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The effects of the usage patterns of the heritage language and the second language on preschool children's vocabulary learning

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Abstract:

In bilingual families, the usage patterns of the native language and the second language indeed make a significant difference in children's vocabulary learning. Different home environment uses different language patterns, for example, one-parent-one-language or situation-based language use, which affected by many factors, like child characteristics, parents' attitude, preschool education, community support and so on, bringing different linguistic inputs and experiences to children, thereby influencing their vocabulary acquisition and language development. For this phenomenon, taking the case of Singapore. Singapore is a bilingual country, however, it shows a noticeable increase in English usage at home in recent years, which results in a difference of input between English and heritage languages like Chinese or Mandarin in many families, especially for those Migration families.

Keywords: preschool children; vocabulary learning; language usage pattern; bilingual; family; school; heritage language; the second language; Singapore

1. Introduction

"The development of heritage languages (HL) for young children is an under-researched but emerging area of early bilingualism because of its strong social relevance" (Cummins, 2001, 2005; Montrul, 2010; Ortega, 2019). In Singapore, HLs is often regarded as the native language. However, as suggested by Cummins (2005, p. 586), "Children who grow up in these kinds of homes may encounter HL outside their homes, as a second language (L2)".

At present there are still some problems about the relationship between family language patterns and bilingual children's language and vocabulary use, which exists in some early works. "Family language patterns maybe related to the amount and type of import that children are exposed to, but these patterns and the types of input are not equivalent: families that adopt a particular family language pattern (e.g., one-parent-one language (OPOL)) may still differ in the amount and type of language input they provide to the child" (Verhagen et al.,2022).

I pay attention to child-receptive vocabulary because it is widely recognized as necessary for language

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understanding and expression. “Vocabulary development is associated with later academic achievement in children (August, Carlo, Dressler, & Snow, 2005) as well as progress in other areas” (e.g., phonological awareness: De Jong, Seveke, & van Veen, 2000; and reading comprehension: Proctor, Uccelli, Dalton, & Snow, 2009). Vocabulary learning is one of the most necessary linguistic developments in early childhood, which affected by parental attitudes, family language environment, socioeconomic status, school education, community support and many other factors. As such, this phenomenon is the emphasis of the current research. Thus, my research question is How does the usage pattern of Chinese L1 and English L2 in bilingual families affect preschool children’s vocabulary learning?

2. Methodology

The research project that I’m going to do is a systematic review. When searching for relevant literature on the topic, one can adopt the following strategies to ensure comprehensive and accurate search results:

Define Key Search Terms

Choose Appropriate Search Engines and Databases

1, Academic Search Engines:

Google Scholar: Provides extensive links to academic resources, including journal articles, dissertations, etc.

2, Specialized Databases:

CNKI (China National Knowledge Infrastructure): The largest Chinese literature database in China, covering journals, dissertations, conference papers, etc.

ERIC (Education Resources Information Center): A database specializing in educational literature in English. Providing educational resources such as educational literature, research reports, journal articles, conference papers, etc.

ProQuest: Boasting a vast information resource library that encompasses journals, newspapers, books, and more across numerous academic disciplines, providing scholars and researchers with a rich resource of degree thesis materials.

Web of science: an essential tool for researchers seeking to stay up-to-date with the latest developments in their fields, covers all areas of science, technology, education, and humanities.

Set Search Scope, Limitations and Criteria

1, Time Range: Specific time frames can be set to search for the latest or particular period’s literature, like within ten to fifteen years.

2, Document Types: Journal articles, dissertations, research reports, etc.

3, Language Restriction: Choose to search for English literature.

4, Inclusion Criteria and Exclusion Criteria:

	Inclusion Criteria	Exclusion Criteria:
1	Complete Reference	Incomplete Reference
2	Relevant to assessing the effects of the usage patterns of heritage and the second language on vocabulary acquisition.	Not relevant to assessing the effects of the usage patterns of the heritage language and the second language on vocabulary acquisition.
3	Published within fifteen years	Published beyond fifteen years
4	Conducted with preschool children	Participants are not preschool children.
5	Research focus on vocabulary	Any study or any topic other than vocabulary.
6	Only looking at preschool children from bilingual families.	Preschool children are not from bilingual families.
7	Outcomes are presented in the form of graphs or tables, and reasonable explanations were provided.	Outcomes are not presented in tabular form, and the conclusion is not clearly explained.
8	Research have a clear experiment with data processing and comparative analysis.	Research design without experiment and its result without data processing and comparative analysis.

