Enhancing Critical Thinking in English Language Teaching (ELT) Programs: A Comparative Study of Higher Education in Pakistan and Saudi Arabia

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Abstract

Critical thinking is often considered essential for improving the quality of higher education and fostering student success, especially within the context of English Language Teaching (ELT). This qualitative and reflective study aims to evaluate the integration of critical thinking skills within ELT programs by examining program specifications and the reflections of faculty members and students from Pakistan and Saudi Arabia. The research specifically investigates how course structures and curriculum design promote critical thinking in ELT, while also exploring faculty perceptions of its role in enhancing students' linguistic abilities and academic performance. By involving twenty PhD and master's students alongside fourteen faculty members, seven from each country, this study analyses the alignment between ELT program schemes and critical thinking development. Results indicate that while critical thinking is present in ELT programs, there is a lack of emphasis on creativity and independent learning. Course specifications tend to be rigid, limiting flexibility. Recommendations include adopting more flexible designs, incorporating creativity, and updating resources to better develop students' critical thinking skills for future success in English language proficiency.

Keywords: critical thinking, English Language Teaching (ELT), higher education, curriculum design, program evaluation, faculty perceptions, student outcomes, Pakistan, Saudi Arabia

1. Introduction

Critical thinking skills are increasingly in demand across various sectors globally, making it essential for educational systems to prioritize their development to prepare learners for post-graduate life (Abrami et al., 2008; Johnston, Mitchell, Myles, & Ford, 2011; Roth, 2010). Higher education programs are expected to be designed in ways that explicitly promote the cultivation of critical thinking, as such skills enable students to navigate complex problems and adapt to dynamic professional environments. When integrated into program schemes, critical thinking can be facilitated through diverse activities, assignments, and projects embedded within the curriculum (Halpern, 2014; Ennis, 2018). Recent studies emphasize the importance of incorporating critical thinking into higher education curricula through problem-based learning, project-based assessments, and inquiry-based teaching methods (Kumar, 2021; Yeh, 2022). These methods encourage learners to engage critically with material and develop cognitive flexibility necessary for real-world applications.

Despite the recognized importance of critical thinking in higher education, there remains a need for continuous refinement of educational approaches to ensure that learners can apply these skills effectively in professional and personal contexts (Paul & Elder, 2019; Chan, 2021). This study aims to investigate the design of higher education programs, particularly within English language teaching programs in Pakistan and Saudi Arabia, by examining how program schemes and pedagogical practices promote critical thinking. Additionally, the perceptions of faculty members, as well as master's and PhD students who have completed these programs, will be explored to provide insights into the development of critical thinking skills. Critical thinking fosters a range of crucial attributes, including problem-solving, open-mindedness, and the ability to engage with diverse perspectives (Brookfield, 2017; Zhang, 2023). These skills are increasingly necessary for higher education students to be successful, adaptable, and competitive in today's workforce.

The selection of Pakistan and Saudi Arabia for this study is rooted in their distinctive higher education landscapes and the shared imperative to cultivate critical thinking skills within their academic frameworks. Both nations have initiated reforms to integrate critical thinking into their curricula, yet they encounter similar challenges shaped by their socio-cultural and educational contexts. In both countries, research indicates a significant reliance on traditional assessment methods and rote learning, which may inadvertently constrain the development of critical thinking among faculty and students (Khan, 2023; Almeqren, 2023). A qualitative study focusing on universities in both contexts revealed that while educators and learners recognize the importance of critical thinking, their priorities diverge; students emphasize

outcomes, whereas faculty concentrate on teaching methodologies. This underscores the need for assessment designs that genuinely promote critical thinking skills (Khan & Ahmed, 2023; Murphy, 2022).

Furthermore, both Pakistan and Saudi Arabia face challenges related to faculty preparedness and curriculum flexibility in fostering critical thinking. While national policies emphasize critical thinking development, implementation at the institutional level remains inconsistent due to variations in faculty training, resource allocation, and pedagogical approaches (Abbas, 2021; Raza, 2022). Additionally, both contexts exhibit constraints in integrating problem-based learning and inquiry-based teaching methods effectively, as faculty members often rely on conventional lecture-based instruction (Alghamdi, 2022; Smith & Abouammoh, 2023).

By highlighting these shared gaps, the study aims to provide a cohesive analysis of how higher education policies and practices influence the promotion of critical thinking in Pakistan and Saudi Arabia. This comparative approach seeks to inform the development of more effective pedagogical strategies that address common challenges and foster critical thinking competencies in both educational contexts.

2. Literature Review

2.1 Critical Thinking Skills in Education

Critical thinking skills are vital life skills that enhance both learning and teaching, particularly in the context of English language education in schools and universities. These skills are increasingly recognized as essential for preparing students to navigate complex real-world scenarios and for future workforce demands. Huber and Kuncel (2016) describe critical thinking as "an asset to the future workforce" (p. 431), emphasizing its importance in both academic and professional settings. However, Davies and Barnett (2015) highlight ongoing concerns in higher education, noting that students often lack sufficient resources, facilities, and materials to fully develop their critical thinking skills. Recent studies emphasize the need for more experiential learning opportunities and technology-driven instruction to foster critical thinking, especially in online and blended learning environments (Kumar & James, 2022; Lee et al., 2021). Research continues to affirm that critical thinking is essential not only for academic success but also for shaping informed, critical citizens (Brodin, 2007; Stenbock-Hult, 2017; Abdelaziz & Ghoneim, 2023). These skills facilitate learners' ability to assess, reflect, and respond critically to complex issues, making them indispensable across all sectors.

Critical thinking is also linked to the philosophical tradition of cultivating intellectual rigor, a practice dating back to pre-Socratic times (Brodin, 2007). In educational theory, John Dewey's concept of reflective thinking has been foundational in shaping modern understandings of critical thinking (Kurfiss, 1988). Dewey (1910) defined reflective thinking as an "active, persistent, and careful consideration of any belief or supposed form of knowledge" in light of the evidence supporting it (p. 6). Dewey's work emphasizes the importance of learners being able to distinguish between belief, truth, and opinion—an essential part of making meaning in their educational experience. Today, critical thinking is seen as a cognitive process that encourages learners to reflect on their ideas, engage with diverse viewpoints, and develop reasoned conclusions. This process is crucial for students' academic progress and for fostering a deeper engagement with the material they encounter (Paul & Elder, 2009; Bohlin, 2014; Fisher, 2021; Abdullah et al., 2021).

