

Research Article

LONGITUDINAL CASE STUDY OF SIMULTANEOUS BILINGUALISM IN AN IRANIAN CHILD WITHIN AN EFL CONTEXT

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KEYWORDS

Simultaneous bilingualism, early language acquisition, EFL context, Iranian child, code-switching, longitudinal case study, bilingual language development

ABSTRACT

This study investigates the developmental trajectory of simultaneous bilingualism in an Iranian child exposed to English from birth within an English as a Foreign Language (EFL) context. Addressing the limited research on early bilingual acquisition in non-English-speaking environments, the study aims to identify key linguistic milestones and challenges encountered during the bilingual development process. Employing a longitudinal case study design, the research observed a two-and-a-half-year-old Iranian boy over a 32-month period. Data were collected biweekly through direct observation of the child's natural interactions in a home setting where Persian was the dominant language and English was introduced as a second language. Language development was systematically recorded and analyzed to track progress across phonological, lexical, and syntactic domains. Findings revealed three distinct phases of bilingual development, marked by increasing complexity in sentence formation, interrogative structures, and lexical diversity. Notable linguistic behaviors included code-switching, overextensions, and effective use of conjunctions. The study also identified persistent challenges such as vocabulary acquisition delays, grammatical inconsistencies, and pronunciation difficulties, exacerbated by limited English exposure outside formal instruction. The results underscore the feasibility of simultaneous bilingualism in EFL contexts when supported by consistent input and interaction. These insights have implications for early childhood education, bilingual curriculum design, and parental strategies in non-English-speaking regions. Future research should explore comparative outcomes across diverse EFL settings and examine long-term cognitive and academic impacts of early bilingual exposure.

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INTRODUCTION

The phenomenon of bilingual language acquisition in early childhood has long intrigued scholars across linguistics, psychology, and education. Within this domain, simultaneous bilingualism—where children acquire two languages from birth—offers a compelling lens through which to examine cognitive development and linguistic adaptability. The significance of this topic is amplified in English as a Foreign Language (EFL) contexts, where English is not the dominant societal language, yet is increasingly prioritized for global communication and academic advancement. Philosophical perspectives such as Chomsky's theory of innate language faculties (Chomsky, 2009) underscore the natural predisposition of children to acquire language when exposed to rich linguistic environments. In non-English-speaking societies like Iran, the emergence of simultaneous bilinguals presents both opportunities and challenges, particularly in navigating dual linguistic systems without immersive exposure. This paper explores the theoretical dimensions of simultaneous bilingualism through a longitudinal case study of an Iranian child, contributing to broader debates on language acquisition, identity formation, and pedagogical strategies in EFL settings.

Concept X: Simultaneous Bilingualism

Simultaneous bilingualism refers to the acquisition of two languages concurrently from birth or early infancy, typically before the age of three (Bialystok, 2011). This concept is central to the thesis, as it encapsulates the cognitive and linguistic processes involved in developing dual language proficiency without sequential learning. Theoretical literature suggests that simultaneous bilinguals initially form a unified linguistic system, which gradually differentiates into distinct language structures as exposure increases (De Houwer, 2009). Scholars such as Castro and Meek (2022) emphasize the role of environmental stimuli and familial interaction in activating innate linguistic capacities. While simultaneous bilingualism is often associated with cognitive advantages, including enhanced executive function and metalinguistic awareness (Bialystok et al., 2009), it also presents challenges such as code-switching, phonological interference, and grammatical inconsistencies (Thordardottir, 2011). The thesis builds on these theoretical foundations to examine how simultaneous bilingualism unfolds in an EFL household, where English is introduced as a second language in a Persian-dominant environment.

