#### SYSTEMIC REVIEW

# Influence of Bilingualism on Language Development: A Systematic Review

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#### **ABSTRACT**

**Background:** This study examines the impact of bilingualism (English and Urdu) on language development, proficiency, and use, focusing on linguistic, cognitive, and social aspects, providing a comprehensive understanding.

**Methodology:** This systematic review followed PRISMA guidelines and used reputable databases Scopus, PubMed and Google Scholar to gather data. The study included peer-reviewed articles published between 2016 and 2023, focusing on language development and structure in bilinguals speaking Urdu and English. The subjects were all ages, and studies excluded if they included secondary illnesses or developmental disorders. The final articles were selected through expert discussions.

**Findings:** The study explores the impact of bilingualism on language development, focusing on morphological, syntactical, morphosyntactical, reading, and verbal pronunciation. It finds that bilingualism can improve comprehension, word learning, predictive skills, and metacognitive reading strategies. However, it can also lead to difficulties in phoneme learning and cross-linguistic interference. The study emphasizes the importance of equal exposure to both languages and educational plans that encourage vocabulary growth. It suggests that bilingual students should develop special reading techniques to enhance vocabulary acquisition.

**Practical implication:** The study suggests that bilingual education programs should promote balanced literacy practices in Urdu and English, address linguistic issues, and support bilingualism and multiculturalism in schools. Teachers should be trained to address lower order English comprehension difficulties, and caregivers should encourage bilingual children at home and participate in cultural activities. Policies should encourage bilingual education and use multiple languages in schools, ensuring bilingual Urdu-English speakers are productive academically, interpersonally, and culturally.

**Conclusion:** The systematic review highlights the positive impact of bilingualism on cognitive development, language proficiency, and social skills, despite initial challenges like smaller vocabulary sizes. It emphasizes the importance of adequate support for bilingual children.

Keywords: Bilingualism, Language, Urdu & English, Cognitive, Language Development

## INTRODUCTION

Bilingualism, the ability to speak and understand two languages, is a complex and multifaceted phenomenon that has been a topic of interest for researchers, linguists, and educators for decades<sup>1</sup>. In today's globalized world, bilingualism is becoming increasingly common, with many individuals exposed to two or more languages from birth or from a young age<sup>2</sup>.

The coexistence of English and Urdu, two languages with distinct linguistic and cultural characteristics, makes them an ideal pair for studying bilingualism³. Language is a fundamental aspect of human communication, and bilingualism raises important questions about language acquisition, language development, and language use. Bilingual individuals face unique challenges and opportunities, as they navigate multiple linguistic and cultural contexts. Understanding bilingualism can inform language teaching and learning practices, language policy decisions, and our understanding of language and cognition⁴.

English and Urdu are two languages with significant linguistic and cultural differences. English is a Germanic language with a global spread, while Urdu is an Indo-Aryan language spoken primarily in Pakistan and India. English is widely used as a lingua franca, while Urdu has a rich literary and cultural heritage. The coexistence of these two languages in many parts of the world makes them an ideal pair for studying bilingualism<sup>5</sup>. Bilingualism can take many forms, including simultaneous bilingualism, where children acquire two languages from birth, and sequential bilingualism, where individuals acquire a second language later in life. Bilingualism can also vary in degree, with some individuals possessing high levels of proficiency in both languages, while others may have more limited proficiency<sup>6</sup>. Research on bilingualism has shown that bilingual individuals possess unique cognitive and linguistic abilities, including enhanced executive function, metalinguistic awareness, and language flexibility.

Bilingualism has also been linked to improved academic achievement, cultural competence, and social mobility. However, bilingualism can also pose challenges, such as language interference, code-switching, and language maintenance. In the context of English and Urdu, bilingualism raises important questions about language development, language contact, and language identity. How do children acquire two languages with distinct linguistic and cultural characteristics? How do bilingual individuals navigate multiple linguistic and cultural contexts? How does bilingualism impact language development, language proficiency, and language use?

