

## Enhancing critical thinking in educational settings (The role of curriculum design)

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Received: 26/09/2025

Accepted: 06/12/2025

published: 26/12/2025

### **Abstract:**

Critical thinking is a fundamental skill that fosters individual and societal advancement by strengthening logical analysis and evidence-based decision-making. In an era of rapid change, educational curricula serve as a pivotal tool for cultivating these competencies.

Contemporary curricula emphasize inquiry-based learning and in-depth information analysis, equipping students to engage actively and thoughtfully in their communities. As the demand for critical thinking-oriented education grows, curricula must evolve to align with these objectives.

This study evaluates the current integration of critical thinking skills into academic programs and investigates effective pedagogical strategies for their enhancement.

**Keywords:** Critical thinking; Educational curricula; Inquiry-based learning; Evidence-based decision-making; Pedagogical strategies.

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## **1.Introduction:**

Critical thinking skills are among the most essential competencies that contribute to individual and societal development. They enhance students' ability to engage in logical analysis, objective evaluation, inference, deduction, and well-informed decision-making taking into account their perspectives, values, and preferences. In a rapidly evolving world marked by complex challenges, the ability to think critically has become more crucial than ever. As a result, education -particularly curricula- has emerged as a key tool for nurturing these skills in students.

Modern curricula emphasize the development of critical thinking, aiming to equip students with the necessary tools to analyze and interpret information in depth. Critical thinking-based education encourages learners to ask questions, discuss ideas innovatively, and explore alternative solutions to problems. Through this process, students become better prepared to engage actively in their communities and make reasoned, well-founded decisions.

Efforts to reform and develop educational curricula focus on empowering learners, granting them greater autonomy in knowledge acquisition, and transforming them into active participants in the learning process. This approach enhances cognitive abilities and intellectual skills, particularly critical thinking, which is one of the most significant and widely recognized forms of thinking in education.

Developing critical thinking requires well-designed curricula and modern teaching methods that assign learners a central role in the educational process. Given that critical thinking is not innate but rather a learned skill requiring practice, training, and patience (Mashri, 2014, p. 142), fostering these competencies has become increasingly important.

Empirical educational research demonstrates that critical thinking development is not age-dependent but requires systematic cultivation.

With the growing emphasis on education that promotes critical thinking, curricula must be adapted to meet these demands, ensuring they serve as effective tools for building a generation capable of addressing contemporary challenges. This requires integrating teaching strategies that encourage independent thinking, analytical reasoning, and deductive skills across various subjects. Accordingly, the present study seeks to answer the following question: ***How can educational curricula contribute to developing students' critical thinking skills, and what challenges might hinder the implementation of these skills in the educational process?***

### **• STUDY OBJECTIVES:**

This study aims to:

- Examine the extent to which critical thinking skills are integrated into current curricula.
- Assess the impact of curricula on developing students' critical thinking abilities.
- Explore effective teaching strategies for fostering critical thinking within educational programs.
- Identify key factors that enhance or hinder the development of these skills.
- Provide actionable recommendations for curriculum reform to better cultivate critical thinking, equipping learners to address contemporary cognitive challenges.

- **METHODOLOGY:**

The descriptive approach will be used to collect information about current curricula, while attempting to analyze their content and how they address critical thinking skills. This approach enables us to describe the teaching strategies used in schools and how these skills are integrated within study programs. We believe it also helps us evaluate the effectiveness of current curricula in developing critical thinking skills by reviewing available literature.

