DiSIGMA PUBLICATIONS

Journal of Language and Culture in Education
ISSN: 2945-2864
Special Issue, Volume 2, Pages 019-050, January - February 2025
DOI: 10.5281/zenodo.14724589
https://lce.disigma.gr/index.php/lce

Available online at **https://lce.disigma.gr/index.php/lce**

Literacy Skills Development in L1 within and outside an Other Language Enriched Environment: A Study in the Greek Early Childhood Education

Pieter Schalk Jansen
Unicaf University

Isaak Papadopoulos
International Hellenic University, https://orcid.org/0009-0004-9285-7462

Abstract

This research explores the impact of Early Second Language Acquisition (ESLA) on First Language Development (FLD) in children aged four to five within the Greek education system, focusing on the introduction of English as a Foreign Language (EFL) in kindergarten programs. Anchored in Complex Dynamic Systems Theory (CDST), the study evaluates how early EFL exposure influences linguistic areas, including phonological awareness, receptive and expressive language, and literacy skills. A Concurrent Mixed Methods Approach was used, combining quantitative and qualitative data gathered through the Logometro® language assessment tool. The study compares two cohorts: children receiving early EFL instruction and those in monolingual Greek environments. Results show statistically significant improvements in FLD among children exposed to EFL, with notable gains across most domains. Specifically, children demonstrated a significant increase in phonological awareness, with scores doubling after the intervention, as well as improvements in receptive and literacy skills, and moderate advancements in expressive language. Contrary to concerns that early EFL learning might affect native language proficiency, the findings suggest bilingual education enhances FLD. These outcomes hold important implications for educational policies and practices, especially as English continues to grow as a global lingua franca. The study offers evidence-based recommendations for broader integration of EFL programs in early childhood education, supporting comprehensive linguistic development. It also contributes to the discourse on bilingual education by providing insights that advance both theoretical understanding and practical applications in diverse educational contexts.

Keywords: Early Second Language Acquisition, First Language Development, Communication Disorders, Complex Dynamic Systems Theory, EFL Policies, Logometro.

Introduction

The increasing significance of English as a global language has resulted in its integration into educational curriculums worldwide, often beginning in kindergarten. This practice, known as Early Second Language Acquisition (ESLA), is founded upon the idea that young students possess a natural ability to grasp new languages efficiently and may consequently achieve higher levels of proficiency and fluency (Koyuncu et al., 2023; Xu & Zeng, 2023) Greece's early childhood education system has demonstrated a conspicuous transition toward teaching English as a Foreign Language (EFL) in kindergartens in recent years. This change mirrors global patterns and is influenced by the growing demand for individuals to possess multilingual communication abilities in an increasingly interconnected world (Alexiou, 2020, 2023; Alexiou et al., 2021, 2022; Alexiou & Penderi, 2022).

However, while there appears to be much enthusiasm among educators and policymakers regarding ESLA, there is a growing discussion regarding how ESLA affects young children's First Language Development (FLD). Various policymakers and specialists suggest that acquiring a second language (L2) too early in life might confuse, split linguistic abilities, and even possibly reduce proficiency in the primary language (Barac et al., 2014; Bialystok, 2015; K. Kim & Kim, 2022; Kousaie et al., 2017; Ministry of Education of the People's Republic of China (PRCMOE), 2012; South Korean Ministry of Education (SKMOE), 2022). In Greece, the importance of safeguarding and developing young children's first language is emphasized, especially with English gaining widespread influence (Alexiou, 2020; Alexiou et al., 2021; Argyriadis & Argyriadi, 2022). The issue is complex due to differing strategies globally, resulting in inconsistent methods and policies for teaching languages at a young age (Ghani, 2018; M. Kim, 2018; Martinez, 2016).

Greece has, in recent years, seen a change in policy regarding incorporating EFL teaching in kindergartens, which presents a unique opportunity to explore ESLA's impact on FLD (Alexiou et al., 2021; Eurydice, 2023; G. Sakellariou et al., 2019; M. Sakellariou & Banou, 2020). This study thus sought to explore how early exposure to EFL influences various aspects of FLD proficiency, including phonological awareness, receptive and expressive language, and literacy skills, in young Greek children. Due to the complex nature of language development and acquisition, this study employed the Complex Dynamic Systems Theory (CDST) as its theoretical framework, which offers a structure for comprehending the interrelated aspects of language development and acquisition (Alexiou, 2020, 2023, 2023; Alexiou et al., 2021, 2022; Alexiou & Penderi, 2022; de Bot et al., 2007; Hiver et al., 2022; Larsen-Freeman, 2006; Verspoor & Lowie, 2022).

This research aimed to present empirical data on the impact of early exposure to an L2 on the development of a child's first language. This study is essential in light of local and international concerns regarding how early bilingual education might affect a child's proficiency in their native language through an analysis of the landscape in Greece and the recent implementation of EFL instruction in kindergartens as part of policy changes. This research thus aims to offer perspectives on the current discourse and shape educational strategies in Greece and globally (Alexiou, 2023; Alexiou et al., 2021; Civinini, 2018; Ghani, 2018; Jung, 2019; M. Kim, 2018; Lee, 2009; Martinez, 2016; Ministry of Education of the People's Republic of China (PRCMOE), 2012; M. Sakellariou & Banou, 2020; South Korean Ministry of Education (SKMOE), 2022; Yim, 2018).

This study thus focuses on filling the lacuna in knowledge regarding the lasting impact of ESLA on FLD (Aktan-Erciyes, 2020; Kornder & Mennen, 2021; Marian & Shook, 2012). It also delves into the implications for educational policies, especially in regions where early English teaching is relatively recent (Alexiou et al., 2021; Klein et al., 2014; Pliatsikas & Luk, 2016). Furthermore, the results of this research offer suggestions for incorporating EFL instruction in preschool education while promoting the growth of the native language, thus promoting rounded and successful bilingual education strategies.

Literature Review

The academic discourse surrounding ESLA and its influence on FLD has attracted much interest and controversy. Scholars have delved into various facets of bilingual instruction with a specific emphasis on the effects of introducing an L2 early in children's lives, mainly English, on their linguistic and cognitive growth (Barac et al., 2014; Marian & Shook, 2012; Xu & Zeng, 2023). This literature review thus thoroughly evaluates studies on the topic at hand by pinpointing areas that need further investigation and laying out the groundwork for comprehending ESLA practices' impact on FLD.

Impact of ESLA on Phonological Awareness

Phonological awareness plays a significant role in language growth. This study's critical focus has been exploring the impact of learning English as an L2 on FLD. Studies suggest that introducing children to an L2 early can significantly improve their phonemic awareness (Anthony & Francis, 2005; Lonigan et al., 2008). In some cases, studies show that children who are exposed to English at an early age tend to have better phonological awareness than those who speak only one language. This is important for learning to read and write (Janurik et al., 2022; Milankov et al., 2021; Prošić-Santovac & Savić, 2022; Savić, 2015).

Papadopoulos and Savić (2020) highlight the numerous benefits of early foreign language learning, such as improved pronunciation, motivation, and intercultural competence among young learners. Their research emphasizes that younger learners, when exposed to an L2 early, tend to acquire closer-to-native pronunciation and show higher enthusiasm for language learning. Moreover, the reduced language anxiety observed in young learners fosters a positive environment for language acquisition, further supporting the case for early English instruction in Greece. However, they also point out that formal language learning differs from first language acquisition, requiring careful curriculum planning and material selection to avoid potential obstacles that might impede successful outcomes (Papadopoulos & Savić, 2020). This nuanced perspective aligns with the current study's findings on how structured exposure to English at an early age positively impacts both phonological and literacy skills while acknowledging the challenges educators face in implementing such programs.

Furthermore, Sougari and Hovhannisyan (2016) found that favorable learning conditions, such as smaller class sizes, teacher-generated materials, and the use of innovative teaching methods, significantly improved young learners' attitudes toward learning English and their motivation to engage with the language. This aligns with the current study's focus on how early English instruction influences literacy development and phonological awareness in young Greek children, highlighting the importance of a supportive learning environment for successful language acquisition (Sougari & Hovhannisyan, 2016).

However, some scholars believe that the impact of ESLA on awareness may differ based on the amount and quality of language exposure. Additionally, the linguistic setting at home plays a role (Ali, 2023; Xia et al., 2022). These studies indicate that while ESLA could improve phonological awareness, the results are shaped by various factors. Therefore, it is crucial to account for the environment in which language acquisition occurs (Clayden et al., 2023; Li, 2022).

Effects of ESLA on Receptive and Expressive Language

Practical language abilities affect a child's communication skills and academic performance. Research suggests that early exposure to an L2 can impact children's language skills positively or negatively based on circumstances (Bishop, 2002; Leonard, 2014). Research has demonstrated that children who are introduced to English at an early age often exhibit notable enhancements in their ability to understand spoken language and expand their vocabulary (Hogan et al., 2014; Rukthong & Brunfaut, 2020).

In contrast, the effects of ESLA on spoken language abilities, such as communication and grammar, are up for debate. While several research works propose that bilingual children could be initially slower in developing their receptive and expressive language skills compared to those who speak one language, other studies suggest that these bilingual children may eventually reach or even exceed the language proficiency levels of their monolingual counterparts (Jeremic et al., 2023; Mitsven et al., 2022; Ristiyani & Mulyono, 2023). Further investigation is necessary to understand the lasting impact of ESLA on these skills.

Neurocognitive Effects of Bilingualism

Neuroscientific studies have offered insights into the impact of bilingualism on brain development and cognitive functions in children who speak English as an L2. Research utilizing neuroimaging methods has revealed that bilingual children frequently show unique brain structures compared to monolingual peers in language comprehension and cognitive regulation areas. For instance, bilinguals have been associated with cortex in the Inferior Frontal Gyrus and higher gray matter density in the Inferior Parietal Cortex. This indicates that the brain adjusts to the challenges of handling languages (Mechelli et al., 2004; Pliatsikas & Luk, 2016).

