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Bridging Language Learning and Cognitive Growth: The Power of Situated Learning and Task-Based Language Teaching in Modern Education

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ABSTRACT

The study explores the effects of a hybrid instructional approach combining Situated Learning (SL) and Task-Based Language Teaching (TBLT) on the executive functions and cognitive abilities of fourth-grade students learning English as a second language (ESL). Method: An experimental design was employed, with students divided into control and experimental groups. The experimental group participated in four weeks of SL and TBLT, while the control group received traditional instruction. Pre-test and post-test measures were taken using the Executive Function Assessment Scale (EFPS) and the Cognitive Abilities Scale (CAS). Results: Although the executive function ($M=158.16$, $t=-14.224$, $p<0.05$) and cognitive ability ($M=133.28$, $t=-11.835$, $p<0.05$) of the students in the control group were improved, the improvement was small. However, the executive function ($M=161.88$, $t=-18.047$, $p<0.05$) and cognitive ability ($M=137.04$, $t=-19.591$, $p<0.05$) of the students in the experimental group were significantly improved. Conclusions: The combination of SL and TBLT significantly enhances both executive functions and cognitive abilities in primary students, indicating the effectiveness of this instructional approach in promoting cognitive development through real-world, task-based activities.

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INTRODUCTION

Teaching cognitive and executive functioning skills is essential in modern education. Through well-designed instructional practices, teachers support students' language acquisition while simultaneously enhancing their ability to plan, organize, and complete complex tasks (Dutro & Moran, 2003; Lampert & Graziani, 2009). The importance of second language (SL2) learning lies not only in providing students with the tools to communicate but also in promoting the development of cognitive abilities by challenging the brain's capacity for processing language (Ellis, 2015). Situated Learning (SL) and Task-Based Language Teaching (TBLT) have been shown to be particularly effective in fostering these competencies, immersing students in practical and contextually rich activities that simulate real-life situations, thereby encouraging active engagement and deeper cognitive processing (Abdallah & Mansour, 2015; Hassan, 2024). Teachers invest considerable time creating such environments, undergoing extensive training to ensure their instructional methods align with the best practices in cognitive development (Paniagua & Istance, 2018).

A central goal of contemporary teaching approaches is fostering students' ability to self-regulate their learning processes. Executive functions such as goal-setting, task initiation, and problem-solving play pivotal roles, especially in second language learning (Meltzer et al., 2021; Cristofori et al., 2019). However, developing these skills can be challenging, particularly in environments dominated by traditional teacher-centered methods. As a result, task-based and SL have emerged as innovative strategies for promoting cognitive flexibility and executive control (Walwanis & Ponto, 2019; McLellan, 1996). This study explores how these approaches can enhance executive functions and cognitive abilities in fourth-grade English learners, focusing on how these methods influence students' ability to manage, control, and reflect on their learning experiences.

LITERATURE REVIEW

Second Language Acquisition

The learning environment for English as a Second Language (ESL) demonstrates complex patterns of language acquisition across various countries and regions. Teaching English as a foreign language varies significantly worldwide, driven by differing goals and methods. For example, in countries such as Brazil, Spain, and Japan, despite English being widely taught in schools, it does not hold a central place in everyday life. Learners in these regions are often motivated by practical needs, viewing English primarily as a tool for advancing their careers or accessing global resources (Rustamov, 2022). This contrasts sharply with learners of English as a second language, where the intricate interaction between their native language and the target language substantially influences the acquisition process. This is particularly evident in subsystems such as phonology, syntax, and semantics, where proficiency in English is shaped by the underlying structure of the first language (Gass, 2009). Indeed, second-language learners frequently draw upon their native linguistic frameworks, particularly in phonological awareness and syntactic rules, which results in noticeable transfer effects during English acquisition (Genesee et al., 2006).