### **1- DEFINING CRITICAL THINKING:**

The origins of critical thinking trace back to Socrates in the 5th century BCE, who emphasized questioning and self-examination as pathways to knowledge. However, **John Dewey** is widely regarded as the pioneer of modern critical thinking through his seminal work **HOW WE THINK** (1910). Dewey introduced key concepts such as **reflective thinking, inquiry, and skepticism**, laying the foundation for contemporary understandings of critical thought. He described its essence as "**THE SUSPENSION OF JUDGMENT UNTIL PROPER EVIDENCE IS EXAMINED.**"

Several definitions of critical thinking have been presented, owing to the diversity of theoretical backgrounds of the researchers who defined it. Among them is John Dewey, who in 1938 defined critical thinking as: "Reflective thinking associated with an individual's capacity for activity and perseverance. It is cautious thinking that involves the study and analysis of beliefs and expected knowledge based on a genuine foundation supported by the ability to infer, distinguish, compare, and reason, with the aim of reaching judgments and orientations backed by supporting evidence." (Abu Jaduwa & Noufel, 2007, p. 226).

Robert Ennis (2011) defines it as: "Reasonable reflective thinking focused on solving problems and making decisions about what an individual thinks or does to develop and control their thinking. It involves thinking about one's own thinking process to make it more accurate, clear, and defensible."

Hassan Zaytoun (2008) defines it as: "A complex, rational, or logical thinking process in which one or more ideas are subjected to investigation, inquiry, and the gathering and presentation of evidence objectively and impartially to determine their validity, followed by issuing a judgment on whether to accept them based on specific criteria or values."

Affana (1998) views critical thinking as: "A process of adopting decisions and judgments based on objective foundations that align with observed facts and are discussed in a scientific manner, free from bias or external influences that may distort those facts, compromise their accuracy, or expose them to potential interference from subjective factors."

A skill is defined as the ability to use and apply scientific knowledge and experience in critical thinking through understanding and practice, with an appropriate degree of speed, accuracy, and mastery, and with minimal cost and effort within available resources to achieve desired goals. Accordingly, thinking skills are defined as specific mental processes carried out intentionally by an individual to process information through procedures such as analysis, organization, planning, and evaluation, including skills such as problem identification, hypothesis generation, and evaluating the strength of evidence (El-Khosht, 2019, p. 111).

### **2- The Importance of Critical Thinking in Education :**

Critical thinking represents the weapon with which individuals face contemporary challenges and the stronghold that stands against destructive thought patterns in society, such as intellectual isolation, religious extremism, opinionated bias, unilateral perspectives, rejection of pluralistic truths, and the prevalence of irrational and illogical thinking among community members. It is the fundamental characteristic for achieving success and excellence in the 21st century, as it preserves the human cognitive structure by enabling individuals to perceive the surrounding world as an organized construct that can be understood and measured (Fahmi, 2020, p. 64).

In this era of rapid information and technological advancement, critical thinking has become one of the most important skills individuals must acquire, particularly within educational systems. Traditional education based on rote memorization is no longer sufficient to prepare individuals to face the complex challenges of today's world. Instead, it has become essential for students to learn how to think critically, how to approach information from a conscious perspective, and how to analyze, evaluate, and understand it within multiple contexts. This is especially important as it enhances their self-esteem, self-confidence, and academic achievement. International organizations like UNESCO emphasize that critical thinking is one of the fundamental skills that educational curricula should focus on in the 21st century. Critical thinking is a cognitive process that involves the analysis, interpretation, evaluation, and application of information. It is not merely about memorizing facts or absorbing academic content, but rather a method for deeply examining ideas and concepts, understanding them in light of available evidence, and subsequently reaching conclusions or decisions based on logical and rational thinking. It also requires individuals to be open to different perspectives and capable of revising and adjusting their ideas based on new information. This process is not limited to academic fields but extends to daily life, helping individuals make more informed decisions, whether at work or when dealing with social and political issues. Consequently, teaching critical thinking is an investment in building more aware and capable societies that can confront contemporary challenges (Facione, 1990).

3.1 The importance of critical thinking lies in its ability to help students:

3.1.1 Enhance Rational Decision-Making: Critical thinking enables students to rationally assess situations and available information, helping them make well-considered decisions. By identifying evidence, analyzing it, and examining it from different angles, students become more capable of making decisions based on logical foundations, especially in our modern world where misinformation and conflicting opinions are increasingly prevalent, making sound decision-making more crucial than ever.

