

Special Issue

The Role of Language in Cognitive Development from Vygotsky's Perspective: Analyzing Its Implications in Language Education

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Abstract

Lev Vygotsky's theory of cognitive development emphasizes the fundamental role of language in mental transformation, presenting it as the primary mediating tool for internalizing concepts, problem-solving, and behavior regulation. In this framework, language learning is not merely the acquisition of communication skills, but a cognitive and social process shaped within the context of cultural interactions. The present study aims to explain the role of language in cognitive development from Vygotsky's perspective and analyze its applications in the design of second language learning environments. This theoretical-analytical and qualitative study uses document content analysis to examine classic works and empirical research related to Vygotsky's theory. Key concepts such as private speech, the Zone of Proximal Development (ZPD), inner speech, dynamic assessment, and language as a cultural tool have been selected as the main axes of analysis. Findings indicate that private speech plays a significant role in developing self-regulation and problem-solving abilities in language learners. Moreover, applying the concept of ZPD and scaffolded instruction in language teaching enhances learners' cognitive and linguistic skills. The analysis suggests that interactive learning environments, dynamic assessment, and the use of modern technologies—aligned with Vygotsky's principles—can make the language learning process more effective and humane. Language is not merely a vehicle for conveying meaning but a tool for the formation of thought. Vygotsky's theory, with its emphasis on social interaction and cultural tools, offers a comprehensive model for language education. Its practical application in instructional design can lead to the simultaneous development of language and cognition.

Keywords: Vygotsky; cognitive development; private speech; zone of proximal development; second language education

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Introduction

Language, beyond being merely a tool for communication, serves as a foundation for thinking, meaning-making of experiences, and the construction of individual and social knowledge. (Singh, 2023-2024). Among developmental psychology theorists, Lev Vygotsky is the most prominent thinker who views language not only as a product of mental development but also as the cause and factor in its formation. He asserts that cognitive and linguistic development occurs within a social context, and language, as a psychological tool, makes cognitive growth possible (Vygotsky, 1978).

This socio-cultural perspective on development revolutionized the understanding of the role of language in learning and teaching, especially in language education, where Vygotsky's theoretical frameworks are now used to design teaching and learning methods. Vygotsky, emphasizing "higher psychological functions" such as problem-solving, reasoning, and self-regulation, introduces language as the most important cultural tool for transmitting knowledge, values, and mental constructs from society to the individual (Wertsch, 1985). From his perspective, language first emerges in social interaction and then becomes internalized; a process in which social speech transforms into inner speech and ultimately into thought (Vygotsky, 1986:57). In other words, language is the mediator through which the mind is shaped. Thus, there is a dialectical relationship between language and thought; a relationship that is clearly articulated in Vygotsky's theory and forms the theoretical foundation for language-based educational approaches. One of the key concepts in Vygotsky's theory is the "Zone of Proximal Development" (ZPD), which refers to the distance between a learner's potential ability to perform a task with the help of others and their actual ability to perform it independently. This concept plays a fundamental role in educational planning, as it shows that effective learning occurs when teaching is slightly beyond the learner's current level, accompanied by support from teachers or peers (Chaiklin, 2003). In language

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education, this concept can guide the design of activities that, with scaffolded support, lead learners to higher levels of language proficiency. On the other hand, dialogue and social interaction in language classrooms are seen as tools for cognitive and linguistic growth. Vygotsky considered social interaction the driving force behind intellectual development.

This view has directly influenced language teaching methods, particularly communicative approaches and collaborative learning (Lantolf & Thorne, 2006). In such frameworks, language learners are seen not as passive recipients but as active agents in constructing linguistic knowledge, expanding their linguistic competence through dialogue, feedback, and interaction, and fostering critical thinking. In recent decades, Vygotsky's theory has inspired the development of language teaching methods based on social interaction, cultural dynamics, and individual differences. Research has shown that applying Vygotskian principles, especially focusing on inner speech and educational scaffolding, can facilitate second language learning and increase learners' motivation (Swain et al., 2011:343).

