Exploring EFL Teachers' Attitudes towards the Relationship between Critical Thinking Skills and Academic Achievement in Higher Education and How to Improve them.

استكشاف اتجاهات أساتذة اللغة الإنجليزية كلغة أجنبية نحو العلاقة بين مهارات التفكير النقدي والتحصيل الأكاديمي في التعليم العالي وكيفية تحسينها

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Abstract:

This study intends to explore EFL teachers' attitudes towards the relationship between Critical Thinking Skills and Academic Achievement in Higher Education and how these skills can be improved and developed through instruction. A mixed-method approach will be adopted to collect data. The relationship will be highlighted from the perspective of EFL teachers in addition to the possible ways to improve and develop Critical Thinking Skills among EFL learners in higher education. As a matter of fact, individuals with high Critical Thinking Skills skillfully plan and use the limited time and limited resources they have, effectively organize the information, problem or decisions, and reach a result.

Key Words: Critical Thinking Skills, Academic Achievement, Higher Education.

الملخص: تهدف هذه الدراسة إلى استكشاف اتجاهات أساتذة اللغة الإنجليزية كلغة أجنبية نحو العلاقة بين مهارات التفكير النقدي والتحصيل الأكاديمي في التعليم العالي، وكيف يمكن تحسين وتطوير هذه المهارات من خلال التدريس. سيتم اعتماد منهج مختلط لجمع البيانات. وسيتم تسليط الضوء على هذه العلاقة من منظور أساتذة اللغة الإنجليزية كلغة أجنبية، بالإضافة إلى الطرق الممكنة لتحسين وتطوير مهارات التفكير النقدي لدى متعلمي اللغة الإنجليزية كلغة أجنبية في التعليم العالي. في الواقع، يقوم الأفراد الذين يتمتعون بمهارات تفكير نقدي عالية بالتخطيط الماهر واستخدام الوقت والموارد المحدودة المتاحة لهم، وتنظيم المعلومات أو المشكلة أو القرارات بفعالية، والوصول إلى نتيجة.

الكلمات المفتاحية :مهارات التفكير النقدي، التحصيل الأكاديمي، التعليم العالي.

*- Entry

Background to the Study

Critical Thinking (CT) is rising in importance in the 21st century due to the overwhelming influence of information, rapid technological advancements like Artificial Intelligence (AI), and complex global challenges making it a crucial skill for navigating misinformation, adapting to the evolving workforce, and solving multifaceted problems.

Critical Thinking Skills (CTS) are crucial to professional success. They allow individuals to process information effectively and form well-reasoned judgements and decisions based on data. Developing these skills takes time, dedication, and resilience. The best way to prepare individuals to the dynamic needs of the 21st century workplace is to start integrating these skills into their coursework and activities as students. By fostering the development of these skills in the learning environment, schools can cultivate intellectual curiosity, analytical rigor, and innovation in students.

Statement of the problem

While CTS are recognized as essential components of scientific thinking and increasingly important outcomes in higher education, there remains a significant gap in understanding how English as Foreign Language (EFL) teachers perceive the relationship between CT and Academic Achievement (AA) among their students. Despite the established benefits of CT integration, including enhanced academic and social success, deeper learning processes, and improved self-monitoring abilities, limited research has explored EFL teachers attitudes toward this relationship and their perspectives on effective instructional strategies for developing these skills in Higher Education (HE) contexts.

This gap is particularly concerning given that students with well-developed CTS demonstrate superior planning abilities, resource management, information organization, and problem-solving abilities,

yet many EFL programs may not be adequately addressing the development of these essential skills, potentially limiting students' AA and overall learning effectiveness.

Research Questions

a. What are EFL teachers attitudes towards the relationship between CT and AA?

b. How do EFL teachers perceive the current level of CTS development in their students, and what factors do they believe influence this development?

c. What instructional strategies and classroom practices do EFL teachers believe are most effective for developing CTS in HE contexts?

Objectives of the study

This study aims to investigate EFL teachers attitudes towards the relationship between CTS and AA in HE settings through a comprehensive examination of their perceptions and experiences. The primary objectives are:

- To explore how EFL teachers view the connection between CT development and student academic performance,
- To understand their perceptions of CTS development among their students,
- And to identify the instructional strategies and classroom practices they consider most effective for fostering CT abilities.

Through employing a mixed-methods approach, this research seeks to provide valuable insights into teachers perspectives while contributing to the development of evidence-based approaches for enhancing CT instruction in EFL contexts.

Significance of the Study

This research holds significant implications for EFL pedagogy and HE practice by addressing a crucial gap in understanding how educators perceive and approach CTS development in language

learning contexts. The findings will provide valuable insights for curriculum designers, teacher trainers, and educational policymakers seeking to enhance CT integration in EFL programs, ultimately contributing to improved instructional practices that foster both language proficiency and cognitive development.