3.1.2 Improve Problem-Solving Skills: Students who learn critical thinking skills become more efficient at handling problems. It is not just about finding a solution but involves critically analyzing the problem, understanding its causes, and arriving at multiple solutions before selecting the best one based on evidence. Critical thinking opens doors to innovative thinking and helps students find unconventional solutions to challenges they may face. Bailin (1999) noted that the importance of critical thinking lies in equipping learners with flexibility and objectivity in problem-solving.

3.1.3 Enhance Effective Communication Skills: When students learn critical thinking skills, they also learn how to express their thoughts and opinions clearly. In this context, it is not just

about reaching conclusions but also about articulating and defending those conclusions using logical arguments supported by strong evidence. Critical thinking also enhances the ability to listen to, understand, and evaluate others' opinions, thereby improving interpersonal communication.

**3.1.4 Prepare for Real-Life Challenges:** Education is not just about preparing students to pass exams but about equipping them for professional and practical life. In today's world, where technology and the economy are constantly evolving, students cannot rely on memorization and rote learning to keep up with these changes. Critical thinking makes them better prepared to understand ongoing changes, address new problems, and innovate in various professional fields. Qar'an (2016) argued that the true value of critical thinking in education lies in providing individuals with the opportunity to delve deeply into subjects to acquire knowledge using their experiences and skills in a neutral and logical manner. It develops their ability to uncover facts and distinguish between different aspects, empowering learners to become self-reliant researchers who contribute to their community's progress.

**3.1.5 Combat Preconceptions and Misinformation:** In the age of the internet and social media, students are exposed to a vast array of information, some of which may be false or misleading. Critical thinking helps students distinguish facts from opinions and differentiate between accurate and inaccurate information by enhancing their analytical and evaluative skills. This makes them more capable of confronting fake news and adopting a critical stance toward the content they encounter.

**3.1.6 Develop Creative Thinking:** Critical thinking is not just about analyzing information but also about identifying assumptions, exploring alternatives, and finding new solutions. It can foster creativity by encouraging students to think outside the box and consider issues from different perspectives. When students develop the ability to analyze ideas and concepts from multiple angles, they become more capable of proposing innovative ideas and finding unconventional solutions.

**3.1.7 Keep Pace with Educational and Technological Developments:** In light of the digital revolution and rapid technological advancements, it has become essential to equip students with the skills needed to handle modern technological tools. Through critical thinking, students become capable of using technology effectively. For example, they can use the internet to access and critically analyze information, as well as employ modern educational software and tools to solve problems and achieve learning objectives.

**3.1.8 Promote Independent Thinking and Personal Responsibility:** Students who possess critical thinking skills learn to be more autonomous in their thinking, rather than mimicking others' ideas or accepting opinions without scrutiny. They become capable of forming independent opinions based on their own evaluations. This type of thinking also encourages them to take responsibility and control the cognitive processes associated with learning (Dogan et al., 2018).

**3.1.9 Engage Critically with Societal Issues:** Critical thinking helps students discuss social and political issues constructively. Students with these skills can gain a deeper understanding of issues such as poverty, social justice, and the environment. They can also engage with these issues critically, considering various solutions while demonstrating respect for diverse viewpoints.

### **3- DEVELOPING CRITICAL THINKING SKILLS THROUGH CURRICULA :**

Critical thinking skills are among the essential competencies that individuals must possess in the contemporary era, as societies witness rapid developments in technical, social, and political fields. Given this accelerated progress, it is no longer sufficient for students to merely receive knowledge from teachers; they must be capable of analyzing, interpreting, and examining information from multiple perspectives before making logically grounded decisions. To achieve this, education plays a pivotal role in enhancing students' critical thinking skills, which requires designing curricula that encourage students to apply critical thinking in various life situations.