Additionally, in language teaching for children and adolescents, the use of cultural tools such as storytelling, language games, and group projects has contributed to simultaneous cognitive and linguistic skill development. Given the foundational importance of language in Vygotsky's theory of cognitive development and its broad applications in language education, a thorough examination of this relationship can lead to a deeper understanding of language learning and the design of more effective teaching methods. This article, aiming to analyze the role of language in intellectual development from Vygotsky's perspective and evaluate its impact on language teaching, seeks to provide a theoretical and practical framework for understanding the connection between language, thought, and learning.

Objectives of the Article and Its Applications

The primary objective of this article is to explore the pivotal role of language in cognitive development from the perspective of Lev Vygotsky's socio-cultural theory. By analyzing key concepts such as private speech, inner speech, and the Zone of Proximal Development (ZPD), the study aims to clarify how language serves not only as a means of communication but as a cognitive tool that shapes thought, facilitates self-regulation, and fosters higher mental functions. The article also seeks to bridge theory with practice by examining how Vygotsky's ideas can be applied to the design and implementation of second language education environments.

This research contributes to a deeper understanding of the dynamic interplay between language and thought, with an emphasis on the social and cultural dimensions of learning. Through qualitative content analysis of theoretical and empirical studies, the article highlights the significance of interactive, learner-centered, and culturally relevant language instruction. One of the key applications of the study lies in advocating for the integration of scaffolded support, dynamic assessment, and collaborative learning strategies into language curricula, which align with the ZPD and encourage active learner engagement.

Furthermore, the article emphasizes the value of private speech as a tool for metacognitive development and proposes that language educators create environments where learners can externalize and internalize linguistic knowledge through dialogue and reflection. The findings can inform teacher training, instructional design, and curriculum development in both traditional and digital learning contexts. Overall, the practical applications of this article extend to educators, researchers, and policymakers seeking to enhance language instruction by incorporating cognitive and socio-cultural dimensions. The insights provided offer a theoretical and pedagogical

foundation for improving second language learning outcomes through practices that support cognitive growth, cultural relevance, and meaningful communication.

Research Background

The study of the connection between language and cognitive development is one of the fundamental areas of research in developmental psychology, applied linguistics, and educational sciences. Among the various existing perspectives, Vygotsky's socio-cultural theory holds a prominent place, as it not only addresses the role of language in human interactions but also positions it as the primary foundation in the development of higher mental functions (Vygotsky, 1978:16). In recent years, numerous studies focusing on the theoretical and practical dimensions of this view have explored the role of language in cognitive development and language education.

In a foundational study, Wertsch (1985) examined the theoretical structure of Vygotsky's thought and showed that language plays a crucial role in the process of internalization. He argues that language first manifests in social speech and gradually transforms into private speech and then into inner speech, becoming a tool for thinking (p. 75). This developmental trajectory, which is at the core of Vygotsky's theory, is clearly observable in children's behavior. Observational studies have also confirmed this process. For example, Berk (1992), in research with preschool children, showed that their private speech is related to the level of difficulty of cognitive tasks and serves as a mediator for self-regulation. Winsler, Diaz, McCarthy, and Chabay (1999), in an empirical study with bilingual children, examined the impact of language on the ability to plan, solve problems, and exercise cognitive control. Their findings revealed that children use private speech as a tool to guide their behavior, and this speech is especially reinforced in active and participatory educational environments.

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This study emphasizes that language learning is accompanied by the enhancement of executive mental functions and highlights the practical application of Vygotsky's theory in bilingual education. In the context of second language education, the socio-cultural approach has been further developed, particularly by Lantolf and Thorne (2006). They used Vygotsky's theory as the basis for creating a new approach to second language learning, focusing on concepts such as the Zone of Proximal Development, inner speech, and teacher-student interactions. They demonstrated that language learning is more effective when it occurs in a social context, through meaningful interaction, and with the support of others (p. 111).

This perspective later found widespread application in collaborative, project-based, and communicative language classrooms. Other studies have examined the role of teachers in guiding language learners through the Zone of Proximal Development. Donato (1994), in a qualitative study with language teachers, showed that "scaffolding" or gradual instructional support plays an important role in enhancing the understanding of linguistic concepts and fostering independent thinking. In this study, teachers created a context for learners to move from their current level to higher cognitive levels through purposeful questioning, supportive feedback, and the use of cultural resources. Swain et al. (2011), using personal narratives of language learners, showed that social interactions, particularly meaningful and reflective conversations, play a fundamental role in the internalization of a second language. They introduced the concept of "linguaging," referring to the process through which learners use language to think about language itself; this process becomes a tool for cognitive and linguistic transformation.