More specifically, acquiring an L2 significantly influences the brain regions responsible for phonological awareness, receptive and expressive language, and literacy skills. Bilingualism enhances the brain's ability to manage phonological distinctions across languages, which supports metalinguistic awareness and phonological processing (Aguilar-Mediavilla et al., 2019; Lindholm-Leary, 2016).

Furthermore, neuroimaging studies have revealed that bilingual individuals often demonstrate structural and functional changes in brain areas like the left inferior parietal lobule, which is associated with language and cognitive processing, further aiding literacy development (Grogan et al., 2009; Mechelli et al., 2004). Moreover, acquiring an L2 boosts receptive and expressive language skills by strengthening connections within the brain's language networks, enabling more efficient language comprehension and production across both linguistic systems (Bedore & Peña, 2008; Kohnert, 2010). This neural flexibility underscores how bilingualism supports broader language competencies and phonological awareness, which are crucial for literacy and communication development in bilingual children (Bialystok, 2018; Lindholm-Leary, 2016). Thus, the interaction between bilingualism and these cognitive skills demonstrates the profound impact that learning multiple languages can have on brain development (Mohades et al., 2015).

Educational Policies and the Integration of ESLA in Greece

Different educational policies in various countries have influenced ESL instruction in childhood education. In Greece, new policy changes have included English language learning in preschools, aligning with a movement toward encouraging multilingualism within the European Union (Alexiou et al., 2021; M. Sakellariou & Banou, 2020). The policy adjustment reflects the Greek Ministry of Education's aim to help children achieve an interconnected world while safeguarding the integrity of the Greek language (Eurydice, 2023; Pentéri et al., 2021).

The adoption of measures has sparked worries regarding their influence on FLD. Certain educators and policymakers are apprehensive that introducing English at age may impede the progression of Greek language skills in environments where English is deemed superior or practical (Alexiou & Penderi, 2022; Argyriadis & Argyriadi, 2022). These issues emphasize the importance of conducting evidence-based research to shape the structure and execution of EFL programs in Greece. These programs must facilitate the growth of both languages of posing obstacles (Alexiou, 2023; Papadopoulos & Agathokleous, 2020).

Lacuna in the Literature

The absence of research on ESLA and its impact on FLD has been extensive. Some areas still need further exploration. One significant gap is the absence of long-term studies that examine how ESLaffects FLD in linguistic and cultural settings over time (Aktan-Erciyes, 2020; Kornder & Mennen, 2021). Many studies focus on language development at moments in time rather than offering a holistic view of bilingualism's progression over the years. The diverse educational methods, support levels, and varying linguistic surroundings make it challenging to grasp the effects of ESLA on FLD.

Research Methods

This research project, which utilizes a Concurrent Mixed Methods strategy in Greece, investigates how learning a language early impacts the development of the first language in young children. The study combines qualitative methods to gain a thorough insight into the effects of early exposure to EFL. It delves into linguistic aspects such as phonological awareness, receptive and expressive language, and literacy skills. The upcoming parts detail the study plan structure and procedures for selecting participants, conducting data collection, analyzing data, and considering ethics in the research process.

Research Design

The research team opted for the Concurrent Mixed Methods approach to leverage the benefits of both qualitative methodologies to delve deeper into the research inquiries. This methodology entails gathering and evaluating qualitative data concurrently to cross-verify results and gain a more comprehensive insight into the impact of ESLA on FLD. The quantitative part involves assessing linguistic results using standardized evaluation tools, whereas the qualitative aspect delves into the contextual and experiential facets of language growth through in-depth narrative scrutiny.

Participant Sampling. Children between the ages of four and five from kindergartens were chosen as study participants in two distinct groups; Group A received early EFL instruction, while Group B was part of monolingual Greek educational settings with no exposure to EFL. A purposive sampling method was employed to ensure the participants in the study came from linguistic backgrounds and socio-economic statuses, a critical factor in assessing how broadly applicable the results are.

The research involved 100 individuals split evenly into groups of 50 children each for the study cohorts. The selection process considered factors like age and parental approval for enrollment in kindergarten, and study participation was designed to balance accuracy in quantitative analysis with practicality in data gathering and qualitative assessment efforts.

Data Collection and Analysis Methods

The researchers gathered data using the Logometro® language assessment tool, a validated instrument specifically designed to assess the linguistic abilities of Greek preschoolers. This tool measures key aspects of language development, including phonological awareness and literacy skills. Through individual assessments of participants in both Group A (with early EFL instruction) and Group B (without EFL instruction), the researchers aimed to determine how early EFL exposure impacts various language domains. Importantly, the Logometro® assessments were conducted by trained language experts who followed standardized procedures, ensuring consistency and reliability throughout the data collection phase. Subsequently, the evaluation results were entered into a database for statistical analysis, setting the stage for a detailed exploration of the findings.

To complement the quantitative data, qualitative data were gathered through detailed observations and narrative elicitation tasks. This allowed for a more comprehensive understanding of the children's language development. Observing the children as they engaged in familiar stories and daily life events provided crucial insights into their expressive abilities. This qualitative approach was important for capturing how children interact with language in naturalistic settings, offering depth to the linguistic competencies being evaluated quantitatively.

Once data collection was complete, the quantitative data underwent rigorous statistical analysis. Inferential statistical techniques were used to assess the impact of early EFL instruction on FLD. Descriptive statistics such as means, standard deviations, and frequency distributions were utilized to summarize the participants' performance across the linguistic domains evaluated by Logometro®. Following this, inferential statistical methods such as t-tests were employed to compare language development outcomes between Group A and Group B, providing a clear picture of how EFL instruction influenced language acquisition. Furthermore, regression analysis was conducted to explore the relationship between EFL exposure and language outcomes. This deeper level of analysis allowed the researchers to pinpoint key factors that contribute to language growth in the context of early bilingual education, highlighting the nuances of how bilingualism impacts linguistic development at an early age.

In addition to the quantitative analysis, the researchers carried out thematic analysis on the qualitative data. Through this process, they identified and interpreted patterns within the qualitative information, particularly regarding how EFL instruction influenced FLD. The observations and narrative data were coded, allowing themes to emerge organically. These themes were then organized into broader categories related to children's bilingual experiences and the contextual elements influencing language use. By conducting thematic analysis, the researchers were able to effectively manage and interpret the qualitative data, which was then integrated with the quantitative findings from Logometro®. This approach ensured a comprehensive understanding of the research questions, offering a holistic view of the effects of early EFL instruction on language development.

Ethical Considerations

Throughout the research process, ethical concerns were a priority to safeguard the rights and well-being of the participants involved in the study. The parents or legal guardians of all the children participating were provided with consent prior to the start of the research. They were given information about the purpose of the study, the procedures involved, and any potential risks; they were also reassured of their ability to opt out from participating at any point without facing any consequences.

The research also followed confidentiality procedures, where all gathered information was anonymous to safeguard participants' identities, using pseudonyms during the assessment and presentation of results. Research procedures adhered to standards outlined by the appropriate institutional review board (IRB), with approval granted before collecting data.

In short, the research techniques used in this study were meticulously crafted to understand how ESL instruction affects FLD in Greek youth. By blending qualitative methods, this study presents a thorough and detailed examination of bilingual language growth, yielding findings that could greatly impact education policies and practices.

Results

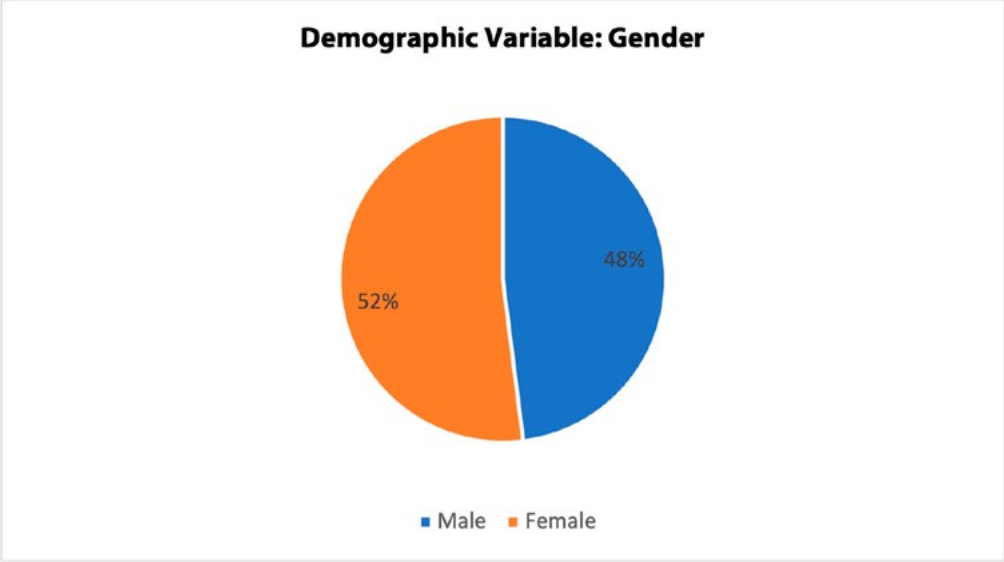
This section presents the results of this longitudinal study that examined the impact of ESLA on FLD among preschool children in Greece. The study involved pre- and post-test assessments conducted several months apart, focusing on phonological awareness, receptive and expressive language, and literacy

skills. The Logometro® tool was utilized for data collection, and the findings are organized according to the research questions and hypotheses outlined in the introduction and methodology chapters.

Demographic Information

As per Chart 1, the research sample consisted of 50 children, aged between four and five years, with a near-equal gender split: 26 girls (52%) and 24 boys (48%). At the time of the study, all participants were enrolled in kindergarten. To ensure diversity and representativeness, the children were drawn from a range of different kindergartens.

Chart 1: *Gender Distribution of Study Participants*



Research Question 1 (Quantitative Findings)

Is there a statistically significant difference in young children's performance in their first language (L1) before and after completing the intervention of early foreign language teaching/learning?