2.2 Defining Critical Thinking

Critical thinking can be defined in various ways depending on the field of study and its intended application. At its core, critical thinking focuses on how people think rather than what they think, emphasizing the importance of evaluating beliefs and assumptions (Vaughn & MacDonald, 2010). It is a process that helps individuals assess the validity of their convictions and determine whether they are based on sound reasoning. Recent research by Jones and Jackson (2022) stresses the importance of critical thinking in STEM fields, arguing that the ability to evaluate data and form evidence-based conclusions is essential in today's rapidly evolving technological landscape. Eduard Glaser (1941) described critical thinking as a strong persistence in seeking evidence to support or challenge beliefs (Fisher, 2001). This process involves interpretation, analysis, evaluation, and synthesis of information, ultimately fostering reflective and reasoned thinking (Ennis, 1985). Critical thinking, therefore, allows individuals to navigate uncertainty and make informed decisions by continuously questioning and evaluating the information they receive.

Some researchers, such as Vyncke (2012), view critical thinking as a cognitive ability that requires rational judgment and analysis of issues. One of the oldest definitions of critical thinking in higher education relates to identifying reliable and unreliable information, a skill crucial for distinguishing between right and wrong assumptions (Davis, 2015). Other early definitions, such as that by Ennis (1962), describe critical thinking as the "correct assessment of statements" (p. 8). Recent studies, including Renaud and Murray (2021), expand on these definitions, emphasizing the role of metacognitive strategies in helping students develop critical thinking skills in academic settings. This active process enables learners to take control of their learning, cope with challenges, and make meaningful connections between ideas (Jashari & Ballhysa, 2005). By fostering an environment that encourages questioning and reflective analysis, critical thinking helps students not only solve problems but also become conscious learners who can adapt to various educational and professional contexts (Kec & Ara, 2005).

2.3 Critical Thinking Skills in Higher Education

The role of critical thinking in higher education is critical for developing reasoning skills, particularly in fields that require the formulation and defence of arguments (van den Brink-Budgen, 2006). Research has shown that doctoral students, in particular, benefit from developing critical thinking skills as they engage in more complex research activities that require them to analyse, interpret, and present original arguments (Facione, 1998). Onwuegbuzie (2001) compared the critical thinking skills of master's and doctoral students,

finding that the latter demonstrated significantly higher levels of critical thinking. This is largely because doctoral students are required to contribute new knowledge to their field, which necessitates the ability to critically evaluate existing literature and synthesize diverse sources of information into a coherent argument (Holbrook et al., 2007; Smith, 2014; Devis-Rozental et al., 2022).

The development of critical thinking skills is further enhanced when students are encouraged to engage with real-world problems and inquiry-based learning methods (Jenkins & Healey, 2011). In this regard, the role of the advisor is critical in guiding students through the process of becoming independent researchers, capable of critical analysis and open to feedback from peers and mentors (Zipp & Olson, 2011). Research has shown that PhD students who are actively involved in research projects, problem-solving, and peer reviews are more likely to develop strong critical thinking skills (Hayes, 2014; Ahmed & Alonazi, 2021). By participating in these activities, doctoral students learn to approach problems with an open mind, evaluate evidence rigorously, and refine their thinking based on new insights and critiques (Gibbs, 2013). As critical thinkers, they are better equipped to navigate the complexities of research, produce original contributions to their field, and engage in meaningful dialogue with other scholars.

Review of Critical Thinking Skills in Higher Education in Saudi Arabia and Pakistan

Recent scholarship on critical thinking (CT) in higher education has drawn attention to the varying degrees of its integration and effectiveness across different educational systems. In particular, the higher education sectors of Saudi Arabia and Pakistan have been subjects of study, with several works investigating the progress, challenges, and opportunities for cultivating CT skills in these regions. While both countries have made strides toward reforming their educational systems to foster more critical, analytical, and creative thinking, there remain significant gaps that hinder the widespread development of CT.

Saudi Arabia

In Saudi Arabia, the ongoing educational reforms under Vision 2030 have created a strong push for enhancing critical thinking within the higher education landscape. Research by Al-Harbi (2021) emphasizes that universities are increasingly recognizing the importance of CT skills, especially as part of a broader shift toward quality assurance and internationalization. The establishment of the National Centre for Academic Accreditation and Evaluation (NCAAA) has been a pivotal step in raising academic standards and fostering accountability (Al-Rasheed & ElTahir, 2022). Despite these advancements, the integration of CT into the curriculum remains a work in progress. Studies indicate that while there is an emphasis on improving teaching methods, including the adoption of blended learning and e-learning platforms, critical thinking is not always systematically embedded in the curriculum (Alamer, 2022). Hussein (2023) further highlights that a disconnect still exists between higher education curricula and industry needs, particularly in STEM fields, where practical problem-solving and innovation are paramount.

Research also suggests that faculty members often lack the necessary training to effectively teach CT skills. For example, Alghamdi and Al-Sulami (2023) report that despite recognition of CT's importance, faculty members frequently rely on traditional teaching methods that do not foster analytical or creative thinking. To overcome these barriers, there is a growing call for the incorporation of more active learning strategies, problem-based learning, and interdisciplinary approaches that challenge students to apply critical thinking in real-world contexts.

Pakistan

In Pakistan, the promotion of critical thinking skills in higher education has also been a key area of focus, though challenges persist. Khan and Akram (2023) argue that despite significant increases in research output and the number of PhDs, Pakistan's higher education system still faces limitations in fostering a robust research culture, which is essential for developing critical thinking. The disconnect between academic research and practical application, particularly in local industries and policymaking, remains a significant issue (Mustafa et al., 2022). While reforms have been implemented to increase research funding and enhance faculty qualifications, Raza and Shafqat (2023) contend that without better governance and incentives for faculty, the potential for creating a critical thinking-oriented academic culture will remain unrealized.

Moreover, studies have highlighted that the traditional lecture-based teaching model prevalent in many Pakistani institutions does little to stimulate critical thinking. As Raza et al. (2021) suggest, there is a need to shift towards more student-centered pedagogies that encourage inquiry, debate, and the application of critical thinking to complex problems. This includes enhancing collaborative learning and fostering an environment where students can engage critically with course material and each other. Additionally, the lack of a strong link between higher education and industry needs in Pakistan has further hindered the development of CT skills, particularly in professional fields (Naveed et al., 2023). To address these gaps, there is an increasing call for curriculum reforms that integrate critical thinking within disciplinary contexts and ensure students are equipped with the skills necessary to thrive in dynamic professional environments.

