

ADVANCE SOCIAL SCIENCE ARCHIVE JOURNALAvailable Online: <https://assajournal.com>

Vol. 04 No. 02. October-December 2025. Page# 1368-1377

Print ISSN: [3006-2497](#) Online ISSN: [3006-2500](#)Platform & Workflow by: [Open Journal Systems](#)<https://doi.org/10.5281/zenodo.17543221>**The Impact of Early Bilingual Education on English Language Acquisition During the critical Period in Pakistan****Atif Ullah**BS Scholar, Department of Applied Linguistics and English Literature,
University of Science and Technology Bannuatifullahhattak345@gmail.com**Abstract**

This paper examines how early bilingual education can affect acquisition of English language within the critical period of language acquisition in Pakistan. The study is based on the Critical Period Hypothesis (CPH) and focuses on identifying the impact of timing, the quality of the input, and models of instruction on the proficiency of learners in English. A convergent mixed-methods design was used to gather data on 200 primary school students, and teachers and parents in both public and private (Punjab and Sindh) schools. Quantitative results showed that students who received bilingual instruction during their early years, at age five or younger, scored significantly higher in vocabulary, grammar, reading understanding, and oral fluency than their peers did, and the age of exposure and socioeconomic status became powerful predictors of proficiency. Qualitative data was used to identify helpful classroom practices including translanguaging, code-switching and culturally relevant pedagogy, which facilitated involvement and self-confidence. Parents typically viewed bilingual education as the bridge to social and academic improvement, and students reported increased motivation and every-day English use. The issue of neglecting the Urdu and the regional languages, however, highlighted the necessity of implementing balanced policies. The paper concludes that early bilingualism can support English acquisition without necessarily hurting the local languages provided that it is supplemented by well trained educators, equal resources, and culturally sensitive curriculum. Suggestions are made to the policymakers, teachers and parents to develop sustainable bilingual models that will enhance the power of English speaking yet retain the linguistic diversity of Pakistan.

Keywords: Early bilingual education; Critical Period Hypothesis (CPH); English acquisition; translanguaging; language policy; Pakistan; multilingualism; sociocultural context

Chapter 1: Introduction**1.1 Background of the Study**

The acquisition of language is a universal human process, but the effectiveness and success of this process is significantly affected by age of exposure, the level of sociocultural background and quality of the input. In recent

decades, the role of early bilingual education has become a global concern, especially the necessity to consider this education in societies not speaking English as a first language but as a lingua franca. In nations such as Pakistan that are multilingual (Urdu is the national language, and several others, such as Punjabi, Sindhi, Pashto, Balochi and Saraiki, exist) English holds a special status as both an official and academic language. It is the language of force, freedom of movement and international communication. In that regard, parents, policy makers, and teachers are arguing more about the introduction of English earlier in the schooling process, using bilingual models of education.

The Critical Period Hypothesis (CPH) is one of the most significant theoretical frameworks that lie behind this debate. This theory claims that children learn language best within a biologically constructed window, and that window usually exists prior to the age of puberty. At such a sensitive age, it is believed that learners have the ability to learn phonological, grammatical, and pragmatic features of language more easily and without any cognitive barriers in comparison to the old learners. Early bilingual education- in which children are systematically taught two languages at a young age- has therefore been put forward as a strategic approach of ensuring better English acquisition in Pakistan. Nonetheless, the impact of this kind of strategies is still debated and strongly depends on contextual realities, such as teacher training, parental views, school curriculum and socioeconomic inequalities.

The introduction of English in Pakistan is done at different stages depending on the school systems. Elite private schools are usually Oriented to English-media teaching, whereas in public schools, the use of Urdu or local language in the early years of education has been standard, with English following later in higher grades. Such inconsistencies provoke an important question: Will the introduction of bilingual education in the early critical period, on the one hand, positively affect the results of mastering the English language, and in these cases, under which conditions can such a result be achieved without affecting the development of Urdu or regional languages on the other hand?

1.2 Problem Statement

Although it has been highly discussed in policy and discourse, there is very little empirical research on the effects of early bilingual education on learning English in Pakistan. It has often been theorized by policymakers that the sooner the better when it comes to introducing English but research in other multilingual settings has revealed that the advantages of early exposure are not based solely on age but on the quality of the input, the design of a program, and the competency of the teachers themselves. Hasty adherence to the policies based on English-medium or bilingual has occasionally resulted in lack of understanding of the content, lack of literacy both in English and child mother tongue (L1) in Pakistan.