The transfer effect of linguistic structures is further reflected in phonological and vocabulary acquisition. Learners tend to process English sounds and vocabulary based on the phonological system and lexical rules of their first language. For example, Japanese

learners often exhibit a preference for American English, while European learners typically lean towards British English (Rustamov, 2022). Such preferences are not arbitrary; they are shaped by cultural, political, and geographic influences, as well as the availability of teachers and educational materials. Additionally, the design of the curriculum and teaching resources within a country's educational system can play a critical role in shaping learners' linguistic pathways and motivation. Therefore, the interaction between national language policies, cultural norms, and available educational resources creates a unique learning experience for each group of ESL learners.

Research into children's reading skill development in an ESL context offers key insights, particularly the longitudinal study by Lesaux and Siegel (2003). This study, which followed 978 second-grade students, including 188 ESL learners and 790 native speakers, found that ESL learners made remarkable progress in reading skills by the end of second grade. In some cases, ESL learners even outperformed their native-speaking peers in certain assessments. Early intervention, especially in identifying and supporting children at risk of reading difficulties, plays a crucial role in enhancing the reading abilities of ESL children. A bilingual environment may facilitate this progress by providing ESL children with opportunities to develop phonological awareness, memory capacity, and decoding skills, helping to bridge the gap in oral fluency (Chung, 2018). Furthermore, the transfer of phonological awareness from the first language to English offers ESL learners a significant advantage in reading comprehension, challenging the traditional notion that bilingualism may impede second-language acquisition.

In recent years, research has shifted towards examining the influence of classroom input, interaction, and output on ESL learners' language development. One of the core factors in this process is the quantity and quality of language input in the classroom. When teachers focus on linguistic form and grammatical rules, learners can make significant strides in their language proficiency through targeted input (Gass, 2009). Moreover, interactive learning environments, characterized by group collaboration and task-based activities, allow learners to apply language forms in meaningful communication. This approach not only enhances their understanding of linguistic rules but also improves their fluency through consistent output in real-life scenarios (Sae-Ong, 2010). Vocabulary acquisition, in particular, benefits from this process, as ESL learners deepen their mastery through repeated exposure and practice, rather than relying solely on rote memorization (August et al., 2005). Consequently, consistent engagement with vocabulary in context is crucial for developing communicative competence, enabling learners to use the language more effectively in everyday situations.

Situated Learning and Task-Based Language Teaching

SL posits that learners become active constructors of knowledge through their engagement in real-world contexts. According to Lave and Wenger (1991), learning is a fundamentally social process that flourishes in authentic settings. This approach emphasizes that learning is not merely the passive reception of information but involves the active construction of knowledge through interaction with the environment. In the domain of language learning, TBLT offers a practical application of this theory. Success in language acquisition is tied to collaboration, cognitive apprenticeship, and situated cognition, where learners develop

deeper comprehension by practicing in real-world scenarios (Warschauer et al., 2000). Practical, context-based exercises empower students not only to internalize language structures but also to position themselves as active knowledge constructors (Felix, 2002). Through these tasks, language acquisition occurs naturally, which greatly enhances overall learning efficacy (Sim et al., 2021).

The central tenet of TBLT lies in the completion of meaningful tasks, driving the development of practical language skills. The effectiveness of this method stems from its focus on embedding language tasks at the core of instruction, encouraging learners to apply language to real-life situations. Teachers design tasks that resonate with students' daily experiences, guiding them to use the target language authentically (Oura, 2001). In contrast to traditional grammar-focused methods, TBLT treats language as a communication tool, helping students achieve real-world goals. As Brown (1994) notes, the primary objective of task-based instruction is functional language use rather than repetitive drills. This approach allows learners to integrate language learning with real-life application, such as writing practical documents, which facilitates deeper comprehension through meaningful practice (Sim et al., 2021). Moreover, Lave and Wenger's (1991) SL theory highlights that through real-world tasks, learners actively engage with the language, thus achieving authentic language proficiency.