Synthesis and Implications

Both Saudi Arabia and Pakistan are actively working to enhance critical thinking skills within their higher education systems, with varying levels of success. While there is growing recognition of the importance of CT in academic and professional contexts, both countries continue to face significant challenges in fully integrating CT into their curricula. In Saudi Arabia, the shift towards innovative teaching methods and quality assurance measures has created a favorable environment for fostering critical thinking, but further faculty development and curriculum alignment with industry needs are necessary. In Pakistan, while there is an emphasis on increasing research output, systemic issues such as the traditional teaching model, limited industry-academia collaboration, and insufficient faculty incentives

pose barriers to developing a critical thinking culture.

To address these challenges, both countries must focus on curricular reforms that prioritize critical thinking, teacher training programs that equip faculty with the skills to foster CT, and stronger connections between higher education and industry needs. By overcoming these barriers, Saudi Arabia and Pakistan can develop graduates who are not only academically proficient but also capable of critical, creative, and analytical thinking, better positioning them for success in a rapidly evolving global landscape.

2.4 Critical Literature Analysis of Existing Critical Thinking Models

Critical thinking has evolved into a key focus of educational research, with various models developed to understand and promote it across disciplines. Each model offers unique insights and contributes to a broader understanding of how critical thinking skills are cultivated and applied in real-world scenarios. This critical analysis examines major contemporary models, identifying strengths and areas for further development, while also synthesizing key elements that inform the development of the proposed Reasoning, Analysis, and Creativity (RAC) framework.

2.4.1 Paul-Elder Critical Thinking Framework

The Paul-Elder framework is widely used, offering a structured approach to analyzing reasoning through intellectual standards and elements of thought (Paul & Elder, 2020). Its strength lies in its applicability across disciplines and its comprehensive nature. However, the model's focus on intellectual standards may underplay the importance of creativity and emotional regulation in critical thinking, aspects that are gaining increasing recognition (Niu et al., 2022). Additionally, the Paul-Elder framework treats critical thinking as an isolated cognitive process, without fully integrating the social and collaborative dimensions crucial for real-world problem-solving (Zhang, 2023).

2.4.2 Halpern's Teaching for Critical Thinking Model

Halpern's model emphasizes teaching for transfer, which is crucial for developing critical thinking that transcends specific contexts (Halpern, 2021). It also highlights problem-solving and decision-making as core components, aligning well with real-world applications. However, while this model stresses the importance of metacognition, it does not deeply engage with the emotional aspects of critical thinking, such as emotional regulation or the influence of biases (Brown & Green, 2022). Additionally, the model could be enhanced by incorporating a more explicit discussion of how creativity fits into the critical thinking process.

2.4.3 Four-Dimensional Critical Thinking Model (4D-CT)

The 4D-CT model by Zhang et al. (2022) represents a significant advancement by integrating cognitive, metacognitive, emotional, and collaborative dimensions into the study of critical thinking. The inclusion of emotional regulation is a major contribution, as emotions play a pivotal role in decision-making and reasoning. However, this model's focus on collaborative thinking, while important, may not fully capture the individual creativity aspect of critical thinking, particularly in fields like the arts or scientific innovation (Guilford, 2023). Additionally, the model could benefit from a clearer articulation of how these dimensions directly contribute to creative output, a core element of critical thinking.

2.4.4 Integrated Critical Thinking Model for STEM (ICT-STEM)

The ICT-STEM model (Jones & Jackson, 2022) excels in connecting critical thinking with data interpretation and problem-solving in STEM fields, where analytical skills are paramount. Its focus on inquiry-based learning is essential for fostering critical thinking in scientific domains. However, the model is somewhat narrowly focused on STEM disciplines, limiting its applicability to creative fields such as the humanities or design thinking (Anderson et al., 2023). Furthermore, the ICT-STEM model could benefit from a stronger emphasis on the interrelationship between reasoning, analysis, and creativity, which are essential for innovative solutions across all disciplines.

2.4.5 Metacognitive Critical Thinking Framework

Renaud and Murray's (2021) emphasis on metacognitive strategies is a valuable addition to critical thinking literature. This framework highlights the role of self-reflection and awareness in fostering critical thinking, which is crucial for learners to actively monitor and adjust their thinking processes. However, this model could be expanded by incorporating creative thinking as a parallel process to metacognition. While it successfully addresses how individuals evaluate their own reasoning, it does not fully explore how creativity and innovative thinking emerge through metacognitive processes (Pavlovic & Williams, 2022).

2.4.6 Reflective Judgment Model (RJM)

King and Kitchener's Reflective Judgment Model (2021) focuses on the development of epistemic cognition, guiding learners through stages of understanding and engaging with complex problems. This model is particularly useful for analyzing how critical thinking develops over time, especially in higher education. However, its focus on epistemic dimensions may overlook the importance of creativity and original thought in producing innovative solutions (Wegerif, 2023). While reflective judgment is essential, the model could benefit from integrating creative reasoning to move beyond reflection toward the generation of novel insights.

2.4.7 Synthesis and the RAC Framework

From these analyses, several gaps emerge that the RAC framework seeks to address:

- Creativity remains underexplored in most models, despite its crucial role in generating new ideas and solutions (Runco, 2023).
- Reasoning and analysis are consistently emphasized, yet often not explicitly connected to creative output, which is essential for problem-solving and innovation (Guilford, 2023).
- Emotional regulation, while acknowledged in newer models, is not fully integrated into the way it influences both reasoning and creativity (Zhang, 2023).
- Collaboration is frequently highlighted, but individual creative reasoning should also be emphasized, particularly for innovation-driven disciplines (Anderson et al., 2023).

The RAC framework builds upon the Paul-Elder, Halpern, and 4D-CT models, integrating key components from each while addressing existing limitations. Specifically, RAC synthesizes reasoning (from Paul-Elder and RJM), analysis (from ICT-STEM and metacognitive models), and creativity (an area underemphasized in all reviewed models). This triadic structure ensures that critical thinking is not only analytical and evaluative but also generative, fostering innovation and adaptability. By bridging these domains, the RAC framework offers a more holistic model applicable across disciplines, enhancing both theoretical understanding and pedagogical application.

