



Comparative Study of Lexical and Grammatical Similarities in Child English and Child Arabic: Insights from YouTube Videos

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Received: 27 December 2024 | Received in Revised Form: 20 March 2025 | Accepted: 28 March 2025

APA Citation:

Akhoirsheda, I. M., & Faraj, B. A. (2025). Comparative Study of Lexical and Grammatical Similarities in Child English and Child Arabic: Insights from YouTube Videos. *Eurasian Journal of Applied Linguistics*, 11(1), 252-259.
Doi: <https://doi.org/10.32601/ejal.11121>

Abstract

This study aims to identify similarities in morphological, phonological, lexical, and syntactical aspects between Arabic and English child language. It seeks to understand how children develop grammar at different stages, adhering to the rules acquired at each stage. This research analyzes YouTube videos featuring Arabic and English-speaking children. Data validity was assessed based on criteria such as children's age, language proficiency, and social context. The videos were transcribed and analyzed to determine similarities in language acquisition processes. The findings reveal that natural ability and imitation theory significantly influence language acquisition in both Arabic and English. Children extract and generalize linguistic rules from the input they receive. Piaget's Cognitive Development Theory and Vygotsky's Sociocultural Theory are instrumental in explaining how social interaction and cognitive development contribute to language acquisition. The study concluded that language acquisition is a dynamic process where children develop grammar in stages, applying and refining linguistic rules. Errors made by children provide insights into these underlying rules. The study highlights the complex interplay of innate abilities and environmental factors in language development. The study emphasizes the importance of providing children with rich linguistic environments to facilitate natural language acquisition. It also underscores the need to recognize common errors in language development and support children's learning through cognitive and sociocultural theories.

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Keywords: Language Acquisition, Lexicon, Grammar, Child Language, Morphological Similarities, Phonological Similarities, Syntactical Similarities.

Introduction

The study emphasizes children's language acquisition, highlighting that all children learn languages regardless of their quantity or type. Language learning is likened to playing a game, where children must learn the rules of enunciation and sentence structure. To realize child language acquisition, the study reflects two key factors: the rules of the language game and the social setting in which the language is used (Al-Baldawi & Saidat, 2011). This study claims that children's language training varies from adults' due to their developmental phase. Language acquisition is a consistent process, including several deceptive "mistakes." These "mistakes" are not faults but critical steps in language learning and should not be corrected as they will obviously vanish over time. Children learn in a natural way the languages and languages they perceive around them. They begin by emulating their parents, but as they interrelate with other children, their speech

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DOI: <https://doi.org/10.32601/ejal.11121>

starts to reflect their mother tongue. Parents can't regulate how their children speak; they'll raise their own accents and language skills based on their atmosphere.

Children will learn the local grammar rules, which may differ from standard English. For example, phrases like "She never goes there" or "my brother is happy" are common in some English-speaking areas but regarded as a mistake in standard English. Children will learn the standard version at school, but using these local grammar systems isn't a mistake in their ordinary language. This validates that various English tongues have their own special instructions. Children are individuals with distinguishing behaviors. Unlike older people, they are raised up and cultivated in a world formed by adult views and performances. Children learn by observing and imitating the actions of those around them, including body language, table manners, and language usage. They learn how to function effectively in their environment through language itself. This study's theory involves discussing with children to teach them about the adult world. Children learn about the world through what they're stated and by observing how adults use dialects. This means that language learning occurs whenever children are unprotected from language (Matychuk, 2005).

Chomsky (2014) believes that children learn language through natural relations with supportive persons in everyday situations. The more communications, the healthier. Involve your children in several events to show them the ability of language in all aspects of their lives. Stimulate them to ask inquiries, reflect imaginatively, and learn how to join in different conversations. As children learn and acquire more languages, the development becomes less obvious, both to parents and to the child. This is also true for mature language learning. Adult people may sometimes feel like they're not progressing, but then suddenly realize they've made significant steps.