Both SL and TBLT prioritize active, contextualized language use over abstract drills. In these models, knowledge acquisition is co-constructed through interaction between individuals and their environment (Barab & Duffy, 2000). This dynamic interaction allows learners to grasp the contextual meanings of language while enhancing their comprehension through collaboration and communication. Shih and Yang (2008) emphasize that task-based approaches foster meaningful engagement with language, encouraging students to use it flexibly in diverse situations. Well-designed tasks prompt learners to apply the target language in practical contexts, equipping them with the problem-solving skills necessary for real-world challenges. As such, TBLT not only strengthens language proficiency but also facilitates authentic language practice, enhancing the overall learning experience by fostering social interaction and communication in relevant contexts.

The integration of SL and TBLT, particularly through task design, offers significant advantages for language learning and intercultural communication. Situated practice helps learners attain a deeper understanding and more meaningful learning outcomes (Abdallah, 2011). In virtual environments like Second Life, students can engage in online interactions that simulate real-life communication scenarios, reinforcing the principles of SL (Sim et al., 2021). Additionally, TBLT employs task design to allow students to engage in authentic intercultural exchanges, promoting collaboration and communication across cultural boundaries. Nunan (1989) asserts that tasks should immerse learners in genuine communication, where they not only enhance their language skills but also cultivate the ability to navigate diverse cultural contexts. Hence, the combination of SL and TBLT provides a comprehensive platform for cross-cultural language acquisition, equipping learners to apply their language skills effectively in both academic and professional settings.

Executive Functions and Cognitive Abilities

Executive functions generally refer to the ability to regulate and control our thoughts and behaviors, playing a critical role in nearly every aspect of cognition (Engle, 2002). Research indicates that EF consists of three core components: inhibition, updating, and shifting. Inhibition refers to the ability to control attention, behavior, and thought, particularly when faced with conflicting responses (Miyake et al., 2000). Updating involves continuously monitoring and swiftly adjusting information in working memory, while shifting denotes the capacity to flexibly switch between tasks or mental sets (Diamond, 2013). Although these processes are interrelated, they can operate independently, and individual differences in EF performance during complex tasks not only affect task execution but are also significantly associated with prefrontal cortex functioning (Friedman et al., 2006).

In the study of the relationship between cognitive abilities and executive functions, working memory is often considered a critical bridge. Baddeley (2006) emphasized that working memory is not only a system for storing short-term information but also a crucial cognitive resource when performing complex tasks. It facilitates the effective regulation of attention, aiding individuals in handling multiple tasks and solving complex problems. Training in working memory has been shown to improve executive functions, particularly in advanced cognitive tasks such as reading comprehension and mathematical reasoning (Karbach & Schubert, 2013). Furthermore, research by Von Bastian & Oberauer (2014) demonstrated that working memory training significantly enhances cognitive flexibility, reasoning abilities, and information processing speed in school-aged children, thereby further promoting the development of executive functions.

The development of executive functions is particularly pronounced during childhood and adolescence, a critical period for the shaping of cognitive abilities. Best et al. (2009) found that the complexity and variety of tasks in educational environments are key factors in promoting the growth of executive functions, especially when children are exposed to cognitive challenges early on. For instance, Durston et al. (2002) used neuroimaging techniques to identify the prefrontal cortex as a critical area for executive functions, particularly in tasks involving cognitive shifting and response inhibition. These studies further suggest that training in educational settings, particularly those focused on enhancing high-level executive functions such as planning and strategy adjustment, can significantly improve students' cognitive flexibility and self-regulation, leading to long-term benefits for academic performance.

Executive functions play a pivotal role in supporting the development of cognitive abilities by effectively aiding individuals in processing complex information, solving problems, and self-regulating (Cristofori et al., 2019; Peng & Kievit, 2020). Existing research has provided ample evidence of the relationship between executive functions and cognitive abilities, indicating that targeted educational interventions can significantly enhance both. However, future research must further explore how different types of executive functions operate across various cognitive tasks to design more effective cognitive training programs.