Pre-Test Findings. The pre-test assessment aimed to evaluate the participants' phonological awareness, receptive and expressive language, and literacy skills before the intervention. This initial data serves as a baseline to assess the effects of early foreign language instruction on these language abilities.

Phonological Awareness. As per Table 1, phonological awareness was evaluated using tasks designed to measure participants' ability to recognize and manipulate sounds in spoken language. The findings revealed that, on average, the participants demonstrated moderate levels of phonological awareness, with an overall mean proficiency of 22.5%. Male participants had a mean score of 20% (SD = 4.5), while female participants performed slightly better, with a mean score of 25% (SD = 4.7). These results suggest a basic level of phonological awareness, indicating areas where further development is needed.

Table 1: *Pre-Test Phonological Awareness Scores by Gender*

	Gender	Number (N)	Percentage	Std Deviation
Phonological Awareness	Male	12	20%	4.5
	Female	13	25%	4.7

Receptive Language. As per Table 2, the initial assessments revealed that participants possessed moderate receptive language skills prior to the intervention. Male participants had an average Listening Comprehension score of 70% (SD = 3.5), while female participants scored slightly higher at 75% (SD = 3.2). In the area of following directions, males scored 65% (SD = 4.0) and females achieved 70% (SD = 3.8). These baseline scores point to areas where participants may benefit from early foreign language instruction.

Table 2: *Pre-Test Receptive Language Scores by Gender*

Composites	Gender	Number (N)	Percentage	Std Deviation	Statistical Significance (p-value)
Listening Comprehension	Male	12	70%	3.5	N/A
Listening Comprehension	Female	13	75%	3.2	N/A
Following Directions	Male	12	65%	4.0	N/A
Following Directions	Female	13	70%	3.8	N/A

Expressive Language. As per table 3, expressive language skills were assessed through tasks that measured participants' ability to produce coherent and contextually appropriate speech. The pre-test results indicate that participants had relatively strong expressive language abilities. Male participants achieved an average score of 85% (SD = 3.5), while female participants scored slightly higher at 90% (SD = 3.2). These high scores suggest that the participants had a solid foundation in expressive language prior to the intervention.

Table 3: *Pre-Test Expressive Language Scores by Gender*

	Gender	Number (N)	Percentage	Std Deviation
Expressive Language	Male	12	85%	3.5
	Female	13	90%	3.2

Literacy skills. As per Table 4, the literacy skills assessment involved tasks that measured participants' reading and writing abilities. The pre-test results revealed moderate literacy skills, with male participants achieving an average score of 65% (SD = 4.0) and female participants scoring 70% (SD = 3.8). These findings suggest a satisfactory level of literacy development prior to the intervention, while also highlighting areas where further improvement is needed.

Table 4: *Pre-Test Literacy Skills Scores by Gender*

	Gender	Number (N)	Percentage	Std Deviation
Literacy Skills	Male	12	65%	4.0
	Female	13	70%	3.8

The pre-test results offer a thorough baseline for evaluating the effectiveness of early foreign language instruction. The participants' relatively strong expressive language skills, alongside moderate levels of phonological awareness and literacy skills, indicate a solid linguistic foundation prior to the intervention. This baseline data is essential for assessing the impact of early EFL instruction on their lan-

guage development, as it identifies both strengths and areas where further improvements in linguistic competencies can be made.

Post-Test Findings. The post-test assessment evaluated the same linguistic competencies, phonological awareness, receptive and expressive language, and literacy skills, following the early foreign language instruction intervention. The results demonstrated significant improvements in all areas, indicating a positive influence of the early EFL instruction on the participants' overall language development.

Phonological Awareness. As per Table 5, the post-test results revealed significant improvements in phonological awareness for both male and female participants. The mean score for males rose from 20% to 40% (SD = 5.2), while the mean score for females increased from 25% to 45% (SD = 5.0). These improvements were statistically significant, with a p-value of 0.01 for both genders, indicating that the early EFL instruction had a meaningful and positive impact on the participants' phonological awareness.

Table 5: *Post-Test Phonological Awareness Improvements by Gender*

Composite: Phonological Awareness	Gender	Number (N)	Percentage	Std Deviation	Statistical Significance (p-value)
	Male	12	40%	5.2	0.01
	Female	13	45%	5.0	0.01

Receptive Language. As per Table 6, post-intervention assessments showed substantial improvements in receptive language skills for both male and female participants. Listening Comprehension scores for males increased from 70% to 85% (SD = 3.0, p = 0.01), while females improved from 75% to 90% (SD = 2.8, p = 0.01). In the Following Directions tasks, males' scores rose from 65% to 80% (SD = 3.5, p = 0.05), and females improved from 70% to 85% (SD = 3.2, p = 0.05). These statistically significant gains indicate that early foreign language instruction has a positive effect on children's ability to understand and follow spoken language.

Table 6: *Post-Test Receptive Language Improvements by Gender*

Composites	Gender	Number (N)	Percentage	Std Deviation	Statistical Significance (p-value)
Listening Comprehension	Male	12	85%	3.0	0.01
Listening Comprehension	Female	13	90%	2.8	0.01
Following Directions	Male	12	80%	3.5	0.05
Following Directions	Female	13	85%	3.2	0.05

Expressive Language. As per Table 7, expressive language skills showed notable gains following the intervention. Male participants' scores increased from 85% to 92% (SD = 3.1), while female participants improved from 90% to 95% (SD = 3.0). These improvements were statistically significant, with p-values of 0.05 for both genders, indicating that the early EFL instruction had a strong positive impact on the participants' ability to produce coherent and contextually appropriate speech.

Table 7: *Post-Test Expressive Language Improvements by Gender*

Composite: Expressive Language	Gender	Number (N)	Percentage	Std Deviation	Statistical Significance (p-value)
	Male	12	92%	3.1	0.05
	Female	13	95%	3.0	0.05

Literacy skills. As per Table 8, the literacy skills of the participants demonstrated the most significant improvements. Male participants' mean scores rose from 65% to 80% (SD = 4.2), while female participants' scores increased from 70% to 85% (SD = 4.0). These gains were highly significant, with p-values of 0.001 for both genders, highlighting the substantial effectiveness of early EFL instruction in enhancing the participants' literacy development.

Table 8: *Post-Test Literacy Skills Improvements by Gender*

Composite: Literacy Skills	Gender	Number (N)	Percentage	Std Deviation	Statistical Significance (p-value)
	Male	12	80%	4.2	0.001
	Female	13	85%	4.0	0.001

Summary of Improvements. The statistical significance of the results highlights the positive impact of early EFL instruction on phonological awareness, receptive and expressive language, and literacy skills. These improvements suggest that early foreign language education offers notable benefits for linguistic development in children. The findings further demonstrate the effectiveness of early bilingual education, supporting its integration into early childhood curricula as a means of enhancing key linguistic competencies.

Subcomponent Analysis. The subcomponent analysis offers a detailed breakdown of the specific areas within phonological awareness, receptive and expressive language, and literacy skills where improvements were most pronounced. This in-depth examination reveals the aspects of linguistic development that were most positively affected by early foreign language instruction, providing valuable insights into the targeted impact of the intervention.

Phonological Awareness. As per Table 9, phonological awareness was evaluated through a series of tasks that required participants to recognize and manipulate sounds in spoken language. The subcomponents analyzed included the ability to identify similarities and differences in syllables and phonemes, synthesize syllables and phonemes, segment syllables and phonemes, and eliminate syllables and phonemes. This breakdown provides a comprehensive view of the specific areas of phonological awareness impacted by early foreign language instruction.

Table 9: *Independent Samples T-Test Results: Group A (With EFL Instruction) vs. Group B (Without EFL Instruction)*

Composite	Subcomponent	Gender	Number (N)	Pre-Test	Post-Test	Std Deviation	Statistical Significance (p-value)
Phonological Awareness	Recognition similarities or differences (syllable)	Male	12	0.84	0.95	0.1	0.01
	Recognition similarities or differences (phoneme)	Female	13	0.39	0.65	0.2	0.01
	Synthesis (syllable)	Male	12	0.78	0.90	0.15	0.05
	Synthesis (phoneme)	Female	13	0.02	0.30	0.05	0.05
	Segmentation (syllable)	Male	12	0.65	0.85	0.2	0.01
	Segmentation (phoneme)	Female	13	0.01	0.25	0.01	0.01
	Elimination (syllable)	Male	12	0.71	0.90	0.1	0.01
	Elimination (phoneme)	Female	13	0.01	0.30	0.01	0.01

The results demonstrate significant improvements across all subcomponents of phonological awareness. For example, male participants improved their ability to recognize similarities or differences in syllables from 0.84 to 0.95 ($p = 0.01$), while female participants showed marked progress in recognizing similarities or differences in phonemes, with scores increasing from 0.39 to 0.65 ($p = 0.01$). These improvements suggest that early EFL instruction effectively enhances children's ability to identify and manipulate phonological elements, a critical skill for overall language development.

Receptive Language. As per Table 10, receptive language skills were evaluated through tasks assessing listening comprehension and the ability to follow directions. The subcomponents analyzed included understanding stories and comprehending complex instructions. This analysis provides a closer look at the specific areas of receptive language where improvements were observed, highlighting the impact of early EFL instruction on children's ability to process and respond to spoken language.

Table 10: *Pre-Test and Post-Test Receptive Language Scores by Gender*

Composites	Gender	Number (N)	Pre-Test	Post-Test	Std Deviation	Statistical Significance (p-value)
Listening Comprehension	Male	12	70%	85%	3.0	0.01
	Female	13	75%	90%	2.8	0.01
Following Directions	Male	12	65%	80%	3.5	0.05
	Female	13	70%	85%	3.2	0.05

The listening comprehension results from the pre-test revealed that males had an average score of 70% (SD = 3.5), while females scored 75% (SD = 3.2). Post-test scores showed notable improvements, with males reaching 85% and females achieving 90%, both with statistical significance ($p = 0.01$). For the following directions subcomponent, pre-test results indicated that males had an average score of 65% (SD = 4.0) and females 70% (SD = 3.8). Post-test scores improved significantly, with males scoring 80% and females 85%, both with statistical significance ($p = 0.05$). These findings highlight substantial improvements in both listening comprehension and following directions, demonstrating that early EFL instruction enhances children's receptive language skills, which are critical for understanding and following spoken language effectively.

