

## PSYCHOLINGUISTIC ASPECTS OF GRAMMAR: EXPLORING THE INTERFACE BETWEEN LANGUAGE AND MIND

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### Abstract

This paper explores the psycholinguistic dimensions of grammar, investigating the ways in which cognitive processes impact the comprehension and application of grammar. It covers important theories, phases of development, how age and skill levels affect learning grammar, and how grammar processing is supported by the brain. The practical consequences for teaching languages are also discussed, emphasizing how crucial it is to match instructional strategies with cognitive concepts.

**Key words:** grammar acquisition, psycholinguistics, cognitive functions, universal grammar, grammatical comprehension, language environment

### Аннотация

В этой статье исследуются психолингвистические аспекты грамматики, исследуются способы, которыми когнитивные процессы влияют на понимание и применение грамматики. В нем рассматриваются важные теории, этапы развития, влияние возраста и уровня навыков на изучение грамматики, а также то, как мозг поддерживает обработку грамматики. Также обсуждаются практические последствия преподавания языков, подчеркивая, насколько важно согласовывать стратегии обучения с когнитивными концепциями.

**Ключевые слова:** овладение грамматикой, психолингвистика, когнитивные функции, универсальная грамматика, грамматическое понимание, языковая среда.

### Annotatsiya

Ushbu maqola grammatikaning psixolingvistik o'lchovlarini o'rganadi, kognitiv jarayonlarning grammatikani tushunish va qo'llashga ta'sir qilish usullarini o'rganadi. U muhim nazariyalarni, rivojlanish bosqichlarini, yosh va malaka darajasi grammatikani o'rganishga qanday ta'sir qilishini o'z ichiga oladi. Tillarni

o'rgatishning amaliy natijalarini ham ko'rib chiqib, ta'lim strategiyalarini kognitiv tushunchalar bilan uyg'unlashtirish qanchalik muhim ekanligi ta'kidlanadi.

**Kalit so'zlar:** grammatikani o'zlashtirish, psixolingvistika, kognitiv funktsiyalar, universal grammatika, grammatik tushunish, til muhiti

### **Introduction**

By bridging the gap between psychology and linguistics, the field of psycholinguistics offers insights into the mental processes that lead to the production and processing of language. Learning and applying grammar is a crucial subject of study in this field. Examining the ways in which developmental variables, cognitive processes, and brain structures interact to support the understanding and creation of grammatical structures is necessary to comprehend the psycholinguistic elements of grammar.

### **Cognitive Foundations of Grammar**

The development of grammar is inextricably linked to cognitive functions. Chomsky posits that people are born with an innate linguistic capacity known as the Universal Grammar, which allows them to comprehend and generate language structures from an early age<sup>1</sup>. Children can create and comprehend an endless number of sentences—even ones they have never heard before—with the help of this innate grammar. According to Chomsky's view, the human brain is predisposed to language and all languages share a common set of grammatical rules<sup>2</sup>.

### **Developmental Stages in Grammar Acquisition**

Grammar is learned by children in phases; they start with basic constructions and work their way up to more sophisticated ones. The Wug Test by Jean Berko Gleason demonstrated how kids utilize their knowledge of grammar rules to unfamiliar contexts<sup>3</sup>. Children start off with single words, progress to two-word phrases, and then learn how to put together complicated sentences. This sequence shows how children's comprehension of grammar rules and cognitive sophistication develops as they get older<sup>3</sup>.

### **Early Stages of Grammar Acquisition**

<sup>1</sup> Chomsky, N. (1965). *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.

<sup>2</sup> Chomsky, N. (1980). *Rules and Representations*. New York: Columbia University Press

<sup>3</sup> Gleason, J. B. (1958). The Child's Learning of English Morphology. *Word*, 14(2-3), 150-177

Children learn languages mostly through imitation and reinforcement in the early stages. Through their interactions with caretakers, they acquire the ability to correlate words with things and behaviors. At this point, learning vocabulary and comprehending fundamental syntactic structures are the main priorities<sup>4</sup>.