Furthermore, by exploring teachers perspectives on effective strategies for developing CTS, this study will offer practical recommendations for enhancing student AA and preparing learners with essential 21st century skills necessary for academic success and lifelong learning in an increasingly complex globalized environment.

1. Literature Review

The Evolution and Importance of Critical Thinking in Education

The conceptualization of learning has undergone significant transformation from traditional memorization-based approaches to dynamic processes characterized by inquiry, discovery, and hypothesis testing (Pennycook, 1994). This paradigm shift has positioned critical thinking (CT) as a fundamental objective for educators in higher education and a highly valued competency among employers (Sulaiman, Rahman, & Dzulkifli, 2008).

Contemporary educational discourse universally acknowledges CT as an indispensable competency for twenty-first century learners across academic and professional contexts. Individuals who possess well-developed critical thinking skills (CTS) demonstrate superior capabilities in information assessment, perspective-taking, and evidence-based decision-making, whether applied to personal belief systems (Halpern, 1998), life satisfaction, or academic achievement (Elder & Paul, 2020). The essence of CT lies in one's capacity to analytically examine situations and creatively respond to novel circumstances, with Paul and Elder (2008, 2014b) characterizing it as a fundamental mechanism for intellectual development.

Beyond individual benefits, CT cultivation serves broader societal functions, particularly in promoting engaged citizenship and sustaining democratic institutions (Pinto & Portelli, 2009). This civic dimension has become increasingly critical in our contemporary "post-truth" era, where algorithmic content curation, misinformation, and deliberate disinformation campaigns necessitate sophisticated information literacy skills (Howat et al., 2023; Machete & Turpin, 2020).

Theoretical Foundations and Definitions

The conceptual framework of CT has been articulated through various scholarly perspectives. Facione (1990) conceptualized CT as "purposeful, self-regulatory judgment that involves reasoned consideration of evidence, context, conceptualization, methods and criteria" (p. 5), emphasizing its deliberate and autonomous nature rooted in interpretation, analysis, evaluation, and meaning-making processes. Complementing this definition, Paul (1992) characterized CT as an intellectually rigorous process involving the active and systematic application of conceptualization, analysis, synthesis, and evaluation of information (p. 3).

Educational implementation of CT requires environments that prioritize analytical application, divergent thinking, and structured opportunities for idea organization and value-based reasoning (Carr, 1988). Such contexts promote active student engagement with critical thinking processes and advance meaningful learning experiences.

Pedagogical Models for Critical Thinking Integration

Paul and Elder's Elements of Thought Model

Contemporary instructional approaches emphasize teaching thinking processes rather than prescriptive content, with various models supporting CT integration within core curricula. Paul and Elder's (2004) framework employs strategic analysis through eight

fundamental elements: purpose, central questions or issues, informational foundations, interpretation and inference, conceptual frameworks, underlying assumptions, implications and consequences, and multiple perspectives. This systematic approach enables practical application of CT in classroom activities.

Brookfield's Reflective Thinking Framework

Brookfield's (1987) model centers on assumption examination and reflective reasoning, creating learning environments that discourage habitual responses and promote thoughtful decision-making. This approach encourages students to pose challenging questions, evaluate evidence thoroughly, and interpret complex problems before reaching informed conclusions. Educators facilitate critical thinking development by encouraging information exploration and challenging personal assumptions, with students validating their assumptions through diverse perspective examination and multiple source consultation.

De Bono's Six Thinking Hats Method

De Bono's (1985) innovative approach recognizes thinking as humanity's ultimate resource while acknowledging the continuous potential for improvement. His Six Thinking Hats model structures thinking into distinct modes represented by colored hats: white (factual, objective information), red (emotional and intuitive responses), black (logical, cautionary reasoning), yellow (constructive, optimistic thinking), green (creative, innovative ideas), and blue (metacognitive control). This framework enables students to approach issues from multiple angles, integrating both creative and critical thinking processes.

Core Critical Thinking Skills

Facione (2013) identified six essential CT competencies that form the foundation of critical thinking proficiency:

Interpretation: encompasses understanding and articulating meaning across diverse experiences, situations, data, and criteria, including categorization, significance decoding, and meaning clarification.

Analysis: involves identifying inferential relationships among statements, concepts, and various representational forms that express beliefs, judgments, experiences, and opinions.

Evaluation: requires assessing the credibility of statements and representations while determining the logical strength of inferential relationships among different forms of information.

***Inference*:** entails securing necessary elements for reasonable conclusions, hypothesis formation, and consideration of relevant information to understand consequences flowing from various data sources.