The study of bilingualism is crucial in today's multilingual world, where language contact and language diversity are increasingly common. In Pakistan, for example, Urdu is the national language, while English is widely used as a second language. Many Pakistanis are bilingual or multilingual, speaking Urdu, English, and other regional languages. Understanding bilingualism in this context can inform language policy, language education, and language development initiatives<sup>9</sup>. Bilingualism has important implications for our understanding of language and cognition. Bilingual individuals have been shown to possess enhanced cognitive abilities, such as executive function, metalinguistic awareness, and language flexibility<sup>10</sup>. Bilingualism has also been linked to improved academic achievement, cultural competence, and social mobility<sup>11</sup>.

Bilingualism can also pose challenges, such as language interference, code-switching, and language maintenance. Bilingual individuals may experience language conflict, language loss, or language assimilation, which can impact their language identity, language proficiency, and language use 12. This study aims to synthesize the existing evidence on the effects of bilingualism (English and Urdu) on language development, language proficiency and language use. By examining the linguistic, cognitive, and social aspects of bilingualism, this review aims to

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provide a comprehensive understanding of the benefits and challenges of bilingualism in the context of English and Urdu in different settings and professions.

# **METHODOLOGY**

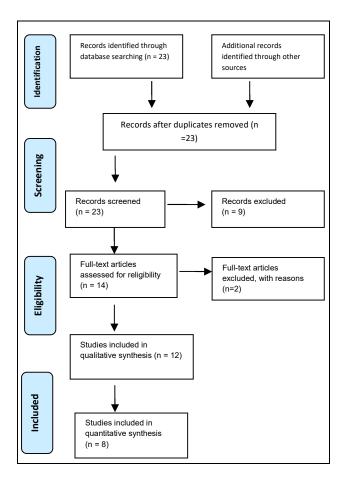
The review followed to the PRISMA guidelines for systematic reviews and meta-analyses.

**Information Sources**: The data was sourced from reputable databases such as Scopus, Science Direct, PubMed, Wiley Online Library, and Google Scholar.

**Search Methods:** The search terms used were "influence of bilingualism" OR "bilingual" OR "language development" OR "language acquisition" and "Urdu" and "English". Search words were searched in February 2024.

Inclusion and exclusion criteria: Peer reviewed articles published between 2016 and 2023 were included in this study. Studies addressed typical language development of bilinguals speaking Urdu and English language with Urdu as native language. These studies covered effect of bilingualism on language development and language structure. Subjects of the included studies were of all ages. Studies were excluded if they include any secondary illness or developmental disorders. Book chapters were also not included.

**Study selection and data extraction:** Relevant articles eight were retrieved after screening all titles and abstracts. Full texts of potentially relevant articles were retrieved and assessed for eligibility. Final articles were selected through discussions of experts.



**Findings:** The eight articles that were chosen within time frame of ten years 2016 to 2023 were to obtain relevant and updated literature.

Overall the aim of the studies included in this review study is to explore the influence of the bilingualism on overall language development and components of language development such as morphological, syntactical, morphosyntactical, reading and verbal pronunciation development.

**Impact of bilingualism on language development:** The analytic research synthesis conducted on the studies reviewed found that the effects of bilingualism towards language development is both positive and negative depending upon the quantity and quality of input they are receiving, age of exposure and other factors related to language dominance.

Several benefits of bilingual experience have been documented for language processing, including improved comprehension even in the face of distraction, more effective word learning, improved predictive skills despite working memory decline and improved metacognitive reading strategies. Nevertheless, it has also been shown that multilingual experience has drawbacks for language processing. For example, the reviewed studies have found that more difficulty learning phonemes, and cross-linguistic interference. However, some of the examined studies did not provide any noteworthy conclusions regarding the impact of bilingualism on language development 13.

Although it may take them longer to pick up specific terminology, bilingual kids eventually develop a level of multilingual competence that is on par with or even higher than before. This variation shows that multilingualism modifies the dynamics and trajectory of language learning rather than impeding total language development <sup>14</sup>.

**Vocabulary development:** The effects of bilingualism on the vocabulary development of children who speak both Urdu and English vary depending on the environment. Bilingualism has clear benefits, such as improved cognitive function and a broader overall lexical knowledge, even though it can also have drawbacks, such as lesser vocabularies in each language when seen independently. The results highlight the value of equal exposure to the two languages as well as the necessity of educational plans that encourage vocabulary growth in both Urdu and English <sup>13-15</sup>.