2.5 Synthesis and Gaps

Despite the extensive body of research on critical thinking models, several key gaps persist, necessitating a new theoretical framework that integrates essential yet underrepresented components. One significant gap is the limited emphasis on creativity within most existing models. While reasoning and analysis are often central to critical thinking frameworks, creativity—an essential element in generating novel solutions and fostering innovation—remains underexplored. This omission is particularly problematic in disciplines where critical thinking must extend beyond evaluation and judgment to include ideation and problem-solving. Without explicitly linking critical thinking to creative output, these models fail to address the full spectrum of cognitive skills necessary for complex decision-making in both academic and professional contexts.

Additionally, although reasoning and analysis are consistently emphasized, their direct connection to creative thinking is often overlooked. Many models treat reasoning as a linear, structured process without considering its dynamic relationship with creative thought. In real-world problem-solving, individuals must not only evaluate information critically but also generate original ideas and solutions. Thus, an integrated approach that recognizes the interplay between reasoning, analysis, and creativity is needed to develop a more holistic understanding of critical thinking.

Another limitation is the partial integration of emotional regulation into critical thinking models. Recent frameworks, such as the Four-Dimensional Critical Thinking (4D-CT) model, acknowledge the role of emotions in cognitive processing, but they do not fully explore how emotional regulation influences both reasoning and creativity. Emotions can shape decision-making processes, impact problem-solving strategies, and either enhance or hinder creative thinking. A comprehensive critical thinking model should account for the ways in which emotional regulation supports both analytical rigor and the capacity for innovative thought.

Finally, while collaborative critical thinking is widely emphasized, there is a tendency to overlook the importance of individual creative reasoning. Many existing models focus on social dimensions of critical thinking, such as teamwork and discourse, which are essential for knowledge construction. However, disciplines that prioritize innovation—such as scientific research, entrepreneurship, and the arts—require individuals to engage in deep, independent reasoning to generate unique insights. A balanced framework should recognize the value of both collaborative and individual critical thinking, ensuring that learners develop the ability to work effectively in group settings while also cultivating independent intellectual creativity.

These gaps directly inform the study's research questions, which aim to examine how critical thinking models can be enhanced to integrate creativity, link reasoning and analysis to creative outcomes, incorporate emotional regulation, and balance collaborative and independent thinking. By addressing these limitations, this study contributes to the development of a more comprehensive theoretical framework that aligns with the demands of contemporary education and professional fields, ensuring that critical thinking is both analytically rigorous and generative.

2.6 Proposed Theoretical Framework: Reasoning, Analysis, and Creativity Model (RAC)

Overview

The Reasoning, Analysis, and Creativity (RAC) Model integrates cognitive reasoning, analytical skills, and creative thinking as key contributors to critical thinking, leading to innovative and critical outputs. This model views critical thinking as a dynamic process that not only evaluates existing knowledge but also generates new ideas and solutions through creativity.

Key Components

1. Reasoning:

Definition: The ability to form sound judgments based on logical principles.

Role: In the RAC model, reasoning is the foundational skill for identifying problems, formulating hypotheses, and making informed decisions. Reasoning acts as the driver that organizes and synthesizes information.

Process: Critical thinkers must reason through a problem, balancing logical analysis with creative solutions. This also includes

self-regulation and emotional awareness to prevent cognitive biases from skewing judgments.

2. Analysis:

Definition: The process of breaking down complex problems or ideas into manageable components.

Role: Analysis sharpens focus by allowing critical thinkers to evaluate the credibility of information, challenge assumptions, and assess the reliability of data.

Process: Analytical skills are essential for interpreting evidence, comparing different perspectives, and arriving at reasoned conclusions. In the RAC model, analysis is iterative, refining reasoning through continuous questioning and examination.

3. Creativity:

Definition: The capacity to produce novel and useful ideas.

Role: Creativity is crucial for moving beyond mere evaluation to generating innovative outputs. It is often overlooked in traditional models but is indispensable in disciplines requiring problem-solving and design thinking.

Process: Creativity in the RAC model is intertwined with reasoning and analysis, allowing individuals to produce new insights by linking disparate ideas and imagining alternatives. This process involves emotional regulation to embrace uncertainty and open-mindedness.

2.7 Outcome: Critical Thinking Output

The output of the RAC model is a critical and creative product, which can be a solution, decision, or idea that is not only analytically sound but also innovative. This output reflects the synthesis of reasoning, analysis, and creativity, integrated into a cohesive whole.

Feedback Loop: The model emphasizes a feedback loop where the creative product is critically evaluated, leading to further refinement of reasoning and analysis.

The RAC model offers a comprehensive approach to critical thinking that integrates reasoning, analysis, and creativity as core contributors. By emphasizing the interconnectedness of these elements, this framework better reflects the complex nature of critical thinking required in today's education and professional environments. It aims to produce not just critical thinkers but creative problem solvers who can contribute innovative solutions to complex global challenges.
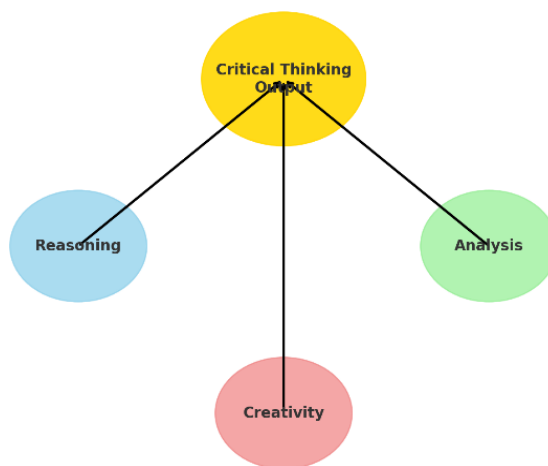

Diagram. 1.1

The diagram 1.1 shows the Reasoning, Analysis, and Creativity (RAC) Model for Critical Thinking. This version arranges the components in a triangle-like layout, with arrows pointing toward the Critical Thinking Output, emphasizing the interconnected flow between Reasoning, Analysis, and Creativity. Each component contributes to producing a critically evaluated and innovative output, visualized clearly with distinct circles and labels.