Explanation: involves coherently presenting reasoning results, providing comprehensive justification based on evidential, conceptual, methodological, and contextual considerations through cogent argumentation.

Self-regulation: represents metacognitive monitoring of cognitive activities and their outcomes, applying analytical and evaluative skills to one's own inferential judgments for validation and correction purposes, also recognized as deductive reasoning.

Critical Thinking in Language Education

The interconnection between language development and cognitive processes highlights CT's particular relevance in language education. According to Brown (2004), effective language programs should transcend linguistic objectives to enhance learners' critical thinking capabilities. Language educators bear significant responsibility for introducing CT concepts and facilitating skill acquisition within language learning contexts (Limpman, 2003).

Davidson (1998) argues that second language teachers may carry greater responsibility than first language instructors for promoting learners' CTS development. Consequently, critical thinking instruction should constitute an integral component of English as a Second Language (ESL) and English as a Foreign Language (EFL) curriculum, providing learners opportunities for self-expression and peer argument evaluation.

Contemporary Research and Global Perspectives

Recent scholarship has increasingly focused on integrating CT within EFL education, responding to the growing demand for autonomous and reflective learners in our globalized society. Research consistently demonstrates CT's significance in language learning contexts, particularly its contributions to problem-solving capabilities, argumentative skills, and reflective communication practices (Facione, 2011; Cottrell, 2017; Paul & Elder, 2019).

The development of CTS throughout all educational levels, from early childhood through higher education, enables individuals to critically examine information and make effective decisions through alternative perspective development (Akça & Taşçı, 2009). Modern educational contexts increasingly recognize CT as a fundamental concern, with educators worldwide expressing growing interest in fostering critical thinking within their instructional practices. Establishing learning environments that facilitate CTS development has emerged as a primary objective for educational programs globally.

2. Methodology

2.1. Research Design

This study employs an explanatory sequential mixed-methods design to investigate EFL teachers' attitudes towards the relationship between critical thinking skills and academic achievement in higher education. The quantitative phase collects numerical data on teachers' attitudes and current practices, followed by a qualitative phase that

provides deeper insights into their perceptions and experiences. This sequential approach allows for the quantitative findings to inform and guide the qualitative data collection, enabling a comprehensive understanding of how EFL teachers perceive critical thinking development and its impact on student academic performance.

2.2. Participants

The study participants consist of 60 EFL teachers working in higher education at Mohamed Lamine Debaghine University of Setif 2, Algeria. Participants were selected through purposive sampling from the Department of English Language and Literature to ensure representation across different academic ranks, teaching experience levels, and departmental affiliations within the English language programs. Selection criteria include current employment as EFL instructors in higher education, minimum one year of teaching experience, and willingness to participate in both survey and interview phases of the research.

2.3. Data Collection Phases

Data collection was conducted through two sequential phases aligned with the mixed-methods design. Phase 1 involved administering a structured quantitative survey to all 60 participants to assess their attitudes towards the critical thinking-academic achievement relationship and current instructional practices. Phase 2 consisted of conducting semi-structured qualitative interviews with a purposively selected subset of survey respondents to explore their perceptions in greater depth, investigate factors influencing critical thinking development, and identify effective instructional strategies for fostering these skills in EFL contexts

2.4. Instruments

Two primary data collection instruments were utilized in this study. The quantitative phase employed a researcher-developed questionnaire comprising Likert-scale items measuring teachers' attitudes towards

critical thinking skills, their perceived relationship with academic achievement, and current classroom practices for developing these skills (See Appendix A). The qualitative phase utilized a semi-structured interview protocol featuring open-ended questions designed to explore teachers' experiences, beliefs about critical thinking development, perceived barriers and facilitators, and recommended instructional strategies for enhancing critical thinking skills among EFL learners in higher education (See Appendix B).

2.5. Data Analysis

Data analysis followed a sequential mixed-methods approach corresponding to the research design. Quantitative survey data were analyzed using descriptive and inferential statistical procedures, including frequency distributions, measures of central tendency, and correlation analyses to examine relationships between variables and identify patterns in teachers' attitudes and practices. Qualitative interview data underwent thematic analysis, involving systematic coding, theme identification, and pattern recognition to capture participants' perspectives on critical thinking development and effective instructional strategies.

2.6. Ethical Considerations

Ethical approval was obtained from the institutional review board at Mohamed Lamine Debaghine University of Setif 2 prior to data collection. All participants provided informed consent after receiving detailed information about the study's purpose, procedures, potential risks, and benefits. Participant anonymity and confidentiality was maintained through the use of numerical codes, secure data storage protocols, and the removal of identifying information from all research outputs. Participants retain the right to withdraw from the study at any point without penalty, and all collected data will be stored securely and destroyed according to institutional guidelines following study completion.