It takes longer for bilingual youngsters to comprehend the lexicon of two languages, and their attempts to become bilingual sometimes result in the blending of grammatical and syntactic norms, making the process sluggish. Hoffman claims that three-year-olds spoke almost entirely nonverbally and relied solely on sign language to understand what was being said. Nonetheless, youngsters require time to comprehend the proficiency of two languages together, as they must concentrate on lexicon, phonetics, and other aspects. Consequently, they require time to appropriately pronounce their first word. Children with language fluency delays are unable to select only one language. Children who are bilinguals struggle with inadequate language proficiency, poor grammar, limited vocabulary, and constant language<sup>1,14</sup>.

While Urdu is mostly used at home, exposure to English is frequently linked to formal education for children who are bilingual in both languages. This separation may lead to an unequal distribution of vocabulary knowledge, with kids growing more literate in the languages that are spoken in their surroundings<sup>2,16</sup>.

Verbal pronunciation development: It has been noted that children's poor language transfer has an impact on their verbal development, specifically their pronunciation. In a study, bilingual kids were asked to read a poem and then their verbal pronunciation was analyzed. Considering that during the data analysis process, the kids applied their Urdu language skills to their English reading activities. For example, the "g" sound in gentle was sounded as "gh," demonstrating their language transmission. Youngsters also spoke inaudibly. There are a total of 54 child-made mistakes in the poem, consisting of 30 vowels and 24 consonants. 44.44% of their entire consonants were

mispronounced, while 55.55% of their total vowels were mispronounced  $^{\rm 17}.$ 

Wrong use of plurals: The impact of bilingualism on the use of incorrect plurals in Pakistani Urdu and English-speaking children is a reflection of the broader challenges of bilingual language acquisition. Cross-linguistic interference is one of the primary effects of bilingualism on pluralization in Pakistani youngsters. Both Urdu and English have different grammatical rules when it

comes to pluralization, bilingual kids may become confused. When pluralizing a word in English, "-s" or "-es" are frequently added at the end (for example, "cat" becomes "cats," "box" becomes "boxes"). In Urdu, on the other hand, plurals can be created by altering the word itself or by changing the word ending (for example, [kitaab] becomes [kitaabein]). These variations may interfere with bilingual kids' ability to comprehend language, which could result in mistakes<sup>18</sup>.

