THE USE OF COGNITIVE STRATEGIES TO DEVELOP LEARNERS' CRITICAL THINKING IN EFL

Botirova Dilsora

Scientific supervisor: ***Kambarova Marjan***

Uzbek State World Languages University, Uzbekistan

Abstract: *The paper discusses the results of a study which explored the use cognitive strategies to develop learners' critical thinking in EFL. The data were collected from 25 students by means of problem-solving tasks and survey. The gathered data were subjected to qualitative and quantitative analysis. The results of the study demonstrated that, on the one hand, Some problem solving tasks were completed positively by the students and they participated very actively in such tasks. This shows how quickly critical thinking has developed in them, but there are still some students whose critical thinking is low. They could not be active in problem solving tasks and debates, and in addition, the survey conducted also revealed that critical thinking is very low in the students.*

Keywords*: Critical thinking, cognitive strategies, EFL learners, problem-solving, surveys*

Introduction

Numerous perspectives suggest that higher education institutions should incorporate critical thinking into their curricula. The new skills grant a central role to critical thinking in new plans. And these new skills require certain degree of conscientiousness and its process. So cognitive strategies or metacognition plays a crucial role in developing critical thinking in every field of learning and it consists of the process of thinking in order to improve their better knowledge. Effective critical thinking relies on the proper functioning of metacognitive mechanisms, as well as an awareness of the involved processes, actions, and emotions. This awareness offers the opportunity to identify and rectify any

shortcomings. Despite evidence linking metacognitive processes with critical thinking, there are still limited efforts to determine which process influences the other or if both are interdependent.

The cultivation of critical thinking (CT) has long been a priority for educators across all levels of education. Critical thinking refers to the capacity for reflective and autonomous reasoning, enabling individuals to make well-founded, logical judgments. It encompasses both cognitive abilities and personal dispositions and is regarded as a fundamental 21st-century competency. This skill is acquired through a lifelong learning process, beginning in early childhood. According to Piaget [1952], the ability to think critically stems from an innate capacity to construct complex cognitive structures. Moreover, higher-order cognitive functions continue to evolve throughout an individual's lifespan.

Taking into consideration the above-mentioned issues, the study reported in this article investigated ways EFL learners use cognitive strategies to develop critical thinking. The article commences with a short overview of relevant literature. Next, the design of the study is described, namely a research question, description, data collection tools and analysis. This is followed by presentation of the results of the study. The article closes with discussion and conclusion.

Literature review

In recent decades, the role of cognitive strategies in fostering critical thinking skills has gained increasing attention in educational research. As learning environments shift toward more learner-centered approaches, educators and scholars have explored how strategic thinking processes—such as analyzing, summarizing, comparing, and evaluating—can deepen students' engagement and understanding. Critical thinking, widely recognized as a key 21st-century skill, is not an automatic outcome of education; rather, it requires intentional cultivation through structured methods and cognitive scaffolding. This chapter reviews key theoretical perspectives and empirical studies on the relationship between cognitive strategy instruction and the development of critical thinking skills, with

a focus on applications in EFL and general education settings. From a cognitive development perspective, one of the most crucial abilities to nurture in preschool-aged children is their capacity for analytical thought. Every new experience provides an opportunity for young learners to absorb and integrate information, facilitating the independent formation of new conceptual frameworks [Piaget, 1952]. However, a key challenge for educators lies in effectively implementing critical thinking strategies within the classroom, whether in a traditional or digital learning environment. In many cases, instructors primarily focus on delivering theoretical concepts and terminology, failing to foster intellectual engagement among students [Brookfield, 2011]. The successful use of critical thinking techniques in the classroom is one of the major issues facing education, according to Brookfield. He contends that a lot of teachers prioritize teaching vocabulary and course material above promoting active student participation. This passive method restricts students' ability to critically evaluate, challenge, and apply what they have learned. The necessity of reflective and interactive teaching strategies that encourage more intellectual engagement is highlighted by Brookfield's viewpoint. In order to effectively develop critical thinking, teachers should create an atmosphere that promotes discussion, investigation, and problem-solving. This will guarantee that students acquire the abilities required for autonomous and critical thinking.