3. Research Questions

- To what extent do the master's and PhD program specifications reflect the use of critical thinking skills?
- How do master's and PhD English students in Pakistan and Saudi Arabia engage in critical thinking?
- What are the perceptions of university faculty members in Pakistan and Saudi Arabia regarding the development of critical thinking skills in higher education?

4. Methodology

This study employs a qualitative research design to explore the integration of critical thinking within master's and PhD programs in English Language Teaching (ELT) across universities in Pakistan and Saudi Arabia. The researchers critically evaluate the curriculum and program specifications, focusing on identifying elements designed to foster critical thinking among doctoral and master's scholars. A multi-method approach is adopted, combining document analysis and focus group interviews to provide a comprehensive understanding of how critical thinking is promoted in higher education.

4.1 Document Analysis

The first phase of the research involves a document analysis of the master's and PhD program specifications, syllabi, and schemes of study related to ELT. The objective is to critically examine the curriculum content and instructional strategies outlined in these documents, with particular emphasis on identifying activities, assignments, and pedagogical approaches that encourage critical thinking. This method allows for a systematic identification of the extent to which critical thinking is integrated into course outcomes, learning objectives, and assessment frameworks. The analysis is conducted using a coding framework based on established models of critical thinking (e.g., Paul & Elder, 2020; Facione, 1998), ensuring that the evaluation is grounded in contemporary theoretical frameworks.

4.2 Focus Group Interviews

Qualitative Interviews and Focus Groups

Phase One: Student Interviews

The first phase of the qualitative component involved semi-structured interviews with Master's and PhD students to explore their perceptions and applications of critical thinking (CT) within their academic experiences. The primary aim was to gain insight into how students understand CT, the extent to which they believe it is embedded in their coursework and research, and how their CT skills have evolved over time. A total of nine participants were engaged in focus group interviews comprising PhD students in English Linguistics from a prominent public-sector university in Lahore, Punjab, Pakistan. An equivalent number of participants were also interviewed through focus group discussions at Umm Al-Qura University, Saudi Arabia. Interviews were conducted in the respective institutions and recorded with the consent of participants. Transcripts were subjected to thematic analysis following Braun and Clarke's (2006) six-phase framework, which includes familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

Phase Two: Faculty Focus Group Interviews

In the second phase, focus group interviews were conducted with faculty members who teach in Master's and PhD programs. The objective was to examine how instructors conceptualize and integrate CT into their pedagogical practices and to explore their perceptions of students' engagement with CT. To ensure diversity in perspectives, faculty members were selected from higher education institutions in both Pakistan and Saudi Arabia, representing a range of academic contexts. Each focus group included 5–7 participants and was facilitated using a semi-structured protocol. To encourage rich discussion, hypothetical instructional cases involving complex problem-solving scenarios were presented to participants, prompting them to reflect on real-world applications of CT in their classrooms.

All discussions were audio-recorded with participant consent, transcribed verbatim, and analyzed using the thematic analysis approach of Braun and Clarke (2006). This analytical framework allowed for the systematic identification of themes related to pedagogical strategies, institutional support, student challenges, and instructional beliefs about critical thinking.

The focus group data provided valuable insights into:

- Faculty members' strategies for embedding CT in lesson design, discussions, and assessments.
- Their observations regarding students' responsiveness to CT-oriented instruction.
- Institutional and cultural challenges that may influence the effectiveness of CT integration in ELT (English Language Teaching) programs.

Transparency and Replicability

To ensure methodological transparency and allow for replication in future studies, the complete set of instruments—including the student interview guide, faculty focus group protocol, and document analysis rubrics—attached in the Appendix of the paper.

4.3 Data Analysis

Thematic analysis is employed to analyze both the document data and the interview transcripts. The coding process is inductive, allowing themes to emerge from the data while also being guided by the pre-established coding framework. This dual approach ensures that both expected and emergent aspects of critical thinking are captured. The analysis focuses on identifying recurring patterns in the curriculum design, instructional strategies, and faculty perceptions, with particular attention to the alignment between theoretical models of critical thinking and their practical implementation in the classroom.

5. Trustworthiness and Rigor

To ensure the rigor of the qualitative analysis, strategies such as triangulation, member checking, and peer debriefing are employed.

Triangulation is achieved by combining data from document analysis and interviews, while member checking involves returning transcripts to the participants for verification of accuracy. Peer debriefing sessions are conducted with an independent group of researchers to review the coding framework and emerging themes, ensuring objectivity and reliability in the analysis.

6. Ethical Considerations

Ethical approval is obtained from the respective universities involved in the study. Informed consent is secured from all participants, and confidentiality is maintained by anonymizing all interview transcripts and documents. Participants are informed of their right to withdraw from the study at any time.

This mixed-method qualitative approach provides a deep and nuanced understanding of how critical thinking is integrated into higher education ELT programs in Pakistan and Saudi Arabia, offering insights that are both theoretically grounded and practically relevant. The complete set of instruments used in the study will be included in the Appendix of this paper for reference.

7. Comprehensive Data Analysis Using Thematic Coding

7.1 Introduction

This analysis explores the integration of critical thinking within Master's and PhD programs in English Language Teaching (ELT) in Pakistan and Saudi Arabia. Data was collected using a document analysis of program specifications and interviews with students and faculty members. The analysis follows a thematic coding approach, where key themes and patterns are identified and organized to provide a comprehensive view of how critical thinking is embedded and promoted in these educational programs.

7.2 Step 1: Document Analysis

The document analysis aimed to evaluate how course specifications, teaching strategies, learning methods, and assessment techniques across the ELT Master's and PhD programs promote critical thinking skills. Documents were coded for themes related to critical thinking, and the findings were synthesized under major categories. To evaluate the extent to which the Master's and PhD program specifications foster the development of critical thinking (CT), a qualitative document analysis (QDA) approach was employed. This method is well-established in educational research as a systematic and rigorous means of examining textual data, particularly policy and curriculum documents, to uncover embedded assumptions, pedagogical intentions, and educational priorities (Bowen, 2009).

Rationale for Methodological Choice

Document analysis is especially effective in curriculum studies where the goal is to assess alignment between intended learning outcomes and broader educational competencies such as critical thinking, problem-solving, and independent inquiry. As curriculum documents are often the product of institutional planning and academic consensus, they serve as authoritative representations of the program's intellectual and pedagogical orientation.