Table1: Summary of the reviewed articles

	the reviewed articles	Mathad	Dauticin and Information	Findings	Canalysian
Author & year	Aim of Study	Method	Participant Information	Findings	Conclusion
Kanwal et al.,	To investigate and explore	Mixed	Local students enrolled	Code switching is found to be used due to	Bilingual speakers find that code-
2023 <sup>13</sup>	the factors behind code	Method	in BS classes of	multiple factors such as: lack of competence in	switching is an effective way to communicate with each other and
	switching in a bilingual	study	different colleges of Sialkot	L2, social stigma, to use as gap fillers, lack of	
	society		Siaikot	vocabulary in one language, market value of English, to boast higher knowledge of English.	efficiently transfer knowledge to multilingual listeners.
Ahsan et al.,	To investigate the effect of	Longitudi	Toddler having	Individual's language development progressed at	The study concludes that
2023 <sup>14</sup>	multilingualism on language	nal case	multilingual environment	a slower pace compared to normal language	multilingualism can have both
2023	development of toddlers	study	at home	development patterns	positive and negative influence on
	development of toddiers	Study	at nome	development patterns	language development, and early
					intervention strategies are
					recommended for children with
					language delay in multilingual
					environments.
Hassan et al.,	To find out how children	Qualitativ	Children were selected	Verbal development is affected by children's	Bilingualism is good for children
2024 15	develop their ability to learn	e Study	from different	negative language transfer	but it also has some
	language (L1 and L2)		institutions, before the		disadvantages that can't be
	before the critical age and		age of 12		ignored
	to find if this critical age is				
	important for learning two languages, and effects of				
	bilingualism on children's				
	verbal development.				
Ali et al,.2021 16	To explore the trends of the	Observat	Bilingual speakers	Non native speakers of English i.e. Urdu speaking	Borrowing from the languages
, ,	use of the wrong plurals by	ory study	speaking English and	individuals (L1) use wrong plurals by taking one	leads to the coinage of new words
	Pakistani bilinguals		Urdu	syllable from English and the other syllable from	that are not from either language
				Urdu such as	but a combination of two.
				<ul> <li>- /teachron/ instead of teachers</li> </ul>	Learners use these words
					'unconsciously'.
Davidson et al,.	To assess the awareness	Cross	Children 5 and 6 years	Children who scored highest on receptive	Bilingualism alone did not
2019 <sup>17</sup>	of grammaticality of	sectional	old	vocabulary tests were better at identifying	influence syntactic awareness but
2010	syntactic awareness	study	old old	improper word order constructions, such as	receptive vocabulary range.
				semantic anomalies and word order violations,	Higher the receptive vocabulary in
				and inaccurate	L1 or L2, higher will be the
				gender agreement compared to kids with less	competence in that language.
				developed receptive vocabulary. On the other	
				hand, no variations were discovered between the	
Missa	This paper explored the	Cymlanata	Children area 0.10	ranges for unclear gender constructs.  The study found that the interaction between	The results indicate that while
Mirza and Gottardo,	role	Explorato ry study	Children ages 8-10 years	Urdu phonology and morphology did not	The results indicate that while children in Pakistan scored lower
2023 <sup>18</sup>	of context, learners' profiles	Ty Study	years	significantly predict the English variables. The	on all English measures used in
2020	and linguistic differences of			majority of the Urdu variables tested in the study	the study, they demonstrated
	Urdu–English bilinguals in			were strongly to moderately negatively correlated	greater proficiency in Urdu
	Canada and			with English word and pseudo-word reading,	phonological awareness.
	Pakistan.			vocabulary knowledge, and phonological	However, there was a positive
				awareness. However, the Urdu and English	correlation between each measure
				measures for the Canadian participants were	in the two languages in the
				moderately positively correlated within constructs for word reading, vocabulary, and phonological	Canadian sample.
				and morphological awareness. Children in	
				Pakistan were taught to read both languages	
				using a whole word memorization technique,	
				specifically through rote repetition. As a result, the	
				children did not receive formal explicit	
Rasul, 2016 19	To compare the	Cross	Children ages 4-6 years	Results reported a positive correlation between	This study clarifies how bilingual
	morphosyntactic growth of	sectional		exposure to second languages, participants aged	children's exposure to their second
	Urdu-only speakers versus	study		5 outperformed those aged 4, highlight the age	language affects the development
	bilingual Urdu-English speakers.			effect; and monolingual persons outperformed their bilingual counterparts in exploiting English	of grammatical markers in that language.
	To find influence of age on			morphosyntactic cues.	language.
	morphosyntactic				
	development and the				
	relationship between				
	multilingual children's				
	morphosyntactic growth				
	and exposure to second				
Mirza et al.,	languages.  To explore awareness of	Explorato	Children	English word reading was found positively	The links between phonological
2017 <sup>20</sup>	script	ry	6-10 years	correlated with reading Urdu words presented in	awareness in L1 and L2
1	similarity, which suggests	',	,	Arabic scripts, while a negative correlation was	demonstrated that phonological
	that bilinguals who read	1		found between English word reading and Urdu	awareness is not a mechanism
	both scripts, Urdu and	1		reading comprehension and vice versa.	that is particular to any one
	Arabic would have	1		Reading English words did not substantially	language. Due to the linguistic
	an advantage in acquiring	1		predict Urdu word reading	interconnectedness between L1
	L1 through the same				and L2, these abilities predict word recognition across languages.
L	scripts.	<u> </u>	l	<u>l</u>	recognition across languages.