Understanding child language acquisition can offer insights into cognitive development and inform educational practices. A comparative analysis of child English and child Arabic remains underexplored. There is a gap in comparative studies examining child language development across different linguistic systems. This research aims to fill that gap by exploring lexical and grammatical similarities in child English and child Arabic. For this purpose, the following objectives of the study were framed: (1) Explore lexical and grammatical similarities between child English and child Arabic. (2) Investigate the role of children's innate abilities and imitation theory in language acquisition. (3) Assess how Piaget's Cognitive Development Theory and Vygotsky's Sociocultural Theory apply to both languages (Huang, 2021). (4) Provide insights to enhance understanding of language acquisition, informing linguistic research and educational practices.

To achieve these objectives, this study was guided by the following research questions: (1) How do child English and child Arabic exhibit similarities in terms of lexicon and grammar during language acquisition? (2) How do children progress through language milestones in both Arabic and English languages? (3) How do children naturally acquire languages, and what role do their innate abilities and environmental factors play in this process?

Literature Review

Behavioristic Perspective

Skinner's (1957) behavioristic theory proposes that children acquire their first language through imitation and support. Children perceive and duplicate the language of adults around them, and their accurate answers are fulfilled while inappropriate ones are modified. This theory highlights the role of ecological features and understandings in language education rather than distinctive organic factors. For instance, if a child hears an adult say, "That's repulsive!" and repeats it, that's imitation. Furthermore, if a child says "tiger" when requested about an animal and is corrected with "lion," the child might acquire the correct word through fortification. Skinner's theory highlights the status of positive and negative fortification in determining language acquisition. Skinner (1957) "highlights that" "language is a behavior shaped by reinforcement contingencies". His theory suggests that language learning is a clear behavior technique, deeply dependent on ecological factors. Pavlov (1997) argues that the occurrence of learning language is dependent on the association of words with objects or actions, and this leads children to adopt these connections over time. Thus, Skinner (1957) states that a functional analysis of verbal behavior must depend on the dynamic procedure of describing the behaviors of interest and then extend itself to illuminate the reasons for those behaviors. At the end, these views offer comprehensive settings for understanding the methods behind language learning. Studies by Ambridge & Lieven (2011) and McLaughlin (2013) highlight the importance of positive reinforcement in developing language usage. McLaughlin et al. (2010), too, note that "verbal behaviors are formed through selective reinforcement and functional analysis, which guide linguistic growth". These perspectives emphasize the continuing significance of Skinner's theories in understanding the mechanisms behind language acquisition (Robson, 2012).

Nativist Perspective

Language acquisition is a normal evolving method; all children grow through similar marks on a similar timetable. It is not for the fact that language is entrenched in human natural science. If human language is an inherently based distinctive of humans, embodied and administered in the human brain, then it follows

that a human baby will acquire that system as its brain advances. This is called the nativist model of language acquisition (Fernández & Cairns, 2010). The other side to the raising argument is the nature theory. Theorists who state that language is acquired through nature approach that language is preplanned into a child's inherited legacy. This is the opposite of the imitation theory, where they thought that language is acquired after a child is born. The nativist theorists state that children have an inherent language acquisition device (LAD) that allows them to use the careful rules of their particular language.

Chomsky believed in this theory and challenged Skinner's theory of imitation. He said that if children are imitating their parents, why are they making righteous mistakes and oversimplifying? Adult people do not make these sorts of errors; therefore, children are not just replicating or imitating what their parents or protectors are saying. He also said that if the children are just imitating what their parents/protectors are saying, then that does not mean the children understand the semantics of language. With the help of Eric Lenneberg, Chomsky also found out that LAD can only be stimulated with adequate input before a certain time; after this time, their language acquisition will be reduced. The case of wild children ropes this theory where children after the age of adolescence fight to learn language as they have passed the critical period stage (Chomsky, 1986).

