Sumaya Zaidan Khalaf

Alaa Abdullah Hussain

Tikrit University/ College of Arts – English Department

* *Corresponding author: E-mail* :
S.zidan@tu.edu.iq

Exploring the Impact of the EXTEND Strategy on Enhancing Critical Thinking Skills

A B S T R A C T

This study aims to explore the impact of the EXTEND strategy comprising the stages Explore, Examine, Think, Elaborate, Network, and Demonstrate on enhancing critical thinking skills among first-year EFL students at the University of Tikrit. The research adopts a quasi-experimental design using one group (N = 30) from the English Department, College of Arts. A pre-test and post-test questionnaire administers to measure changes in students' critical thinking abilities and their engagement with the strategy.

The results indicate a statistically significant improvement in students' critical thinking skills following the application of the EXTEND strategy. Mean scores increased across all measured items, particularly in students' ability to reflect, justify opinions, collaborate, and analyze information. A paired-sample t-test revealed that the difference between pre- and post-test scores was highly significant ($p < 0.05$), confirming the effectiveness of the strategy.

استكشاف أثر استراتيجية EXTEND في تعزيز مهارات التفكير النقدي في جامعة تكريت

سميه زيدان خلف/ جامعة تكريت/ كلية الآداب – قسم اللغة الانكليزية

الاء عبدالله حسين/ جامعة تكريت/ كلية الآداب – قسم اللغة الانكليزية

الخلاصة:

تهدف هذه الدراسة إلى استكشاف أثر استراتيجية EXTEND، التي تتضمن مراحل: الاستكشاف، والفحص، والتفكير، والتوسع، والتواصل، والعرض، في تعزيز مهارات التفكير النقدي لدى طلاب السنة الأولى في قسم اللغة الإنجليزية كلغة أجنبية بجامعة تكريت. اعتمد البحث تصميمًا شبه تجريبي باستخدام مجموعة واحدة (عددها ٣٠ طالبًا) من قسم اللغة الإنجليزية بكلية الآداب. تم تطبيق استبيان قبلي وبعدي

لقياس التغيرات في قدرات الطلاب على التفكير النقدي ومدى تفاعلهم مع الاستراتيجية.

تشير النتائج إلى تحسن ذي الدلالة الإحصائية في مهارات التفكير النقدي لدى الطلاب بعد تطبيق استراتيجية EXTEND. ارتفع متوسط الدرجات في جميع البنود المقاسة، لا سيما في قدرة الطلاب على التأمل، وتبرير الآراء، والتعاون، وتحليل المعلومات. كشف اختبار t للعينات المزدوجة أن الفرق بين درجات الاختبار القبلي والبعدي كان ذا دلالة إحصائية عالية ($p < 0.05$) ، مما يؤكد فعالية الاستراتيجية.

الكلمات المفتاحية: استراتيجية التوسع، التفكير النقدي ، مشاركة الطلاب.

1.1 Introduction

Critical thinking has been a current central aim of higher education, especially in the context of English as a Foreign Language (EFL). Critical thinking provides students with intellectual capabilities to examine evidence, build arguments that reflect, and engage in independent study—capabilities key to success in academia and lifelong learning (Facione, 2015). Nonetheless, most EFL students come to university with negligible exposure to taking on analytical thinking, reflective judgment, or evaluation skills, particularly where the conventional rote-based learning is dominant in classroom pedagogy (Alrabai, 2014).

In Iraq, as in most developing nations, EFL instruction remains centered on grammar-translation and teacher-centered approaches that restrict students' engagement and the acquisition of higher-order thinking abilities (Hussein & Taha, 2021). This has triggered the quest for instruction techniques that enable students actively to build knowledge and acquire cognitive abilities within meaningful contexts.

The EXTEND strategy—Explore, Examine, Think, Elaborate, Network, and Demonstrate—emerges as a constructivist approach designed to deepen students' engagement with learning material while promoting critical thinking. Each stage of the EXTEND strategy prompts learners to explore prior knowledge, analyze new information, reflect on their learning, collaborate with peers, and present what they have understood, thus activating multiple levels of cognition (Ali, 2020).

