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THE SECRETS BEHIND CHILDREN'S RAPID LANGUAGE ACQUISITION: A PSYCHOLINGUISTIC PERSPECTIVE ON EARLY CHILDHOOD LEARNING

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Abstrak *This research explores the process of rapid language acquisition in children aged 0–6 years, focusing on the psycholinguistic perspective. The study aims to uncover the primary factors influencing language learning and the mechanisms that facilitate it. Using a literature review approach, data were gathered and analyzed from academic journals, books, and case studies. The results indicate that language development is driven by biological factors, such as neuroplasticity, and environmental influences, including parental communication patterns like motherese. Furthermore, declarative and procedural memory systems play a crucial role in building vocabulary and mastering grammar. Unlike adults, children learn language more effectively through natural interactions in daily life. This research contributes to the creation of appropriate strategies for early language education. Future studies could investigate multilingual language development and the effects of digital technology on children's language acquisition.*
Keywords: *Language Development, Psycholinguistics, Early Childhood, Memory Systems*

Abstrak Penelitian ini mengeksplorasi proses pemerolehan bahasa yang cepat pada anak usia 0-6 tahun, dengan fokus pada perspektif psikolinguistik. Penelitian ini bertujuan untuk mengungkap faktor-faktor utama yang mempengaruhi pembelajaran bahasa dan mekanisme yang memfasilitasinya. Dengan menggunakan pendekatan tinjauan literatur, data dikumpulkan dan dianalisis dari jurnal akademis, buku, dan studi kasus. Hasil penelitian menunjukkan bahwa perkembangan bahasa didorong oleh faktor biologis, seperti neuroplastisitas, dan pengaruh lingkungan, termasuk pola komunikasi orang tua seperti pola asuh. Selain itu, sistem memori deklaratif dan prosedural memainkan peran penting dalam membangun kosakata dan menguasai tata bahasa. Tidak seperti orang dewasa, anak-anak belajar bahasa dengan lebih efektif melalui interaksi alamiah dalam kehidupan sehari-hari. Penelitian ini berkontribusi pada penciptaan strategi yang tepat untuk pendidikan bahasa awal. Penelitian selanjutnya dapat menyelidiki perkembangan bahasa multibahasa dan pengaruh teknologi digital terhadap pemerolehan bahasa anak-anak.
Kata Kunci: *Perkembangan Bahasa, Psikolinguistik, Anak Usia Dini, Sistem Memori*

INTRODUCTION

Children's natural ability to acquire language is one of the fascinating phenomena in psycholinguistics. In a relatively short time, they are able to master language structures, expand their vocabulary, and learn pronunciation without formal education. This ability contrasts with adults, who often require more time and effort to learn a new language. The fundamental question arises: what factors enable children to acquire language so quickly and efficiently?. According to According to Chomsky (1965) cited in Sampson (2019), cited in Sampson (2019), cited in Sampson (2019), children are equipped with an innate mechanism called the Language Acquisition Device (LAD), which allows them to understand and produce language structures. This view is supported by Lenneberg (1967) cited in Siahaan (2022)'s cited in Siahaan (2022) cited in Siahaan (2022), Critical Period Hypothesis, which considers early childhood a critical period for language acquisition, when the brain is at its peak in processing linguistic information. Piaget (1926) cited in Kazi & Galanaki (2020), argues that cognitive development plays a crucial role in language learning, with children's language skills developing alongside their mental

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capacities. On the other hand, Vygotsky (1978) cited in McLeod (2022), emphasizes the importance of social interaction, suggesting that language is learned through communication with more capable individuals in the child's environment.

In addition, Tomasello (2003) cited in Tamasello (2009), presents the usage-based theory, which highlights the importance of repeated exposure to language in the child's environment. Bruner (1983) cited in Hamidi & Bagherzadeh (2018), further contributes with the concept of scaffolding, where caregivers provide structured support to help children learn language. Recent studies by Kuhl (2004) and Pinker (1994) cited in Jansen (2024), also highlight the interaction between biological factors and environmental influences in shaping children's language abilities.

While many theories have been proposed, the interaction between biological and environmental factors in supporting language acquisition remains an area that requires further research. Through this literature review, the study aims to identify key factors and psycholinguistic mechanisms underlying children's language acquisition. It is hoped that the findings will enrich psycholinguistic theory and contribute to the development of effective language teaching strategies, particularly for children during their critical language development phase.