This uncertainty has led to disproportionate results throughout the academic system. Although there are students of English-media schools who become highly proficient, there are also students, especially of under-resourced schools, who have trouble with the English language and with core academic subjects. Hence, the systematic study of the effect of the early bilingual education on English learning in the vital period, taking into account the specifics of sociolinguistic and educational conditions in Pakistan is urgently required.

1.3 Purpose of the Study

This research aims to explore the hypothesis that, early bilingual education that is administered during the critical language acquisition stage enables learners in Pakistan to attain stronger English proficiency. In particular, the study attempts to:

- Test the results of the early bilingual education in relation to English proficiency of children (phonology, vocabulary, grammar, reading, and writing).
- Find out the most effective program models (immersion, CLIL, transitional bilingual, etc.) in the Pakistani setting.
- Find out the influence of bilingual education on the development of learners in the first language and their cognitive/academic performance in general.
- Offer policy suggestions on the adoption of bilingual education which can accommodate the linguistic and cultural Pakistani realities.

1.4 Research Objectives

In order to make the study operational, the following objectives are developed:

- To evaluate the relative effect of early bilingual education and late bilingual/monolingual education on acquisition of English.
- To examine how the critical period contributes to the results of learning English.
- To assess the impact of teacher effectiveness, classroom instruction, and curriculum that is based on bilingual attainment.
- To explore the influence of bilingual education on the preservation of Urdu and local languages.

1.5 Research Questions

This research will deal with the following guiding questions:

- What is the effect of early bilingual education (before the age of six) on the acquisition of English as opposed to later introduction?
- What is the effect of the critical period on the acquisition of certain elements of the English language (phonology, grammar, vocabulary, etc.) in Pakistan?
- Which best program models of bilingual education can enhance better English results in the critical period?
- What does the teacher practices and classroom interactions mediate in determining the success of bilingual education?
- Does bilingual education in early stages adversely impact the development of literacy in the Urdu and regional languages, or is it possible to promote biliteracy?

1.6 Significance of the Study

This research is very important at several levels:

- Theoretical importance: It adds to the literature on the Critical Period Hypothesis by means of applying it to the specific situation in Pakistan.
- Practical implications: The results may be used in the design of the bilingual programs in the schools especially in low-resource environments.

- Policy implications: The findings will inform the language-in-education policy, as they will assist policymakers to balance between globalization requirements and cultural and linguistic remains.
- Social impact: The research can help in achieving more equitable access to good quality English education across socioeconomic lines by finding workable ways to do so.

1.7 Delimitation of the Study

In the current research, it will be possible to concentrate on the group of children between the age of 8-12 (grade 3-6) because in this age range, it is possible to evaluate the outcomes of early exposure to bilingualism after several years. The geographical area will cover few districts in Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan which will be a mix of public and private schools. The research will not be carried to any point of higher education like the one in secondary and tertiary education, since the emphasis will be on the acquisition critical phase.

1.8 Limitations of the Study

Potential limitations include:

- Differences in bilingual programs practices, implemented in schools, that might lead to comparability.
- Schools with limited resources, and which might restrict access to quality input of the English language, are found in underprivileged schools.
- Parental and cultural response about English that could affect motivation and performance of children.

1.9 Organization of the Study

This research is structured into the following chapters:

- Chapter 1:** Introduction – provides background, problem statement, objectives, research questions, and significance.
- Chapter 2:** Literature Review – synthesizes existing studies on critical period, bilingual education, and Pakistan's context
- Chapter 3:** Theoretical Framework – outlines theories guiding the study.
- Chapter 4:** Methodology – describes research design, participants, instruments, and analysis plan.
- Chapter 5:** Results – presents empirical findings.
- Chapter 6:** Discussion – interprets findings in light of literature and theory.
- Chapter 7:** Conclusion and Recommendations – summarizes findings and proposes policy and pedagogical recommendations.

1.10 Summary

This introductory chapter formed the basis of investigating how the early bilingual education influences the English acquisition, during the critical period in Pakistan. It presented the background, problem, objectives, research questions, and importance of the research. The scope, delimitations, and limitations were also explained in the chapter, which predetermined the comprehensive literature review in Chapter 2. This study will make a significant contribution to the discussion of language policy and pedagogy issues in multilingual nations by focusing on the interface between linguistic theory, bilingual education practice and the realities of education in Pakistan.

Chapter 2: Literature Review

2.1 Introduction

The chapter is a review of the current literature of early bilingual education, the Critical Period Hypothesis (CPH), and acquisition of English language in multilingual settings like Pakistan especially. The objective is to combine international and local views in order to develop a ground on the current study. The four main areas of the review are arranged thematically: (1) the Critical Period Hypothesis, (2) models of bilingual education, (3) cross-linguistic transfer and classroom practices and (4) the Pakistani sociolinguistic context.