Concept Y: EFL Contextual Influence

The second theoretical construct underpinning this study is the influence of EFL contexts on bilingual development. Unlike English as a Second Language (ESL) environments, where learners are immersed in English through daily interactions, EFL settings limit exposure to formal instruction and isolated communicative instances (McLeod & Verdon, 2017). This distinction is critical in understanding the constraints and affordances of bilingual acquisition in non-English-speaking societies. Scholars such as Oliva-Olson (2019) and Purba et al. (2023) argue that the socio-cultural environment significantly shapes language proficiency, motivation, and identity. In EFL contexts, the dominance of the native language may hinder balanced bilingual development, leading to receptive rather than productive bilingualism. The thesis situates its case study within this framework, analyzing how limited English exposure

impacts the linguistic trajectory of a child acquiring English alongside Persian from birth. This concept complements the discussion of simultaneous bilingualism by highlighting the contextual variables that mediate language acquisition outcomes.

Theoretical Gap and Rationale

Despite extensive research on bilingualism, the intersection of simultaneous bilingual development and EFL contexts remains underexplored, particularly in Iranian settings. Existing literature tends to focus on ESL environments or sequential bilinguals, leaving a gap in understanding how children navigate dual language acquisition without immersive exposure. The thesis identifies this gap and addresses it through a longitudinal case study, offering empirical insights into the developmental phases, linguistic behaviors, and challenges faced by a simultaneous bilingual child in Iran. Notably, the study highlights issues such as vocabulary delays, code-switching, and grammatical interference, which are exacerbated by the limited availability of English in the child's social environment (Grosjean, 2010; Herman et al., 2024). By documenting these phenomena, the research contributes to theoretical debates on language input, cognitive load, and socio-emotional factors in bilingual development. It calls for a nuanced understanding of bilingualism that accounts for contextual diversity and pedagogical implications.

Objectives and Structure of the Paper

The primary objective of this paper is to advance a theoretical framework that explains the process and challenges of simultaneous bilingualism in EFL contexts. It seeks to answer two key questions: (1) What is the developmental process of becoming a simultaneous bilingual in an Iranian household? and (2) What linguistic and cognitive challenges emerge during this process? Drawing on the thesis, the paper adopts a conceptual approach that integrates language acquisition theory with contextual analysis. The structure of the paper is as follows: the next section reviews relevant literature on bilingualism and EFL learning; the third section develops the theoretical model based on the case study findings; the fourth section discusses the implications of the model for educational practice and policy; and the final section concludes with a synthesis of insights and recommendations for future research. This structure ensures a coherent progression from theoretical grounding to conceptual advancement, addressing the identified gap and contributing to the field of bilingual education.

THEORETICAL FRAMEWORK

The research topic explored in this thesis centers on the process of becoming a simultaneous bilingual in an English as a Foreign Language (EFL) context, specifically through a longitudinal case study of an Iranian child. This topic holds conceptual significance within the fields of applied linguistics, cognitive development, and bilingual education, as it addresses the nuanced interplay between early language acquisition and sociolinguistic environment. Simultaneous bilingualism, defined as the acquisition of two languages before the age of three, has been widely studied in immersion and ESL contexts, yet remains underexplored in EFL settings where English exposure is limited (Bialystok, 2011; De Houwer, 2009). The thesis

contributes to this gap by examining how bilingual development unfolds in a Persian-dominant household, offering insights into the cognitive, linguistic, and social dimensions of bilingualism. The study's relevance is further underscored by the increasing global emphasis on bilingual competence and the pedagogical challenges faced by non-English-speaking communities seeking to foster early bilingualism (McLeod & Verdon, 2017).

The primary theoretical objective of the study is to conceptualize the developmental trajectory and challenges of simultaneous bilingualism within an EFL context. Guided by Chomsky's theory of innate language acquisition and supported by sociocultural perspectives, the thesis aims to identify key linguistic behaviors and environmental factors that shape bilingual development (Chomsky, 2009; Castro & Meek, 2022). The theoretical framework integrates cognitive and interactionist models to explain how language input, exposure, and familial engagement influence the emergence of dual language proficiency. By focusing on a single case study, the research offers a micro-level analysis that contributes to broader theoretical debates on bilingual education and language policy. It also proposes a conceptual model that can inform curriculum design and parental strategies in similar sociolinguistic settings. The study's theoretical contributions lie in its contextual specificity and its potential to refine existing models of bilingual acquisition by incorporating EFL constraints.