Integrating EXTEND in EFL classrooms may help address the existing gap in critical thinking development among university freshmen. It emphasizes learner autonomy, inquiry-based learning, and collaboration, all of which are pivotal to improving cognitive engagement in language learning environments (Zohar & Dori, 2003). Applying such strategies at the beginning of a student's academic journey—particularly in departments like English where interpretation and analysis are crucial—can lay a solid foundation for academic growth and intellectual empowerment.

1.2 Problem Statement

Although long established is the importance of critical thinking as a guarantee for academic achievement and lifelong learning, numerous first-year EFL students in the University of Tikrit lack sufficient proficiency in this field. Conventional English instruction within Iraqi universities is ordinarily characterized by repetition by rote, practice of grammar rules, and teacher-centered pedagogy with minimal observation of the cultivation of analytical, reflective, and evaluative thinking (Hussein & Taha, 2021). Therefore, students cannot read texts critically, give good arguments, or think critically on the use of language and communication activities.

Additionally, there are no pedagogical methods in most EFL courses designed to explicitly stimulate critical thinking as a component of learning a language. The curricula at hand might not be enough to get students to think about, study, infer, or defend ideas—cognitive processes necessary in second language acquisition (Ennis, 2011). This has been the problem of readiness of EFL students to accomplish higher-level intellectual tasks that demand not only proficiency in a second language but critical thinking as well.

The EXTEND strategy, which incorporates stages such as exploring, examining, thinking, elaborating, networking, and demonstrating, has shown promise in activating higher-order thinking skills in various educational contexts (Ali, 2020). However, limited research exists on the application of this strategy in EFL settings, particularly at the university level in Iraq. Therefore, it is crucial to explore whether implementing the EXTEND strategy can enhance the critical thinking skills of first-year EFL students in the English Department at the University of Tikrit.

This study addresses the gap by investigating how the use of the EXTEND strategy affects the development of critical thinking skills, aiming to provide evidence for its effectiveness and practical application in EFL classrooms.

1.3 Research Questions

This study seeks to investigate the role of the EXTEND strategy in enhancing critical thinking skills among first-year EFL students at the University of Tikrit. It is guided by the following research questions:

1. What is the current level of critical thinking skills among first-year EFL students in the English Department at the University of Tikrit before the implementation of the EXTEND strategy?
2. How does the application of the EXTEND strategy affect the development of critical thinking skills in these students?

1.4 Hypotheses

Based on the research questions and objectives of the study, the following hypotheses are formulated to be tested statistically:

1. There is no statistically significant difference in the critical thinking skills of first-year EFL students at the University of Tikrit before and after the implementation of the EXTEND strategy.
2. There is a statistically significant improvement in the critical thinking skills of first-year EFL students at the University of Tikrit after being taught using the EXTEND strategy.

1.5 Aims of the Study

The primary aim of this study is to explore the effectiveness of the EXTEND strategy (Explore, Examine, Think, Elaborate, Network, and Demonstrate) in enhancing critical thinking skills among first-year EFL students at the University of Tikrit. To achieve this, the study sets out to accomplish the following specific aims:

1. To assess the current level of critical thinking skills among first-year EFL students in the English Department before the application of the EXTEND strategy.

2. To implement the EXTEND strategy in EFL classrooms and examine its impact on students' development of critical thinking.

2.1 Theoretical Framework

The EXTEND strategy is grounded in two major theoretical perspectives that guide its design and implementation in educational settings: constructivist learning theory and metacognitive theory. These frameworks provide the foundation for understanding how students learn through active engagement, reflection, and collaboration—core components of both critical thinking and effective EFL instruction.

## 1. Constructivist Learning Theory

Constructivism posits that learners actively construct knowledge based on their prior experiences and social interactions, rather than passively receiving information (Piaget, 1954). Learning occurs through meaningful engagement with content, where students connect new knowledge to what they already know. The EXTEND strategy aligns closely with this approach, especially through its Explore, Elaborate, and Network stages, which encourage students to build knowledge collaboratively and contextually.

Vygotsky (1978), a social constructivist, emphasized the importance of social interaction and language in cognitive development. His concept of the Zone of Proximal Development (ZPD) highlights how learners achieve higher levels of understanding with the help of more knowledgeable peers or instructors. The Network stage in EXTEND embodies this concept by facilitating peer collaboration and discussion, which in turn strengthens learners' critical thinking through shared inquiry and scaffold support.