Piaget's view of how children's minds work, and advances has been extremely important, mainly in instructive theory. His specific understanding was the role of development in children's cumulative ability to understand their world: they cannot assume certain everyday jobs until they are psychologically mature enough to do so. His study has deposited a good agreement more, much of which has damaged the detail of his own, but like many other original detectives, his reputation comes from his general image (Fernández & Cairns, 2010).

Developmental Perspective

Vygotsky's theory of language acquisition pays attention to the importance of social interaction and scaffolding in the development and evolution of language (Bickerton, 2007; Gallagher, 1999; McLeod, 2024; Smolucha & Smolucha, 2022). He supposed that children learn language through interacting with others who are more educated than they are, and that this communication supports them to grow their realization about the world and their capability to use language in an effective way (Ofori-Attah, 2021; Vygotsky, 1987). Alternatively, Piaget believed that children's cognitive development is determined by their own examination and investigation of the real world. He argued that children reflect their own realization about the world through their relations with things and actions, and that this consciousness is then echoed in their language. Both theorists had various perspectives on the child's role and the effect of the situation. Vygotsky (1987) highlights the impact of communal and social aspects on a child's cognitive development, while Piaget emphasizes the child's inborn inquisitiveness and energetic structure of consideration (Alharbi, 2022).

Empirical Studies

Several studies have been carried out on the development of lexicon and grammar during language acquisition, and to examine how children naturally acquire languages, and what role their innate abilities and environmental factors play in this process. For instance, Behrend (1990) examined the development of verb concepts in children and found that children's use of verbs to label familiar and novel events reflects their cognitive development and language acquisition process. Gerken & McIntosh (1993), in another study, investigate the interplay of function morphemes and prosody in early language development, highlighting the role of phonological patterns in children's language acquisition. Vygotsky (1987) emphasized the importance of social interaction and scaffolding in language acquisition, demonstrating how children's language development is influenced by their social environment. Paradis et al. (2021) examine morphosyntactic development in first-generation Arabic-English children, it highlights the capability of cognitive, age, and input factors in influencing bilingual language acquisition.

Additionally, Tallas-Mahajna & Dromi (2024) attempted to show the Arabic Morpheme Per Utterance (Arabic-MPU) as a developmental measure for assessing morphological language development in Arabic-speaking preschoolers. Thus, it can be used for language screening (El-Shishiny, 1990). Abdalla & Mahfoudhi (2024) articulate the construction of verb agreement in children with developmental language disorders who speak Arabic, and also highlight the function of reinforcement and corrective feedback in establishing the accuracy of linguistics forms. In another empirical study, Lahbib & Yeou (2024) establish that the complexity of negation structures in Modern Standard Arabic (MSA) influences learners' age of acquisition. The study examines the ability of learners to utilize various Arabic negation forms by outlining how learners perceive and use different Arabic structures of negation.

Theoretical Framework

The study draws on theoretical frameworks from language acquisition and development to recognize the similarities and differences between Arabic and English child language. Specifically, it adopts a comparative method to examine how children in both languages acquire and utilize lexical and morphological constructions. To understand this, we need to examine the morphological, syntactic and phonological similarities along with examining the errors made during the telegraphic stage and overextension / under tension errors made by children.

Morphological Similarities

Both Arabic and English, being inflectional languages, share similarities in their morphological structures. Morphology involves the study of expressive elements within language, including arguments and their parts (Ryding, 2005). In Arabic, this includes derivational (word formation) and inflectional (word-syntax interaction) morphology. Research shows that children in both languages exhibit overgeneralization, where they apply rules too broadly. For example, children might incorrectly add regular endings to irregular verbs (Saracho, 2023).

Syntactic Similarities

Syntax, the organization of sentence components, begins to emerge with two-word utterances (Cattell, 2007). Children acquire complex linguistic constructions with relative ease, despite incomplete contact. Common errors during this period include misappropriation of tenses, especially irregular verbs, and the omission of auxiliary verbs.