Central to the thesis are two essential concepts: simultaneous bilingualism and EFL contextual influence. Simultaneous bilingualism refers to the concurrent acquisition of two languages from birth, often facilitated by parental strategies such as the "one parent, one language" approach (Zhu & Li, 2005). This concept is significant because it challenges traditional views of sequential language learning and highlights the brain's capacity for parallel linguistic development. The EFL context, on the other hand, denotes environments where English is taught as a foreign language, typically through formal instruction rather than immersive exposure (Oliva-Olson, 2019). In such settings, children may experience limited opportunities to use English outside the classroom, affecting their fluency and linguistic confidence. The thesis examines how these two concepts interact, emphasizing the importance of consistent input, cultural engagement, and pedagogical support in fostering balanced bilingualism. These constructs provide the foundation for analyzing the child's linguistic behaviors and developmental milestones.

The theoretical foundation of the thesis is built upon several influential models and theories. Chomsky's nativist theory posits that children possess an innate language faculty activated by environmental stimuli, which aligns with the study's emphasis on early exposure and interaction (Chomsky, 2009). De Houwer's (2009) model of bilingual first language acquisition supports the notion that simultaneous bilinguals initially develop a unified linguistic system before differentiating between languages. Additionally, Bialystok's (2011) cognitive framework highlights the executive function benefits of bilingualism, including enhanced attention control and problem-solving skills. These theories are complemented by sociocultural models that stress the role of family, community, and educational institutions in shaping language development (Castro & Meek, 2022; McLeod & Verdon, 2017). The thesis applies these frameworks to interpret the child's linguistic progression, including code-switching, sentence formation, and lexical diversity, thereby demonstrating their relevance and applicability in EFL contexts.

The interrelation of these key concepts and theories forms a cohesive theoretical foundation for the thesis's inquiry. Simultaneous bilingualism, as conceptualized through nativist and cognitive models, is influenced by the sociocultural dynamics of the EFL environment, which

mediates language exposure and usage. The integration of Chomsky's innate mechanisms with De Houwer's developmental stages and Bialystok's cognitive advantages provides a multidimensional perspective on bilingual acquisition. Moreover, the contextual lens offered by McLeod and Verdon (2017) and Oliva-Olson (2019) underscores the importance of environmental factors in shaping linguistic outcomes. Together, these theoretical elements support a comprehensive understanding of how bilingualism emerges and evolves in non-immersive settings. They also justify the need for tailored pedagogical approaches that address the unique challenges faced by simultaneous bilinguals in EFL contexts, reinforcing the study's conceptual relevance and scholarly contribution.

METHODOLOGY

The theoretical methodology employed in this study is grounded in conceptual analysis and interpretive synthesis, drawing from established frameworks in bilingual language acquisition and sociocultural linguistics. Rather than relying on empirical generalization, the thesis adopts a theory-driven approach to examine the constructs of simultaneous bilingualism and EFL contextual influence. The analysis is informed by Chomsky's (2009) theory of innate language acquisition, De Houwer's (2009) model of bilingual development, and Bialystok's (2011) cognitive framework, which collectively provide a foundation for exploring the conceptual dimensions of early bilingualism in non-immersive environments.

The analytical process involved deductive reasoning and critical interpretation of theoretical literature, integrating perspectives from cognitive, linguistic, and sociocultural domains. Key concepts were deconstructed and recontextualized to align with the specific conditions of EFL environments, allowing for the development of a nuanced theoretical model. The study systematically examined linguistic behaviors and developmental patterns through the lens of these frameworks, enabling a coherent synthesis of theoretical insights. This method facilitated the identification of conceptual linkages between language exposure, cognitive flexibility, and bilingual identity formation, thereby advancing the theoretical understanding of bilingual development in constrained linguistic settings.