Browse and Filter Results

1, Preview Abstracts: Quickly scan through the abstracts of search results to determine their relevance to the topic.

2, Read Full Texts: For highly relevant literature, further read the full texts to obtain detailed information.

3, Select High-Quality Literature: Focus on publications in authoritative journals and those with high citation counts.

Record and Organize

1, Record Literature Information: Note down key information for each document, such as title, author, publication year, journal name, abstract, etc.

2, Classify and Organize: Sort the literature based on research content, methodology, experiment design, conclusions, findings, etc., for ease of subsequent analysis and citation.

Utilize Citation Tracking

1, View References: When reading a document, explore

its reference list to discover more related literature.
2, Track Cited Literature: In academic search engines, check the citation status of a document to trace the latest research progress in the field.
Extraction Data
1, Research Design: Review the methodology section to understand the study's sample size, sample characteristics (such as age, gender, language background), sampling method, data collection tools, etc. For instance, extract the sample size (e.g., 805 Singaporean children) and their age range (e.g., from 4 years to 5 years 8 months) from the "Participants" section.
2, Variable Measurement: Record the details of standardized tests and questionnaires used to measure internal and external factors. For internal factors, these might include nonverbal intelligence (measured using Raven's Colored Progressive Matrices), phonological awareness (assessed by the omission and mixing subtest of the speech Processing Synthesis Test) and working memory (assessed using the Backward Digit Recall test). External factors may be collected through parent questionnaires, including factors such as home language exposure, media input, number of books, family socioeconomic status, etc.
3, Statistical Results: Examine the results section, particularly focusing on tables, graphs, and the outcomes of regression analyses. Extract the mean, standard deviation, correlation coefficients, and regression coefficients for key variables from the tables. Pay attention to noting the β coefficients, standard errors, t-values, and significance levels for each predictor variable in the regression analyses.

3. Result

Number and Types of Studies
1, Number: Five articles were included in the study.
2, Types: All studies fall under the category of empirical research, verifying hypotheses or exploring problems through collecting and analyzing the actual data. These types integrate both quantitative and qualitative methods.
Sample Size and Selection
1, Sample Size: Studies typically require larger sample sizes to ensure representativeness and reliability. For instance, the literature of "Differential effects of internal and external factors" involves 805 Singaporean kids; "Home and community factors influencing bilingual children's ethnic language vocabulary development" comprises 282 Singaporean kindergarten children hailing from diverse ethnic backgrounds (Chinese, Malay, and Indian), with Mandarin, Malay, and Tamil as their respective native languages, all of whom are also learning English.
2, Sample Selection: The above two literature specifically focus on children in bilingual environments in Singapore, ensuring cultural and linguistic specificity in the sample, considering representativeness and specific group characteristics.
Research Methods
1, Quantitative Methods: These studies commonly employ quantitative tools like questionnaires and standardized tests to collect data about family background, parental education levels, household incomes and language usage habits. For example, the document I mentioned about the influence of family and community factors on bilingual children's ethnic language vocabulary development that uses a translated version of the Peabody Picture Vocabulary Test-III (PPTV-III) to evaluate the vocabulary of the first language of children.
2, Qualitative Descriptions: In addition to quantitative data, researchers provide detailed descriptions of phenomena and results, facilitating comprehension of the underlying reasons and mechanisms behind the quantitative findings.
Result Presentation
1, Data Analysis: Researchers utilize various statistical methods, such as regression analysis and paired-samples t-tests, to analyze data.
2, Result Interpretation: The results section typically includes detailed explanations of data analysis outcomes, coupled with discussions grounded in existing theories and literature.
Result Assessment
1, Internal and External Factors: These studies consistently find that both inner elements (e.g., nonverbal intelligence, language aptitude) and outer elements (e.g., language import, family socioeconomic status, preschool education, community language environment) significantly influence children's language and cognitive development.
2, Theoretical Contributions and Practical Applications: The commonality among these literatures lies in their adoption of empirical research methodologies, examining specific domain issues through the collection and analysis of both quantitative and qualitative data. The samples are representative and specific, and the data analysis methods are diverse and rigorous. The results not only elucidate the mechanisms behind phenomena but also contribute valuable insights to theory and practice.