Phonological Similarities

Phonology, the study of sound patterns, considers factors like articulation and speech organs. Children are born with a perceptual system designed for speech recognition (Yule, 2022). Early language acquisition often involves substitution, where one sound is replaced with another. This is common in both Arabic and English. Examples include:

- Stopping: "sing" /sɪŋ/ -> "ting" /tɪŋ/
- Fronting: "ship" /ʃɪp/ -> "sip" /sɪp/
- Gliding: "lion" /laɪn/ -> "yion" /jaɪn/
- Denasalization: "jam" /dʒæm/ -> "jab" /dʒæb

The Telegraphic Stage

The telegraphic stage of language development, characterized by simple or short sentences, is a vital phase in a child's linguistic journey. Despite their limited language, children are attuned to the linguistic elements used by others (Gerken & McIntosh, 1993). Examples include phrases like "Chair broken" or "Star shine" in English, and "ana akul" (I want to eat) or "mama rah bara" (Mom is out) in Arabic.

Overextension & Under-Extension Errors

Children often make errors in word usage, such as overextension (applying a word too broadly) and under-extension (applying a word too narrowly). These errors are a natural part of language development and reflect the child's developing cognitive abilities (Samuelson & Smith, 2000). For example, a child might call all four-legged animals "dog" or only refer to their own pet as "dog" (Caplan & Barr, 1989).

Methodology

Research Design

This study uses a comparative method to examine the similarities between child English and child Arabic in lexical, morphological, syntactical, and phonological aspects during the language acquisition process.

Sampling and Data Collection

The sample study comprised children between the ages of 3 and 4 years old. The study was confined to only two samples, one child each in English and Arabic engaged in a conversation in YouTube videos. Each child was a native speaker of Arabic or English. Each video was captured in a natural environment, focusing on finding the use of language in settings such as home, school, and play. Both YouTube videos were transcribed and analyzed to identify similarities and differences in the children's lexical, morphological, syntactical, and phonological development.

Data Analysis

The data was analyzed using transcription analysis to identify common linguistic patterns and errors in both Arabic and English child language. The analysis focused on morphological, phonological, lexical, and syntactical aspects of language development.

Results

The English video entitled "My 3-year-old must argue and debate everything!" was taken from YouTube retrieved from <https://www.youtube.com/watch?v=aFYsJYPye94>. The video is evidence of common phonological mistakes between Arabic and English called, substitution. Here is the script of the video:

English Child

Scenario: A child is talking to his mother, asking her for a cup cake.

Child: listen to me, like I do this all the time.

Mother: I have to yell at you guys.

C: Linda, listen, listen, listen.

M: ok, what?

C: everything you do at the south.

M: ok then, you aren't listening to me.

C: you aren't listening to me. (imitating)

M: I asked you not to do something.

C: Linda, but liken(listen), liken, if you get that, you are gonna break it.*

M: but, I'm asking, I'm letting you know.

C: (interrupting), Linda, liken, liken.

M: you're listening, listen to me.

C: (imitating) listen to me.

M: I said no cupcakes, and you tried to get cupcakes, and tried to ask your grandma. Didn't you?

C: liken, liken.

M: you and Kevin don't listen; I have to hit both of you for browsing your butt.

C: but, Linda.

M: you don't want me to hit you, or you want me to spank you.

C: No.

M: why?

C: I don't want anybody to spank me.

M: so, I have to spank Kevin.

C: he doesn't have a bob butt.

M: he doesn't have a bob butt, he doesn't listen.

C: but Linda, honey, honey. Liken, liken. Right now. You can do anything, and you can get anything out of the wall, and you gonna break everything down.

M: I'm not breaking anything down, I'm letting you know you can't have any cupcakes.

C: Linda, liken, liken. This ting has never belong to you. Anything*, anything, and anything.*

M: I'm not arguing with you.

C: (imitating) I'm not arguing with you.

M: You need to listen to everything I say, because I am the Mum, and I'm not arguing with you.

C: (imitating) I'm not arguing with you.