RESEARCH METHODS

Population and Sample

The sample consisted of 75 fourth-grade students from three natural classes in a public primary school in China during the 2024 academic year, representing 45.2% of the total number of fourth-grade students. The students were systematically divided into three groups. Two of the groups were clearly defined as the experiment group (Class A: 25 students) and the control group (Class B: 25 students). The experiment group used an instructional approach based on inquiry-based learning and task-based learning, while the control group followed traditional teaching methods. A third group (Class C: 25 students) was designated as the validation group, playing a crucial role in assessing the reliability and validity of the research instruments used in this study. The participants ranged in age from 9 to 10 years (M =10.4, SD=0.53).

Research Purpose and Variables

This study aims to investigate the effects of instructional approaches based on SL and TBLT on the executive functions and cognitive abilities of fourth-grade students. The independent variable is the teaching method, with the experimental group using a hybrid approach of SL and TBLT, while the control group employs traditional teaching methods. The dependent variables are executive functions and cognitive abilities, focusing on enhancing students' cognitive skills and task execution abilities in the English course through the application of different instructional methods.

Hypotheses

H1: Compared to before the study, the instructional approach based on SL and TBLT can enhance the executive functions and cognitive abilities of 4th-grade students.
H2: Compared to the control group, the instructional approach based on SL and TBLT can enhance the executive functions and cognitive abilities of 4th-grade students.

Research instruments

Executive Function Assessment Scale

The Executive Function Assessment Scale for Primary Students (EFPS) is an evaluation tool aimed at measuring executive function behaviors in children aged 6 to 12. This scale was adapted from the Self-Report Measure of Executive Function created by Awomokun (2022), which originally targeted university students' self-perception of purposeful, goal-oriented, and problem-solving behaviors. Executive Functions (EF) are key cognitive abilities that include cognitive control, flexibility, planning, organization, and self-monitoring, all of which play a crucial role in academic performance and daily activities. The EFPS contains 35 items, organized into seven dimensions: 1) Organization/Planning, 2) Attention, 3) Emotional Regulation, 4) Time Management, 5) Transitions/Adaptations, 6) Learning/Memory, and 7) Self-Reflection. Each item is rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), and the overall score is calculated using the Mean Global Executive Composite (GEC) (Guy et al., 2004), which serves as a comprehensive indicator of executive function. Higher GEC scores reflect stronger executive functions. A preliminary test was conducted on a sample of 25 fourth-grade students from Class C to ensure the

reliability of the scale. The internal consistency, measured by Cronbach's α=0.87, and the test-retest reliability=0.764 (P<0.05), confirming that the EFPS is a reliable tool for assessing executive functions in 4th-grade students.

Cognitive Abilities Assessment Scale

The Cognitive Abilities Scale (CAS) was developed as an assessment tool to systematically evaluate the cognitive abilities of test subjects, particularly in the context of organization and management. Originally adapted by Fleishman and Reilly (1992), the CAS aims to provide a comprehensive approach to understanding managerial competencies by assessing cognitive, psychomotor, physical, and sensory perceptual domains. The CAS includes 20 items covering multiple cognitive domains such as 1) Perceptual Ability, 2) Spatial Abilities, 3) Thinking and Reasoning Skills, 4) Quantitative Abilities, and 5) Language Proficiency, with each domain represented by three items. The assessment uses a five-point Likert scale, where respondents evaluate the accuracy of statements regarding their cognitive abilities, with 5 indicating a high degree of accuracy. To ensure the reliability of the CAS, a preliminary survey was conducted with 25 fourth-grade students from Class C of the same school. Following this survey, the internal consistency of the scale was tested, yielding a Cronbach's α=0.84. Additionally, the test-retest reliability was calculated as 0.813 (P<0.05). These results demonstrate that the CAS is a reliable tool for measuring the cognitive abilities of 4th-grade students.