3. Results and Findings

3.1. EFL Teachers Questionnaire Analysis

Table 1: Descriptive Statistics

Item	Statement	Mean	SD	Mode
Q1	Strong positive relationship between CTS and academic achievement	4.35	0.78	5
Q2	Well-developed CTS leads to better language learning performance	4.28	0.82	4
Q3	CTS essential for EFL students' success in higher education	4.42	0.74	5
Q4	Current CTS level among students is adequate	2.68	1.12	2
Q5	Students demonstrate strong analytical abilities	2.75	1.08	3
Q6	Students effectively apply CTS in coursework	2.82	1.15	3
Q7	Integrating CTS activities improves learning outcomes	4.18	0.89	4
Q8	Discussion activities effectively develop CTS	4.05	0.95	4
Q9	Problem-solving tasks more effective than traditional exercises	3.92	1.02	4
Q10	Questioning and reflective writing are essential strategies	4.12	0.91	4

The descriptive statistics reveal distinct patterns in EFL teachers' attitudes toward critical thinking skills. Items 1-3 and 7-10 demonstrate high means (above 4.0), indicating strong agreement with the importance of critical thinking skills and effective instructional strategies. Conversely, items 4-6 show notably lower means (2.68-2.82), reflecting teachers' perceptions that current student critical thinking capabilities are inadequate. The standard deviations suggest moderate variability in responses, with item 4 showing the highest variability (SD=1.12), indicating diverse opinions about students' current skill levels.

Table 2: Research Questions Analysis

Research Question	Items	Overall Mean	Key Finding
RQ1: Teachers' Attitudes towards CTS-Academic Achievement Relationship	1-3	4.35	High positive attitudes with 85% agreement
RQ2: Perceptions of Current CTS Development in Students	4-6	2.75	Below-average perceptions indicating inadequacy
RQ3: Effective Instructional Strategies	7-10	4.07	Strong agreement on strategy effectiveness

The research question analysis highlights three critical findings. Teachers overwhelmingly recognize the importance of critical thinking skills for academic achievement (RQ1), with the highest overall mean of 4.35. However, there is a significant gap between this recognition and teachers' assessment of students' current abilities (RQ2), which scored well below the neutral point at 2.75. Despite this challenge, teachers express strong confidence in various instructional strategies (RQ3) with a mean of 4.07, suggesting optimism about the potential for improvement through targeted pedagogical interventions.

Table 3: Correlational Analysis

Variables	Pearson r	Significance
RQ1 (CTS Importance) & RQ3 (Instructional Strategies)	0.67**	$p < 0.01$
RQ2 (Current CTS Level) & RQ3 (Instructional Strategies)	0.45**	$p < 0.01$
RQ1 (CTS Importance) & RQ2 (Current CTS Level)	0.23	$p = 0.08$

The correlational analysis reveals meaningful relationships between teachers' attitudes and perceptions. A strong positive correlation exists between recognition of critical thinking importance and belief in instructional strategies (r=0.67), suggesting that teachers who value critical thinking skills also have confidence in pedagogical methods to develop them. The moderate correlation between current skill perceptions and instructional strategies (r=0.45) indicates that teachers who perceive higher student capabilities also show greater confidence in teaching methods. Notably, the weak correlation between CTS importance and current skill levels suggests that recognition of critical thinking value is independent of assessments of student abilities.

3.2. EFL Teachers Interview Thematic Analysis

The thematic analysis of interview data revealed five interconnected themes that provide deeper insights into EFL teachers' perspectives on critical thinking skills development.

Theme 1: The Critical Thinking-Achievement Paradigm All interviewed teachers demonstrated universal recognition of the strong relationship between critical thinking skills and academic achievement. Teachers consistently reported observing that students with developed analytical abilities perform significantly better across various assessment types, approach learning more strategically, and demonstrate superior knowledge transfer capabilities. This paradigm forms the foundation of teachers' pedagogical beliefs and drives their commitment to developing these skills despite existing challenges.

Theme 2: The Preparedness Paradox A significant paradox emerged between the recognized importance of critical thinking skills and students' actual preparedness levels. Teachers unanimously reported that approximately 60-70% of students enter higher education with inadequate critical thinking abilities, relying heavily on memorization strategies rather than analytical approaches. This gap creates ongoing challenges in classroom instruction and necessitates substantial remedial efforts to develop higher-order thinking skills among EFL learners.