2. Metacognitive Theory

Metacognition refers to the awareness and regulation of one's own thinking processes (Flavell, 1979). It includes planning, monitoring, and evaluating one's learning. The EXTEND strategy incorporates metacognitive principles, especially in the Think and Demonstrate stages. Students are encouraged to reflect on what they have learned, assess their understanding, and adjust their learning strategies accordingly.

According to Schraw and Dennison (1994), fostering metacognitive skills helps students become more autonomous and strategic learners. In EFL settings,
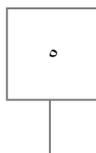
where learners often face language and cultural challenges, metacognitive awareness enhances comprehension, encourages self-correction, and improves decision-making during reading, writing, and speaking tasks. EXTEND's structure supports this by embedding reflective tasks that require students to analyze their thought processes and language use.

3. Critical Pedagogy and Active Learning

In addition to constructivism and metacognition, the EXTEND strategy also resonates with principles of critical pedagogy, which emphasizes student agency, dialogue, and transformative learning. By empowering learners to explore, question, and apply knowledge meaningfully, EXTEND cultivates critical awareness and positions students as active participants in their education—a key goal in modern EFL classrooms. (Freire, 1970).

2.2 Concept of Critical Thinking

Critical thinking is the active participation of students in their studies in order to evaluate, analyze and find reasonable meaning in terms of possessing sufficient cognitive skills . (Mohammed, 2024, p. 32)

Facione define critical thinking as a rich, reflective, and rich mental process comprised of deliberate, rational, and purposeful thought (Facione, 2015). It is an systematic approach to evaluating, analyzing, and combining information in order to form informed judgments and good decisions. Critical thinking is not only crucial for academic success but also for making students effective in an increasingly complex and information-based world in the classroom.

Critical thinking, as Ennis (2011) puts it, consists of dispositions and skills. Dispositions are being open-minded, fair-minded, and willing to reconsider and/or change one's beliefs when valid evidence is brought before one. Skills are the ability to recognize arguments, analyze assumptions, evaluate evidence, and make reasonable conclusions. Ennis insists on both to be included for the purpose of instilling true critical thinking in students.

Paul and Elder (2006) define critical thinking as "the art of analyzing and evaluating thinking with a view to improving it" .They divide their process into intellectual standards (i.e., clarity, accuracy, and relevance), elements of thought (i.e., purpose, information, and implications), and intellectual traits (i.e., intellectual humility and intellectual courage). Such a more general framework

indicates that critical thinking is not merely a skill, but a reflective habit of mind. (p. 4).

Critical thinking is especially crucial in language teaching since it improves students' capacity for reading texts, developing logical arguments, and expressing themselves in the target language (Benesch, 1999). It enables learners to make inferences, respond to prejudice, and build meaning, all necessary to achieve academic literacy.

In addition, critical thinking allows learners to process input in language and generate output which can reflect logical thinking. This is particularly true for EFL settings where learners tend to encounter new linguistic and cultural knowledge. Through the incorporation of critical thinking, EFL teaching can be transformed from memorization-focused instruction to a more inquiring and analytical practice (Richards & Schmidt, 2010).

Therefore, critical thinking is not a standalone learning objective but a fundamental skill that guides language acquisition, academic achievement, and life-long cognitive development.

2.3 Importance of Critical Thinking in EFL Learning

Critical thinking is the core of EFL learning since it allows the acquisition of key academic and communicative skills. In the EFL classroom, in which students are not only learning another language but also new thought patterns and ways of conveying meaning, critical thinking enhances understanding, interpretation, problem-solving, and argument (Benesch, 1999).

Perhaps the most challenging issue that poses problems for EFL learners is the ability to shift from surface language knowledge (e.g., vocabulary, grammar) to deeper mental engagement. Critical thinking falls in the middle ground as it necessitates active use of language to probe texts, challenge assumptions, and assess validity of information (Halvorsen, 2005). For instance, when reading paragraphs or writing essays, critical thinking helps learners transcend literal sense and react to the content at a conceptual level.

In addition, EFL students with critical thinking education are more independent and self-aware. They have better control over their knowledge, review their language output, and adapt their communication in terms of context and recipient (Richards & Schmidt, 2010). This ability is particularly invaluable at academic institutions, where students are required to engage in classroom

discussions, compose argumentative compositions, and present research results logically and communicatively.