### **Intermediate Stages of Grammar Acquisition**

With the advancement of their cognitive skills, kids may comprehend and employ increasingly intricate linguistic structures. They begin to understand ideas like agreement, number, and tense. Grammar norms are overgeneralized during this stage, as in the case of using "goed" instead of "went".<sup>5</sup>

### **Advanced Stages of Grammar Acquisition**

Children hone their grammar abilities and discover how to deal with grammatical exceptions in the advanced phases. They become proficient in the use of passive constructions, subordinate clauses, and other intricate syntactic devices. Children's grammatical proficiency by this point is very similar to adults<sup>6</sup>

### **Age and Proficiency Factors**

The age at which someone starts learning a language has a big impact on how well-versed in grammar they are. According to Lenneberg's Critical Period Hypothesis, language acquisition is most successful in the early years of life, after which grammar learning becomes less effective<sup>7</sup>. Evidence demonstrating that children exposed to a second language prior to puberty have a higher chance of achieving native-like ability than children who begin learning later in life supports this theory<sup>8</sup>.

### **Impact of Early Exposure**

Early language exposure promotes overall cognitive development in addition to improving grammatical ability. Early bilingual children frequently exhibit improved cognitive flexibility, problem-solving abilities, and metalinguistic awareness<sup>9</sup>.

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<sup>4</sup> Brown, R. (1973). *A First Language: The Early Stages*. Cambridge, MA: Harvard University Press.

<sup>5</sup> Tomasello, M. (2003). *Constructing a Language: A Usage-Based Theory of Language Acquisition*. Cambridge, MA: Harvard University Press.

<sup>6</sup> Pinker, S. (1999). *Words and Rules: The Ingredients of Language*. New York: HarperCollins.

<sup>7</sup> Radford, A. (1990). *Syntactic Theory and the Acquisition of English Syntax: The Nature of Early Child Grammars of English*. Oxford: Blackwell.

<sup>8</sup> Lenneberg, E. H. (1967). *Biological Foundations of Language*. New York: Wiley.

<sup>9</sup> Johnson, J. S., & Newport, E. L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology*, 21(1), 60-99.



### **Proficiency Levels and Grammatical Competence**

Grammar proficiency is greatly influenced by proficiency levels. Increased language proficiency is correlated with a deeper comprehension and use of sophisticated grammatical structures. Grammar has intricacies and nuances that less proficient learners could find difficult to understand<sup>10</sup>.

### **Neurocognitive Aspects**

The role of the brain in grammar processing has been observed by researchers thanks to developments in neuroimaging. Research has demonstrated the importance of regions like Wernicke's and Broca's areas for grammatical comprehension and syntactic processing<sup>11</sup>. Event-related potentials (ERP) and functional magnetic resonance imaging have shed light on how these brain areas are active when performing linguistic tasks.

### **Broca's Area and Syntactic Processing**

Speech production has historically been linked to Broca's region in the left frontal lobe. But it also contributes significantly to syntactic processing. Broca's aphasia, which is characterized by difficulty forming grammatically accurate sentences, can be brought on by damage to this area<sup>12</sup>.

### **Wernicke's Area and Grammatical Comprehension**

The left temporal lobe contains Wernicke's region, which is essential for understanding language and semantics. Wernicke's aphasia is a condition in which people with injury to this region can speak fluently but frequently without meaningful grammatical structure<sup>13</sup>.

### **Implications for Language Teaching**

For language teachers, it is useful to comprehend the psycholinguistic components of grammar. Grammatical acquisition and retention can be improved by employing strategies that support cognitive processes, such as immersive language settings and explicit grammar instruction<sup>14</sup>.

### **Explicit Grammar Instruction**

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<sup>10</sup> Bialystok, E. (2001). *Bilingualism in Development: Language, Literacy, and Cognition*. Cambridge: Cambridge University Press

<sup>11</sup> Ellis, R. (2008). *The Study of Second Language Acquisition*. Oxford: Oxford University Press

<sup>12</sup> Friederici, A. D. (2011). The Brain Basis of Language Processing: From Structure to Function. *Physiological Reviews*, 91(4), 1357-1392.

<sup>13</sup> Friederici, A. D. (2011). The Brain Basis of Language Processing: From Structure to Function. *Physiological Reviews*, 91(4), 1357-1392.