4. Discussion

Finding
1, Influence on the First Language First Model on Bilingual Children's vocabulary learning:
The study found that in the First Language First model, where kids first receive language education in their native

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language (L1) environment and gradually introduce second language (L2) education, it does not hinder bilingual children's progress in L2 vocabulary development. Specifically, compared to bilingual children who receive early L2 immersion education in a monolingual environment, bilingual children under this model do not show developmental delays in L2 vocabulary depth.

The findings challenge the prevalent notion that "the earlier the start of L2 learning, the better," suggesting that introducing L2 education after relatively mature native language acquisition can effectively promote balanced development in both languages among bilingual children.

2, Influence of Family and Socioeconomic Background:

Saravanan has said in his work in 2001,"The higher the SES of the parents, the lower the ethnolinguistic ability of the children. It has also been noted that parents with higher SES tended to be more proficient in English and choose to use it more with their children, because schooling is through English as a medium."

"This finding indicates the significance of language import for HL maintenance in bilingual children found in previous research" (e.g., Dixon et al., 2012, in the context of Singapore; Duursma et al., 2007; Hammer et al., 2009, using the United States as an example), where children have higher HL vocabularies when parents speak HL at home and lower HL vocabularies when parents use English at home.

3, The influence of Internal and External Elements on English Language studying and Native Language studying:

Internal contributors (such as nonverbal intelligence, phonological awareness, and working memory) contribute significantly to English vocabulary development. External contributors (like family language assimilation, media exposure, home reading atmosphere) contribute more significantly to native language vocabulary development.

Limitations

1, Data collection methods: If data is primarily obtained through questionnaires or interviews, there may be recall bias or social desirability bias.

2, Sample limitations: The study may be limited to children in specific regions or age groups, and the results may not be fully applicable to a broader population.

3, Subjectivity in variable measurement: Measurements of family environment and socioeconomic status rely on parental reports, which may introduce bias.

4, Absence of a control group: Without a control group in the study, it is difficult to definitively identify the specific effects of bilingual advantages.

Implications

1, The paper emphasizes the significant impact of family environment, school education, and socioeconomic status on children's bilingual proficiency, providing educators and policymakers with strategies to optimize children's growth environments.

2, It suggests that future research should adopt a longitudinal design to receive an in-depth comprehend of the long-term trajectory and influencing factors of bilingual proficiency development.

3, It reveals the distinct roles of inner and outer contributors in English learning procession in bilingual family, offering theoretical support and practical guidance for bilingual education.

4, The study underscores the crucial character of the linguistic environment in the procession of kids' bilingual proficiency, suggesting that future research should employ more objective methods of environmental assessment and explore the interactions between internal and external factors across different learning contexts.

5, It encourages future research to adopt more diverse samples and standardized measurement tools to further validate and refine the bilingual advantage.

5. Conclusion

To sum up, the literatures reveal that family language use patterns, parents' educational level, family socioeconomic status, and school environment and teaching quality significantly affect children's vocabulary development. The environment where English is the dominant language makes many children less proficient in their ethnic languages, emphasizing the importance of using ethnic languages at home. These studies also probe the influence of internal and external elements on English vocabulary learning of bilingual children in Singapore and finds that internal factors (such as nonverbal intelligence) contribute more to English vocabulary learning, while external factors (such as language input) are more important for heritage language vocabulary learning. Encouraging children to actively use bilingualism, especially heritage languages, can help promote their vocabulary growth.

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