Syntactic awareness: The acquisition and mastery of sentence structure, which includes the arranging of words and phrases to make meaningful sentences, is referred to as syntactic development. The interaction between these two languages, which are members of separate language families, offers special opportunities and challenges for the syntactic development of Urdu-English bilinguals 18-19

Bilinguals who speak both Urdu and English frequently show higher syntactic awareness than monolinguals. Gaining mastery in one language might helps one gain mastery in the other, especially when it comes to academic and cognitive abilities. Transfer, or the impact of syntactic norms from one language on another, is a common occurrence for bilingual speakers. This may have a beneficial effect such as promoting learning or negative effects by creating interference in learning. For instance, grammatical mistakes in one or both languages may result from Urdu's Subject-Object-Verb (SOV) structure interfering with English's Subject-Verb-Object (SVO) structure. Word order violations are more common than violations of gender representation.

Receptive vocabulary ability also impacted children's ability to correctly identify specific types of incorrect word order and gender constructions. Children's epilinguistic awareness may be correlated with higher vocabulary proficiency in a language, which supports research findings that higher vocabulary proficiency is frequently associated with improved syntactic and lexical processing<sup>20</sup>.

Reading development: Bilingualism affects Urdu-English speakers' reading development in a variety of ways. Reading comprehension and fluency are supported by cognitive benefits like improved executive functions, although reading accuracy and speed might be hampered by linguistic difficulties such script discrepancies and language interference. Effective teaching methods that take into account these difficulties and make use of cognitive advantages are crucial for helping bilingual students enhance their reading skills  $^{18\text{-}20}$ .

Despite the differences in script between L1 and L2, as well as the parallels between Arabic and Urdu (L1), children who were proficient readers in L1 were also proficient readers in L2. They also estimated their L2 word reading level based on their L1 word reading level. When given the L1 reading test in Arabic script, these bilingual kids did better, and their scores allowed them to be divided into good and poor readers. Individuals show differences in reading development based on the relative levels of proficiency in each language as well as any similarities or differences between the L1 and L2 scripts. This is particularly important if the bilingual readers exhibit low literacy levels in their L1. Bilinguals create special reading techniques that make use of both languages. Understanding Urdu script, for example, can help in identifying English morphological patterns and cognates, which can speed up vocabulary acquisition<sup>20</sup>.

# **DISCUSSION**

The overall review and synthesis of the chosen studies have shown that the field of study on bilingualism and language development has moved from concentrating on how bilingualism affects language processing externally to focusing on how bilingualism affects language processing internally. Bilingualism is consistently associated with cognitive benefits, particularly in the realm of executive functions. Bilingual children tend to outperform monolingual peers in tasks requiring cognitive control, attention, and working memory. This enhanced cognitive ability is often attributed to the necessity of switching between two languages, which strengthens the brain's capacity to manage competing information<sup>20-23</sup>. These findings align with the systematic review, which confirms that bilingualism encourages cognitive flexibility and problem-solving skills, especially in tasks demanding inhibitory control

However, when it comes to language proficiency, bilingual children might initially have smaller vocabularies in each language compared to monolingual children. Despite this, the combined vocabulary across both languages is often equivalent to or larger than that of monolingual peers. <sup>15-18</sup> The review highlights that while bilingual children may experience slower vocabulary growth in each language individually; this effect tends to be short-lived. As bilinguals gain more exposure to both languages, they typically catch up to their monolingual peers, particularly when both languages are supported in the home and educational environments.

Bilingualism has both positive and negative effects on language development, depending on the quality of input, age of exposure, and other factors related to language dominance. Benefits include improved comprehension, effective word learning, predictive skills, and metacognitive reading strategies. However, multilingual experience has drawbacks such as difficulty learning phonemes and cross-linguistic interference 18,21,23

Bilingualism affects children who speak both Urdu and English, with benefits such as improved cognitive function and broader lexical knowledge. However, it can also have drawbacks, such as lesser vocabularies in each language when seen independently. Equal exposure to both languages is crucial, as educational plans that encourage vocabulary growth in both languages are necessary. 19,22Bilingual children's poor language transfer impacts their verbal development, specifically their pronunciation. Cross-linguistic interference is one of the primary effects of bilingualism on pluralization in Pakistani Urdu and English-speaking children. Both Urdu and English have different grammatical rules, which can cause mispronunciation 19,22-24. confusion

