

COGNITIVE AND METACOGNITIVE STRATEGIES IN EFL LEARNING : THEIR IMPACT ON STUDENT PERFORMANCE

Abstract

This study explores the cognitive and metacognitive methods used by second year students at Faculty of languages in Elmergib University while learning . Using a qualitative case study approach, the research focuses on 15 students in a single classroom setting. Data is collected through classroom observations and semi-structured interviews to explore how students approach tasks such as reading, writing, and group discussions. The findings reveal that students frequently use cognitive strategies such as repetition, summarizing, and using context clues, as well as metacognitive strategies like goal-setting and self-monitoring. However, some students demonstrated limited awareness of metacognitive strategies, highlighting the need for explicit instruction in this area. In this study the researcher pays a close attention to how to make use of cognitive and metacognitive skills in classrooms to enhance students' language proficiency Some of these findings can be applied by teachers using strategy training in their lessons so that students can learn in effective way and work independently in classroom.

Introduction

The process of learning a foreign language, such as English, is complex and multifaceted. Language learners engage in various cognitive and metacognitive strategies to acquire, process, and retain new language knowledge. Cognitive strategies refer to the mental techniques learners use to process information, such as repetition, summarization, and inferencing from context. These strategies help learners understand and produce language, making them essential for language acquisition. On the other hand, metacognitive strategies involve the regulation and control of one's cognitive processes, such as planning, monitoring, and evaluating

one's learning. These strategies are vital for fostering self-regulation and autonomous learning, allowing learners to adapt their approach based on their progress and challenges.

In the context of English as a Foreign Language (EFL), students' use of both cognitive and metacognitive strategies is crucial for their academic success and language proficiency. However, while cognitive strategies are often instinctively employed, metacognitive strategies require conscious reflection and awareness. As such, fostering metacognitive skills is vital for helping students manage their own learning and become more independent and effective in acquiring language skills.

Given the importance of these strategies in the language learning process, there is a growing need to explore how EFL students employ cognitive and metacognitive methods in the classroom. Understanding the strategies that students use can inform teaching practices and help educators design more effective language learning environments. By promoting both cognitive and metacognitive approaches, teachers can support students in becoming more autonomous learners who are able to take control of their language development.

Research Questions

To address the research problem, the study is guided by the following research questions:

1. What cognitive strategies do students use during language learning tasks, such as reading, writing, and group discussions?
2. What metacognitive strategies do students use to plan, monitor, and evaluate their learning during language tasks?
3. How do cognitive and metacognitive strategies influence students' performance and outcomes in language tasks?
4. What challenges do students face in applying cognitive and metacognitive strategies during language tasks?

Significance of the Study

This study provides insights into the use of cognitive and metacognitive strategies by second-year EFL students, focusing on their application in real classroom tasks. By identifying strategies students use and the challenges they face, the study offers practical recommendations for enhancing teaching practices, learner autonomy, and self-regulation.

Literature Review

Cognitive and metacognitive strategies are vital for learning English as a Foreign Language (EFL). Cognitive strategies, such as repetition, summarizing, and using context clues, help learners engage with language tasks and enhance skills in reading, writing, listening, and speaking. Repetition, for instance, aids in vocabulary retention, but deeper processing like organizing information supports long-term learning (Craik & Lockhart, 1972). Summarizing and note-taking also promote comprehension and retention (Kiewra, 1989), while context inference enhances vocabulary growth and reading comprehension (Nagy, Herman, & Anderson, 1985).

Metacognitive strategies involve self-awareness and regulation of cognitive processes, such as planning, monitoring, and evaluating learning. Planning helps learners set goals and stay focused, improving motivation (Zimmerman, 2002). Monitoring allows learners to check understanding and performance, improving accuracy (Vandergrift & Goh, 2012), while evaluation helps identify areas for improvement and adjust strategies (Butler & Winne, 1995). The combination of cognitive and metacognitive strategies is crucial for effective language learning, as both help learners engage with tasks and regulate their learning processes (Zhang & Zhang, 2013). Explicit instruction in these strategies has shown to improve EFL learners' performance in reading, writing, and vocabulary acquisition (Cohen, 2011).