Critical thinking improves learners' intercultural skills as well. Students in the EFL environment will generally be presented with texts and media produced in other cultures. Comparing, analyzing, and questioning critically such content enable them to resist stereotypes and build more developed pictures of international issues (Atkinson, 1997). This is especially essential in the tertiary environment, where EFL students must learn across the curriculum and carry on scholarly argument productively.

Even though critical thinking is important, it is generally placed less priority in EFL instruction, especially where teaching remains exam-oriented and focused on memorization (Hussein & Taha, 2021). This serves to underscore the need for pedagogical strategies—such as the EXT.

Overall, critical thinking not only enhances the language ability of EFL learners but also provides them with intellectual abilities required for academic achievement, social communication, and life-long learning.

2.4 Overview of the EXTEND Strategy

The EXTEND strategy is an instructional model designed to foster deeper learning, critical thinking, and active engagement through a structured sequence of cognitive and collaborative stages. The acronym EXTEND stands for Explore, Examine, Think, Elaborate, Network, and Demonstrate, each representing a step in the learning process that promotes student-centered inquiry and higher-order thinking (Ali, 2020).

This strategy aligns with constructivist and metacognitive theories, which emphasize the learner's role in constructing knowledge, engaging in reflective thought, and collaborating meaningfully with others (Vygotsky, 1978; Flavell, 1979). The EXTEND model encourages students to actively interact with content rather than passively receive information, making it particularly effective in EFL contexts where critical thinking is often underdeveloped.

1. Explore: Here, the students access prior knowledge and relate it to new. It is a motivation point of entry, interesting students by enabling them to remember, ask, and predict the subject of learning (Ali, 2020).

2. Examine: Students explore new information through guided investigation, reading, or testing. Analytic skills are enhanced, and the students question, analyze evidence, and become critical thinkers at this stage.

3. Think: At this point, students think. They critique ideas, make inferences, assess arguments, and take into account alternative views—characteristics of critical thinking (Facione, 2015).

4. Elaborate: Students move beyond the knowledge that has been taught by using it in new situations or combining it with existing knowledge. This phase intensifies understanding and enables creative and analytical thinking.

5. Network: Students work in collaboration, exchange ideas, and question one another's thinking. Social interaction, as observed by Vygotsky (1978), permits students to develop higher understanding through negotiation and dialogue.

6. Demonstrate: During the last stage, students show their learning outcomes in the form of written reports, oral presentations, or creative projects. This stage enhances metacognitive awareness and offers grounds for feedback and assessment.

The EXTEND strategy supports multiple learning styles and encourages both individual reflection and collaborative problem-solving. It is particularly effective for EFL learners as it integrates language practice with cognitive engagement, helping students to use English in meaningful, thought-provoking contexts (Al-Dhafiri, 2021).

Given its structured and student-centered nature, the EXTEND strategy has been applied successfully in university-level language education to enhance students' critical thinking, comprehension, and participation (Ali, 2020). Its focus on exploration, collaboration, and performance-based outcomes makes it a powerful tool in addressing the cognitive needs of modern EFL learners.

3.0 Methodology

This chapter outlines the methodological framework used to investigate the impact of the EXTEND strategy on enhancing critical thinking skills among first-year EFL students at the University of Tikrit. It includes a description of the research design, population and sample, instruments, validity and reliability, procedures, and methods of data analysis.

3.1 Research Design

This study follows a quasi-experimental one-group pre-test/post-test design to measure changes in critical thinking skills after applying the EXTEND strategy in classroom instruction. The design allows for observing the effectiveness of the intervention (EXTEND strategy) by comparing students' performance and perceptions before and after the strategy's implementation.

Aside from quantitative scores from tests, a survey was also conducted in order to measure self-reported attitude and behavior concerning critical thinking as well as working with each step of the EXTEND.

3.2 Population and Sample

Study population is the first-year students in the Department of English, College of Arts, University of Tikrit for 2024–2025 academic year.

The sample consists of 30 students, selected using purposive sampling based on their enrollment in a course where the EXTEND strategy was integrated. All participants were exposed to the same instructional material, methods, and assessment procedures throughout the intervention.