On the other hand, Poehner (2009), by integrating dynamic assessment and Vygotsky's theory, designed a framework for measuring the cognitive development of language learners. In this approach, the focus on the interaction between the assessor and the learner, along with real-time

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feedback, allows the learner to activate their potential ability and reach a new level of language proficiency. This model demonstrates the practical adaptation of the Zone of Proximal Development theory in educational assessment. In formal education settings, studies by Anton (1999) and Ohta (2001) have examined the role of interpersonal interactions in language classrooms from a Vygotskian perspective. They found that teacher-student dialogues and peer interactions, when framed in a purposeful and meaningful context, not only assist in language learning but also promote the growth of analytical thinking and linguistic awareness. These findings provide significant theoretical and empirical support for applying Vygotsky's theory in language curriculum planning. In the field of educational technology, recent studies have explored the use of digital tools within the framework of Vygotsky's theory. For example, Blake (2013) demonstrated that virtual learning platforms, when designed collaboratively, can provide opportunities for interaction and cognitive growth.

Linguistic interaction in online environments, especially through new communication tools, has the potential to enhance inner speech and cognitive reflection. Overall, the research background indicates that Vygotsky's theory has been a source of inspiration in various fields of language education, from classroom activity design to assessment and educational technology. These studies emphasize the interconnectedness of cognitive and linguistic development and present language not only as a tool for transmitting knowledge but also as a constructive process for shaping thought. Therefore, a thorough examination of Vygotsky's theory and related research findings can provide a profound and credible framework for understanding and improving the language learning process.

Methodology

This study is a qualitative, theoretical-analytical investigation that uses document analysis and a systematic review of scholarly sources to examine various aspects of Vygotsky's cognitive development theory and its implications for language education. The sources used include Vygotsky's classic works, as well as empirical studies related to private speech, the Zone of Proximal Development (ZPD), and socio-cultural approaches in second language education. For data analysis, qualitative content analysis was employed. Selected articles, books, and studies were categorized and analyzed based on criteria such as their relevance to key concepts in Vygotsky's theory—internalization, private speech, ZPD, dynamic assessment, language as a cultural tool—and their application in language education environments. This research methodology provides the opportunity for a deep explanation of theoretical concepts and the extraction of pedagogical strategies based on the socio-cultural approach.

Theoretical Framework

Language as a Tool for Cognitive Development in Vygotsky's Theory

Lev Vygotsky's theory of cognitive development is one of the foundational approaches in cultural-historical psychology, explaining the role of language in the development of higher mental functions. (Afrilyasanti, Basthomi, Zen, 2025: 38). Contrary to traditional views that considered cognitive development solely as a product of individual maturation, Vygotsky defines growth as a social and language-centered process. He believed that cognitive functions arise not from within the individual, but from social interactions and cultural contexts (Vygotsky, 1978: 57). Within this framework, language is seen as a fundamental mediator for concept formation, problem-solving,

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and internalization of knowledge. One of the core concepts in Vygotsky's theory is internalization, which refers to the process through which external activities, occurring in social interactions with others, transform into internal mental structures. Language is the primary tool for this transformation. Initially, the child learns language through social interaction and then uses it to guide their own behavior. (SWARGIARY, 2024:65). This private speech gradually becomes internal speech, eventually functioning as thought itself (Vygotsky, 1986:78). As Vygotsky stated, "Every mental function in the course of development appears twice: first, on the social level, and later, on the individual level" (Vygotsky, 1978: 90). In this context, private speech is one of the most prominent phenomena demonstrating cognitive growth through language. Research by Berk (1992) and Winsler et al. (2000) indicates that children use private speech to guide their behavior and focus during difficult tasks, serving as a sign of language transforming into a tool for self-regulation of the mind. This speech especially expands in environments rich with social interactions, where children use language to solve problems, plan, and give themselves feedback (Berk, 1992: 31).