Theme 3: The Multidimensional Influence Matrix Critical thinking skills development is influenced by multiple interconnected factors. Educational background emerged as a primary determinant, with students from traditional, teacher-centered systems requiring significant adjustment time. Cultural factors, particularly respect for authority and hesitation to question established ideas, create additional barriers. Language proficiency serves as both a facilitator and constraint, while individual characteristics such as motivation and personality traits significantly impact development rates. Technology presents a dual influence, potentially hindering deep thinking through instant gratification while simultaneously providing tools for accessing diverse perspectives.

Theme 4: The Pedagogical Convergence Despite varying experience levels and backgrounds, teachers demonstrated remarkable consensus regarding effective instructional strategies. Interactive discussions, Socratic questioning techniques, problem-based learning scenarios, and reflective writing activities emerged as universally endorsed approaches. This convergence suggests that certain pedagogical methods are fundamentally effective for critical thinking development in EFL contexts, regardless of individual teacher characteristics or specific classroom situations.

Theme 5: The Systemic Transformation Imperative Teachers consistently emphasized that meaningful critical thinking skills development requires comprehensive institutional support beyond individual classroom efforts. Professional development for faculty, systematic curriculum integration across all courses, assessment reform to explicitly evaluate critical thinking, and institutional culture change emerged as essential requirements. This theme highlights the need for coordinated, institution-wide commitment to create sustainable improvements in critical thinking instruction and student learning outcomes.

4. Discussion

The quantitative analysis of responses from 60 EFL teachers at Mohamed Lamine Debaghine University of Setif 2 revealed significant

patterns in teachers' attitudes towards critical thinking skills and academic achievement. The findings demonstrate a clear consensus among participants regarding the positive relationship between critical thinking skills and student academic performance, with an overall mean score of 4.35 for items addressing this relationship. Teachers overwhelmingly agreed that critical thinking skills are essential for EFL students' success in higher education (M=4.42), and that well-developed critical thinking abilities lead to superior performance in language learning tasks (M=4.28). This strong recognition of the CTS-achievement nexus was consistent across participants regardless of their teaching experience or departmental affiliation.

Conversely, teachers' perceptions of their students' current critical thinking capabilities painted a markedly different picture. The mean scores for items assessing current student abilities were significantly below the neutral point (M=2.75), indicating that teachers perceive substantial deficiencies in their students' analytical and evaluative thinking skills. Only 26.7% of participants rated their students' current critical thinking levels as adequate for academic needs, while 30% believed their students demonstrate strong analytical abilities. This finding reveals a substantial gap between the perceived importance of critical thinking skills and the actual capabilities teachers observe in their classrooms.

Regarding instructional strategies, teachers expressed strong confidence in various pedagogical approaches for developing critical thinking skills (M=4.07). Discussion-based activities received the highest endorsement (M=4.05), followed closely by the integration of critical thinking activities into EFL instruction (M=4.18). The correlation analysis revealed significant positive relationships between teachers' recognition of critical thinking importance and their belief in instructional strategies ($r=0.67$, $p<0.01$), suggesting that those who most value critical thinking skills are also most confident in their ability to develop these skills through targeted pedagogical interventions.

The qualitative interviews with six EFL teachers provided rich, contextual insights that both validated and expanded upon the quantitative findings. All participants unanimously acknowledged the

strong relationship between critical thinking skills and academic achievement, offering specific classroom examples and observations accumulated over their teaching careers. Teachers consistently reported that students who demonstrate critical thinking abilities—such as questioning assumptions, analyzing multiple perspectives, and synthesizing information from various sources—consistently outperform their peers across different assessment types, from essays and presentations to examinations and research projects.

The interviews revealed a complex web of factors influencing critical thinking development in EFL learners. Educational background emerged as the most significant factor, with teachers noting that students from traditional, rote-learning educational systems require considerable time and support to develop analytical thinking habits. Cultural factors also play a substantial role, as many students demonstrate hesitation to question authority or challenge established ideas due to deeply ingrained respect for hierarchical structures. Language proficiency itself was identified as both a facilitator and barrier, with some students possessing critical thoughts but lacking the linguistic tools to express them effectively in English.

Teachers described current student critical thinking levels as inadequate, estimating that 60-70% of incoming students possess minimal analytical capabilities. However, participants expressed optimism about students' potential for development when provided with appropriate instruction and consistent practice opportunities. The interviews revealed remarkable convergence regarding effective pedagogical strategies, with all teachers endorsing interactive, discussion-based approaches over traditional lecture methods. Socratic questioning, case-based learning, reflective writing activities, and structured debates emerged as consistently successful strategies across different teaching contexts and student populations.

The systemic challenges identified by participants extended beyond individual classroom practices to encompass institutional and cultural dimensions. Teachers emphasized the need for comprehensive faculty development programs, curriculum integration across all courses, assessment reform to reward critical thinking rather than mere

content recall, and broader institutional culture changes that value questioning and intellectual exploration over passive knowledge absorption.