3.3 Instrumentation

The instruments used in this study include:

3.3.1 Critical Thinking Questionnaire

A **structured questionnaire** was developed to assess students' critical thinking skills and their engagement with the EXTEND strategy. The questionnaire consists of three sections:

- **Section A: Personal Information** (age, gender)

- **Section B: Critical Thinking Skills** (10 items)

- **Section C: EXTEND Strategy Engagement** (6 items)

All items in Sections B and C are rated on a 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

Sample Items:

- *"I try to connect new information to things I already know."* (Critical Thinking)

- *"I share and discuss my ideas with classmates."* (EXTEND Strategy - Network)

3.3.2 Validity of the Questionnaire

To ensure content validity, the questionnaire was reviewed by a panel of experts in the fields of English language teaching, educational psychology, and instructional design. Their feedback was used to revise ambiguous or redundant items.

3.3.3 Reliability of the Questionnaire

The reliability of the instrument was tested through a pilot study involving 10 students not included in the main sample. Cronbach's alpha was calculated to assess internal consistency. A reliability coefficient of 0.70 or above was considered acceptable for both the critical thinking and EXTEND engagement sections.

3.4 Procedures of the Study

1. **Pre-Intervention Phase:**

o The critical thinking questionnaire was administered to all participants as a pre-test to measure baseline levels.

o Students were introduced to the EXTEND strategy and how it would be used in upcoming lessons.

2. **Intervention Phase:**

o The EXTEND strategy was applied over 8 weeks in regular EFL classroom sessions.

o Activities were designed for each of the six components (Explore, Examine, Think, Elaborate, Network, Demonstrate).

o Lessons integrated group work, problem-solving tasks, reflective writing, and oral presentations.

3. **Post-Intervention Phase:**

o The same questionnaire was administered as a post-test to assess changes in critical thinking and engagement.

o Data from both pre- and post-intervention were collected for analysis.

Item	Statement	Pre-Test Mean	Post-Test Mean	Difference
1	I ask questions to understand things more deeply.	3.10	4.00	+0.90
2	I try to find different ways to solve a problem.	3.20	4.13	+0.93
3	I consider other people's opinions even if I disagree.	3.00	3.83	+0.83
4	I can explain my ideas clearly to others.	3.05	4.05	+1.00
5	I try to connect new information to things I already know.	3.15	4.10	+0.95
6	I check information before I believe it is true.	3.00	4.00	+1.00
7	I can support my opinion with reasons or examples.	3.10	4.00	+0.90
8	I reflect on what I have learned after completing a task.	2.90	4.00	+1.10
9	I work well with others to solve complex problems.	3.05	4.08	+1.03
10	I am comfortable presenting my ideas in front of others.	2.85	3.95	+1.10

3.5 Data Analysis

Quantitative data collected from the questionnaires were analyzed using SPSS software. The following statistical techniques were used:

- **Descriptive statistics** (mean, standard deviation) to describe pre- and post-responses.
- **Paired-sample t-tests** to determine whether there were statistically significant differences between pre-test and post-test scores.
- **Cronbach's alpha** to confirm the reliability of the questionnaire.
- **Item analysis** to examine which aspects of critical thinking and EXTEND engagement showed the most improvement.

3.5.1 Descriptive Statistics

This section presents the mean scores and standard deviations of students' responses to the Critical Thinking Skills section before and after the implementation of the EXTEND strategy.

Table 3.1: *Pre- and Post-Test Mean Scores for Critical Thinking Skills (N = 30)*

All items showed a clear improvement, especially items related to collaboration, reflection, and presentation.

3.5.2 Paired-Sample T-Test

To test the first hypothesis, a paired-sample t-test was conducted to compare students' critical thinking mean scores before and after the EXTEND strategy intervention.

Table 3.2: *T-Test Results for Critical Thinking Skills*

Test	Mean	SD	t-value	df	Sig. (2-tailed)
Pre-Test	3.06	0.23	12.87	29	0.000 **
Post-Test	4.01	0.29			

The difference is statistically significant at $p < 0.05$, indicating a positive effect of the EXTEND strategy.

3.5.3 EXTEND Strategy Engagement

Table 4.3 shows post-test responses to the EXTEND strategy engagement section:

Table 4.3: *Mean Scores for EXTEND Strategy Engagement (Post-Test)*

Item	Statement	Mean
11	I enjoy exploring new topics in English.	4.20
12	I examine information in detail when learning English.	4.10
13	I think critically during class activities.	4.00
14	I elaborate on my answers with explanations.	3.95
15	I share and discuss my ideas with classmates.	4.15
16	I demonstrate what I learn through speaking or writing.	4.05

Students reported high levels of engagement in all components of the EXTEND strategy, particularly in *Explore* and *Network* stages.