Additionally, Vygotsky views language not only as a tool for communication but as a cultural instrument that transmits values, thought, and collective experiences. In this sense, language, as a "thinking tool," facilitates the development of higher cognitive functions such as logical reasoning, abstraction, and self-awareness (Wertsch, 1985, p. 89). Cultural tools, including language, mediate the relationship between the individual and the social world, providing a foundation for learning and development. (Oliveira, Hebecci, 2024: 109). The Zone of Proximal Development (ZPD) is another key concept in Vygotsky's theory, referring to the distance between the child's current level of independent ability and their potential level of ability with the help of others. Language serves as the primary tool in this zone, as verbal interaction with more knowledgeable individuals

(teachers or peers) allows for the transfer of skills (Chaiklin, 2003, p. 45). This concept forms the theoretical basis for many interaction-based language teaching methods. Vygotsky's views also laid the groundwork for innovations in language teaching methods. For instance, Swain et al. (2011) introduced the concept of "linguaging," a process in which language learners use language to think about language. This linguistic activity not only enhances language awareness but also serves as a tool for cognitive growth (p. 343). Numerous field studies have confirmed the relationship between language and cognitive development. For example, Fernyhough and Fradley (2005) showed that children use more private speech when solving problems, particularly in the presence of cognitive challenges. This private speech serves as a means of cognitive regulation and the use of language as a tool for thinking (p. 686). In summary, Vygotsky's theory positions language as the central mechanism in intellectual growth, through which social knowledge is transformed into individual knowledge. This perspective provides a solid theoretical foundation for understanding the role of language in learning, thinking, and self-regulation. (Rigopouli, Kotsifakos, Psaromiligkos, 2025:257).

Discussion and Analysis

Private Speech and Internalization of Language in the Process of Cognitive Development

One of the fundamental concepts in Vygotsky's cognitive development theory is internalization, the process by which social actions become internalized into mental structures. Private speech plays a central role in this process, serving as a bridge between social speech and inner speech, thus contributing to a child's intellectual growth (SWARGIARY, 2025:98). This type of speech, which children often utter to themselves when engaged in complex activities, is viewed by Vygotsky not only as a sign of language development but also as an indicator of

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cognitive development (Vygotsky, 1986: 78). In Vygotsky's theory, language initially functions as an interpersonal tool for communication but, over time, through social interaction, it becomes an intrapersonal tool for guiding thought, planning, and problem-solving (Vygotsky, 1978: 90). This process of transition is manifested through private speech, which Vygotsky considers to signify the beginning of mental independence and self-regulation in children. Several empirical studies have confirmed this concept. For example, Berk (1992) found that children, when faced with difficult cognitive tasks (such as puzzles or solving math problems), use private speech to guide their behavior. She found that the frequency and content of private speech directly correlated with the task difficulty and the level of mental concentration (p. 31). These findings suggest that private speech functions as a tool for emotional regulation, attention focus, and enhancing cognitive performance. Research by Winsler, Diaz, McCarthy, and Chabay (2000) also supports this notion. In their study on bilingual preschool children, they found that children with stronger language skills exhibited more private speech and showed higher effectiveness in problem-solving. It was also found that private speech became richer and more complex in environments where collaborative learning and open discussions were encouraged (p. 147). These findings emphasize the importance of the social and cultural context in the development of private speech and, consequently, cognitive development.

From Vygotsky's perspective, the final stage in this transformation is inner speech, a form of language that occurs silently in the mind and is directly related to thought. In his famous work *Thought and Language*, he states that inner speech is compact and conceptual in nature and, unlike outer speech, tends to eliminate unnecessary linguistic elements (Vygotsky, 1986: 124). This characteristic of inner speech makes it an efficient mechanism for thinking, problem-solving, and creativity. In the context of second language acquisition, these concepts gain even greater

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significance. Language learners, especially in the early stages of learning, use private speech to organize information, rehearse structures, and resolve ambiguities. Ohta (2001) showed in her field study in a Japanese language class that learners often murmur to themselves during individual or group exercises, which she interpreted as a sign of deep linguistic processing and an attempt to internalize the new language (p. 62). Additionally, private speech plays a role in predicting responses, reviewing rules, and even boosting confidence. Swain, Kinnear, and Steinman (2011), in their theoretical analysis, view private speech as part of a broader phenomenon called "languageing," a process where learners use language to think about language.