Research Problem

Children's ability to acquire language quickly is a phenomenon that distinguishes them from adults. Children can easily understand and use grammar, vocabulary, and pronunciation even without formal learning. This phenomenon raises several important questions that are the focus of research, namely:

1. What factors play a role in the rapid acquisition of language in children?
2. How do psycholinguistic mechanisms, such as memory systems and language processing, support children's ability to learn language?
3. What causes children's language acquisition to be more efficient than adults, especially at an early age?
1. This study aims to answer these questions by exploring the role of biological factors, such as brain plasticity, and environmental factors, such as social interaction and communication patterns with parents, in facilitating language acquisition in children.

Research objective

This study aims to:

1. **Identify the main factors that influence language acquisition in children aged 0-6 years.** This study aims to reveal various biological and environmental factors that play a role in the ability of early childhood to acquire language quickly, such as brain plasticity, social interaction with adults, and the quality of linguistic input received by children at this stage.
2. **Analyze the psycholinguistic mechanisms involved in language acquisition in children aged 0-6 years.**
   This study focuses on understanding how psycholinguistic mechanisms, such as declarative and procedural memory, and language processing, contribute to the ability of early childhood to learn language quickly and effectively.
2. **Explore the role of the critical period in language acquisition in children aged 0-6 years.** This study aims to explore how the critical period at the age of 0-6 years affects children's ability to acquire language efficiently, and why this period is considered the optimal time for the language acquisition process.

3. **Comparing the language acquisition process between children aged 0-6 years and adults.**
   This study aims to examine the differences in how children aged 0-6 years and adults learn language, with a focus on how biological and social factors influence the speed and effectiveness of language acquisition in both groups.
4. **Providing recommendations for the development of more effective language teaching strategies for children aged 0-6 years.**
   This study aims to provide useful insights in designing language learning methods that are more appropriate to the developmental stages of children aged 0-6 years, based on an understanding of the psycholinguistic mechanisms that support language acquisition at an early age.

Research Object and the Data Collection

Studies on language acquisition in children have become an important topic in psycholinguistics. Several relevant studies on this topic include:

1. **Nativist Theory by Chomsky**
   According to Chomsky (1965) cited in Sampson (2019), proposed the Language Acquisition Device (LAD) theory, which suggests that children are born with an innate ability to understand and process language. LAD helps children recognize language patterns naturally without the need for formal instruction, and this view has become a major foundation for research on biological factors in language acquisition.
2. **Critical Period Hypothesis**
   According to Lenneberg (1967) cited in Siahaan (2022), introduced the concept of a critical period, which is the optimal period for language acquisition occurring between the ages of 0-12 years. During this period, children's brains are highly flexible, allowing them to learn language more quickly and efficiently than adults.
3. **The Importance of Social Interaction in Language Acquisition**
   According to Snow (1977) cited in Golinkoff, et al (2015), highlighted the role of social interaction in children's language development. He showed that child-directed speech (CDS), the way adults speak tailored to the child's abilities, provides significant linguistic input for learning vocabulary and grammar.
4. **The Relationship Between Memory Capacity and Language Acquisition**
   According to Ellis (2002) cited in Kartal & Sarigul (2017), explored the role of memory systems in language acquisition. Declarative memory enables children to store vocabulary, while procedural memory helps them learn grammar and syntax rules gradually.
5. **Brain Plasticity in Language Learning**
   According to DeKeyser (2000) cited in major (2014), studied brain plasticity and its relationship to language acquisition. He found that children's brains are more flexible than adults', allowing them to process linguistic information more quickly and effectively. These studies provide a strong foundation for understanding the extraordinary abilities of children aged 0-6 years in learning language. The findings emphasize that language acquisition is the result of an interaction between biological and environmental factors. Based on these studies, further research will deepen the understanding of the psycholinguistic mechanisms that support children's language acquisition abilities.

METHOD

This study uses a qualitative approach with a literature review method to explore the factors influencing language acquisition in children aged 0-6 years. This approach was chosen because it allows the researcher to examine previous theories and findings in-depth, providing a better understanding of the language acquisition process in children. The primary focus of this research is to understand the role of biological, cognitive, social, and environmental factors in influencing children's ability to learn language, as well as to explore the psycholinguistic mechanisms underlying this process.

The steps in the research design are as follows:

1. **Literature Review.**

   This study will conduct a thorough literature review by gathering information from various sources related to language acquisition in early childhood. The sources to be analyzed include books, journal articles, dissertations, and scientific reports from reputable institutions. The purpose of this review is to synthesize key findings that provide deeper insights into the influence of biological factors (such as brain plasticity), social interactions (such as relationships with adults), and the quality of linguistic input received by children at early developmental stages.