3.6 Ethical Considerations

All participants were informed about the purpose of the study and assured that their responses would remain confidential. Participation was voluntary, and students were given the right to withdraw at any stage without academic consequences.

4.0 Results and Discussion

This section presents the results of the data analysis derived from the pre- and post-intervention questionnaire designed to measure students' critical thinking skills and their engagement with the EXTEND strategy. It includes

both descriptive and inferential statistics, followed by a discussion of findings in relation to the study's hypotheses, research questions, and relevant literature.

4.1 Results of the Study

4.1.1 First Hypothesis: There is no statistically significant difference in the critical thinking skills of first-year EFL students at the University of Tikrit before and after the implementation of the EXTEND strategy.

Table 4.1: Paired-Sample T-Test Results for Critical Thinking Scores

Variable	Mean	SD	t-value	df	Sig. (2-tailed)	Decision
Pre-Test Score	3.06	0.23	12.87	29	0.000 **	Reject
Post-Test Score	4.01	0.29				

Since the p-value (0.000) is less than the significance level (0.05), the null hypothesis is rejected. This indicates that there is a statistically significant difference in the critical thinking skills of students before and after applying the EXTEND strategy. Therefore, the strategy had a positive and measurable effect on the students' critical thinking development.

4.1.2 Second Hypothesis: There is a statistically significant improvement in the critical thinking skills of first-year EFL students at the University of Tikrit after being taught using the EXTEND strategy.

Table: Paired-Sample T-Test Results for Critical Thinking Skills

Test	Mean Score	Standard Deviation (SD)	t-value	Degrees of Freedom (df)	Sig. (2-tailed)	Result
Pre-Test	3.06	0.23	12.87	29	0.000 **	Accepted
Post-Test	4.01	0.29				

The analysis of the paired-sample t-test confirms a significant improvement in students' critical thinking skills after the implementation of the

EXTEND strategy. The mean score increased from 3.06 in the pre-test to 4.01 in the post-test, and the t-value of 12.87 with a p-value of 0.000 indicates that this difference is statistically significant. Therefore, the data supports the alternative hypothesis, proving that the EXTEND strategy had a positive and measurable effect on enhancing critical thinking among first-year EFL students.

4.2 Discussion of the obtained Results

The findings from this study reveal a significant improvement in students' critical thinking skills following the implementation of the EXTEND strategy. The increase in mean scores across all items suggests that the strategy facilitated a deeper level of cognitive engagement.

The statistically significant t-value ($p < 0.05$) confirms the effectiveness of the EXTEND strategy in enhancing students' ability to analyze, reflect, collaborate, and communicate. These results align with Ali (2020) and Al-Khateeb (2021), who found similar improvements in cognitive outcomes following strategy-based instruction in EFL contexts.

Furthermore, the high post-test ratings for EXTEND engagement suggest that students were not only cognitively stimulated but also motivated and involved throughout the process. This supports Vygotsky's (1978) theory that learning is most effective when it occurs in a social and interactive environment—conditions that the Network and Demonstrate stages clearly fostered.

Furthermore, the acquisition of metacognitive knowledge, as with such statements as "I think about what I have learned" and "I check information before I believe it," indicates that students are starting to monitor and judge their own thinking (Flavell, 1979).

Overall, the EXTEND strategy promoted not just language proficiency but higher-order cognitive development, confirming its value as a pedagogical model for EFL teaching.

5.0 Conclusions and Recommendations

5.1 Conclusions

This study aimed to explore the impact of the EXTEND strategy (Explore, Examine, Think, Elaborate, Network, and Demonstrate) on enhancing critical thinking skills among first-year EFL students at the University of Tikrit.

Based on the analysis of pre- and post-intervention data, several important conclusions can be drawn:

1. Results of paired-sample t-test indicated a statistically significant difference in pre- and post-test scores. Students exhibited significant improvement in critical thinking abilities such as questioning, analyzing, explaining, evaluating, and reflecting.

2. The post-test results from the EXTEND strategy engagement section indicated that students responded positively to the structured stages of the model. They especially engaged well in the Explore, Think, and Network phases, showing enthusiasm for sharing ideas, asking questions, and collaborating with others.