These activities, including thinking aloud, inner dialogues, and interactions with others, promote metacognitive skills and cognitive growth (p. 48). Therefore, second language learning will be more successful when the classroom environment allows learners to use private speech as a tool for discovering, practicing, and consolidating language. Practically, it is essential to create conditions where learners can freely use private speech. Effective strategies include encouraging "thinking aloud" during problem-solving activities, providing low-anxiety learning environments, and emphasizing meaning processing over mere grammatical accuracy (Anton, 1999). Moreover, teachers can use learners' private speech as an indicator of their cognitive development level. In conclusion, private speech and inner speech form the conceptual core of Vygotsky's theory regarding the role of language in cognitive development. These processes serve as a bridge between language and thought, enabling individuals to achieve self-regulation, critical thinking, and problem-solving. Empirical evidence also shows that in rich educational environments, these mechanisms are enhanced, leading to more effective learning. Therefore, understanding and applying these concepts can elevate language teaching from mere knowledge transmission to a tool for cognitive and intellectual growth. (Amini, Bicen, 2024:67).

The Zone of Proximal Development and the Role of Interaction in Language Learning

The concept of the "Zone of Proximal Development" (ZPD) is one of the fundamental elements in Vygotsky's cognitive development theory, emphasizing the relationship between learning and development. This concept provides a theoretical framework for understanding how learning occurs through social and cultural interactions. According to Vygotsky, the ZPD refers to the distance between a learner's current abilities (the level of independent performance) and their potential level (the level of performance with assistance) (Vygotsky, 1978: 86). In other words, effective learning occurs in a space where the individual can perform a task with the help of others, help that can later become internalized.

From Vygotsky's perspective, interaction with a more competent individual—whether a teacher or a peer—gradually leads the learner to take responsibility for their learning and reach a level of self-regulation. This model has wide applications in language teaching, as language learners often need support at the beginning stages of learning to understand and use language skills. One of the ways ZPD is operationalized in language teaching is through the concept of "scaffolding." This term, first introduced by Wood, Bruner, and Ross (1976), refers to temporary structural support provided by a teacher or peer during the learning process. This support decreases as the learner's abilities grow, until the individual is able to perform independently. Donato's (1994) qualitative study in a French language class provides a clear example of the application of ZPD and scaffolding in practice.

He found that learners could interact in group activities in a way that allowed them to play the role of the teacher for each other, achieving collaborative learning. This mutual support not only improves the learners' language proficiency but also boosts their confidence and self-efficacy (p.

45). The role of social interaction in moving through the ZPD is very prominent. According to Vygotsky's theory, language learning becomes meaningful when the learner is engaged in the learning process within a social context through purposeful and meaningful interactions (Lantolf & Thorne, 2006, p. 112). In such conditions, language is not only the subject of learning but also the tool of learning. For instance, in language classes that emphasize dialogue and collaborative learning, students learn to experience language in a dynamic and practical way through group activities, language games, and interactive projects.

Ohta's (2001) research in a Japanese language class provides a precise example of how ZPD influences teacher-student and peer interactions. She showed that teachers, by using open-ended questions, strategic feedback, and targeted repetition of language structures, help students understand more complex language concepts through soft, gradual guidance. It was also observed that peers, by playing the role of "learning supporters," create opportunities for each other to grow within the ZPD (p. 85). In second language learning environments, the use of the ZPD concept can form the basis for designing activities that are both challenging and achievable. This principle aligns with the theory of "cognitive load," suggesting that educational challenges should be placed at a level that is neither too difficult nor too easy, but precisely at the border of the learner's current abilities (Sweller, 1988).

Research has also shown that the level of support provided within the ZPD should be carefully calibrated. If the support is too much, the learner's independence is weakened; if it is insufficient, effective learning will not occur. In this regard, Aljaafreh and Lantolf (1994) proposed a model of "negotiated scaffolding," where the teacher, through dialogue and gradual feedback, provides an appropriate level of support for each learner (p. 471). Another important tool for activating the ZPD in language teaching is Dynamic Assessment (DA), an approach that focuses on assessing

learners' potential abilities through interaction and feedback. Poehner (2009) demonstrated in a study with language learners that dynamic assessment allows for better identification of individual educational needs and provides feedback that aligns with the ZPD (p. 473). Practical applications of the ZPD in language teaching are diverse, ranging from collaborative exercises to dialogue-centered interaction and even the use of technology to provide immediate feedback. For example, in digital learning environments such as interactive apps or virtual classrooms, ZPD-based strategies can be used to adjust difficulty levels, offer gradual guidance, and encourage self-assessment by the learner (Blake, 2013).