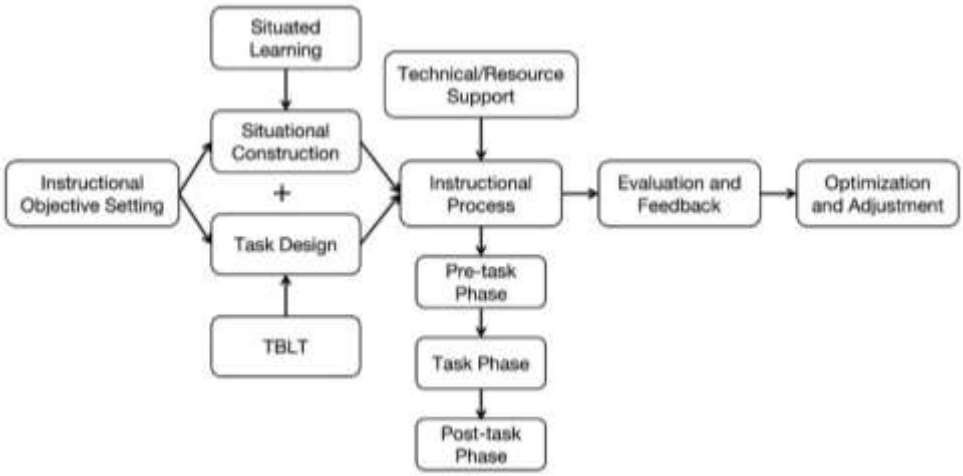

Figure 1. Instructional Framework for SL and TBLT

Intervention

The intervention in this study was designed around the principles of SL and TBLT. SL emphasizes learning in authentic, real-world contexts, while TBLT focuses on engaging students with practical tasks to facilitate language acquisition and cognitive development. Figure 1 shows the teaching framework for experiment group, students participated in tasks that directly reflected real-life situations, such as simulated shopping, travel planning, and

weather discussions. These tasks were carefully designed to integrate English language use with the enhancement of executive functions such as cognitive flexibility, working memory, and problem-solving abilities. The teacher facilitated the tasks by guiding students through the use of target language in relevant, meaningful contexts, allowing students to apply what they learned to complete the tasks.

The intervention took place over four weeks, with five sessions each week, lasting 45 minutes per session. During these sessions, students in the experimental group completed tasks related to the course content from the Compulsory Education Curriculum Standard Experimental Textbook English, including units such as My School and Shopping. The lessons were structured to simulate real-life interactions, fostering an immersive learning environment. The control group, by contrast, followed a traditional teaching approach that focused on lecture-based instruction, with minimal emphasis on contextual learning or task-based activities. Both groups underwent a pre-test and post-test using the EFPS and the CAS to assess changes in executive functions and cognitive abilities resulting from the instructional methods.

Data Collect and Analysis

EFPS and CAS score data were statistically collected and analyzed using SPSS software. The data collected in this study were compared by ANOVA and T-test to compare 1) the difference between pre-experimental and post-experimental groups and 2) the difference between experiment and control groups. The significance level was set at $p<0.05$, and Cohen's d was set at Cohen's d=0.2, 0.5, and 0.8, which represent small, medium, and large effect sizes, respectively.

Ethical Approval

Ethical approval for this study was obtained from the Research Ethics Committee of Nakhon Phanom University (Reference No: HE14467). The study followed national and international ethical guidelines to protect the rights, privacy, and well-being of all participants, especially the 4th-grade students. Informed consent was obtained from parents or legal guardians and the school administration. All research procedures were confidential, and steps were taken to minimize any risks or discomfort to participants.

Result

Pre-test Comparison of Executive Function and Cognitive Abilities

Table 1 presents the descriptive statistics and results of the t-tests conducted, showing that the mean scores for executive function in the control and experimental groups were nearly identical, M=157.36 and M=157.16, respectively. The t-test results indicated that the difference was not statistically significant, $t(24)=1.309$, $p>0.05$, with Cohen's d=0.262, reflecting a small effect size. Similarly, for cognitive abilities, the mean scores for the control and experimental groups were M=132.08 and M=132.12, respectively. The t-test, $t(24)=-0.253$, $p>0.05$, further confirmed the lack of significant difference, and Cohen's d=0.051 suggests a negligible effect size. These results demonstrate no significant pre-test differences between the control and experimental groups for both executive function and cognitive abilities, establishing a baseline that ensures the fairness of the comparison and

supports the attribution of any subsequent changes to the instructional intervention rather than pre-existing differences.