Despite its strengths, the theoretical approach is subject to certain limitations. The scope of literature reviewed, while comprehensive, may not encompass all relevant perspectives, and the interpretive nature of conceptual analysis introduces a degree of subjectivity. Additionally, the reliance on a single case study limits the generalizability of the theoretical model. Ethical considerations were addressed through rigorous citation practices and adherence to academic integrity, ensuring proper attribution of all referenced theories and avoiding interpretive bias. These measures uphold the scholarly standards of theoretical inquiry and reinforce the validity of the conceptual framework developed.

RESULTS

The primary theoretical findings of the thesis center on the conceptualization of simultaneous bilingualism within an English as a Foreign Language (EFL) context. The analysis identified three distinct developmental phases in the bilingual trajectory of the child under study, each

marked by specific linguistic behaviors such as code-switching, sentence formation, and lexical expansion. These phases were characterized by the emergence of interrogative structures, negative constructions, and the use of conjunctions, reflecting a progressive internalization of both linguistic systems. The findings support the theoretical proposition that simultaneous bilinguals initially develop a unified linguistic framework, which gradually differentiates into two distinct language systems as exposure and usage increase (De Houwer, 2009; Bialystok, 2011). The thesis further delineated how consistent exposure to both languages, even in a non-immersive environment, contributes to the structural development of bilingual competence.

Secondary findings from the thesis focused on the challenges associated with simultaneous bilingualism in an EFL household. The conceptual analysis revealed recurring difficulties in vocabulary acquisition, grammatical accuracy, and pronunciation, particularly in the English language. These challenges were attributed to the limited availability of English input outside formal instruction and the dominance of Persian in the child's immediate environment. The thesis also documented patterns of language interference, including phonological overlap and syntactic transfer, which were consistent with prior literature on cross-linguistic influence in early bilinguals (Thordardottir, 2011; Rony et al., 2024). These findings underscore the theoretical insight that the quality and quantity of language exposure are critical variables in shaping bilingual development, especially in contexts where one language lacks societal reinforcement.

Further results addressed the theoretical constructs of planned bilingualism and the role of parental strategies in facilitating early dual-language acquisition. The thesis clarified the operational definition of planned bilingualism as a deliberate and structured approach to language exposure, often implemented through methods such as the "one parent, one language" strategy (Zhu & Li, 2005). The analysis highlighted how intentional language planning within the household contributed to the child's balanced engagement with both languages. Additionally, the thesis proposed a conceptual framework that integrates cognitive, environmental, and sociocultural factors influencing bilingual development. This framework emphasized the interplay between innate linguistic capacities, as posited by Chomsky (2009), and external stimuli, including parental input and routine interaction, aligning with Castro and Meek's (2022) sociocultural model of early bilingualism.

The final set of theoretical findings addressed the broader contextual influences of the EFL environment on simultaneous bilingualism. The thesis identified structural limitations inherent in EFL settings, such as restricted access to authentic English communication and culturally embedded language use. These constraints were found to affect the child's expressive and receptive proficiency in English, reinforcing the theoretical distinction between EFL and ESL contexts (McLeod & Verdon, 2017; Oliva-Olson, 2019). The study also noted the absence of immersive opportunities and the reliance on formal instruction as defining features of the EFL landscape. These observations contributed to a refined understanding of how sociolinguistic context mediates bilingual development, particularly in non-English-speaking societies. Collectively, the findings offer a comprehensive theoretical account of simultaneous bilingualism shaped by both internal cognitive mechanisms and external environmental conditions.