2. **Data Collection.**

   The data for this research will be obtained from secondary literature, specifically previous studies relevant to language acquisition in young children. The researcher will review significant works by scholars such as Noam Chomsky, Eric Lenneberg (1967) cited in Siahaan (2022), and Jean Piaget to understand the influence of various biological, social, and cognitive factors on language development.

3. **Thematic Analysis.**

   After the data is collected, it will be analyzed using a thematic approach. The researcher will identify key themes emerging from the literature, such as the role of the critical period in language acquisition, the influence of social interaction on language development, and the contribution of memory systems in language learning. This analysis aims to understand how biological, cognitive, and social factors interact to influence children's language acquisition ability.

4. **Comparative Analysis.**

   The study will also compare the language acquisition process between children aged 0-6 years and adults. The comparison will focus on the speed and effectiveness of language learning, considering the biological and social factors that impact both groups. The researcher will investigate how age differences and brain development affect the language acquisition process in children and adults.

5. **Synthesis and Recommendations.**

   Based on the findings from the literature review and data analysis, the study will propose recommendations for language teaching strategies for children aged 0-6 years. These recommendations will focus on more effective ways to support language learning in children, taking into account the psycholinguistic mechanisms involved, ensuring that language learning at an early age is maximized.

This research design aims to provide a comprehensive understanding of the various factors influencing language acquisition in young children and offer valuable recommendations for developing teaching strategies that are more suitable for their developmental stages.

Research Subjects

This study focuses on children aged 0-6 years as the main subject of the study. This age group was chosen because it is a critical period in language development, where the level of brain plasticity is very high, allowing children to learn language quickly and effectively. In addition, the subject of this study also includes an analysis of literature related to previous studies on language acquisition in children. Data sources used include academic journals, books, and scientific research reports. This information serves to support the analysis of psycholinguistic mechanisms, biological factors, and the role of the environment in language development in early childhood. The approach used does not involve collecting data directly from children, but focuses on analyzing secondary data from various studies and reliable literature. This method aims to provide an in-depth understanding of the factors that influence language acquisition abilities in children aged 0-6 years.

Research Object

This study focuses on the process of language acquisition in children aged 0-6 years, which is a crucial period in language development. This study highlights psycholinguistic mechanisms, such as the role of declarative and procedural memory, and brain flexibility, which enable children to learn and use language quickly and effectively. This study also explores environmental influences, including social interactions and language input from parents or caregivers, which play an important role in supporting children's language development. By analyzing data from various previous studies, this study aims to reveal the relationship between biological and environmental factors in the process of language acquisition at an early age. This research object was chosen because understanding language acquisition in children aged 0-6 years not only provides important contributions to linguistic studies, but also has practical applications in the field of education, especially in developing language teaching strategies that are appropriate to the stages of child development.

Data Analysis

1. **Classification of Language Acquisition Factors**
   a) Biological Factors:
      Lederberg (1967) cited in Siahaan (2022), explained that young children's brains are more flexible than adults', which helps them learn languages quickly. Example: A child exposed to two languages from birth can naturally become bilingual, while adults often struggle to learn a second language.
   b) Environmental Factors: Hart & Risley (1995) cited in Rindermann & Baumeister (2015), found that children who experience more verbal interaction with their parents develop a larger vocabulary. Example: Children who often talk with their parents about different topics tend to be better at expressing themselves. Psycho-linguistic Mechanisms: Manful (2001) stated that declarative memory helps children remember words, while procedural memory helps them understand grammar. Example: A child might memorize the word "run" with declarative memory, but procedural memory helps them learn forms like "running" or "ran."
2. **Evaluation of Psycholinguistic Mechanisms**
   Adderley (2003) cited in Belgrave (2015), showed that working memory is important for understanding complex sentences and processing language. Example: A child with strong working memory can easily understand sentences like, "The boy who is wearing a red shirt

is running," while children with weaker memory might struggle.Explanation:Working memory is crucial for children to learn new words and sentence structures, especially in situations where they need to process complex information.

3. **Importance of the Critical Period**

   Johnson & Newport (1989) cited in Hartshrne, et al (2018), found that children who learn a second language before the age of 7 perform better in grammar than those who start later. Example: A 5-year-old immigrant may speak the new language fluently without an accent, while their parents might speak it with an accent.Explanation:The critical period is the best time for children to learn a language. Once this period passes, learning becomes harder and less effective.

4. **Comparison with Adult Learning**

   Rukeyser (2000) found that adults are faster at memorizing vocabulary but struggle with complex grammar. Example: Adults can quickly learn simple words like "apple" or "house," but they often make grammar mistakes like saying "He goed" instead of "He went." Explanation: This shows that children's brains are better at learning grammar, while adults rely more on memorizing words.