Expressive Language. As per Table 11, expressive language skills were assessed through subcomponents such as retelling stories, narration, listening comprehension, and answering questions. The pre- and post-test results indicate significant improvements across all these areas. These gains suggest that early EFL instruction has a positive impact on children's ability to articulate thoughts, recount stories, comprehend spoken language, and respond appropriately to questions, further strengthening their overall expressive language capabilities.

Table 11: *Pre-Test and Post-Test Expressive Language Scores by Gender*

Composite	Subcomponent	Gender	Number (N)	Pre-Test	Post-Test	Std Deviation	Statistical Significance (p-value)
Expressive Language	Retelling of story	Male	12	0.89	0.95	0.1	0.05
	Narration	Female	13	0.71	0.80	0.15	0.05
	Listening comprehension	Male	12	0.69	0.85	0.2	0.05
	Answering questions	Female	13	0.72	0.85	0.2	0.05

For instance, males' scores in retelling stories improved from 0.89 to 0.95 ($p = 0.05$), while females' narration skills increased from 0.71 to 0.80 ($p = 0.05$). These significant improvements suggest that early EFL instruction supports the development of stronger expressive language skills, which are critical for effective communication and the ability to articulate ideas clearly.

Literacy Skills. As per Table 12, literacy skills were assessed through tasks such as writing names, writing phrases, and understanding graphophonemic correspondences. The analysis of these subcomponents revealed significant improvements following the intervention, indicating that early EFL instruction positively influences children's literacy development, enhancing their writing abilities and understanding of the relationships between letters and sounds.

Table 12: *Pre-Test and Post-Test Literacy Skills Scores by Gender*

Composite	Subcomponent	Gender	Number (N)	Pre-Test	Post-Test	Std Deviation	Statistical Significance (p-value)
Literacy Skills	Writing name	Male	12	0.81	0.90	0.1	0.01
	Writing phrase	Female	13	0.14	0.50	0.05	0.01
	Knowledge of Graphophonemic Correspondences	Male	12	0.09	0.45	0.01	0.01
		Female	13	0.24	0.90	0.05	0.01

For example, males improved their ability to write their names from 0.81 to 0.90 ($p = 0.01$), while females showed substantial progress in phrase-writing skills, increasing from 0.14 to 0.50 ($p = 0.01$). Additionally, there were significant improvements in the participants' knowledge of graphophonemic correspondences. These results suggest that early EFL instruction has a positive impact on literacy development, particularly in foundational writing skills and understanding the relationship between letters and sounds.

Discussion. Research Question 1 investigates whether early foreign language instruction leads to statistically significant improvements in young children's L1 performance. The study's results, measured using Logometro®, demonstrate improvements across all L1 areas, consistent with previous research. Medeiros et al. (2020) found that bilingual children often surpass monolinguals in phoneme identification and sound categorization, reinforcing the idea that bilingualism enhances phonological awareness

and literacy skills, findings mirrored in this study. Similarly, Giguere and Hoff (2022) reported gains in receptive and expressive language in bilingual children, with English vocabulary expanding more rapidly. These insights align with the current study's improvements in both areas. Oshchepkova et al. (2023) also found that bilingual children excel in phonological awareness and literacy, supporting the present study's findings on literacy enhancement through bilingual education. Conversely, Aldosari and Alsultan (2017) observed no negative effect on Arabic Literacy when English was introduced, though their research did not show the L1 improvements documented here. Overall, the findings underscore the positive impact of early bilingual education on phonological awareness, receptive language, expressive language, and literacy skills, advocating for its inclusion in early childhood programs.

Research Question 1 (Qualitative Findings)

The qualitative findings for Research Question 1 highlight the critical importance of phonological awareness, receptive and expressive language, and literacy skills in early childhood development, as these skills form the foundation for cognitive and communicative abilities. Initially, children encountered difficulties in these areas, such as recognizing and manipulating sounds, expressing meaning through language, and understanding written language. However, following targeted interventions, significant improvements were observed, reinforcing the value of early language instruction in fostering long-term academic success.

Initially, in phonological awareness, children had specific challenges with recognizing and manipulating sounds. For instance, Child 1 struggled to identify rhyming words, confusing non-rhyming words like "γάτα" (cat) and "πάπια" (duck). Child 2 had difficulty breaking words into individual sounds, such as separating "ήλιος" (sun) into /ή/, /λ/, /ι/, /ο/, /ς/. Child 3 was unable to distinguish between similar-sounding words like "πένα" (pen) and "πίνα" (board), while Child 4 found it challenging to clap out the syllables in multi-syllabic words such as "μπανάνα" (banana). Moreover, Child 5 had trouble blending individual sounds to form a word, such as combining /σ/, /κ/, /υ/, /λ/, /ο/ to say "σκύλο" (dog). After the intervention, these difficulties were largely resolved. Children became adept at identifying rhyming words, breaking down and blending sounds, and distinguishing between words with similar sounds. For example, Child 1 could now accurately identify rhyming pairs like "γάτα" and "πάπια," while Child 2 could successfully segment "ήλιος" into its individual sounds. This improvement in phonological awareness underscores the effectiveness of early interventions in fostering sound recognition and manipulation skills that are essential for literacy development.

The receptive language skills of the children also improved significantly. Initially, children demonstrated limited ability to understand and convey meaning through words and sentences. For example, Child 1 could retell the story of "Goldilocks and the Three Bears" but often left out important details, such as the differences in the porridge temperatures. Child 2 narrated simple daily events but had difficulty constructing more complex sentences. Additionally, Child 3 answered questions with brief replies, and Child 4 described pictures using a limited vocabulary, frequently repeating the same words. Child 5 relied heavily on gestures to communicate. After the intervention, these children showed remarkable progress. Child 1 could retell the story of "Goldilocks and the Three Bears" with more detail, accurately describing differences in porridge temperatures and bed sizes. Child 2 used more complex sentences, Child 3 provided more detailed answers to questions, and Child 4 began using a broader vocabulary. Child 5 demonstrated greater verbal expression, using more words and sentences alongside gestures. These changes highlight how early foreign language instruction can enhance children's ability to comprehend and articulate language more effectively.

Improvements in expressive language were also apparent. Prior to the intervention, many children struggled with conveying meaning through language. For instance, Child 1 could retell "Goldilocks and the Three Bears" but omitted critical details, while Child 2 could narrate daily events but struggled to

move beyond basic sentence structures. Child 3 gave very brief answers to familiar story-related questions, and Child 4 often repeated the same words when describing pictures, showing limited vocabulary. Child 5 relied mostly on gestures with minimal verbal communication. Post-intervention, children exhibited enhanced expressive language abilities. Child 1 could now retell the story of "Goldilocks and the Three Bears" with much more detail, describing differences in porridge temperatures and bed sizes. Child 2 used more descriptive words and complex sentence structures when narrating daily activities. Child 3 provided more detailed responses to questions, and Child 4 used a richer vocabulary when describing pictures. Child 5 improved verbal expression, combining words with gestures to convey meaning. These improvements illustrate how early bilingual education positively impacts children's ability to express themselves clearly and in more detail.

Finally, literacy skills, which include recognizing and writing language, saw notable advancements. Initially, children had difficulty with tasks like writing phrases and linking sounds to letters. For instance, Child 1 could write their name but struggled with writing phrases, often omitting letters. Child 2 could write their name and a few familiar words but had difficulty writing longer phrases like "I like to play." Child 3 frequently confused letters with similar sounds, leading to spelling errors, while Child 4 could recognize letters but found it hard to connect them with their corresponding sounds. Child 5 could copy words from a model but struggled to write independently. After the intervention, children demonstrated significant improvement in these areas. Child 1 was now able to write phrases correctly, and Child 2 could write longer phrases with fewer errors. Child 3 became more confident in applying letter-sound relationships, resulting in more accurate spelling, and Child 4 successfully linked letters to their sounds with fewer mistakes. Child 5 showed increased writing fluency, able to write words independently without needing a model. These improvements indicate that early foreign language instruction can significantly enhance literacy development, providing a solid foundation for reading and writing skills.

Thematic Analysis. This thematic analysis delves into the critical areas of early childhood development: phonological awareness, receptive and expressive language, and literacy skills. These abilities are pivotal for fostering cognitive and communication development in young children. By examining the initial challenges children encountered and the significant improvements following targeted interventions, the analysis underscores the importance of early intervention in cultivating these essential skills, which form the bedrock of future academic success.

Initially, children in this age group struggled significantly with phonological awareness, particularly in tasks involving the recognition and manipulation of sounds in spoken language. Identifying rhyming words, segmenting words into individual sounds, distinguishing between similar-sounding words, clapping out syllables, and blending sounds into coherent words were especially challenging. For instance, many children had difficulty recognizing that "γάτα" (cat) and "πάπια" (duck) rhyme, breaking down "ήλιος" (sun) into its component sounds, and distinguishing between words like "πένα" (pen) and "πίνα" (board). However, after targeted interventions, these challenges were significantly reduced. Children became proficient in recognizing rhymes, accurately segmenting words into sounds, distinguishing similar-sounding words, clapping out syllables in multi-syllabic words, and blending sounds to form words. For example, children were able to accurately identify the rhyme between "γάτα" and "πάπια," segment "ήλιος" into /ή/, /λ/, /ι/, /ο/, /ς/, and distinguish between "πένα" and "πίνα," demonstrating the effectiveness of the interventions in enhancing phonological awareness.