Analytical Framework

The analysis was structured around a predefined framework of critical thinking indicators derived from key literature in higher education and cognitive development. The framework encompassed the following dimensions of CT:

- Questioning techniques
- Self-directed learning
- Problem-solving ability
- Analytical reasoning
- Synthesis of knowledge
- Evaluation of evidence
- Reflective practice
- Logical reasoning
- Flexibility in learning approaches
- Peer collaboration and review

These indicators were operationalized into a series of evaluative questions and applied systematically across four principal components of the program:

1. Aims of the Program
2. Learning Strategies
3. Learning Outcomes
4. Graduate Characteristics

Each component was assessed against the CT indicators using a three-point ordinal scale:

- Not enough to promote CT

- Enough to a little degree to promote CT
- Enough to promote CT

This scale enabled the classification of curriculum elements based on the strength and clarity of their support for critical thinking development.

Data Collection and Analysis Procedure

A purposive sample of official program documentation was reviewed, including program handbooks, curriculum specifications, course descriptors, learning outcomes, and graduate attribute statements. Each document was subjected to a close reading to identify explicit and implicit references to CT-related skills and dispositions.

Data were thematically coded according to the predefined CT indicators. A deductive coding approach was used to ensure consistency and alignment with the analytical framework. Where relevant, illustrative excerpts were extracted to support evaluative judgments. Cross-component comparisons were then conducted to identify patterns, strengths, and areas for improvement within and across program levels.

Validity and Trustworthiness

To enhance the trustworthiness of the analysis, coding decisions were guided by established criteria in the literature, and iterative cross-checking was conducted to mitigate subjective bias. The use of a structured rubric and rating scale further contributed to analytical transparency and replicability.

Conclusion of Methodological Approach

Overall, qualitative document analysis provided a robust methodological foundation for examining the extent to which critical thinking is embedded in the formal structure of postgraduate programs. It enabled a nuanced and context-sensitive evaluation of how educational goals are articulated through institutional documentation and revealed the degree to which programs are designed to cultivate high-order cognitive skills.

Table 1.1. Document analysis themes and key findings

Category	Key Findings	Themes
Aims of the Program	Program aims focused on research skills and problem-solving but lacked explicit attention to creativity and higher-order thinking.	Limited Creativity and Flexibility
Teaching Strategies	Collaborative learning, problem-solving, and discussions were evident, promoting critical thinking development.	Collaborative Learning and Problem-Solving
Learning Strategies	Independent learning and creative knowledge applications were underemphasized in course strategies.	Need for Independent and Creative Approaches
Assessment Techniques	Research assignments, group projects, and presentations encouraged reflection, analysis, and critical thinking.	Critical Thinking Through Applied Research
Learning Outcomes	Course outcomes focused on evaluation and analysis but lacked explicit promotion of creativity and flexibility.	Evaluation and Reflection Skills

The document analysis shows that while critical thinking is embedded in some aspects of the programs, there is a lack of focus on creativity and flexible learning approaches. These areas present opportunities for enhancing the development of critical thinking in students.

Explanation of Themes

1. Limited Creativity and Flexibility: This theme emerged from the analysis of the program aims, which were found to focus primarily on research skills and problem-solving. However, there was a noticeable lack of emphasis on creativity and higher-order thinking, indicating a need for more flexible and innovative approaches in the curriculum.

2. Collaborative Learning and Problem-Solving: The teaching strategies highlighted the use of collaborative learning, problem-solving, and discussions. These methods were effective in promoting critical thinking development, as they encouraged students to engage with diverse perspectives and work together to solve complex problems.

3. Need for Independent and Creative Approaches: The learning strategies revealed a gap in the emphasis on independent learning and creative knowledge applications. This theme underscores the importance of incorporating more opportunities for students to engage in self-directed and creative learning activities.

4. Critical Thinking Through Applied Research: The assessment techniques showed that research assignments, group projects, and presentations were effective in encouraging reflection, analysis, and critical thinking. This theme highlights the role of applied research in fostering critical thinking skills.

5. Evaluation and Reflection Skills: The learning outcomes focused on evaluation and analysis but lacked explicit promotion of creativity and flexibility. This theme points to the need for course outcomes to include a broader range of critical thinking skills, including creativity and adaptability.

The themes were created by systematically coding the documents for recurring patterns and key findings related to critical thinking. These patterns were then synthesized into major categories, which helped to identify the overarching themes that emerged from the analysis.

7.3 Step 2: Thematic Analysis of Student Interviews

The purpose of the student interviews was to gather insights on how PhD and master's students perceive and apply critical thinking in their coursework, discussions, and research. Thematic coding was applied to identify patterns and common experiences shared by the students.

Table 1.2. Student interview themes and key findings

Theme	Description	Representative Quotes
Critical Thinking in Research	Students emphasized the importance of critical thinking in selecting, analysing, and synthesizing information for research.	Ema: "Applying critical thinking is essential in selecting references and synthesizing information."
Classroom Discussions	Discussions were key to refining perspectives and challenging assumptions, contributing to a deeper understanding of topics.	Meera: "Class discussions add to my knowledge and reflect upon my practices."
Initial Struggles	Students initially struggled with applying critical thinking but developed these skills over time through practice and reflection.	Noran: "It was difficult to apply critical thinking at first, but I developed over time."
Self-Reflection and Growth	Self-reflection helped students critically assess their learning and improve their ability to engage with course material.	Nesreen: "Critical thinking is a tool that urges self-reflection and growth."

Key Insights:

- Students initially face challenges in applying critical thinking but improve over time through classroom participation and self-reflection.
- Class discussions were instrumental in promoting critical thinking by allowing students to engage with diverse perspectives and evaluate different viewpoints.

7.4 Step 3: Thematic Analysis of Faculty Interviews

Objective of the Faculty Interviews

Faculty interviews aimed to explore the instructors' perceptions of how critical thinking is developed within their courses, and to gather suggestions for improving course design to better foster these skills.