Table 1. Comparison of Pre-test between Control and Experimental Groups

Variable	df	Mean	SD	t	P	Cohen's d
Executive Function						
Control Group	24	157.36	5.873	1.309	0.203	0.262
Experiment Group	24	157.16	5.864			
Cognitive Abilities						
Control Group	24	132.08	5.163	-0.253	0.802	0.051
Experiment Group	24	132.12	5.134			

Note: *P<0.05.

Hypotheses 1: Significant Improvement After Intervention in Experimental Groups

Table 2 presents the descriptive statistics and t-test results comparing the pre-test and post-test scores in the experimental group. For executive function, the mean scores increased from M=157.16 in the pre-test to M=161.88 in the post-test. The t-test results indicated that this improvement was statistically significant, t(24)=-18.047, p<0.05, with Cohen's d=3.609, suggesting a large effect size. Similarly, for cognitive abilities, the mean score rose from M=132.12 in the pre-test to M=137.04 in the post-test. The t-test, t(24)=-19.591, p<0.05, confirmed the statistical significance of this change, with Cohen's d = 3.918, also indicating a large effect size. These findings demonstrate a significant improvement in both executive function and cognitive abilities following the intervention, providing strong evidence of the effectiveness of the instructional approach used in the experimental group. Therefore, hypotheses 1 can be accepted.

Table 2. Comparison of Pre-test and Post-test in the Experiment Group.

Variable	df	Mean	SD	t	P	Cohen's d
Executive Function						
pre-test	24	157.16	5.86	-18.047	0.000*	3.609
post-test	24	161.88	6.11			
Cognitive Abilities						
pre-test	24	132.12	5.13	-19.591	0.000*	3.918
post-test	24	137.04	5.10			

Note: *P<0.05.

Hypotheses 2: Significant Differences Between Control and Experimental Groups After Intervention

Table 1 previously demonstrated that the pre-test comparison of executive function and cognitive abilities between the control and experimental groups showed no significant differences, confirming that both groups were comparable at baseline before the intervention. Table 3 presents the descriptive statistics and t-test results comparing the

post-test scores between the control and experimental groups. For executive function, the mean score for the control group was M=158.16, while the experimental group scored M=161.88. The associated t-value, t(24)=-14.224, p<0.05, indicates that the difference was statistically significant, with Cohen's d = 2.845, suggesting a large effect size. Similarly, for cognitive abilities, the control group had a mean score of M=133.28, and the experimental group scored M=137.04. The t-test result, t(24)=-11.835, p<0.05, confirms the statistical significance of this difference, with Cohen's d=2.367 also indicating a large effect size. These results demonstrate significant differences between the control and experimental groups in both executive function and cognitive abilities after the intervention, providing strong evidence of the effectiveness of the instructional approach employed in the experimental group. Therefore, hypotheses 2 can be accepted.

Table 3. Comparison of Post-test Between Control and Experimental Groups

Variable	df	Mean	SD	t	P	Cohen's d
Executive Function						
Control Group	24	158.16	5.86	-14.224	0.000*	2.845
Experiment Group	24	161.88	6.11			
Cognitive Abilities						
Control Group	24	133.28	5.03	-11.835	0.000*	2.367
Experiment Group	24	137.04	5.10			

Note: *P<0.05.

DISCUSSION

Although there is widespread recognition that interventions grounded in SL and TBLT can effectively enhance both executive functions and cognitive abilities (McKinley, 2015; Besar, 2018), the specific mechanisms and contextual factors driving these improvements remain insufficiently explored. As noted by Lave and Wenger (1991), SL emphasizes participation in real-world activities, allowing learners to engage in problem-solving within meaningful contexts. This study sought to investigate the extent to which this approach, in combination with TBLT, contributes to cognitive outcomes. Aligned with Vygotsky's sociocultural theory (1978), which highlights the significance of social interaction and contextualized learning in cognitive development, this study aimed to determine whether students exposed to this method would show greater improvements in executive functions and cognitive abilities compared to those taught using traditional methods. By addressing this gap, the study adds to the growing body of literature on contextual learning and cognitive development (Ellis, 1999).