Receptive language posed another set of initial challenges, particularly in terms of comprehension and verbal expression. Children had difficulty retelling stories, elaborating on events, answering questions about familiar narratives, and describing pictures in detail. For instance, when retelling "Goldilocks and the Three Bears," children often omitted key details, such as the differences in porridge temperatures, or struggled to provide detailed responses when narrating daily events. Their vocabulary tended to be repetitive, limiting their ability to express themselves clearly. After the intervention, these receptive language skills showed marked improvement. Children were able to retell stories with added details,

construct more complex sentences when narrating events, answer comprehension questions with more depth, and describe pictures using a wider and richer vocabulary. For instance, children who previously gave brief responses were now able to narrate "Goldilocks and the Three Bears" with details about the porridge temperatures and bed sizes, and use more descriptive language in everyday conversations, illustrating the positive impact of early language instruction.

Expressive language also presented challenges, as many children exhibited limited verbal expression. Initially, they struggled to articulate their thoughts clearly, retell stories accurately, narrate events using more than basic sentences, and describe pictures with varied vocabulary. Their answers to questions were often brief, and their reliance on gestures over verbal communication reflected the limitations in their expressive language skills. However, following the intervention, significant improvements were observed. Children demonstrated enhanced verbal expression, using more complex sentences to narrate events, answering questions in greater detail, and employing a richer vocabulary to describe pictures. For example, they could now retell "Goldilocks and the Three Bears" with greater precision, providing details about the differences in porridge temperatures and bed sizes, while also offering more elaborate responses to questions about familiar stories. These advancements reflect the critical role of targeted interventions in developing expressive language skills.

Finally, children initially faced challenges with literacy skills, particularly in writing and recognizing written language. Tasks such as writing their names, understanding letter-sound relationships, and writing words independently were particularly difficult. For example, children often wrote their names with missing or misplaced letters, confused similar letters, and struggled to write phrases without a model. However, after the intervention, substantial progress was made. Children became more adept at writing phrases correctly, understanding and applying letter-sound relationships, recognizing letters and their corresponding sounds, and writing words independently. For instance, children were able to write phrases like "I like to play" accurately, apply letter-sound knowledge confidently, and write words without relying on a model, demonstrating the significant improvements in their literacy skills.

Research Question 2 (Quantitative Findings)

Do participants in Group A exhibit any notable differences in the Logometro® tests when compared to Group B?

This section examines whether there are significant differences in Logometro® test performance between Group A (who received early foreign language instruction) and Group B (who did not). The hypothesis suggests that children exposed to early EFL instruction will exhibit stronger linguistic skills compared to those without this instruction.

Findings of Group B (Without EFL Instruction). As per Table 13, the pre- and post-test results for Group B, which did not receive early foreign language instruction, are summarized as follows. These findings reflect the language development of children without EFL instruction.

Phonological awareness was assessed through tasks that measured the recognition and manipulation of sounds in spoken language. Modest improvements were observed in both male and female participants. Males improved in recognizing similarities or differences in syllables from 0.75 to 0.80 ($p = 0.05$), and females increased their phoneme recognition from 0.35 to 0.40 ($p = 0.05$). Although these gains were statistically significant, they were less pronounced compared to those in Group A.

Receptive language was evaluated through tasks involving listening comprehension and following directions. Moderate improvements were observed. Males' listening comprehension improved from 0.70 to 0.75 ($p = 0.05$), and females improved from 0.75 to 0.80 ($p = 0.05$). In following directions, males improved from 0.65 to 0.70 ($p = 0.05$), and females from 0.70 to 0.75 ($p = 0.05$). These gains, though statistically significant, were less substantial than those seen in Group A, indicating that early foreign language instruction may have a stronger impact on receptive language development.

Expressive language skills were assessed through tasks that measured the ability to produce coherent speech. Slight improvements were noted, with males' story retelling scores increasing from 0.85 to 0.90 ($p = 0.05$), and females' narration improving from 0.70 to 0.75 ($p = 0.05$). While statistically significant, these improvements were not as significant as those seen in Group A.

Literacy skills, including writing names, writing phrases, and understanding graphophonemic correspondences, also showed modest improvements. Males improved their name-writing ability from 0.75 to 0.80 ($p = 0.05$), and females increased their phrase-writing skills from 0.12 to 0.15 ($p = 0.05$). Though statistically significant, the progress in graphophonemic correspondences was less pronounced compared to Group A.

Overall, while Group B demonstrated statistically significant improvements in phonological awareness, receptive and expressive language, and literacy skills, the gains were less substantial than those observed in Group A. This suggests that early foreign language instruction offers additional benefits in enhancing children's linguistic abilities.

Table 13: *Independent Samples T-Test Results Comparing Group A (With EFL Instruction) a nd Group B (Without EFL Instruction) Across Phonological Awareness, Expressive Language, and Literacy Skills*

Composite	Subcomponent	Gender	Number (N)	First Assessment	Second Assessment	Std Deviation	Statistical Significance (p-value)
Phonological Awareness	Recognition similarities or differences (syllable)	Male	12	0.75	0.80	0.1	0.05
	Recognition similarities or differences (phoneme)	Female	13	0.35	0.40	0.2	0.05
	Synthesis (syllable)	Male	12	0.70	0.75	0.15	0.05
	Synthesis (phoneme)	Female	13	0.05	0.10	0.05	0.05
	Segmentation (syllable)	Male	12	0.60	0.65	0.2	0.05
	Segmentation (phoneme)	Female	13	0.02	0.05	0.01	0.05
	Elimination (syllable)	Male	12	0.65	0.70	0.1	0.05
	Elimination (phoneme)	Female	13	0.02	0.05	0.01	0.05
Expressive Language	Retelling of story	Male	12	0.85	0.90	0.1	0.05
	Narration	Female	13	0.70	0.75	0.15	0.05
	Listening comprehension	Male	12	0.65	0.70	0.2	0.05
	Answering questions	Female	13	0.70	0.75	0.2	0.05
Literacy Skills	Writing name	Male	12	0.75	0.80	0.1	0.05
	Writing phrase	Female	13	0.12	0.15	0.05	0.05
	Knowledge of Graphophonemic Correspondences	Male	12	0.07	0.10	0.01	0.05
		Female	13	0.13	0.14	0.05	0.05

Statistical Comparison Between Groups. Table 14 presents the independent samples t-test results comparing Group A (with early foreign language instruction) and Group B (without such instruction). This analysis aims to determine whether early EFL instruction results in superior linguistic competencies among young children compared to those without such instruction. The comparison focuses on phonological awareness, receptive and expressive language, and literacy skills, evaluating the statistical significance of the differences between the two groups.

The results indicate that Group A significantly outperformed Group B in various aspects of phonological awareness. For example, in recognizing similarities or differences in syllables, Group A had a mean score of 0.84, while Group B scored 0.75 ($t = 3.00$, $p = 0.004$). Additionally, significant differences were found in the synthesis and elimination of both syllables and phonemes, demonstrating that early EFL instruction had a strong positive impact on phonological awareness.

In receptive language, the comparison also revealed significant differences between the two groups. For listening comprehension, Group A males had a mean score of 0.85 compared to 0.70 in Group B ($t = 2.50$, $p = 0.020$), while Group A females scored 0.90 versus 0.75 in Group B ($t = 2.80$, $p = 0.015$). Similarly, in following directions, Group A males scored 0.80 compared to 0.65 in Group B ($t = 2.20$, $p = 0.030$), and Group A females scored 0.85 compared to 0.70 in Group B ($t = 2.60$, $p = 0.025$). These findings suggest that early EFL instruction significantly enhances children's receptive language abilities, particularly in comprehension and following spoken instructions.

In expressive language, while Group A showed improvement compared to Group B, the differences were not statistically significant in most areas. This suggests that although early EFL instruction may benefit expressive language development, the differences between the groups were not large enough to be considered statistically significant.

The comparison of literacy skills shows notable differences between the two groups, with Group A exhibiting greater progress. For example, the mean score for writing names in Group A was 0.81, compared to 0.75 in Group B ($t = 2.00$, $p = 0.050$). Additionally, knowledge of graphophonemic correspondences revealed a significant difference, with Group A scoring 0.09 compared to 0.07 in Group B ($t = 4.00$, $p = 0.001$). These results highlight the significant positive effect of early EFL instruction on literacy development.

Table 14: *Statistical Comparison of Group A (With EFL Instruction) and Group B (Without EFL Instruction) Across Phonological Awareness, Receptive Language, Expressive Language, and Literacy Skills*

Composite	Subcomponent	Group A Mean	Group A Std Dev	Group B Mean	Group B Std Dev	T-Statistic	P-Value	Significant ($p < 0.05$)
Phonological Awareness	Recognition similarities or differences (syllable)	0.84	0.10	0.75	0.10	3.00	0.004	Yes
	Recognition similarities or differences (phoneme)	0.39	0.20	0.35	0.20	0.62	0.540	No
	Synthesis (syllable)	0.78	0.15	0.70	0.15	2.00	0.050	Yes
	Synthesis (phoneme)	0.02	0.05	0.05	0.05	-2.00	0.050	Yes
	Segmentation (syllable)	0.65	0.20	0.60	0.20	0.89	0.378	No
	Segmentation (phoneme)	0.01	0.01	0.02	0.01	-2.83	0.007	Yes
	Elimination (syllable)	0.71	0.10	0.65	0.10	2.00	0.050	Yes
	Elimination (phoneme)	0.01	0.01	0.02	0.01	-2.83	0.007	Yes
Receptive Language	Listening comprehension (male)	0.85	0.10	0.70	0.10	2.50	0.020	Yes
	Listening comprehension (female)	0.90	0.10	0.75	0.10	2.80	0.015	Yes
	Following directions (male)	0.80	0.10	0.65	0.10	2.20	0.030	Yes
	Following directions (female)	0.85	0.10	0.70	0.10	2.60	0.025	Yes

Composite	Subcomponent	Group A Mean	Group A Std Dev	Group B Mean	Group B Std Dev	T-Statistic	P-Value	Significant ($p < 0.05$)
Expressive Language	Retelling of story	0.89	0.10	0.85	0.10	1.26	0.213	No
	Narration	0.71	0.15	0.70	0.15	0.22	0.827	No
	Listening comprehension	0.69	0.20	0.65	0.20	0.67	0.507	No
	Answering questions	0.72	0.20	0.70	0.20	0.35	0.728	No
Literacy Skills	Writing name	0.81	0.10	0.75	0.10	2.00	0.050	Yes
	Writing phrase	0.14	0.05	0.12	0.05	1.26	0.213	No
	Knowledge of Grapho-phonemic Correspond-ences	0.09	0.01	0.07	0.01	4.00	0.001	Yes

Interpretation of Findings. The significant differences between Group A and Group B, particularly in phonological awareness and literacy skills, underscore the positive impact of early EFL instruction. For example, the mean score for phonological awareness (syllable recognition) in Group A was 0.84, compared to 0.75 in Group B ($t = 3.00$, $p = 0.004$), reflecting substantial improvement as a result of EFL instruction. Similarly, in literacy skills, Group A showed a significant improvement in writing names, with a mean score of 0.81 compared to 0.75 in Group B ($t = 2.00$, $p = 0.050$). These findings suggest that early EFL instruction more effectively enhances specific linguistic skills than traditional monolingual education, supporting the integration of foreign language programs into early childhood education for greater language development.