Ultimately, it must be emphasized that the ZPD is not only a tool for assessment and educational planning but also a theoretical framework for understanding the process of language learning in social interaction. This concept helps shift the teacher's role from a mere transmitter of knowledge to a dynamic facilitator, and the language learner's role from a passive recipient to an active learner.

The Reflection of Vygotsky's Theory in Designing Second Language Learning Environments

Vygotsky's socio-cultural theory, with its emphasis on the role of interaction, culture, and language in cognitive development, has had a profound impact on the design of second language learning environments in recent decades. This theory views learning as a social and dynamic process that is realized through participation, dialogue, and the use of cultural tools (Vygotsky, 1978: 88). Therefore, a language learning environment should not be limited to the mere transmission of linguistic data but should provide a context for the cognitive and cultural growth of learners. One of the key concepts derived from Vygotsky's theory in language education is "languageing." This term, coined by Swain (2006), refers to the process in which language learners

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use language to think about language. "Languaging" is a dynamic process in which language becomes a tool for meaning-making, reflection, and problem-solving (Swain et al., 2011: 50). This concept is especially useful in second language teaching, as it allows learners to actively process the language through restatement, rethinking, and interaction.

Lantolf and Poehner (2008) argue that an effective learning environment must provide opportunities for languaging, such as through activities like thinking aloud, reflective writing, or dialogue-based feedback. These activities not only consolidate language learning but also foster cognitive, metacognitive, and self-regulation development (p. 75). Thus, language learning environments should be designed to facilitate the process of thinking with and through language. Another key element in designing language learning environments is Dynamic Assessment (DA), which is rooted in the concept of the ZPD. Unlike traditional assessment, which merely measures learners' current abilities, dynamic assessment seeks to identify their potential capacities through interaction and feedback (Poehner, 2009: 472).

In this approach, the teacher is not only an evaluator but also a facilitator of learning, helping the learner progress through the ZPD by providing targeted guidance. For instance, in Aljaafreh and Lantolf's (1994) model, language feedback is given gradually and based on need; general guidance is provided initially, followed by more precise feedback as the learner's needs increase (p. 471).

This type of interaction not only identifies linguistic gaps but also facilitates simultaneous cognitive and linguistic growth. For this reason, many language education researchers view dynamic assessment as not just a tool for assessment but also a method of teaching. With the expansion of digital technologies, it has become even easier to design language learning environments centered around interaction and collaboration. Vygotsky considered the use of

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cultural tools essential for cognitive growth, and today, digital tools act as new "cultural mediators" in the language learning process (Blake, 2013: 22). For example, online language learning platforms such as Duolingo or Babbel, by offering immediate feedback, interactive exercises, and a social space, create a structure for learning within the ZPD.

Blake (2013) showed that using interactive technologies such as virtual classrooms, group chats, language learner forums, and collaborative writing tools increases opportunities for social interaction, enhances private speech, and expands meaningful language learning (p. 105). These technologies are most effective when designed based on Vygotsky's theoretical principles, engaging learners in meaningful and purposeful activities instead of mechanical repetition. Finally, the design of language learning environments based on Vygotsky's theory also requires attention to individual differences, cultural backgrounds, and learners' linguistic experiences. Vygotsky emphasized that learning gains meaning within a specific cultural context and through native tools (Vygotsky, 1986: 213). Therefore, educational activities should align with the learner's linguistic and social culture to facilitate effective internalization. For example, when teaching English to Iranian children, using stories, proverbs, and situations that connect both the target language and the learners' native culture can bridge prior knowledge and the new language. This cultural-centered design aligns with Vygotsky's approach to using cultural tools for cognitive growth. Ultimately, in such environments, the role of the teacher changes from being a knowledge transmitter to a learning facilitator. By understanding the learner's position in the ZPD and providing appropriate support, the teacher enables both cognitive and linguistic growth. This role requires skill in identifying individual needs, adjusting feedback, and creating a safe and motivating learning space (Anton, 1999: 310).