Research Questions Revisited

Research Question 1: What are EFL teachers' attitudes towards the relationship between critical thinking skills and academic achievement?

The findings overwhelmingly demonstrate that EFL teachers hold strongly positive attitudes toward the relationship between critical thinking skills and academic achievement. Both quantitative (M=4.35) and qualitative data provide compelling evidence of universal recognition among teachers that these skills directly and significantly impact student performance. Teachers view critical thinking as essential for academic success, with qualitative interviews revealing specific observations of how students with stronger analytical abilities demonstrate superior performance across multiple assessment types. This attitude appears consistent across teachers with varying experience levels and backgrounds, suggesting a professional consensus based on empirical classroom observations rather than theoretical preferences.

Research Question 2: How do EFL teachers perceive the current level of critical thinking skills development in their students, and what factors do they believe influence this development?

Teachers perceive current student critical thinking levels as significantly inadequate for academic success (M=2.75), with qualitative data revealing that 60-70% of students enter higher education with minimal analytical capabilities. The factors influencing development form a complex, multidimensional matrix including educational background, cultural dynamics, linguistic competency, individual motivation, and technological influences. Previous educational experiences in rote-learning systems emerged as the most significant barrier, while cultural hesitation to question authority and insufficient language proficiency for expressing critical thoughts were identified as additional challenges. However, teachers maintain

optimism about students' developmental potential when provided with appropriate instructional support and consistent practice opportunities.

Research Question 3: What instructional strategies and classroom practices do EFL teachers believe are most effective for developing critical thinking skills in higher education contexts?

Teachers demonstrate strong consensus regarding effective instructional strategies (M=4.07), with remarkable convergence identified through qualitative analysis despite diverse teaching backgrounds. Discussion-based activities, Socratic questioning techniques, problem-based learning scenarios, reflective writing exercises, and collaborative peer interactions emerged as consistently endorsed approaches. The qualitative data revealed that interactive, student-centered methodologies significantly outperform traditional lecture-based instruction for critical thinking development. Teachers emphasized the importance of creating learning environments that encourage questioning, provide opportunities for perspective-taking, and require evidence-based reasoning, while gradually building students' confidence in expressing and defending analytical positions.

5. Limitations

This study acknowledges several methodological and contextual limitations that may influence the generalizability and interpretation of findings. The research was conducted at a single institution (Mohamed Lamine Debaghine University of Setif 2) with a relatively homogeneous participant group, which may limit the transferability of findings to other higher education contexts, particularly those with different cultural, linguistic, or institutional characteristics. The sample size of 60 teachers for the quantitative phase and 6 teachers for interviews, while adequate for the study's scope, represents a relatively small proportion of the global EFL teaching community.

The cross-sectional design captures attitudes and perceptions at a single point in time, preventing the examination of how teachers' perspectives might evolve with experience or professional development. Additionally, the study relies entirely on teacher self-

reports and perceptions rather than direct observation of classroom practices or student performance measures, which could introduce social desirability bias or gaps between reported beliefs and actual pedagogical behaviors. The cultural and linguistic context of Algeria may also influence findings in ways that limit applicability to other EFL contexts with different socio-cultural dynamics.

Furthermore, the study does not include student perspectives on critical thinking development or validate teacher perceptions against objective measures of student critical thinking abilities. The interview sample, while providing rich qualitative insights, represents a limited range of teaching experience and may not capture the full spectrum of perspectives within the institution or field

6. Implications and Future Recommendations

Theoretical Implications

The findings contribute to the growing body of literature on critical thinking in EFL education by providing empirical evidence for the universally recognized but inadequately documented relationship between critical thinking skills and academic achievement in language learning contexts. The study's identification of a significant perception gap between the importance of critical thinking and current student capabilities offers a theoretical framework for understanding the challenges facing EFL education in developing analytical competencies. The emergence of five distinct themes through thematic analysis—particularly the concepts of "preparedness paradox" and "multidimensional influence matrix"—provides new theoretical constructs for understanding critical thinking development in second language contexts.

The research validates existing theoretical models while extending them to specific EFL contexts, demonstrating how established critical thinking frameworks (Paul & Elder, Brookfield, Facione) manifest in language learning environments. The study's mixed-methods approach also contributes methodologically by demonstrating how quantitative attitude measures can be effectively complemented by qualitative explorations of teaching experiences and pedagogical beliefs.