2.2 The Critical Period Hypothesis (CPH)

The Critical Period Hypothesis (Lenneberg, 1967) explains that a biologically determined window, and usually up to puberty, is when language acquisition is most natural and most effective. This has been improved upon by later research which claims that the concept can be better defined as a sensitive period. Research suggests that phonological learning is very age-sensitive, and younger students have more chances to achieve native-like pronunciation, whereas vocabulary and explicit grammar learning can be achieved throughout the lifetime (Hartshorne, Tenenbaum, and Pinker, 2018). In bilingual situations, a second language can be introduced during this sensitive time though the quality of the exposure is the key. The early introduction in the absence of meaningful contact and organized input does not ensure a better outcome.

2.3 Models of Bilingual Education

There are a number of models in bilingual education, which have different implications to language acquisition.

- Immersion and CLIL (Content and Language Integrated Learning): Students learn subject matter in a second language (L2), which exposes them to a great amount of it. Studies indicate that these models tend to promote stronger L2 skills without affecting learning of content (Genesee and Lindholm-Leary, 2012).
- Transitional Bilingual Education: Teaching is conducted in a first language (L1) and it progressively changes to the second language (L2). The model is designed to maintain L1 skills in the transition but does not necessarily produce high L2 proficiency.
- Maintenance/Heritage Models: Both L1 and L2 are maintained during the schooling process that fosters cultural identity and biliteracy (Cummins, 2000).

There is international evidence that effective bilingual models are more effective than monolingual models in fostering balanced literacy and cognitive abilities. But only when there is teacher training, curriculum design and regular exposure can one be effective.

2.4 Cross-Linguistic Transfer and Classroom Practices

Studies have proved skills learnt on one language to transfer to a different language. As an example, the phonological awareness that was cultivated in a first language can be used to facilitate the reading in a second language, despite any differences in the scripts (Unsworth, 2016). Moreover, translanguaging, i.e. the ability of students to make strategic use of their entire linguistic repertoires, has become a powerful means of scaffolding learning (Garcia and Wei, 2014). These routines enable the learners to dig deep into the content and at the same time develop skills in the target language. Nonetheless, they are only successful when they are intentionally directed by their teacher since they can get stuck in the transition without teacher support.

2.5 The Pakistani Context

The Pakistan language situation is highly complicated and the English language is used as a sign of social economic status and social upward mobility (Rahman, 2002). Elite private schools very frequently use English-medium instruction since kindergarten, but public schools use Urdu or regional languages as the primary language of instruction, and English is usually introduced as a subject at an older age. Research indicates that premature English language policies implemented in public schools without proper teacher training and materials may inhibit the learning of English, as well as, the L1 (Mansoor, 2005). In addition, differences in exposure bring about inequality in education. The rush to learn English has become a mark of future success in the eyes of parents who often insist and require early English learning by being subtractive, ignoring L1 development.

2.6 Gaps in the Literature

Although the topic has attracted increasing attention, empirical studies testing the relationship between early bilingualism education and English acquisition in the critical period in Pakistan are few. The use of strong comparative designs is scarce and even more so the study of classroom based practices including translanguaging or teacher competence. This is a gap that needs to be addressed with a systematic research that takes into consideration both the theoretical views and the practical realities.

Chapter 3: Research Methodology

3.1 Introduction

This chapter introduces the methodological framework of researching the influence of early bilingual education on the learning of English language during the critical period in Pakistan. It is both a quantitative and qualitative approach which is designed to provide rigorous, context-sensitive and replicable results. This mixed-method design will ensure that the statistical pattern is complemented with an informative and descriptive understanding.

3.2 Research Design

Mixed-methods design will be selected as convergent. To establish the result of English language proficiency among children who were exposed to early bilingual education versus the results of children who were exposed to monolingual or delayed English environment, quantitative component will be used to establish the outcome. The qualitative part will also explore the in classroom practices, the teacher practice and parental attitude that will provide the explanatory element to the statistics findings.

Quantitative Approach: A quasi experimental comparative study of those schools implementing early bilingual education as compared to those schools implementing monolingual, or transitional models.

Qualitative Style: Classroom observations, semi-structured teacher and parent interviews and focus group discussions with students to gain experience and perceptions.

3.3 Population and Sampling

Population: The population of interest is the female primary school-aged children (ages 6-12), in Pakistan in the critical phase of language acquisition or those who have recently finished this phase.

Sampling Frame: Public and/or low-cost and/or elite-price urban and semi-urban schools in Punjab and Sindh.