In the English sample, the child named Mathew demonstrates a common phonological error known as substitution made one of the most common phonological mistakes between Arabic and English, which is called, substitution. The child "Mathew" tends to substitute one consonant with another where he replaces one consonant sound with another. This is a typical phenomenon in both Arabic and English child language acquisition. For example, when he substitutes/s/ sound with/k/, /ə/ with /t/. In addition, this video shows the innate faculty of the human mind of the child that imitation played a primary role in language acquisition. These are the phonological examples of substitution in the video: (1) "thing" /əɪŋ/ à "ting" /tɪŋ/. (2) "listen" /lɪsən/ à "liken" /lɪkən/. (3) "look" /lʊk/ à "wook" /wʊk/. These substitutions are common in early language development and highlight the role of imitation in language acquisition. Children often replace sounds they find difficult with ones they can produce more easily, which is a natural part of early language development.

Arabic child

The Arabic sample was taken from children's program, "L'ib 'Ayal", which was released in 1998, by Ahmed Helmy. "L'ib 'Ayal" is a comedy program for children hosted by the Egyptian actor Ahmed Helmy in 1998. This show was one of the early works that contributed to Ahmed Helmy's fame, relying on the innocence and spontaneity of children to deliver entertaining and humorous content. In each episode, Helmy would invite a group of children and engage them in playful and funny conversations, discussing amusing topics and everyday situations from their lives. The show was characterized by the genuine and spontaneous interactions of the children, making it beloved by audiences of all ages. Overall, "L'ib 'Ayal" was not just an entertainment program; it was also an opportunity to showcase the talents of children and their ability to express themselves naturally and enjoyably. This show featured playful and humorous conversations with children, showcasing their spontaneous and genuine interactions. The program highlights the natural and enjoyable way children express themselves, making it a beloved show for audiences of all ages.

For the purpose of this study, two extracts were retrieved of the program uploaded on YouTube found at <https://www.youtube.com/watch?v=gwQ46EEPUc4&list=PLy10wxjLJugrLdaaMo2owA0nJLhrz7iFH>).

Table 1: Presents The Arabic and The English Scripts of These Extracts".

| a) Arabic sample | b) Arabic Child Sample (Translation) |
|---|---|
| Extract 1 الطفل الاول : انا بغني النجما كمان المقدم "احمد حلمي" : لا انا عايز كمننا غنيلي كده ابراهيم فصل الطفل الثاني : معرفش ابراهيم فتل المقدم: كريم انت يا ابو عنين خضرا الطفل : اسود عيني لونها ثودا المقدم : ايه رنيكم في التفريقه العنصريه الطفل الاول اه عشان احنا بنطلخ فوق البيتو ندخل البيت الثغير الطفل الثاني بندخل بيتنا عشان ننام الطفل الاول وانا بخلع الحبل وبخلع الشجره الطفل الاول وانا بركب الخروف الطفل الثاني وانا بركب الخروف كمان الطفل الاول : وانا بركب الكلب الطفل الثاني وانا بركب الكلب والقطه الكبيره الطفل الاول وانا بركب البقره الكابوسه احمد: الو هر كليز ايوه يا هر كليز دا الاتنين الي قاعدين قدامي دول من الصبح بيقلولو هيصبر بوكي ابو شعر اصفر. اه اه الطفلاول : لا انا شعري سودا الطفل الثاني وانا شعري سودا | Extract 1 Child 1: I sing Ninja too. Host (Ahmed Helmy): No, I want you to sing Ibrahim Fathl. Child 2: I don't know Ibrahim Fathl. Host: Kareem, you with green eyes. Child: My eyes are black. Host: What do you think about racism? Child 1: Because we play on the house and enter the small house. Child 2: We enter our house to sleep. Child 1: I take off the rope and climb the tree. Child 1: I ride the sheep. Child 2: I ride the sheep too. Child 1: I ride the dog. Child 2: I ride the dog and the big cat. Child 1: I ride the big cow. Host: Hercules, hey Hercules, these two sitting in front of me say they will hit you. Child 1: No, my hair is black. Child 2: My hair is black too. |
| Extract 2 احمد : اسمر يعني ايه الطفله : أسمر يعني احمر وابيض احمد: انت لونك ايه الطفله : أنا ابيضه | Extract 2 Ahmed: What does "asmar" mean? The girl: Asmar means red and white. Ahmed: What color are you? The girl: I am " abida" |