5. **Applying Findings to Education**

   Tomasello (2003) cited in Ghalebi & Sadighi (2015), suggested that language learning for young children should include interactive activities. Example: Teachers can use role-playing games, like pretending to be a buyer and seller in a market, to encourage children to practice speaking. Explanation: Interactive activities help children not only learn words and grammar but also understand how to use language in real-life situations.

RESULTS AND DISCUSSION

1. **Key Factors in Language Acquisition in Children Aged 0-6 Years**

   This study shows that the brains of children aged 0-6 years have a high level of plasticity, so they can absorb and understand language quickly. This ability is supported by the function of declarative memory, which helps remember vocabulary, and procedural memory, which facilitates the learning of grammar and syntax. In addition, social interactions, such as the use of child-directed speech by parents or caregivers, provide significant linguistic input for children's language development.

2. **Psycholinguistic Mechanisms in Language Development**

   Children utilize innate psycholinguistic mechanisms to process language naturally. For example, repeated exposure helps them recognize language patterns with the support of memory systems. In addition, children's ability to actively interact with their environment accelerates language acquisition because they receive input while simultaneously practicing language output.

3. **The Role of the Critical Period in Language Acquisition**

   This analysis supports the Critical Period theory, which states that language acquisition is most effective before the age of 7. Children who receive sufficient language exposure during this period experience significant development in vocabulary, grammar, and pronunciation compared to individuals who begin learning a language after the period ends.

4. **Comparison with Language Learning in Adults**

   Unlike children, adults rely more on explicit learning processes, which are usually slower and require more effort. Reduced brain plasticity in adults is one of the main reasons why second language acquisition is more challenging than in young children.

5. **Implications for Language Education**
   These findings underscore the importance of learning approaches specifically designed for young children, such as the use of interactive materials, educational games, and social interaction-based strategies. These approaches aim to maximize children's potential during the critical period of their language development.

These results and discussion confirm that language acquisition in children aged 0-6 years is influenced by complex interactions between biological and environmental factors. These findings also provide practical directions for improving the effectiveness of language learning in young children.

General Observations

This study highlights that language acquisition in children aged 0-6 years is influenced by a complex interaction between biological, psycholinguistic, and environmental factors. Some of the main findings that can be concluded are:

1. **Critical Period and Biological Advantage**
   Children aged 0-6 years have a very high level of brain plasticity, allowing them to learn language naturally and quickly. This process is much more efficient than language learning in adults, thanks to innate mechanisms such as declarative and procedural memory that support language acquisition.
2. **The Role of Social Interaction**
   The environment, especially social interaction, plays an important role in children's language development. Child-directed speech used by parents and caregivers provides linguistic input that is appropriate to the child's developmental stage, accelerating their ability to understand and use language.
3. **Differences in Learning Strategies Between Children and Adults**
   Children learn language implicitly through everyday experiences, while adults rely more on explicit learning processes that require conscious effort and more time. This difference underlines children's natural advantage in language acquisition.
4. **Implications for Education**
   These findings underscore the importance of utilizing the critical period of 0-6 years to support children's language development. Learning approaches based on social interaction and environmental stimulation are essential to maximize children's potential during this period.

Overall, this study suggests that early childhood language acquisition is influenced by the synergy between biological and environmental factors. These findings also provide important guidance for designing more effective language learning programs for young children.

CONCLUSION

This study reveals that language acquisition in children aged 0-6 years is influenced by a combination of biological, psycholinguistic, and environmental factors. Children in this age range have highly plastic brains, with optimally functioning declarative and procedural memory, allowing them to absorb and understand language naturally through environmental exposure. Social interactions, especially with parents and caregivers, provide relevant language input and support the development of their linguistic abilities. In addition, this study confirms the importance of the critical period, which is the period when children have superior abilities to learn language compared to adults. Decreased brain plasticity in adults makes second language learning more challenging, so early childhood is a crucial time to support optimal language development.

Based on the results of this study, several recommendations can be given:

1. For Parents and Caregivers: Increase communication with children aged 0-6 years through daily activities, such as talking directly, using child-directed speech, reading books together, and playing games that involve language.
2. For Educators: Create language learning strategies that prioritize social interaction and environmental stimulation. Use play-based methods, creative media, and interactive activities to support children's language development during critical periods.
3. For Future Researchers: More in-depth research is needed on language acquisition in children living in multilingual environments, or on the impact of digital media on early childhood language development.

These conclusions and suggestions are expected to provide both practical and theoretical contributions in supporting children's language acquisition, both in the family environment and in the formal education system.

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