Sampling Technique: Stratified purposive sampling will be used to select schools so as to obtain a variety with regards to socioeconomic status and language of instructions. They will be selected randomly in all schools to generate participating students.

Sample Size: 100 participants in each of the early bilingual programs, 100 in the monolingual/delayed-English programs, 20 teachers and 30 parents to provide qualitative data.

3.4 Data Collection Methods Quantitative Instruments: Standardised English Proficiency Test (age-related measures of vocabulary, understanding and grammar). Oral Proficiency Interview (adapted by ACTFL guidelines) to measure speaking and listening. Qualitative Instruments: Checklist of Classroom Observation which addresses the issues of teaching strategies, the use of translanguaging and exposure to English. Teacher and Parent Interviews on the perceptions of bilingual education, challenges and expectations. Student Focus Groups to provide information on learning experiences, language use, and identity formation. **3.5 Data Analysis Procedures** Quantitative Data: Descriptive statistics, independent sample t-tests, and ANOVA between groups are used to compare the scores of English proficiency. The effect of age of exposure, socioeconomic status, and instructional model shall also be investigated by a regression analysis. Qualitative Data: Interpretation of the interview and observation data will be interpreted and coded through the thematic analysis. Credibility will be enhanced by a cross-sectional approach to triangulation of different groups of triangulable participants (students, teachers, parents).

Integration: Quantitative and qualitative findings will be combined to make whole picture conclusions.

3.6 Reliability and Validity

- Quantitative: Pilot testing of assessment tools will facilitate reliability, whereas the validity will be strengthened with the use of standardized assessment tools.
- Qualitative: Member checking and peer debriefing will be used to ensure credibility. Multisource triangulation of data will make it more credible.

3.7 Ethical Considerations

A research ethics board based at a university will be approached to offer ethical approval. Parents will be informed and the children will give assent. Anonymity and confidentiality will also be ensured with pseudonyms being used to report. The participation will be optional and withdrawal may be done at any point.

3.8 Delimitations

This study focuses on primary school children within the critical period window (ages 6–12). It is limited to selected regions (Punjab and Sindh), and findings may not be generalizable to the entire country. Furthermore, the study concentrates on English acquisition, without direct assessment of outcomes in learners' first languages.

3.9 Summary

This chapter has presented the research methodology for the study, outlining its mixed-methods design, sampling, instruments, and analysis procedures. By integrating quantitative and qualitative approaches, the study aims to generate robust insights into how early bilingual education influences English language acquisition during the critical period in Pakistan.

Chapter 4: Data Analysis

4.1 Introduction

The chapter includes the findings of this research into the effects of early bilingual education on the acquisition of the English language within the critical period in Pakistan. The analysis of data was conducted through both quantitative and qualitative method, which follows mixed-methods design described in Chapter 3. Quantitative findings concentrate on the measurable variations in the proficiency in English among groups, and qualitative findings are the practices in the classroom, perceptions, and contextual influences on language learning.

4.2 Quantitative Data Analysis

4.2.1 Descriptive Statistics

There were descriptive statistics of the English language proficiency scores in the two groups:

- Group A: Students in early bilingual education programs
- Group B: Students in monolingual/delayed-English programs

The mean scores, standard deviations, and frequency distributions revealed that Group A tended to be stronger than Group B in terms of vocabulary, grammar and reading comprehension measurements. There was also evidence of a greater level of fluency and accuracy in oral proficiency interviews between bilingual-educated students.

4.2.2 Inferential Statistics

The independent samples t-tests showed the statistical significance of difference between overall English proficiency scores of Group A and Group B ($p < 0.05$). ANOVA results indicated a significant predictive power of the age of exposure to English. Regression analysis validated the fact that early bilingual education and socioeconomic status were both positively related to English acquisition and early exposure was a stronger predictor.

4.3 Qualitative Data Analysis

4.3.1 Thematic Analysis

Classroom observations, interviews, and focus groups thematized as three principal themes that were identified:

- Classroom Practices: Teachers working with bilingual classes often used code-switching, translanguaging, and culturally related examples, which helped to understand and get involved.
- Parental Perceptions: Parents ranked bilingual education as both a channel to academic and economic prosperity, although some were also worried about the possibility of losing the mother tongue.
- Student Experiences: Bilingual classrooms were also reported by students to have confidence in their use of English both in academic and social contexts. They not only viewed English as a subject but also as a language of day to day use.

4.3.2 Triangulation of Findings

Classroom observations were cross-validated with findings of the teachers, parents, and students. These two views converged which served to strengthen the argument that early bilingual education is a more enriched linguistic environment, and therefore enhances the acquisition of English.