Metacognition was first introduced by John Flavell in the early 1970s. Flavell identified metacognition as having two aspects: one is "the knowledge one possesses about their own cognitive processes or products, or any related matters," and the other is "the active oversight and consequent regulation and organization of these processes concerning the objects or cognitive data they engage with" [Flavell, 1976, p.232]. From this understanding, we can distinguish two components of metacognition: the declarative aspect, known as metacognitive knowledge, which concerns knowledge of the individual and the task, and the procedural aspect, referred to as metacognitive control or self-regulated learning,

which is always goal-oriented and governed by the learner. The concept of critical thinking lacks a universally accepted definition, as diverse interpretations have existed and continue to exist. Its complexity makes it challenging to encapsulate all its facets in a single definition. Despite the numerous interpretations of critical thinking, it is crucial to determine which definition we will adopt. Critical thinking can be described as a process of acquiring knowledge through reasoning skills to solve problems and make decisions, enabling us to more effectively attain our desired outcomes [Saiz, Rivas, 2008, p.131]

Critical thinking is a data-driven and action-oriented approach to problem-solving and interpersonal interaction [Daniel, Auriac, 2012]. It is marked by self-directedness, self-discipline, self-regulation, and self-correction, adhering to rigorous standards of excellence and a deliberate control over its application. Additionally, it encompasses effective communication and the enhancement of problem-solving abilities [Saiz and Rivas, 2008, 2012, 2016].

If we speak about the work called “University students’ cognitive flexibility and critical thinking dispositions” by Ismail Karakus, I find this study particularly intriguing because it highlights the vital role of cognitive flexibility in fostering critical thinking. The fact that cognitive flexibility explains about 40% of the differences in critical thinking attitudes indicates that the ability to adjust one's thinking is not just advantageous, but may be essential for sound reasoning. In my experience, when individuals are prompted to examine problems from various angles and modify their strategies accordingly, they often reach more insightful and comprehensive conclusions. This research supports the notion that educational approaches should prioritize not only knowledge transmission but also the cultivation of flexible thinking. Overall, I believe that incorporating practices that enhance cognitive adaptability could greatly improve critical thinking skills, equipping students to handle complex and fast-changing situations more effectively.

Because of the importance of critical thinking in solving problems related to students' learning, critical thinking cannot be separated from educational institutions [Kim and Choi, 2008], especially from institutions of higher education [Collier and Morgan, 2008].

Methods

Scaffolding encourages learners to engage in higher-order thinking by guiding them through problem-solving and decision-making processes. Initially, the teacher provides clear instructions and models the task, helping students analyze the problem and make connections. Over time, as the students gain confidence and proficiency, they are asked to take more responsibility for their learning, encouraging them to evaluate the information independently and make reasoned decisions. This approach not only improves language skills but also strengthens critical thinking by fostering a deeper understanding of the material and enabling learners to reflect on their thought processes. In this method I used table in order to explain the students' critical thinking and their opinions. My table involves open -ended questions that don't have a simple answer push students to think critically, analyze different perspectives and make decisions.

Participants

The study involved 25 students from an elementary level English as a Foreign Language (EFL) class at a local study center. The participants ranged in age from 9 to 12 years old. These students were selected based on their enrollment in the language program and their participation in a series of lessons designed to implement cognitive strategies for improving critical thinking skills. Of the 25 participants, there were 13 males and 12 females, with an overall balanced gender representation. The students' language proficiency levels varied slightly but were all within the A1 (Beginner) level according to the Common European Framework of Reference (CEFR). Their familiarity with English vocabulary,

grammar, and basic communication skills were assessed at the beginning of the course to ensure they were appropriate candidates for the study.