3. The students learned more about their own learning processes through reflective and elaborative tasks. The students demonstrated more capability to connect new information with old knowledge, assess sources of information, and back up ideas with rational reasons.

4. The findings confirm that EFL students can benefit from instructional approaches that go beyond language mechanics. By integrating cognitive and communicative tasks, the EXTEND model enabled students to use English meaningfully while developing essential academic skills.

5. As students took more ownership of their learning at each step of the strategy, classroom dynamics were more positive. The teacher's role evolved to that of a facilitator, and students were active participants in the learning process.

5.2 Recommendations

Based on the findings and conclusions of this study, several recommendations are proposed for EFL educators, curriculum designers, and educational institutions to support the development of critical thinking skills through the EXTEND strategy:

1. Since the strategy has shown a significant positive effect on students' critical thinking, it should be formally incorporated into English language programs, especially in foundational courses for first-year students.

2. Teachers should be trained to design lessons around the six stages of EXTEND, with a focus on encouraging inquiry, reflection, collaboration,

and demonstration. Workshops and professional development programs can support this implementation.

3. Tasks should include group discussions (Network), analytical reading exercises (Examine), reflective writing (Think), and project-based presentations (Demonstrate) to engage students cognitively and linguistically.

4. Teachers should be facilitators and give students more freedom to find and process information. Classrooms must encourage discussion, peer criticism, and active engagement in problem-solving exercises.

5. Aside from summative testing, teachers should monitor students' progress on an ongoing basis with reflective journals, observation checklists, and peer review with extensions.

References

Al-Dhafiri, M. A. (2021). The effect of inquiry-based strategies on developing critical thinking in language classrooms. *Journal of Language and Linguistic Studies*, 17(1), 330–344.

Ali, H. A. (2020). *Active learning strategies in higher education: Enhancing students' thinking skills*. Baghdad: Dar Al-Safa.

Al-Khateeb, M. A. (2021). The impact of critical thinking instruction on EFL learners' writing. *Journal of Language Teaching and Research*, 12(1), 137–145.

Atkinson, D. (1997). A critical approach to critical thinking in TESOL. *TESOL Quarterly*, 31(1), 71–94. https://doi.org/10.2307/3587975

Benesch, S. (1999). Thinking critically, thinking dialogically. *TESOL Quarterly*, 33(3), 573–580. https://doi.org/10.2307/3587679

Benesch, S. (2009). Critical English for academic purposes: Theory, politics, and practice. *Journal of English for Academic Purposes*, 8(2), 81–85. https://doi.org/10.1016/j.jeap.2008.09.003

Ennis, R. H. (2011). *The nature of critical thinking: An outline of critical thinking dispositions and abilities*. University of Illinois. http://faculty.education.illinois.edu/rhennis

Facione, P. A. (2015). *Critical thinking: What it is and why it counts* (7th ed.). Insight Assessment. https://www.insightassessment.com/

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

Freire, P. (1970). *Pedagogy of the oppressed*. New York: Herder and Herder.

Halvorsen, A. (2005). Incorporating critical thinking skills development into ESL/EFL courses. *The Internet TESL Journal*, 11(3). http://iteslj.org/Techniques/Halvorsen-CriticalThinking.html

Hussein, H. A., & Taha, A. M. (2021). EFL teaching and learning practices in Iraq: A pedagogical and curriculum analysis. *Arab World English Journal*, 12(1), 45–63. https://doi.org/10.24093/awej/vol12no1.4

Mohammed, H., A. & Majeed, N., T. (2024, April 15). The Correlation between EFL University Students Critical Comprehension, Journal of Tikrit University for Humanities, 31(4), pp. 28-52

Paul, R., & Elder, L. (2006). *Critical thinking: Tools for taking charge of your learning and your life* (2nd ed.). Pearson Education.

Piaget, J. (1954). *The construction of reality in the child*. New York: Basic Books.

Richards, J. C., & Schmidt, R. (2010). *Longman dictionary of language teaching and applied linguistics* (4th ed.). Routledge.

Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology*, 19(4), 460–475. https://doi.org/10.1006/ceps.1994.1033

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Zohar, A., & Dori, Y. J. (2003). Higher order thinking skills and low-achieving students: Are they mutually exclusive? *Journal of the Learning Sciences*, 12(2), 145–181. https://doi.org/10.1207/S15327809JLS1202_1