Table 1.4. Faculty interviews themes and key findings

Theme	Description	Representative Quotes
Independent Learning	Faculty emphasized the need for students to engage in independent learning to foster critical thinking.	Rania "Learners need to analyse their opinions and perceptions."
Classroom Discussions	Discussions enabled students to apply critical thinking by exploring diverse ideas and perspectives.	Fatmah: "Discussions linked to real-world applications promote critical thinking."
Limitations in Course Specifications	Rigid course specifications limited the development of critical thinking, as they often lacked flexibility in content and methods.	Mohammad "Course specifications should be flexible to allow for diverse teaching methods."
Recommendations for Improvement	Faculty recommended more flexible course designs, updated resources, and a focus on varied skill development to promote critical thinking.	Anoud: "Updated resources and flexible assignments would enhance critical thinking."

Key Insights:

- Faculty recognized the need for flexible course designs that allow for the integration of independent learning and the development of a broader range of critical thinking skills.
- Classroom discussions were identified as crucial for promoting critical thinking, but the rigidity of course specifications limited opportunities for deeper critical engagement.

7.5 Step 4: Integration of Findings

The analysis across document reviews, student interviews, and faculty interviews reveals several key themes that are consistently emphasized:

1. Classroom Discussions: Both students and faculty members highlight the role of discussions in developing critical thinking. Discussions provide a platform for exploring diverse perspectives, challenging assumptions, and refining ideas through peer engagement.

2. Self-Reflection: Students identified self-reflection as a key process that helped them improve their critical thinking. This process allowed them to critically evaluate their own learning, and the perspectives shared during discussions.

3. Limitations in Course Design: Faculty members pointed out that many of the current course specifications lack the flexibility needed to foster a broader range of critical thinking skills. This rigidity prevents the incorporation of innovative teaching methods and limits students' ability to engage in independent critical thought.

4. Recommendations for Improvement: Faculty emphasized the need for flexible course specifications that allow for the incorporation of updated resources and varied teaching methods. This would enable a more holistic development of critical thinking in students.

8. Discussion

The findings from this study provide a detailed understanding of how critical thinking is embedded within master's and PhD programs in English Language Teaching (ELT) in Pakistan and Saudi Arabia. Through document analysis, student interviews, and faculty interviews, the research highlights that while critical thinking is prioritized in some aspects of these programs, there are several gaps that hinder its full potential. These gaps predominantly relate to the rigidity of course design, limited encouragement of creativity, and the need for updated resources.

8.1 Integration of Critical Thinking in Program Specifications:

The document analysis reveals that while research skills and problem-solving—both essential components of critical thinking—are emphasized, there is a significant lack of focus on creativity and flexibility. Higher-order thinking requires creativity, but it was underrepresented in the course aims and content. This aligns with prior research emphasizing the need for creative thinking in higher education to promote more comprehensive critical thinking (Halpern, 2021). Furthermore, while collaborative learning and problem-solving activities were prevalent, the promotion of independent learning was limited. This rigidity restricts students from engaging in self-directed inquiry, a critical element of deeper critical thinking (Paul & Elder, 2020).

8.2 Student Engagement with Critical Thinking:

Thematic analysis of the student interviews revealed that students initially struggled to apply critical thinking but gradually improved through classroom discussions and self-reflection. Classroom discussions were highlighted as crucial in fostering critical thinking, providing students with the opportunity to challenge assumptions, engage with diverse perspectives, and refine their ideas. Over time, as students participated in these discussions, they became more adept at critical engagement, showcasing the importance of peer-to-peer learning environments in developing such skills.

This finding aligns with Dewey's (1933) theory of reflective thinking, which posits that exposure to multiple viewpoints through discussion enhances critical thinking. However, the limited emphasis on independent learning in the program structure was a common concern raised by students, as it restricted opportunities for self-directed engagement with course material.

8.3 Faculty Perceptions and Challenges in Fostering Critical Thinking:

Faculty members shared a common concern regarding the rigidity of course specifications, which limited their ability to introduce more flexible and innovative teaching methods. While classroom discussions were acknowledged as effective in promoting critical thinking, faculty emphasized the need for modernized resources and more flexible course designs. According to the faculty, promoting critical thinking should extend beyond research-based tasks and problem-solving to include creativity, independent inquiry, and reflection.

This perspective aligns with studies on pedagogical flexibility, which argue that rigid curricula can hinder students' ability to engage fully in creative and critical thinking (Brookfield, 2012). Faculty members advocated for curriculum reform that would allow for more flexibility and creativity in both teaching methods and assessments, to better support the development of students' critical thinking skills.

8.4 Recommendations for Improvement:

The recurring themes across document analysis, student, and faculty interviews indicate that more flexible course designs are essential to promoting critical thinking. Faculty members recommended updated resources and a shift toward more innovative teaching strategies that integrate independent learning, creativity, and self-reflection. These changes would enable a more comprehensive development of critical thinking skills in students, better preparing them for academic and professional challenges.

In conclusion, while critical thinking is embedded in various aspects of the master's and PhD ELT programs in Pakistan and Saudi Arabia, there is significant room for improvement. A shift towards flexible course designs that prioritize creativity, self-directed learning, and modernized resources is crucial to fully fostering critical thinking in students. Such reforms would not only address the gaps identified in this study but also align these programs with contemporary trends in higher education, ultimately preparing students to become well-rounded critical thinkers capable of navigating complex academic and professional landscapes.

9. Conclusion

This comprehensive analysis demonstrates that while critical thinking is embedded within master's and PhD programs, there are clear opportunities to enhance its promotion through more flexible course designs, updated learning resources, and a greater emphasis on independent learning and creativity. Classroom discussions and self-reflection emerged as powerful tools in fostering critical thinking, but they need to be supported by course structures that encourage diverse thinking approaches. The integration of critical thinking across these programs is evident, but there is room for improvement to ensure students are fully equipped with the skills needed to navigate complex academic and professional challenges.

Document analysis showed that while some aspects of the curriculum support critical thinking, such as problem-solving and collaborative learning, the overall design is rigid and lacks flexibility. Creativity is underrepresented, which limits students' ability to develop innovative solutions to complex problems. This gap is crucial, as creativity is a key element of higher-order thinking and is essential for producing graduates who are capable of critical inquiry and original thought.

Student interviews indicated that while students initially struggle with critical thinking, they improve through reflective practices and participation in classroom discussions. However, students also noted that the courses did not always encourage them to take ownership of their learning, highlighting the need for more self-directed learning opportunities.