Syntactic awareness is another impact of bilingualism, with bilinguals often showing higher syntactic awareness than monolinguals. Reading comprehension and fluency are supported by cognitive benefits like improved executive functions, but reading accuracy and speed might be hampered by linguistic difficulties such as script discrepancies and language interference. Effective teaching methods that take into account these difficulties and make use of cognitive advantages are crucial for helping bilingual students enhance their reading skills 16-1

Code-switching, or the practice of alternating between languages in conversation, is common among bilinguals and is often misunderstood as a sign of confusion. However, research indicates that code-switching reflects linguistic competence and serves important communicative functions, such as expressing nuanced meanings or addressing different audiences<sup>22</sup>. The review underscores that code-switching is a natural behavior for 

This study suggests that bilingual speakers of Urdu and English have significant benefits from bilingualism in terms of syntactic awareness and growth. Bilinguals gain from increased syntactic awareness and cognitive advantages, but they may also encounter difficulties because of cross-linguistic effect. Crosslinguistic transfer is advantageous for bilingual kids, but it can also cause problems, especially when they're starting to read in English. Bilingual children can become good readers with the support of educational practices that encourage balanced literacy in both languages and offer assistance for the particular difficulties presented by each language<sup>23-24</sup>.

Bilingualism also has social and cultural implications, often fostering greater cultural awareness and empathy as bilingual individuals navigate multiple cultural contexts. This dual exposure can enhance social skills and broaden worldviews, although the review also notes potential social challenges, such as identity conflicts or feelings of marginalization in environments where one language is dominant. Despite these challenges, bilingual individuals frequently report a stronger sense of cultural connectedness and adaptability, especially in multicultural settings.

## CONCLUSION

In conclusion, the systematic review reaffirms the positive influence of bilingualism on cognitive development, language proficiency, and social skills. Although bilingualism can present initial challenges, such as smaller vocabulary sizes in each language, it ultimately promotes cognitive flexibility, cultural adaptability, and academic success. The findings support the growing recognition of bilingualism as a linguistic asset rather than a disadvantage, highlighting the importance of providing bilingual children with adequate support and language exposure to maximize their developmental potential.

Limitation: The review acknowledges several limitations in the current body of research on bilingualism, including a focus on specific language pairs that may not generalize across all bilingual contexts. There is also a need for more longitudinal studies to track bilingual development over time and provide insights into long-term outcomes. Future research should explore the roles of socioeconomic status, quality of language exposure, and educational support in shaping the bilingual experience.

Future Research and Gap: This study highlights the need for further research on bilingualism, particularly in Urdu and English speakers. Future longitudinal studies should examine the effects of bilingual education interventions on syntactic awareness and children's cognitive development beneficiaries and analyze how such interventions can enhance balanced literacy. It is established that it is possible to build greater syntactic and cognitive abilities by taking advantage of cross-linguistic transfer. For a future research, it is recommended to work on social and cultural realities, multicultural identity struggles, and multicultural empathy. Such circumstance could have an impact in educational policy and intercultural communication in multicultural diverse societies.

Implication and Contribution: The study further recommends that bilingual education programmes should foster balanced literacy practices in Urdu and English with regard to inter and intra linguistic issues. The difficulties in understanding of lower order of English should be detected and addressed by teachers and training them on this aspect is necessary especially when the learner is in the lower classes. Care-givers of the bilingual children should encourage them at home and should have literatures as well as involve themselves in cultural relevance activities. This is why, schools should support models of bilingualism and multiculturalism as it is possible in some schools to experience identity crises or even marginality. Thus, the policies in the field of education should encourage bilingual education and the use of multiple language in schools. Much care should be taken in managing the bilingual children when they are in dominant school environments so that they do not have isolated feelings. With reference to such realistic issues, this paper concludes that bilingual Urdu-English speakers can be productive at academic, interpersonal, and cultural levels.

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**Author Contributions: AF:** Conceptualization, original draft, methodology, **NB:** Critical review, **SA:** Data duration, **FA:** Formal Analysis, **SI:** Methodology, review and editing, **GF:** Results, proof reading

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