The results from the statistical analyses revealed substantial improvements in the experimental group's post-test scores, with large effect sizes noted in both executive functions (Cohen’s d=3.609) and cognitive abilities (Cohen’s d=3.918). These notable gains provide strong support for Vygotsky’s sociocultural theory (1978), which emphasizes that cognitive development is deeply influenced by social interaction and environmental factors. The tasks integrated into the intervention were designed to replicate real-life scenarios, fostering both engagement and active participation, in line with Dewey’s (1933) argument that direct, experiential contexts enhance cognitive development. Furthermore, McKinley

(2015) suggested that knowledge is constructed through collaborative engagement with one's environment, a notion supported by the significant improvements in both cognitive flexibility and working memory observed in this study. These findings underscore the critical role of active learning and contextual engagement in promoting executive function development.

In addition, the comparison between the control and experimental groups post-intervention provided further validation of the effectiveness of SL and TBLT. The significant differences observed in both executive functions ($t=-14.224$, $p<0.05$, Cohen's $d=2.845$) and cognitive abilities ($t=-11.835$, $p<0.05$, Cohen's $d=2.367$) are consistent with previous findings by Zelazo and Müller (2002), who emphasized that executive functions like working memory and cognitive flexibility can be enhanced through emotionally and cognitively engaging tasks. These results align with Gardner's (1985) emphasis on the importance of practical engagement with complex, meaningful tasks in fostering cognitive development. In contrast, traditional teaching methods often fail to provide the level of engagement necessary to support the development of higher-order cognitive functions, highlighting the limitations of more conventional instructional strategies.

The theoretical foundation of SL, as articulated by Lave and Wenger (1991), further elucidates the success of this intervention. Their concept of Legitimate Peripheral Participation (LPP) posits that learning is most effective when learners are immersed in authentic, real-world tasks. This framework is supported by Boud (1994), who argued that contextual learning allows students to re-experience real-world events from multiple perspectives, thereby fostering deeper cognitive engagement. In this study, tasks such as simulated shopping and travel planning were designed to provide authentic learning experiences that not only enhanced students' cognitive abilities but also promoted active participation and problem-solving. Participation in Communities of Practice (CoP) facilitates both the acquisition of new knowledge and the refinement of existing skills, aligning with the cognitive gains observed in this study (Wenger, 1998).

Finally, the research instruments employed in this study, including the EFPS and the CAS, were critical in capturing the nuanced changes in students' cognitive abilities. The reliability and validity of these tools, supported by Cronbach's $\alpha=0.87$ for the EFPS and Cronbach's $\alpha=0.84$ for the CAS, ensured the robustness of the findings (Awomokun, 2022). The use of such reliable measures is crucial for assessing cognitive outcomes in educational research, as highlighted by Gioia et al. (2000), who emphasized the importance of behavioral assessments in evaluating real-world executive function skills. This study builds on Guy et al.'s (2004) concept of the Global Executive Composite (GEC), further demonstrating the EFPS's suitability for measuring executive functions in children and reinforcing its validity as an assessment tool in the context of instructional interventions.

CONCLUSION

In this study, we explored the effects of SL and TBLT on enhancing executive functions and cognitive abilities in fourth-grade students. We proposed a structured approach that integrates real-world tasks with language instruction to promote active learning and cognitive development. The findings demonstrate that this instructional method significantly improves students' ability to plan, organize, and solve complex problems, confirming the

effectiveness of these teaching strategies. A key advantage of this approach is its adaptability and potential application across various educational contexts, providing a flexible framework for enhancing cognitive abilities through immersive, task-based learning.

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