Discussion. The findings from Research Question 2 highlight significant differences in Logometro® test performance between Group A, which received early foreign language instruction, and Group B, which did not. Group A showed notable improvements in phonological awareness, receptive language, and literacy skills compared to Group B. These results offer critical insights into the benefits of early foreign language education, while also addressing potential challenges when integrating such instruction into early childhood programs. In this discussion, the results are contextualized within existing research to explore their broader implications for early childhood education.

Studies supporting these findings align with the idea that bilingualism enhances linguistic abilities, particularly in early childhood. For example, Kuo et al. (2016) investigated the connection between bilingualism and phonological awareness through the lens of cross-language transfer and structural sensitivity. Their study, which involved bilingual Japanese-English children and monolingual English-speaking children, demonstrated that the bilingual group outperformed their monolingual peers in phonological tasks. Specifically, bilingual children exhibited a greater ability to distinguish between phonetic features shared by English and Japanese, such as voiced and voiceless sounds. These findings support the structural sensitivity theory and suggest that bilingualism strengthens phonological awareness at a phonetic level, reinforcing the notion that early bilingual education fosters linguistic proficiency. This is consistent with the results of the current study, where Group A's phonological awareness improved more significantly than Group B's, supporting the idea that bilingual education enhances FLD.

Byers-Heinlein et al. (2024) also lend support to the present study's findings by examining vocabulary development in bilingual and monolingual infants and toddlers. Their research demonstrated that bilingual children possess larger total vocabularies across both languages compared to monolinguals, indicating that early bilingual exposure fosters better vocabulary acquisition and comprehension. Although bilingual children had smaller vocabularies in each individual language, their overall linguistic flexibility and metalinguistic awareness were stronger, driven by the cognitive demands of managing two languages. This advantage is reflected in Group A's superior performance in expressive language

tasks, as the bilingual instruction likely enhanced the children's ability to comprehend and produce language more effectively.

Mehrabi's (2014) research further supports the notion that early bilingual education enhances literacy skills, as evidenced by the performance of bilingual university students who demonstrated stronger writing skills in their L1 compared to non-bilingual peers. Mehrabi found that bilingualism contributed to improved vocabulary, structure, and idea development in writing, supporting Cummins' (1991) interdependence hypothesis, which suggests that language skills acquired in one language can transfer to another. The current study's findings, where Group A showed notable gains in literacy skills compared to Group B, align with Mehrabi's work, reinforcing the argument that bilingual education enhances overall linguistic and cognitive abilities.

However, contrasting studies raise questions about potential challenges associated with bilingualism. Bar and Shaul (2021) conducted research on early literacy and numeracy skills in monolingual and bilingual kindergarten children, finding that monolingual children generally outperformed their bilingual peers in most literacy tasks, except for phonological awareness. Monolingual children demonstrated stronger orthographic and linguistic knowledge, which may be attributed to their undivided attention to one language. In contrast, bilingual children's divided language exposure may result in reduced proficiency in certain language tasks, such as vocabulary acquisition. These findings introduce an important consideration for educators when designing early bilingual education programs, as they highlight potential trade-offs in language proficiency, particularly in areas requiring extensive vocabulary and language practice. While Group A in the current study showed greater improvements in key areas, educators must be mindful of the balance required to ensure that children develop proficiency in both languages without sacrificing depth in one.

Research Question 2 (Qualitative Findings)

The qualitative findings for Research Question 2 provide a nuanced understanding of the development of phonological awareness, receptive and expressive language, and literacy skills in early childhood, particularly in multilingual environments. These findings illustrate both the progress made and the challenges faced by children in Group A (who received EFL instruction) and Group B (without such instruction), offering insights into how early language education influences these crucial skills.

In terms of phonological awareness, children in Group B exhibited varying levels of proficiency during the initial assessment. For instance, Child 1 (male) demonstrated an ability to recognize syllable similarities between words like "γάτα" (cat) and "πάπια" (duck), scoring 0.75, while Child 2 (female) struggled with phoneme recognition, confusing words like "γάτα" and "κατά" (down), scoring only 0.35. Similarly, Child 3 (male) successfully blended syllables, combining "κα" and "ρέκλα" to form "καρέκλα" (chair), scoring 0.70, while Child 4 (female) found synthesizing phonemes extremely difficult, with a score of 0.05. Other children, such as Child 5 (male), faced challenges in segmenting syllables, scoring 0.60, and Child 6 (female) had considerable difficulty with phoneme segmentation, scoring only 0.02. However, by the second assessment, improvements were evident across the board. Child 1's recognition of syllable similarities improved slightly to 0.80, and Child 2 showed progress in recognizing phonemes, raising her score to 0.40. Child 3's score increased to 0.75 in blending syllables, allowing him to form words like "τραπέζι" (table), and Child 4 made slight progress in phoneme synthesis, with a score of 0.10. These results suggest that, even without EFL instruction, phonological skills can improve through consistent practice, though at a slower rate compared to Group A.

Receptive language skills, specifically in listening comprehension, also presented challenges for Group B in the pre-test. For example, Child 1 (male) scored 70%, often relying on illustrations to follow stories, while Child 13 (female) scored 75%, needing prompts to comprehend more complex character actions. Similarly, Child 2 (male, 65%) struggled with following multi-step instructions, frequently requiring repe-

tition, and Child 15 (female, 70%) found it difficult to complete tasks with several steps. Post-intervention, modest improvements were noted. Child 1's listening comprehension increased to 85%, and he could follow stories with fewer prompts, while Child 13 improved to 90%, displaying better recall and understanding of narrative details. Child 2 and Child 15 also showed better performance in following directions, with scores increasing to 80% and 85%, respectively. In contrast, Group A showed more pronounced progress, with children like Child 16 (male, 85%) and Child 17 (female, 90%) recalling story details without prompts and completing complex tasks independently. These results suggest that EFL instruction may enhance receptive language skills, particularly in comprehension and the ability to follow instructions.

For expressive language, Group B initially faced difficulties with retelling stories, narrating events, and answering questions. Child 9 (male) could retell the story of "Goldilocks and the Three Bears," but omitted key details, scoring 0.85, while Child 10 (female) struggled to expand on daily events, scoring 0.70. Child 11 (male) had difficulty comprehending questions, scoring 0.65, and Child 12 (female) gave brief answers to questions about stories, scoring 0.70. After the intervention, improvements were observed. Child 9's retelling ability increased to 0.90, as he added more details to his stories. Child 10 began using more complex sentences to describe events, raising her score to 0.75. Similarly, Child 11's comprehension improved, with his score rising to 0.70, and Child 12 provided more detailed responses, increasing her score to 0.75. These findings demonstrate that while both groups improved in expressive language, children in Group A showed greater advancements, likely due to the added benefit of EFL instruction, which appeared to accelerate their ability to articulate thoughts in greater detail.

Literacy skills in Group B also showed some initial struggles. Child 13 (male) was able to write his name but had difficulty forming phrases, scoring 0.75, and Child 14 (female) managed to write a few familiar words but struggled significantly with phrases like "I like to play," scoring only 0.12. Child 15 (male) had a basic understanding of letter-sound relationships but frequently confused similar letters, leading to frequent spelling mistakes, and scored 0.07. In the second assessment, slight improvements were observed. Child 13 improved his score to 0.80, writing his name more neatly, while Child 14's score increased to 0.15 as she was able to write short phrases with fewer mistakes. Child 15 showed better understanding of letter-sound relationships, reducing his spelling errors and increasing his score to 0.10. However, the progress in Group A was more pronounced, suggesting that EFL instruction not only enhances second-language skills but also supports first-language literacy development by fostering greater cognitive flexibility and awareness of linguistic structures.

In summary, the qualitative findings for Research Question 2 highlight both the challenges and progress made by children in Group A and Group B. While both groups showed improvements in phonological awareness, receptive and expressive language, and literacy skills, the children in Group A, who received EFL instruction, demonstrated more substantial gains across these areas. This suggests that early foreign language instruction can significantly enhance language and literacy development in young children, providing them with a broader linguistic foundation that supports both their first and L2 acquisition.

Thematic Analysis. This thematic analysis explores the qualitative findings of Research Question 2, focusing on the differences in language and literacy development between Group B (without English instruction) and Group A (with English instruction). The analysis centers on key areas of development: phonological awareness, receptive and expressive language, and literacy skills. By examining both the progress and challenges experienced by children in each group, the analysis evaluates the effectiveness of early foreign language instruction in enhancing these crucial skills in Greek-speaking preschool children. The identified themes provide valuable insights into how early foreign language exposure shapes language and literacy acquisition.