<sup>14</sup> Kertesz, A. (2007). *The Western Aphasia Battery-Revised*. San Antonio, TX: Pearson.

Grammar rules are taught explicitly in explicit grammar training, and learners are given structured exercises to practice what they have learned. This method aids students in internalizing grammar rules and using them in a variety of settings<sup>15</sup>.

### **Immersive Language Environments**

Grammar is implicitly learned by learners in immersive language settings because they are exposed to naturalistic language input. By simulating the circumstances of early language learning, this approach aids in the development of learners' intuitive grasp of grammatical structures<sup>16</sup>.

### **Technology in Grammar Teaching**

Teaching grammar can also benefit greatly from the use of technology, including online resources and apps for language acquisition. To meet the demands of each unique learner, these technologies frequently include interactive exercises, real-time feedback, and adaptive learning algorithms<sup>17</sup>.

**Conclusion** The study of grammar from a psycholinguistic perspective sheds light on how language is learned and used. Through an examination of cognitive underpinnings, developmental phases, neurocognitive elements, and the usefulness for language instruction, scholars and instructors

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<sup>15</sup> Ellis, R. (2006). Current Issues in the Teaching of Grammar: An SLA Perspective. *TESOL Quarterly*, 40(1), 83-107

<sup>16</sup> DeKeyser, R. (1998). Beyond focus on form: Cognitive perspectives on learning and practicing second language grammar. In Doughty, C., & Williams, J. (Eds.), *Focus on Form in Classroom Second Language Acquisition* (pp. 42-63). Cambridge: Cambridge University Press.

<sup>17</sup> Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In Ritchie, W. C., & Bhatia, T. K. (Eds.), *Handbook of Second Language Acquisition* (pp. 413-468). San Diego, CA: Academic Press.

## References

1. Chomsky, N. (1965). *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
2. Chomsky, N. (1980). *Rules and Representations*. New York: Columbia University Press.
3. Gleason, J. B. (1958). The Child's Learning of English Morphology. *Word*, 14(2-3), 150-177.
4. Brown, R. (1973). *A First Language: The Early Stages*. Cambridge, MA: Harvard University Press.
5. Tomasello, M. (2003). *Constructing a Language: A Usage-Based Theory of Language Acquisition*. Cambridge, MA: Harvard University Press.
6. Pinker, S. (1999). *Words and Rules: The Ingredients of Language*. New York: HarperCollins.
7. Radford, A. (1990). *Syntactic Theory and the Acquisition of English Syntax: The Nature of Early Child Grammars of English*. Oxford: Blackwell.
8. Lenneberg, E. H. (1967). *Biological Foundations of Language*. New York: Wiley.
9. Johnson, J. S., & Newport, E. L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology*, 21(1), 60-99.
10. Bialystok, E. (2001). *Bilingualism in Development: Language, Literacy, and Cognition*. Cambridge: Cambridge University Press.
11. Ellis, R. (2008). *The Study of Second Language Acquisition*. Oxford: Oxford University Press.
12. Friederici, A. D. (2011). The Brain Basis of Language Processing: From Structure to Function. *Physiological Reviews*, 91(4), 1357-1392.
13. Grodzinsky, Y., & Amunts, K. (2006). *Broca's Region*. Oxford: Oxford University Press.
14. Kertesz, A. (2007). *The Western Aphasia Battery-Revised*. San Antonio, TX: Pearson.
15. Ellis, R. (2006). Current Issues in the Teaching of Grammar: An SLA Perspective. *TESOL Quarterly*, 40(1), 83-107.



16. DeKeyser, R. (1998). Beyond focus on form: Cognitive perspectives on learning and practicing second language grammar. In Doughty, C., & Williams, J. (Eds.), *Focus on Form in Classroom Second Language Acquisition* (pp. 42-63). Cambridge: Cambridge University Press.
17. Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In Ritchie, W. C., & Bhatia, T. K. (Eds.), *Handbook of Second Language Acquisition* (pp. 413-468). San Diego, CA: Academic Press.
18. Godwin-Jones, R. (2011). Emerging technologies: Autonomous language learning. *Language Learning & Technology*, 15(3), 4-11.



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