The analysis of the Arabic sample from "L'ib 'Ayal" is quite thorough. There are several key points where the children made mistakes in morphology, syntax, and phonology, similar to the English child in the previous example. The following is the summary of these mistakes:

Phonological Mistakes:

- Substitution of sounds, such as "ثودا" instead of "سودا" (black).
- Simplification of complex sounds, like "الثغير" instead of "الصغير" (small).

Morphological Mistakes:

- Incorrect verb forms or conjugations, such as "بخلع" instead of "أخلع" (I take off).
- Misuse of gender agreements, like "القطه الكبيره" instead of "القط الكبير" (the big cat).

Syntactical Mistakes:

- Incorrect sentence structures, such as "احنا بنطلخ فوق البيتو" instead of "نحن نلعب فوق البيت" (we play on the house).
- Mixing colloquial and formal Arabic, which is common in children's speech.

These errors align with language acquisition theories, showing that children naturally make similar types of mistakes regardless of the language they are learning. This supports the idea that language development follows universal patterns.

Discussion

The comparison of the Arabic and English child language samples reveals commonalities with language development in general, including phonological substitutions, morphological errors, and syntactical errors. For phonological errors, substitution is a representation of children's schema, revealing their tendency to simplify sounds in early language production. Mathew (an English child) substitutes /ə/ with /t/, pronouncing "thing," as "ting." The Arabic child substitutes "سودا" (black) with "ثودا." Both phonological errors describe a well-known process of development where children default to producing whatever sounds are the least difficult, or sound more recognizable, as they begin speaking. There are morphosyntactic errors in both videos, such as incorrect conjugations of verb or gender agreements. For instance, the Arabic child says "بخلع" (I take off) instead of "أخلع," and "القطه الكبيره" (big cat), problems with gender agreement, while Mathew shows lexical errors that are arbitrated by imitation, such as misusing the lexical form ("liken" for "listen"). All these patterns can be framed through Skinner's behaviorist theory, which places significance on the influence of imitation and reinforcement on linguistic accuracy.

Particularly, the syntactic errors indicate some of children's use of formal and informal language, or shortened sentences. For the Arabic sample, for instance, phrases such as "اِحنّا بنطلخ فوق البيتو" (we play on the house) show entertaining informal speech with problematic syntax. In Mathew's conversational style, break-ups and imitations also demonstrate the relationship between the use of informal spoken language with error corrections. In a word, these findings reinforce the universality of language acquisition processes and encourage a more elaborate description of cognitive and socio-linguistic paradigms.

Conclusion

The study highlights the similarities between child English and child Arabic in language acquisition, emphasizing the role of natural ability and imitation in language development. The findings support the influence of cognitive and sociocultural theories in understanding language acquisition. The data analysis of both English and Arabic videos reveals that both Arabic and English-speaking children exhibit similar phonological errors, such as substitution. This supports the notion that imitation plays a crucial role in language acquisition. By analyzing the natural language use of children in different contexts, the study provides valuable insights into the similarities in language development across cultures.

The study is limited by the availability and quality of YouTube videos, as well as the specific age range of the children analyzed. Future research should explore a broader age range and utilize diverse data sources to gain a more comprehensive understanding of language acquisition. The study would like to make some recommendations. First, children should be provided with rich linguistic environments to facilitate natural language acquisition. Second, children should be engaged in meaningful linguistic exchanges to support their language development. Third, recognizing common errors in language development provides better support to children's learning. Last, but not the least, cognitive and sociocultural theories should be used to understand and support language acquisition.

The study provides valuable insights into the process of language acquisition, emphasizing the active role of children in learning and the interplay between innate abilities and environmental factors. The findings have practical applications in linguistics and education, informing teaching practices and educational policies.

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