Practical Implications

The findings have immediate practical implications for EFL curriculum design and teacher professional development. The identified gap between critical thinking importance and current student capabilities suggests urgent need for systematic integration of critical thinking instruction from foundational courses through advanced levels. The pedagogical convergence revealed through interviews provides evidence-based guidance for selecting and implementing effective instructional strategies, with discussion-based activities, Socratic questioning, and reflective writing emerging as particularly promising approaches.

For teacher educators, the study highlights the need for comprehensive professional development programs that not only introduce critical thinking concepts but provide practical training in implementing interactive, inquiry-based pedagogical strategies. The identification of cultural and educational background factors suggests that teacher preparation should include understanding of diverse learning traditions and strategies for supporting students transitioning from rote-learning to analytical thinking paradigms.

Institutional implications include the need for assessment reform to reward critical thinking rather than memorization, curriculum integration across all EFL courses, and creation of supportive environments that encourage questioning and intellectual exploration. The findings also suggest that individual teacher efforts, while valuable, require systemic institutional support to achieve meaningful critical thinking development outcomes.

Future Research Recommendations

Future research should expand the geographical and institutional scope to include multiple universities and diverse cultural contexts, enabling comparison of critical thinking attitudes and practices across different EFL environments. Longitudinal studies tracking changes in teacher attitudes and student critical thinking development over time would provide valuable insights into the effectiveness of various

interventions and the natural progression of analytical skill acquisition in language learning contexts.

Research incorporating direct classroom observation and objective measures of student critical thinking abilities would strengthen the evidence base by validating teacher perceptions against empirical performance data. Mixed-methods studies including student perspectives alongside teacher viewpoints would provide a more comprehensive understanding of the critical thinking development process from multiple stakeholder perspectives.

Intervention studies testing the effectiveness of specific pedagogical strategies identified in this research would contribute to evidence-based practice development. Comparative research examining critical thinking development in EFL contexts versus first-language contexts could illuminate unique challenges and opportunities in second language learning environments.

Conclusion

This mixed-methods investigation of EFL teachers' attitudes toward critical thinking skills and academic achievement has revealed both encouraging and challenging findings that have significant implications for language education practice and policy. The study demonstrates universal recognition among EFL teachers of the positive relationship between critical thinking abilities and student academic success, validating theoretical assertions with empirical evidence from practitioners with diverse experience levels and backgrounds.

However, the research has also uncovered a substantial gap between teachers' recognition of critical thinking importance and their perceptions of current student capabilities, suggesting that despite widespread acknowledgment of these skills' value, EFL programs may not be adequately addressing their development. This "preparedness paradox" represents both a challenge and an opportunity for educational improvement, highlighting the urgent need for systematic approaches to critical thinking integration in EFL curricula.

The remarkable convergence among teachers regarding effective pedagogical strategies provides a solid foundation for evidence-based practice development, with discussion-based activities, Socratic questioning, and reflective writing emerging as consistently endorsed approaches. However, the identification of systemic barriers—including cultural factors, educational background influences, and institutional constraints—suggests that individual teacher efforts alone are insufficient for meaningful change.

The study's contribution extends beyond its immediate findings to include methodological insights about mixed-methods research in educational contexts and theoretical contributions to understanding critical thinking development in second language learning environments. The five themes identified through thematic analysis—particularly the concepts of pedagogical convergence and systemic transformation imperative—provide frameworks for future research and practice development.

Moving forward, the findings call for comprehensive, multi-level interventions that address critical thinking development through coordinated efforts involving curriculum reform, faculty development, assessment alignment, and institutional culture change. The research demonstrates that while individual teachers possess both recognition of critical thinking's importance and knowledge of effective strategies, the realization of improved student outcomes requires systemic support and coordinated institutional commitment to transforming EFL education practices.

Ultimately, this study contributes to the growing recognition that language education in the 21st century must extend beyond linguistic competency to include the analytical and evaluative thinking skills essential for academic success and lifelong learning. The findings provide both empirical validation for this educational imperative and practical guidance for its implementation, offering a roadmap for enhancing critical thinking development in EFL contexts while acknowledging the complex, multifaceted nature of this educational challenge.

Appendices

Appendix A: EFL Teachers Questionnaire

Instructions: Please indicate your level of agreement with each statement by marking (✓) the appropriate box.