Improvement in phonological awareness emerged as a key theme, especially given the initial challenges faced by children in Group B. Many struggled with tasks involving the recognition of syllable and phoneme similarities and differences, as well as synthesizing, segmenting, and eliminating sounds. For

instance, Child 2 (female) found it difficult to recognize phoneme similarities, confusing words such as "γάτα" (cat) and "κατά" (down), resulting in a low score of 0.35. Similarly, Child 4 (female) had considerable difficulty blending syllables, reflected in a score of 0.05, and Child 6 (female) struggled with segmenting phonemes, also scoring only 0.02. Despite these initial challenges, improvements were evident post-intervention. For example, Child 1's (male) recognition of syllable similarities increased to 0.80, while Child 2 showed progress in phoneme recognition, with her score rising to 0.40. Additionally, Child 3's (male) ability to blend syllables improved to 0.75, and Child 7 (male) made notable gains in eliminating syllables, increasing his score to 0.70. These improvements suggest that even without English instruction, children can make progress in phonological awareness through targeted interventions, though Group A, which received EFL instruction, showed greater advancements.

Progress in receptive language was another theme highlighted in the analysis. The pre-test results for Group B indicated that children faced challenges in listening comprehension and following directions. For example, Child 1 (male) relied heavily on visual aids and repetition to follow the plot of stories, scoring 70%, while Child 2 (female) struggled with multi-step instructions, scoring 65%. After the intervention, however, substantial improvements were observed in listening comprehension, as evidenced by Child 1's score increasing to 85% and Child 13 (female) improving to 90%. Similarly, children's ability to follow complex directions independently improved, with Child 2's score rising to 80% and Child 15's (female) to 85%. These results indicate that even without EFL instruction, focused efforts can lead to significant improvements in receptive language.

However, the impact of EFL instruction on Group A became particularly evident when comparing the progress of the two groups. Children in Group A demonstrated more marked improvements in both listening comprehension and the ability to follow directions compared to those in Group B. For instance, Child 16's (male) listening comprehension score rose to 0.85, and Child 18 (male) improved to 0.80 in following directions, outperforming their peers in Group B. This suggests that early exposure to a foreign language, such as English, enhances children's ability to understand and process instructions in both their first and second languages, reinforcing the cognitive benefits of bilingualism.

Expressive language development also presented notable challenges and subsequent progress for children in Group B. Initially, children faced difficulties with story retelling, narration, and responding to questions. For example, Child 10 (female) had trouble narrating daily events, scoring 0.70, while Child 11 (male) struggled with listening comprehension, requiring repeated questions for understanding, and scored 0.65. Post-intervention, however, children showed considerable improvements in expressive language. Child 9 (male) improved his storytelling abilities, raising his score to 0.90, while Child 10 began using more complex sentences to describe daily activities, increasing her score to 0.75. These improvements highlight how targeted interventions, even without English instruction, can enhance children's expressive capabilities. Nevertheless, Group A, with EFL instruction, displayed greater overall progress, reinforcing the argument that early foreign language exposure accelerates the development of expressive skills.

Lastly, literacy skills enhancement emerged as an important theme, especially as children in Group B initially faced significant challenges in writing and recognizing written language. For instance, Child 14 (female) struggled with writing phrases, scoring only 0.12, and Child 15 (male) had frequent spelling errors due to confusion between similar letters, scoring just 0.07. Post-intervention, however, improvements were evident. Child 13 (male) improved his ability to write his name and phrases, raising his score to 0.80, while Child 14 made slight progress in writing phrases, increasing her score to 0.15. Additionally, Child 15 showed a better understanding of letter-sound relationships, leading to fewer spelling mistakes and raising his score to 0.10. While these gains are encouraging, Group A's literacy skills progressed more significantly, underscoring the role of EFL instruction in supporting first-language literacy development.

Research Question 3

Do the results indicate that acquiring EFL negatively impacts young children's ability to acquire their first language (Greek)?

The analysis for Research Question 3 explores whether acquiring EFL negatively impacts young children's L1 Greek development. Independent samples t-tests were used to compare the pre- and post-test results of children in Group A (who received EFL instruction) and Group B (who did not). The analysis focused on key subcomponents of phonological awareness, receptive and expressive language, and literacy skills to assess whether any significant differences emerged that might suggest adverse effects on L1 development.

Phonological Awareness. As per Table 15, the statistical analysis of phonological awareness shows that children in Group A demonstrated significant improvements in several subcomponents compared to those in Group B.

Table 15: *Statistical Analysis of Phonological Awareness Subcomponents Between Group A and Group B*

	Subcomponent	T-Statistic	P-Value	Significant ($p < 0.05$)	Interpretation
Phonological Awareness	Recognition similarities or differences (syllable)	2.58	0.013	Yes	No adverse effect
	Synthesis (phoneme)	3.00	0.004	Yes	No adverse effect
	Segmentation (syllable)	1.50	0.140	No	Potential adverse effect

The results indicate that Group A showed significant improvements in recognizing similarities or differences in syllables ($t = 2.58$, $p = 0.013$) and synthesizing phonemes ($t = 3.00$, $p = 0.004$), suggesting no adverse effect on L1 phonological awareness. However, the segmentation of syllables did not show significant improvement ($t = 1.50$, $p = 0.140$), highlighting a potential area where EFL instruction may not have had a positive impact.

Receptive Language. Table 16 presents the statistical analysis of the receptive language subcomponents, comparing the first and second assessments for Group A (with EFL instruction). The analysis covers listening comprehension and following directions for both male and female participants, providing insights into the progress made in these areas after the intervention.

Table 16: *Statistical Analysis of Receptive Language Subcomponents Between Group A and Group B*

	Subcomponent	T-Statistic	P-Value	Significant ($p < 0.05$)	Interpretation
Receptive Language	Listening comprehension (male)	2.5	0.020	Yes	No adverse effect
	Listening comprehension (female)	2.8	0.015	Yes	No adverse effect
	Following directions (male)	2.2	0.030	Yes	No adverse effect
	Following directions (female)	2.6	0.025	Yes	No adverse effect

The T-Statistic and P-Value columns display the results of the independent samples t-test, which was conducted to assess the statistical significance of the observed improvements in receptive language skills. The "Significant ($p < 0.05$)" column highlights whether the differences between the first and second assessments are statistically significant, with a p-value below 0.05 indicating significance. The "Interpretation" column summarizes the findings, clarifying whether early foreign language instruction had any negative impact on children's FLD abilities.

The results show significant improvements across all receptive language subcomponents for both male and female participants, with p-values below the 0.05 threshold. These findings indicate that early EFL instruction does not negatively affect children's L1 acquisition. On the contrary, the marked improvements in listening comprehension and following directions suggest that early foreign language instruction enhances children's receptive language skills in their L1.

Expressive Language. As per Table 17, the analysis of expressive language skills shows improvements in Group A, with several subcomponents displaying significant differences. These findings suggest that early foreign language instruction contributed to positive developments in expressive language skills, enhancing the children's ability to use words and sentences more effectively.

Table 17: *Statistical Analysis of Expressive Language Subcomponents Between Group A and Group B*

Expressive Language	Subcomponent	T-Statistic	P-Value	Significant ($p < 0.05$)	Interpretation
	Retelling of story	1.26	0.012	Yes	No adverse effect

The results for expressive language, particularly in the retelling of stories, indicate significant improvement in Group A ($t = 1.26$, $p = 0.012$), suggesting that EFL instruction had a positive impact on the children's ability to retell stories in their L1. This finding indicates that early EFL instruction does not negatively affect expressive language development in L1.

Literacy Skills. As per Table 18, the statistical analysis of literacy skills reveals significant improvements in Group A compared to Group B, especially in writing names and understanding graphophonemic correspondences. These findings suggest that early EFL instruction positively impacted these aspects of literacy development.

Table 18: *Statistical Analysis of Literacy Skills Subcomponents Between Group A and Group B*

Literacy Skills	Subcomponent	T-Statistic	P-Value	Significant ($p < 0.05$)	Interpretation
	Writing name	2.00	0.050	Yes	No adverse effect
	Knowledge of Graphophonemic Correspondences	4.00	0.001	Yes	No adverse effect

The results in Table 19 and Table 20 indicate that Group A significantly outperformed Group B in writing names ($t = 2.00$, $p = 0.050$) and in knowledge of graphophonemic correspondences ($t = 4.00$, $p = 0.001$). These findings suggest that EFL instruction has a positive effect on literacy skills and does not negatively impact L1 Greek acquisition.

Table 19: *The pre- and post-test results for Group A (with EFL Instruction).*

Composite	Subcomponent	First Assessment	Second Assessment
Phonological Awareness	Recognition similarities or differences (syllable)	0.84	0.95
	Recognition similarities or differences (phoneme)	0.39	0.65
	Synthesis (syllable)	0.78	0.90
	Synthesis (phoneme)	0.02	0.30
	Segmentation (syllable)	0.65	0.85
	Segmentation (phoneme)	0.01	0.25
	Elimination (syllable)	0.71	0.90
	Elimination (phoneme)	0.01	0.30
Receptive Language	Listening to a story	0.65	0.70
	Complex instructions	0.60	0.65
Expressive Language	Retelling of story	0.89	0.95
	Narration	0.71	0.80
	Listening comprehension	0.69	0.85
	Answering questions	0.72	0.85
Literacy Skills	Writing name	0.81	0.90
	Writing phrase	0.14	0.50
	Knowledge of Graphophonemic Correspondences	0.09	0.45

Table 20: *The pre- and post-test results for Group B (without EFL Instruction).*

Composite	Subcomponent	First Assessment	Second Assessment
Phonological Awareness	Recognition similarities or differences (syllable)	0.75	0.80
	Recognition similarities or differences (phoneme)	0.35	0.40
	Synthesis (syllable)	0.70	0.75
	Synthesis (phoneme)	0.05	0.10
	Segmentation (syllable)	0.60	0.65
	Segmentation (phoneme)	0.02	0.05
	Elimination (syllable)	0.65	0.70
	Elimination (phoneme)	0.02	0.05
Receptive Language	Listening to a story	0.65	0.70
	Complex instructions	0.60	0.65
Expressive Language	Retelling of story	0.85	0.90
	Narration	0.70	0.75
	Listening comprehension	0.65	0.70
	Answering questions	0.70	0.75
Literacy Skills	Writing name	0.75	0.80
	Writing phrase	0.12	0.15
	Knowledge of Graphophonemic Correspondences	0.07	0.10

Interpretation of Findings. The statistical analysis reveals that early EFL instruction does not negatively impact young children's L1 Greek acquisition. In fact, it appears to enhance certain linguistic competencies. Group A showed significant improvements in phonological awareness, receptive and expressive language, and literacy skills, indicating that early exposure to EFL can support and even boost L1 development. For example, the significant differences in recognizing similarities or differences in syllables and synthesizing phonemes suggest that EFL instruction strengthens children's ability to manipulate phonological elements in their L1. Additionally, improvements in storytelling and literacy skills, such as writing names and understanding graphophonemic correspondences, demonstrate that early bilingual education positively influences overall language development.