DISCUSSION

The theoretical insights developed in the thesis underscore the complex interplay between innate linguistic capacity and environmental input in the emergence of simultaneous bilingualism within an EFL context. Drawing on Chomsky's (2009) theory of universal grammar, the study interprets early bilingual development as a manifestation of pre-existing cognitive structures activated by consistent exposure to two languages. This interpretation aligns with the thesis's conceptual framework, which posits that simultaneous bilinguals navigate dual linguistic systems through a dynamic process of differentiation and integration. The findings reveal that even in non-immersive environments, structured and intentional language input—particularly within the household—can facilitate the acquisition of both languages. These insights contribute to ongoing theoretical debates about the sufficiency of input in bilingual development and challenge assumptions that immersive environments are a prerequisite for successful bilingualism (De Houwer, 2009; Castro & Meek, 2022).

The thesis's theoretical contributions resonate with and extend existing literature on bilingual acquisition. It affirms Bialystok's (2011) cognitive perspective by demonstrating that early bilingual exposure supports the development of executive functions, such as attention control and linguistic flexibility. However, it also nuances this view by emphasizing the contextual limitations of EFL settings, where English exposure is often confined to formal instruction. This contrasts with studies conducted in ESL environments, which typically report more balanced bilingual proficiency due to immersive language use (McLeod & Verdon, 2017). Furthermore, the thesis builds on Zhu and Li's (2005) model of planned bilingualism by illustrating how parental strategies can compensate for environmental constraints, thereby extending the applicability of their framework to non-English-speaking societies. By integrating these perspectives, the study enriches the theoretical landscape with a context-sensitive model that accounts for both cognitive and sociocultural dimensions of bilingual development.

Despite its conceptual depth, the thesis's theoretical approach is subject to certain limitations. The reliance on a single case study constrains the generalizability of its insights, and the scope of literature reviewed, while robust, may not fully capture the diversity of bilingual experiences across different EFL contexts. Additionally, the interpretive nature of conceptual analysis introduces potential biases, particularly in the framing of linguistic behaviors and developmental phases. These constraints suggest the need for future theoretical research that incorporates comparative analyses across varied sociolinguistic settings and explores longitudinal outcomes beyond early childhood. Expanding the theoretical framework to include multilingual dynamics, identity negotiation, and educational policy implications could further enhance its relevance and applicability. Continued inquiry into the intersection of planned bilingualism and EFL constraints will be essential for refining models of early language acquisition and informing pedagogical practices in global contexts.

CONCLUSION

This thesis offers a substantive theoretical contribution to the study of early bilingual development by conceptualizing simultaneous bilingualism within the constraints of an English as a Foreign Language (EFL) context. Through the integration of cognitive, linguistic, and sociocultural frameworks, the study advances understanding of how dual language acquisition can unfold in non-immersive environments. It reinforces the view that language development is not solely contingent on immersion, but can be effectively supported through structured input and intentional planning, even in settings where English is not the dominant language (Chomsky, 2009; De Houwer, 2009). The conceptual insights presented in the thesis address key theoretical questions regarding the nature of bilingual acquisition, the role of environmental stimuli, and the viability of planned bilingualism in EFL households. These contributions enrich the broader discourse on bilingual education and language policy, offering a context-sensitive model that can inform future theoretical and pedagogical approaches.

Building on the conceptual framework developed in this study, future theoretical research could explore comparative models of simultaneous bilingualism across diverse EFL environments, examining how sociolinguistic variables influence developmental trajectories. Expanding the inquiry to include multilingual households, identity formation, and cross-cultural dynamics would further refine the theoretical landscape. Additionally, integrating perspectives from educational psychology and language socialization could enhance the explanatory power of existing models, particularly in relation to motivation and agency in bilingual learners. The framework proposed in this thesis may also be applied to longitudinal studies that investigate the evolution of bilingual competence beyond early childhood, contributing to a more comprehensive understanding of bilingualism across the lifespan. These directions hold promise for advancing theoretical scholarship and informing inclusive, evidence-based practices in global language education.

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