However, many learners face challenges in applying these strategies. Some lack awareness of metacognitive strategies or struggle to use them in practice, relying more on cognitive strategies like repetition (Oxford, 1990). Additionally, learners from teacher-centered educational systems may find self-regulated learning practices difficult to adopt (Rao, 2016). These challenges highlight the importance of explicit

strategy instruction to help learners become more effective and autonomous in their language learning

Methodology

This study adopts a qualitative case study design to explore the cognitive and metacognitive strategies used by second-year EFL students in a natural classroom setting. The participants are 15 students (ages 19-21, B1 proficiency level on the CEFR scale), selected for their willingness to participate. Informed consent is obtained from all participants.

Data is collected through classroom observations and semi-structured interviews. Observations focus on reading, writing, and group discussions, recording the use of cognitive and metacognitive strategies with an observation checklist and field notes. Semi-structured interviews, lasting 15-20 minutes, delve into students' strategy use and challenges.

The data is analyzed using thematic analysis, identifying key themes related to strategy use and its impact on learning. Ethical guidelines ensure confidentiality and anonymity.

The study's limitations include a small sample size and focus on a single classroom, limiting generalizability. However, the qualitative approach offers rich, context-specific insights into students' strategy use.

Results

The findings of this study reveal how second-year students use cognitive and metacognitive strategies during language learning tasks and the challenges they face in applying these strategies. The analysis of classroom observations and semi-structured interviews highlights several key patterns in students' learning processes, with results that align with existing research:

Cognitive Strategies

Students frequently employed cognitive strategies to complete language tasks such as reading, writing, and group discussions. A commonly used strategy is repetition, especially for vocabulary acquisition. During a vocabulary exercise, students are observed repeating new words aloud or writing them multiple times in their notebooks. One student shared in an interview, "I write the word many times to remember it. Sometimes I say it out loud to myself." This supports Nation (2001), who argues that repetition enhances short-term memory retention.

Another prevalent cognitive strategy is summarizing, which students used during reading comprehension tasks. Students are observed taking notes or underlining key points to help them understand and retain the content. As one student explained, "I try to write the main ideas in my own words. It helps me understand better." This aligns with Kiewra (1989), who asserts that summarizing is crucial for improving comprehension and long-term retention. Additionally, students frequently used context clues to infer the meanings of unfamiliar words. During a reading task, students would look at surrounding sentences to guess the meaning of difficult vocabulary. One student said, "If I don't know a word, I look at the sentences before and after it. Usually, I can figure it out." This reflects Nagy, Herman, and Anderson (1985), who found that context clues are essential for vocabulary growth and reading comprehension.

Metacognitive Strategies

While cognitive strategies are widely used, the application of metacognitive strategies is more inconsistent among students. Some students effectively used goal-setting to guide their learning. One student explained, "Before I start a task, I think about what I want to achieve. If it's a reading task, I tell myself to focus on understanding the main idea." This reflects Zimmerman (2002), who emphasizes the importance of goal-setting for self-regulated learning, highlighting its role in improving task performance.

Self-monitoring is another metacognitive strategy observed, but its use varied. During a writing task, some students reread their work and made corrections. One student said, "I check my sentences to see if they make sense. If I find a mistake, I fix it."

This aligns with Garrison (1997), who argued that self-monitoring is an important metacognitive skill for improving writing accuracy. However, not all students engaged in self-monitoring. Some admitted in interviews that they rarely reviewed their work, with one student stating, "I just write and finish. I don't usually go back to check." This inconsistency in self-monitoring use is similar to Karpicke and Roediger (2008), who noted that while some students use self-monitoring effectively, others do not develop this habit.

The least used metacognitive strategy is self-evaluation. While a few students reflected on their performance after completing tasks, many did not engage in this practice. One student who did reflect shared, "After I finish, I think about what I did well and what I need to improve." This lack of widespread use of self-evaluation mirrors Butler and Winne (1995), who emphasize that self-evaluation is essential for students to identify areas for improvement in their learning.