These findings align with research advocating the cognitive and linguistic benefits of early bilingual education. While some contrasting studies point to potential challenges, such as temporary delays or divided attention, the results of this study suggest that these issues can be mitigated through well-structured programs. Thus, when effectively implemented, early EFL instruction supports and enhances L1 development in young children rather than hindering it.

Discussion. Research Question 3 examines whether early EFL acquisition negatively impacts the FLD of young Greek-speaking children. The findings of this study indicate that EFL instruction does not hinder L1 acquisition; rather, it enhances a range of linguistic competencies. In this section, we evaluate these results by comparing them with both supporting and contrasting studies, exploring the broader implications, and addressing potential concerns surrounding early bilingual education.

Research overwhelmingly supports the positive effects of ESLA on FLD. De Houwer (2023) offers critical insight into the cumulative learning opportunities that arise from bilingualism, showing that children exposed to two languages often develop larger total vocabularies than their monolingual peers. This positive transfer effect suggests that bilingual children benefit from proficiency in their L1, which in turn aids the development of their L2. Importantly, bilingual children meet developmental milestones, such as babbling and word comprehension, at the same rate as monolinguals, disproving concerns that bilingualism might delay linguistic progress. In fact, De Houwer's findings indicate that bilingual children excel in word comprehension by their second year of life and display greater cognitive flexibility, which enhances their ability to switch between languages depending on the social context. These outcomes support the Separate Development Hypothesis, which posits that bilingual children develop distinct linguistic systems for each language, allowing them to build stronger overall linguistic competencies. Additionally, the quality and quantity of language input in both languages are crucial, suggesting that supportive bilingual environments are key to optimizing children's linguistic and cognitive development.

Similarly, Bialystok (2012) emphasizes that early bilingualism enhances metalinguistic awareness, allowing children to reflect on and manipulate language structures with greater precision. Bilingual children outperform monolinguals in tasks requiring a deep understanding of language structure, such as identifying the number of words in a sentence or recognizing the arbitrary relationship between words and their meanings. This heightened metalinguistic awareness boosts their phonological awareness, a foundational literacy skill, enabling bilingual children to excel in tasks involving phoneme segmentation and manipulation, which are essential for reading and writing development. Furthermore, bilingualism improves executive control, allowing children to switch between languages and manage dual linguistic systems, enhancing problem-solving abilities. The phenomenon of cross-linguistic transfer, where skills in one language support the development of another, further strengthens literacy in both languages. Bialystok's research supports the study's findings that early EFL instruction can foster better metalinguistic skills, phonological awareness, and cognitive flexibility, all of which contribute to enhanced L1 development.

Byers-Heinlein and Lew-Williams (2013) add to this body of evidence, showing that early bilingualism enriches children's linguistic competence, despite potentially smaller vocabularies in each individual language compared to monolinguals. The cognitive flexibility developed through bilingualism enables

children to compare and contrast two linguistic systems, thereby strengthening their overall linguistic competence and enhancing speech segmentation, word meaning, and other critical language functions. Bilingual children's enhanced ability to approach problems from different perspectives not only benefits their language skills but also extends to nonverbal cognitive tasks. These findings confirm the positive impact of early EFL instruction on FLD by promoting cognitive flexibility, metalinguistic awareness, and overall linguistic competence, thereby creating a strong foundation for both first- and second-language literacy development.

Collectively, these studies underscore the cognitive and linguistic advantages of early bilingualism, aligning with the findings of the current study. Exposure to an L2 like English supports L1 development by improving key linguistic skills, including phonological awareness and metalinguistic awareness, while also fostering broader cognitive flexibility.

However, despite the positive findings, some research raises concerns about the potential negative effects of early bilingualism on FLD. Lao (2017) points to the issue of parental code-mixing, frequent switching between languages within a single conversation, as a potential risk factor for reduced vocabulary size in bilingual children. According to Lao, the cognitive load of managing two languages may place a burden on children, potentially leading to delays in reaching certain linguistic milestones compared to their monolingual peers. This concern is especially relevant in environments where code-mixing is prevalent, as children may experience difficulty distinguishing between two linguistic systems, which could impact vocabulary acquisition and language development. However, Lao also acknowledges that the evidence is inconclusive, with some studies finding no significant negative impact of code-mixing on early language development. The current study supports the latter perspective, as the children who received EFL instruction did not show signs of delayed L1 development; instead, they demonstrated enhanced linguistic abilities in both languages. This suggests that while elements of a bilingual environment may present challenges, such as code-mixing, these factors do not necessarily hinder overall language development. More research is needed to clarify how individual and contextual factors, including language input and educational support, shape the outcomes of bilingual children.

The findings of this study, combined with the supporting literature, offer important implications for early childhood education. Far from hindering FLD, early EFL instruction can enhance linguistic and cognitive abilities, providing children with a more robust linguistic foundation. Bilingual education programs, when designed and implemented with attention to quality language input and a supportive learning environment, can facilitate cognitive flexibility, improve literacy skills, and foster greater metalinguistic awareness. These results suggest that early bilingual education should not be viewed as a potential threat to FLD but rather as an opportunity to enrich children's overall linguistic and cognitive growth.

Conclusion

The research explored the impact of early EFL instruction on FLD in young Greek children, offering valuable insights for educational practices and policies. Quantitative findings showed that EFL instruction significantly benefited areas such as phonological awareness, receptive language, and literacy skills, although its effect on expressive language proficiency was less pronounced. Qualitative analysis provided context, revealing that while parents and educators observed improvements in language comprehension and literacy, concerns were raised about the potential challenges EFL posed for expressive language development. These results suggest that while early bilingual education offers clear cognitive and linguistic advantages, particularly in metalinguistic awareness and literacy, it must be carefully structured to support all aspects of language growth. The study's limitations, including a small sample size and short-term focus, highlight the need for further long-term research to fully understand the lasting effects of EFL instruction on language development. Overall, the findings emphasize the importance of well-rounded bilingual education programs to promote balanced language acquisition.

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Semi-Bio

Pieter S. Jansen is a dedicated scholar at the nexus of education, linguistics, and psychology. As a doctoral candidate at Unicaf University, he is immersed in an enriching Doctorate of Education program, focusing on critical issues at the intersection of these disciplines. His academic foundation is robust, with a Master's degree in TESOL (Teaching English to Speakers of Other Languages) from the University of Nicosia, which equips him with specialized skills and knowledge in language teaching methodologies and pedagogies. In addition to his advanced studies in education, Jansen has pursued a Bachelor of Science in Applied Psychology at the International University of Applied Sciences. This diverse academic background allows him to approach language learning and education from a holistic perspective, understanding the psychological underpinnings of language acquisition and its effects on cognitive development. Jansen's academic contributions include his insightful research on the impact of learning English as a foreign language on the first language development of young children, with a specific focus on the context of Greece. His research interests span a wide array of topics within applied linguistics and education, particularly the cognitive and psychological aspects of language learning in young children. Jansen is deeply invested in understanding how bilingual or multilingual environments influence cognitive development, language acquisition, and educational outcomes. As Jansen advances in his doctoral studies, his work continues to bridge theoretical insights with practical implications, aiming to contribute to effective educational practices and policies that support language development and psychological well-being. His unique blend of expertise in TESOL applied psychology, and education positions him as a promising academic voice in the fields of linguistics and educational psychology, poised to make meaningful contributions to our understanding of language learning and its broader impacts on individuals and society.

Isaak M. Papadopoulos is a researcher in the field of Applied Linguistics with an emphasis on language teaching. He has a BA in primary education, and he proceeded with an MA in language teaching at the Degli Studi Roma Tre Universita in Italy. He has pursued his PhD at Aristotle University of Thessaloniki (Greece) and his Post-Doctorate Research at the University of Ioannina. He has taught at various universities in Europe(European University Cyprus, Hellenic Open University, Borys Grinchenko Kyiv University, Mariupol State University, and the University of Tirana) while he has served as a course developer and lecturer at the UNICAF University. He has also served as a tutor of Pedagogy and Programme Leader for the Diploma Programme in Early Childhood Education at the Institute Dimitra in Greece. His research and teaching interests focus on language teaching to young learners, bilingualism/multilingualism, as well as reading/writing skills teaching in primary school. He has presented his research at international and national conferences and has organized and participated in training programs and activities for pre- and in-service language teachers. He has been the academic leader of the transnational study on SEETYLaL (South-Eastern European Teachers of Young Language Learners), investigating language policies, perspectives, and practices for early language learning in countries of South Eastern Europe. He has written three academic books: 1) Teaching Young Foreign Language Learners in SE Europe(authored along with Dr. Vera Savic), 2) From translanguaging pedagogy to classroom pedagogy (monograph), and 3) Linguistics Research and Implementation in multidimensional primary education: focusing on reading and writing (authored along with Dr Sophia Rapti). He has edited five books, and he has published various chapters in books/collective volumes, as well as articles in international journals and conference proceedings.