Faculty interviews reinforced these concerns, with instructors acknowledging that rigid course specifications often prevent them from incorporating more innovative teaching methods. Faculty recommended more flexibility in the design of courses, allowing for a broader range of teaching strategies, assessment techniques, and learning resources. They also highlighted the need for updated course materials to reflect contemporary trends in TESL, which would further enhance students' ability to engage in critical thinking.

10. Recommendations

Flexible Course Designs: Course specifications should be revised to allow for more flexibility in teaching methods, assessments, and content delivery. This flexibility will enable instructors to tailor their approaches to meet the critical thinking needs of individual students and encourage more creative approaches to problem-solving.

Integration of Creativity: Program aims and learning outcomes should explicitly include creativity as a key component of critical thinking. This can be achieved by designing assessments that require students to engage in innovative problem-solving, design thinking, and creative applications of their knowledge.

Updated Resources: The current reliance on outdated resources is a significant barrier to promoting critical thinking. Institutions should invest in updating their course materials, ensuring that they are aligned with the latest trends in TESL and higher education. This would not only enhance critical thinking but also make the learning experience more relevant and engaging for students.

Independent Learning Opportunities: Programs should place greater emphasis on independent learning, encouraging students to take ownership of their education through self-directed research, project-based learning, and inquiry-based approaches. This would help students develop critical thinking skills that are essential for both academic success and professional growth.

Reflective Practice: Reflective practice should be formally integrated into the curriculum as a means of enhancing critical thinking. Students should be encouraged to regularly reflect on their learning processes, assess their strengths and weaknesses, and engage in self-assessment to improve their critical thinking abilities.

By implementing these recommendations, ELT programs in Pakistan and Saudi Arabia can foster a more dynamic and engaging learning environment, ensuring that students develop the critical thinking skills necessary for success in both academic and professional settings. These improvements will better equip students to become independent thinkers, capable of approaching complex problems with creativity and rigor.

Authors' contributions

Dr. Humaira Irfan and Dr. Nurah Alfares were responsible for the study design and overall supervision of the research process. They were also responsible for data collection and contributed to the refinement of the study instruments. Dr. Syeda Rabia Tahir drafted the manuscript, while Prof. Maya Khemlani David revised it critically for important intellectual content. All authors read and approved the final manuscript. Dr. Humaira Irfan and Dr. Nurah Alfares contributed equally to this study and share first authorship.

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The authors declare that they have no known competing to disclose.

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Obtained.

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Appendix

1. Critical Thinking Program Specifications Form

No	Aims of the program	Enough to promote CT	Enough to a little degree to promote CT	Not Enough to promote CT
1	Do the aims of the program help learners to enhance questioning technique			
2	Do the aims of the program help learners to enhance self-directed learning			
3	Do the aims of the program help learners to enhance to solve problems			
4	Do the aims of the program help learners to enhance solve problems			
5	Do the aims of the program help learners to enhance			
6	Do the aims of the program help learners to enhance analyze scientific reasons			
7	Do the aims of the program help learners to promote synthesis of knowledge			
8	Do the aims of the program help learners to enhance evaluation of knowledge			
9	Do the aims of the program help learners to enhance reflection of knowledge			
10	Do the aims of the program help learners to enhance reasoning skills			
11	Do the aims of the program help learners to be fixable in learning			
	Learning strategies	Enough to promote CT	Enough to a little degree to promote CT	Not Enough to promote CT
1	Do the learning strategies of the program promote using questioning technique			
2	Do the learning strategies of the program promote self-directed learning			
3	Do the learning strategies of the program promote to solve problems			
4	Do the learning strategies of the program promote solve problems			
5	Do the learning strategies of the program promote collaborative learning			
6	Do the learning strategies of the program promote analyzing skills			
7	Do the learning strategies of the program promote synthesizing			
8	Do the learning strategies of the program promote evaluations' skills			
9	Do the learning strategies of the program promote reflection's skills			
10	Do the learning strategies of the program promote reasoning skills			
11	Do the learning strategies of the program use flexible strategies			
12	Do the learning strategies of the program promote discussion methods			
13	Do the learning strategies of the program promote peer review			
	Learning outcomes	Enough to promote CT	Enough to a little degree to promote CT	Not Enough to promote CT
1	Do the learning outcomes aimed to help learners using questioning technique			
2	Do the learning outcomes aimed to help learners to direct their learning			
3	Do the learning outcomes aimed to help learners to solve problems			
4	Do the learning outcomes aimed to help learners solve problems			
5	Do the learning outcomes aimed to help learners to use different kinds of thinking			
6	Do the learning outcomes aimed to help learners analyze scientific reasons			
7	Do the learning outcomes aimed to help learners to be able to synthesis of knowledge			
8	Do the learning outcomes aimed to help learners to be able to evaluate knowledge			
9	Do the learning outcomes aimed to help learners to use reflections			
10	Do the learning outcomes aimed to help learners to use reasoning			

	skills			
11	Do the learning outcomes aimed to help learners to be fixable in learning			
	Characteristics of graduate	Enough to promote CT	Enough to a little degree to promote CT	Not Enough to promote CT
1	Do the Characteristics of graduate include that learners should be able to use questioning technique			
2	Do the Characteristics of graduate include that learners should be able to direct their learning			
3	Do the Characteristics of graduate include that learners should be able to solve problems			
4	Do the Characteristics of graduate include that learners should be able to solve problems			
5	Do the Characteristics of graduate include that learners should be able to use different kinds of thinking			
6	Do the Characteristics of graduate include that learners should be able to use analyze scientific reasons			
7	Do the Characteristics of graduate include that learners should be able to use be able to synthesis of knowledge			
8	Do the Characteristics of graduate include that learners should be able to use be able to evaluate knowledge			
9	Do the Characteristics of graduate include that learners should be able use reflections			
10	Do the Characteristics of graduate include that learners should be able to use reasoning skills			
11	Do the Characteristics of graduate include that learners should be able to be fixable in learning			

2. Interview Protocol

1. Tell me about your experiences of applying CT in your study?
2. Tell me about your experiences participating in class discussions?
3. In what ways has your participation in classroom discussions developed this year?
4. can you mention an example of your involvement in class discussion and struggle of decision making?
5. How would you describe your listening to other students' perspectives during class discussion?
6. Comment on your self-reflection after participating in class discussions this past year, state an example of that.
7. Describe a discussion you have had with your colleagues in the class about any conflict issue in education
8. How have you used your communication skills during the past year both in class and out of class?