Conclusion

From Vygotsky's perspective, language is not merely a tool for communication between individuals, but a central factor in structuring cognition, regulating behavior, and internalizing culture. His socio-cultural theory, emphasizing interpersonal, social, and cultural processes in intellectual development, fundamentally redefines the role of language and provides a theoretical foundation for transformation in language education. In this paper, we aimed to gain a deeper understanding of the relationship between language and thought by analyzing key concepts of this theory, such as private speech, the Zone of Proximal Development (ZPD), and language internalization, and to identify its practical applications in second language education. One of the most important results of this analysis is clarifying the role of private speech in cognitive development. Numerous studies have shown that children and language learners, in challenging situations, use private speech to organize thoughts, solve problems, and control their emotions (Berk, 1992; Winsler et al., 2000). This phenomenon not only reflects the presence of self-regulated thinking but also a process in which language becomes a cognitive tool. Therefore, in educational environments, special attention should be given to opportunities for private speech expression and reinforcement, especially in the early stages of second language learning, where learners need individual practice and language processing.

The concept of the Zone of Proximal Development (ZPD) is also crucial as a theoretical framework for designing interactive language instruction. In this framework, real learning occurs when the language learner is positioned appropriately within their current abilities and, with the support of the teacher or peers, moves toward their potential capabilities. This process requires accurate recognition of the learner's abilities, providing targeted feedback, and gradually reducing instructional support—what is known in language education as scaffolding (Donato, 1994).

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Studies such as Ohta's (2001) show that teacher-student interactions, when structured according to ZPD principles, can facilitate language internalization, enhance motivation, and improve language skills.

Another important point is the reflection of Vygotsky's theory in designing second language learning environments. In recent decades, with the expansion of digital technologies and innovative educational approaches, the possibility has arisen to design environments based on interaction, collaboration, and meaning-making. Concepts such as languaging, introduced by Swain (2006), suggest that language learning occurs not through passive reception, but through active participation in meaning construction and linguistic interaction. Therefore, language classrooms should provide opportunities for dialogue, reflective writing, thinking aloud, and group interaction so that language functions as a cognitive tool.

In this regard, Dynamic Assessment (DA) also serves as an alternative to traditional assessments, providing a framework for identifying and developing language abilities within the ZPD. This type of assessment, with its emphasis on interaction and feedback, not only measures the learner's current performance but also activates their potential capacities. Using this approach, especially in language learning environments with varying levels of proficiency, can play a significant role in individualizing instruction.

Additionally, it is essential to highlight the importance of cultural adaptation in language teaching within the framework of Vygotsky's theory. Since Vygotsky viewed learning as an intracultural process, educational activities should align with the cultural experiences of the learners (Vygotsky, 1986:12). Designing educational materials suited to the learner's cultural context, using familiar narratives, proverbs, and situations, can aid in better internalizing the new language and enhancing motivation. This principle is particularly important in teaching language

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to children and adolescents in multicultural contexts. From a practical perspective, the findings of this research can provide guidance for curriculum designers, language teachers, and educational policymakers. Specifically, in designing second language programs, attention should be paid to the following:

Strengthening the space for interaction and conversation in the classroom; instead of focusing solely on language rules, emphasis should be placed on language use in real situations. Identifying learners' ZPDs and adjusting the difficulty level of activities based on them; using techniques such as scaffolding and dynamic assessment. Encouraging private speech and thinking in the language; through individual tasks, problem-solving exercises, and verbal reflection. Designing digital learning environments focused on social interaction and using technology to enhance immediate feedback and group participation. Incorporating the cultural and social elements of learners into the teaching process to facilitate language internalization.

In conclusion, Vygotsky's theory has opened new horizons in understanding the role of language in cognitive development and language education. This theory, with its emphasis on language as a cultural and cognitive tool, social interaction, and educational support, provides an effective framework for understanding the complexities of language learning. The applications of this theory in language education, from the classroom to virtual environments, from assessment to the design of collaborative activities, indicate the flexibility and depth of this approach. Ultimately, the future of language research and teaching requires the integration of socio-cultural theories with modern technologies, attention to individual differences, and a focus on the cognitive processes underlying language learning. Such an approach can lead not only to language growth but also to the intellectual and cognitive development of learners—a goal that lies at the heart of Vygotsky's theory.

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