The participants were taught using scaffolding techniques aimed at promoting problem-solving and critical thinking. Throughout the lessons, the students were encouraged to engage in activities such as collaborative problem-solving, open-ended questions, group discussions, and the use of visual aids like concept maps. The study was conducted over four weeks, with students attending two 90-minute sessions per week. The participants were informed about the study and gave their consent (through parental consent for minors) to participate in the research. Their responses and feedback were anonymized to ensure privacy, and no personal or identifiable data was collected beyond the scope necessary for this study.

Data collection and analysis

The data were gathered by means of questionnaires, observations and student reflections during the four-week instructional period. The main aim was using scaffolding strategies on students' critical thinking skills in EFL lessons. The data collection was involved both quantitative and qualitative feedback to provide students' experiences.

Questionnaires: at the end of the study, overall 25 students completed 10 question questionnaire assessing with scaffolding. Students were also given open-ended feedback. Most students reported that techniques like group work, think-alouds and open-ended questions positively impacted their critical thinking.

The analysis started with partial transcription of the important parts of the data on a computer. The ideas were reviewed, read and updated in order to be more clearly. The researcher used different techniques in order to make more researches.

Findings

Questions	S/agree	Agree	Neutral	Disagree	S/disagree
For being independent, teacher reduced their support	12	9	2	1	1
I took many questions that helped me to think critically about the topic	10	12	2	1	0
After using scaffolding I would feel comfortable completing tasks	10	12	2	1	0
By scaffolding I improved my ability to think critically	13	9	2	1	0
During the lesson teacher asked open-ended questions that were the cause of thinking deeply	11	9	4	1	0
Maps or diagrams helped me	9	10	5	1	0

understand the material better					
I worked with my classmates to discuss the topic together	18	8	3	10	0

The table shows using different scaffolding methods in the lesson and their effectiveness. The majority of students (12/25) strongly agree that they could work independently without their teacher's help. Only (2/25) neutral and 1 student disagreeing about this opinion. This technique is called Gradual Release of Responsibility in scaffolding. From the question for critical thinking most students (22/25) agree and strongly agree that teacher's questions were useful to improve their thinking deeply. A few students were naturel and no one strongly disagreed. From this facts questions and prompts that were given to the students help them to increase their critical thinking. 22 students out if 25 would feel comfortable completing tasks independently after receiving scaffolding, which reflects the success of the scaffolding techniques in promoting autonomy. From them 10 students were strong agree, 12 students were agree for this opinion.

Open-ended questions were also useful for prompting deeper thinking. Most students (20/25) agreed strongly for this technique. 19 students felt that map and charts, visual aids, helped them with their understanding. Using of maps helps students to analyze and organize information effectively. The most students (13/25 strongly agree, 8/215 agree) found that working with classmates is useful for developing critical thinking. By working in a group they can learn new things and share their own opinions that help students to think deeply.

In general, this table was used to show how scaffolding is effective in order to improve students' critical thinking in EFL lessons. By using scaffolding

techniques the lessons can be interesting and students can enjoy by using their own opinions in the lessons.

Conclusion

This research explored the implementation of scaffolding methods to improve critical thinking in EFL learners at the elementary level. The information gathered via surveys, classroom observations, student reflections, and teacher documentation indicated that scaffolding practices—like gradual transfer of responsibility, think-aloud strategies, collaborative activities, and open-ended inquiries—considerably enhanced students' critical thinking skills. Many students shared that they felt more confident and self-reliant when tackling problem-solving tasks, suggesting that the support they received really helped their cognitive growth. Working together with classmates and using visual tools played a big role in assisting students with breaking down and sorting through information. Moreover, feedback from students indicated that they believed they were better at thinking critically and making decisions on their own after experiencing this supportive scaffolding.

Overall, the results indicate that scaffolding is an effective approach for encouraging critical thinking among EFL learners, supporting their journey from structured guidance to self-reliant problem-solving. In the future, research could delve deeper into how various scaffolding techniques can be customized to accommodate the unique needs of different learners.

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