the pragmatic, highly contextual scaffolding of repetitive home routines to establish early sound-meaning mappings long before entering the strict lexical one-word stage."

Early Sound and Meaning Association

Yule (2010) places the one-word stage at approximately twelve to eighteen months, when children begin to produce recognizable single-word utterances for familiar objects, people, or needs. Because Y was still nine months old at the time of observation, the following data are interpreted more cautiously as early sound-meaning association or possible proto-word-like behavior rather than as conclusive evidence of the one-word stage. This distinction is important in order to align the analysis with the developmental range described in the literature.



Figure 6. Calling her sister who went out

On November 23, 2024, Y produced the repeated sound “tata... tata... tata...” when her sister left the room. This observation may indicate an emerging association between a recurring vocal pattern and a particular person or situation. However, because the utterance was reduplicated and occurred during the prelinguistic period, it should not be treated as definitive evidence that Y had already acquired a stable lexical item equivalent to “kakak.” A more appropriate interpretation is that the sound functioned as a context-bound vocalization that accompanied her attention to her sister’s movement and her desire to maintain social contact.



Picture 7. She asked to be carried by her father

Likewise, Y’s production of “yayah” on November 29, 2024 while looking at her father may suggest the beginnings of a sound pattern associated with a familiar caregiver. In developmental terms, this can be discussed as an early indication that repeated vocal forms are becoming linked to recurrent social experiences. Nevertheless, following Yule (2010), it is more accurate to describe this behavior as prelexical or proto-word-like rather than as a fully established one-word utterance. The observation shows increasing communicative intentionality, but the available evidence is still insufficient to conclude that Y had entered the one-word stage in the strict sense.

CONCLUSIONS

This study concludes that Y’s observed language-related behavior is consistent with the early prelinguistic stages of first language acquisition described by Yule (2010). The data shows the presence of cooing and babbling, as well as sensitivity to caregiver speech and repeated interactional routines. These findings support the view that early language acquisition develops gradually through the interaction between biological maturation and social input.

Furthermore, the vocal forms produced by Y, such as “tata” and “yayah,” should be interpreted cautiously. Rather than constituting established one-word utterances, they are better understood as possible proto-word-like forms or early sound–meaning associations. In this sense, the study highlights the importance of natural interaction in supporting early communicative development while also emphasizing the need to align interpretation with the child’s age and the developmental stages outlined in the literature.

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