Challenges in Strategy Use

The study also revealed several challenges students face in applying cognitive and metacognitive strategies. One major challenge is limited awareness of metacognitive strategies. Many students are unfamiliar with strategies such as goal-setting, self-monitoring, and self-evaluation. For instance, one student admitted, "I don't really think about how I learn. I just try to finish the task." This lack of metacognitive awareness reflects Schraw (1998), who argues that students often lack the necessary skills to monitor and regulate their learning effectively, especially when they have not received explicit training in these strategies.

Another challenge is an over-reliance on cognitive strategies, particularly repetition and memorization. While these strategies help with short-term retention, they may not support deeper learning or long-term proficiency. As one student explained, "I just repeat the words until I remember them. I don't know other ways to learn." This over-reliance on cognitive strategies resonates with Oxford (1990), who suggests that students should diversify their strategies beyond simple memorization to achieve greater language proficiency.

Finally, students faced difficulty applying strategies in real-time tasks. For example, during a group discussion, many students struggled to monitor their speech or adjust their language use. One student shared, "It's hard to think about grammar and vocabulary while speaking. I just focus on getting my ideas out." This finding aligns with Vandergrift and Goh (2012), who note that learners often struggle to implement metacognitive strategies effectively in dynamic, real-time situations like speaking tasks, where cognitive load is high.

Recommendations

Based on the findings of this study, several recommendations can be made to support the development of cognitive and metacognitive strategies among EFL students. First, teachers should provide explicit instruction in metacognitive strategies, such as goal-setting, self-monitoring, and self-evaluation. This can be done through modeling, guided practice, and reflective activities that encourage students to think about their learning processes .

Second, teachers should create opportunities for students to practice applying strategies in a variety of contexts. For instance, during reading tasks, students can be encouraged to use context clues and summarize key points, while during writing tasks, they can practice self-monitoring and self-evaluation. Group discussions and role-plays can also provide opportunities for students to practice self-regulation in real-time communication.

Third, a supportive environment is needed so that students may feel at ease making use of these strategies. This can be achieved by providing constructive feedback, encouraging peer collaboration, and celebrating students' progress. Teachers can also use reflective journals or self-assessment tools to help students develop metacognitive awareness and take ownership of their learning.

Finally, curriculum designers and policymakers should consider integrating strategy instruction into EFL curricula and teacher training programs. By equipping teachers with the knowledge and skills to teach cognitive and metacognitive strategies, educational institutions can help students become more effective and independent learners.

References

- Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research*, 65(3), 245–281.
<https://doi.org/10.3102/00346543065003245>
- Cohen, A. D. (2011). *Strategies in learning and using a second language*. Routledge.
- Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 11(6), 671–684.
[https://doi.org/10.1016/S0022-5371\(72\)80001-X](https://doi.org/10.1016/S0022-5371(72)80001-X)
- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, 34(10), 906–911.
<https://doi.org/10.1037/0003-066X.34.10.906>
- Kiewra, K. A. (1989). A review of note-taking: The encoding-storage paradigm and beyond. *Educational Psychology Review*, 1(2), 147–172.
<https://doi.org/10.1007/BF01326640>
- Nagy, W. E., Herman, P. A., & Anderson, R. C. (1985). Learning words from context. *Reading Research Quarterly*, 20(2), 233–253. <https://doi.org/10.2307/747758>
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Newbury House.
- Rao, Z. (2016). Language learning strategies and English proficiency: Interpretations from information-processing theory. *The Language Learning Journal*, 44(1), 90–106.
<https://doi.org/10.1080/09571736.2012.733886>
- Vandergrift, L., & Goh, C. C. M. (2012). *Teaching and learning second language listening: Metacognition in action*. Routledge.

Wenden, A. L. (1998). Metacognitive knowledge and language learning. *Applied Linguistics*, 19(4), 515–537. <https://doi.org/10.1093/applin/19.4.515>

Zhang, L. J., & Zhang, D. (2013). Thinking metacognitively about metacognition in second and foreign language learning, teaching, and research: Toward a dynamic metacognitive systems perspective. *Contemporary Foreign Language Studies*, 396(12), 111–121.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2