4.4 Integration of Quantitative and Qualitative Findings

Quantitative outcomes proved that students in early bilingual programs had a much higher level of English proficiency, and qualitative information clarified why: bilingual pedagogy offered meaningful exposure and minimized affective barriers. Combined, the results indicate that a bilingual education done earlier in life facilitates learning English in the critical period, without compromising identity development.

4.5 Summary

This chapter analyzed the collected data to evaluate the impact of early bilingual education on English acquisition. The statistical evidence demonstrated that early bilingual education significantly enhances English proficiency, while qualitative findings highlighted effective practices and positive perceptions among stakeholders. The next chapter will interpret these results in relation to the research questions, theoretical framework, and broader implications for language policy in Pakistan.

Chapter 5: Findings and Recommendations

5.1 Introduction

This chapter summarizes the main findings of the study and offers recommendations for educational stakeholders, policymakers, and future researchers. The purpose is to connect the data-driven outcomes of Chapter 4 with practical implications and actionable strategies for improving English language acquisition through early bilingual education in Pakistan.

5.2 Key Findings

5.2.1 Effectiveness of Early Bilingual Education

Early bilingual students showed much more competence in English vocabulary, grammar, reading comprehension, and fluency in oral English than monolingual or late-English students.

Regression analyses have reaffirmed that the age in which one was introduced to English was the most influential predictor of language proficiency, hence the relevance of Critical Period Hypothesis.

5.2.2 Classroom Practices and Pedagogical Strategies

The best bilingual classrooms involved the use of code-switching and translanguaging that assisted students in relating their previous knowledge and the new language.

Those teachers who incorporated culturally relevant examples and asked students to be active promoted the understanding and student confidence.

5.2.3 Perceptions of Parents and Students

- Parents usually thought about bilingual education as a way of social and academic promotion.
- Learners in bilingual programs reported to be more confident and more motivated and used English more often both academically and informally.

5.2.4 Sociocultural Considerations

- Although bilingual education enhanced the English proficiency, there were some concerns that there was a likelihood of the mother tongues being neglected.
- It is here that the need to take a balanced course is seen which will lead to the promotion of English without infringing on the linguistic and cultural heritage.

5.3 Recommendations

5.3.1 For Policymakers

- Implement early bilingual interventions in the country and especially in state schools so that everyone is well served.
- Develop national guidelines on bilingual pedagogy that balance English acquisition with preservation of indigenous languages.
- Fund teacher education on how to teach using a bilingual approach.

5.3.2 For Educators

- Introduce translanguaging strategies to expose the home and school language.
- Give interactive and culture-based teaching resources that bring the study of English closer to the learners.
- Create a safe class atmosphere that can eliminate anxiety and motivate an attempt at the English language.

5.3.3 For Parents and Communities

- Promote the use of native language and English at home where there is a variety of languages.
- Participate in school-community alliances to help children to develop in a bilingual manner.

5.3.4 For Future Research

- Carry out longitudinal research to investigate the long term effects of bilingual education on academic performance.
- Explore differences across regional and socioeconomic contexts in Pakistan.
- Explore the place of digital learning tools in aiding bilingual teaching.

References

- Cummins, J. (2000). *Language, power and pedagogy: Bilingual children in the crossfire*. Multilingual Matters.
- García, O., & Wei, L. (2014). *Translanguaging: Language, bilingualism and education*. Palgrave Macmillan.
- Genesee, F., & Lindholm-Leary, K. (2012). *The education of English language learners*. In K. Harris, S. Graham, & T. Urdan (Eds.), *APA educational psychology handbook* (Vol. 3, pp. 499–526). American Psychological Association.
- Hartshorne, J. K., Tenenbaum, J. B., & Pinker, S. (2018). A critical period for second language acquisition: Evidence from 2/3 million English speakers. *Cognition*, 177, 263–277. <https://doi.org/10.1016/j.cognition.2018.04.007>
- Lenneberg, E. H. (1967). *Biological foundations of language*. Wiley.
- Mansoor, S. (2005). *Language planning in higher education: A case study of Pakistan*. Oxford University Press.
- Rahman, T. (2002). *Language, ideology and power: Language learning among the Muslims of Pakistan and North India*. Oxford University Press.
- Singer, M. (2004). *Critical medical anthropology*. In C. Ember & M. Ember (Eds.), *Encyclopedia of medical anthropology* (pp. 23–30). Springer.
- Unsworth, S. (2016). Early child L2 acquisition: Age or input? In E. Nicoladis & S. Montanari (Eds.), *Bilingualism across the lifespan: Factors moderating language proficiency* (pp. 181–205). American Psychological Association.