No.	Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1	There is a strong positive relationship between students' critical thinking skills and their academic achievement in EFL courses.	☐	☐	☐	☐	☐
2	Students with well-developed critical thinking skills demonstrate better performance in language learning tasks.	☐	☐	☐	☐	☐
3	Critical thinking skills are essential for EFL students' success in higher education.	☐	☐	☐	☐	☐
4	The current level of critical thinking skills among my EFL students is adequate for their academic needs.	☐	☐	☐	☐	☐
5	Most of my EFL students demonstrate strong analytical and evaluative thinking abilities.	☐	☐	☐	☐	☐
6	My students effectively apply critical thinking skills when engaging	☐	☐	☐	☐	☐

No.	Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
	with course materials and assignments.					
7	Integrating critical thinking activities into EFL instruction significantly improves student learning outcomes.	☐	☐	☐	☐	☐
8	Discussion-based activities are highly effective for developing critical thinking skills in EFL learners.	☐	☐	☐	☐	☐
9	Problem-solving tasks enhance critical thinking development more effectively than traditional language exercises.	☐	☐	☐	☐	☐
10	Questioning techniques and reflective writing activities are essential strategies for fostering critical thinking in EFL contexts.	☐	☐	☐	☐	☐

Appendix B: EFL Teachers Interview Guide

1. How do you perceive the relationship between critical thinking skills and academic achievement among your EFL students? Can you provide specific examples from your teaching experience?
2. What factors do you believe most significantly influence the development of critical thinking skills in your EFL students? What barriers, if any, have you observed?

3. Can you describe the current level of critical thinking abilities you observe in your students? How do you assess or recognize these skills in your classroom?
4. What instructional strategies or classroom practices have you found most effective for developing critical thinking skills among EFL learners? Can you share specific techniques or activities?
5. Based on your experience, what recommendations would you make for improving critical thinking instruction in EFL programs at the higher education level? What changes or improvements do you think are needed?

The References

- Akça, N. K., & Taşçı, S. (2009). Hemşirelik eğitimi ve eleştirel düşünme [Nursing education and critical thinking]. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, *5*(2), 187-195.
- Brookfield, S. (1987). *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. Jossey-Bass.
- Carr, K. (1988). How can we teach critical thinking? *Childhood Education*, *65*(2), 69-73.
- Cottrell, S. (2017). *Critical thinking skills: Effective analysis, argument and reflection* (Vol. 100). Bloomsbury Publishing.
- Davidson, B. (1998). A case for critical thinking in the English language classroom. *TESOL Quarterly*, *32*(1), 119-123.
- DeBono, E. (1985). *Six thinking hats*. Little, Brown.
- Elder, L., & Paul, R. (2020). *Critical thinking: Tools for taking charge of your learning and your life*. Foundation for Critical Thinking.
- Facione, P. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. Research findings and recommendations*. American Philosophical Association.
- Facione, P. A. (2011). Critical thinking: What it is and why it counts. *Insight Assessment*, *1*(1), 1-23.
- Facione, P. A. (2013). *Critical thinking: What it is and why it counts*. The California Academic Press.
- Halpern, D. F. (1998). Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring. *American Psychologist*, *53*(4), 449-455. https://doi.org/10.1037/0003-066X.53.4.449

- Howat, A., Bruschke, J., & Ocampo, M. (2023). Critical thinking instruction for the post-truth era. *Argumentation and Advocacy*, *59*(1-4), 17-35. https://doi.org/10.1080/10511431.2022.2125698
- Machete, P., & Turpin, M. (2020). The use of critical thinking to identify fake news: A systematic literature review. In M. Hattingh, M. Matthee, H. Smuts, I. Pappas, Y. K. Dwivedi, & M. Mäntymäki (Eds.), *Responsible design, implementation and use of information and communication technology* (pp. 235-246). Springer. https://doi.org/10.1007/978-3-030-45002-1_20
- Paul, R. (1992). *Critical thinking: What every person needs to survive in a rapidly changing world*. Foundation for Critical Thinking.
- Paul, R., & Elder, L. (2004). Critical thinking . . . and the art of close reading, Part III. *Journal of Developmental Education*, *28*(1), 36-37.
- Paul, R., & Elder, L. (2008). Critical thinking: The nuts and bolts of education. *Optometric Education*, *33*(3), 88-91.
- Paul, R., & Elder, L. (2014). *Critical thinking: Tools for taking charge of your professional and personal life*. Pearson Education.
- Paul, R., & Elder, L. (2019). *The miniature guide to critical thinking concepts and tools*. Rowman & Littlefield.
- Pennycook, A. (1994). *The cultural politics of English as an international language*. Longman.
- Pinto, L. E., & Portelli, J. P. (2009). The role and impact of critical thinking in democratic education: Challenges and possibilities. In J. Sobocan, L. Groarke, R. H. Johnson, & F. Ellett (Eds.), *Critical thinking education and assessment: Can higher order thinking be tested?* (pp. 299-320). Althouse Press.
- Sulaiman, W. S. W., Rahman, W. R. A., & Dzulkifli, M. A. (2008). The relationship between critical thinking dispositions, perceptions towards teachers, learning approaches and critical thinking skills among university students. *The Journal of Behavioral Science*, *3*(1), 122-133.