Critical thinking means the ability to analyze ideas, interpret data and information, evaluate evidence, and draw correct conclusions based on logical criteria. When students possess these skills, they become more capable of handling complex situations and understanding the world around them more profoundly, enabling them to continue self-directed learning. This aligns with Sternberg's assertion that while knowledge is undoubtedly important, it often becomes obsolete, whereas thinking skills remain perpetually relevant, allowing us to acquire knowledge regardless of time and place (Al-Qawasmeh & Abu Ghazaleh, 2015, p. 12).

Hence, critical thinking constitutes the cornerstone of modern education, helping students in:

Analyzing information: assessing its validity and quality.

Problem-solving: devising innovative and unconventional solutions.

Decision-making: relying on logical thinking to deduce optimal solutions.

The foundation for developing critical thinking through curricula lies in ensuring that curricula systematically and consistently aim to enhance these skills, thereby teaching students how to think rather than merely memorize information. Critical thinking skills can be fostered through curricula by:

Modifying curricula to encourage critical thinking: Curricula should include components that prompt students to think critically rather than merely transmitting dry information. By altering teaching methods and introducing new elements that require deep thinking, students can be motivated to ask questions and test hypotheses. This includes incorporating thought-provoking topics, where teachers can integrate controversial subjects in various fields such as social sciences, politics, and philosophy, prompting students to consider and analyze diverse viewpoints. There is a general consensus among educators that education for thinking, or teaching thinking, is a crucial goal of education, as developing students' thinking capacity enables them to effectively address life's complex problems now and in the future (Jarwan, 2009, p. 199).

- Engaging with real-life situations: Introducing complex life scenarios into the curriculum, such as environmental issues, political conflicts, or international relations, allows students to analyze situations and propose critical solutions.

- Teaching strategies that promote critical thinking: There are numerous approaches to stimulate critical thinking, including:

Classroom discussions: Group discussions are effective tools for encouraging critical thinking. By allowing students to express their opinions and debate various issues, they learn to analyze situations from multiple perspectives.

Problem-based learning: This approach involves presenting students with specific problems, requiring them to use critical thinking to analyze the problem and propose logical solutions.

Investigative activities: These encourage students to ask questions and seek answers through observation and reasoning, enhancing critical thinking by helping students investigate and reach solutions independently.

Collaborative learning: Group work contributes to developing critical thinking skills through exchanging ideas and discussing solutions with peers, while also helping students learn from others and broaden their perspectives.

- Developing evaluation and interpretation skills: It is important for students to learn how to assess information from various sources and draw conclusions based on logical analysis. In this context, curricula can focus on:

Interpreting evidence: Students should learn how to interpret information and evidence presented in curricula. For example, research papers, case studies, or scientific documents can be introduced for students to analyze and discuss their findings.

Distinguishing between facts and opinions: Training students to differentiate between facts (evidence-supported data) and opinions (personal ideas that may lack factual backing).

Considering available evidence: Teaching students the importance of examining available evidence and proofs before making any conclusions or decisions.

- Using technology to enhance critical thinking:

In the digital age, technology serves as a powerful tool for promoting critical thinking.

Curricula can leverage these tools through:

Interactive applications: Numerous apps and programs encourage students to solve problems innovatively, such as educational games, simulation software, and research tools that allow students to explore new topics through interactive means. These help students analyze academic material and comprehend it thoroughly (Samara, 2004).

Online research: Teaching students how to search for information online and carefully evaluate sources can significantly enhance critical thinking skills.

Interactive digital content: Such as educational videos through which students can explore new concepts and critically analyze video content.

- Encouraging independent thinking:

By integrating teaching methods that foster independent thinking, curricula can help students develop decision-making skills. These methods include:

Offering multiple choices: Allowing students to choose among diverse academic tasks, selecting topics that interest them or that they believe require critical thinking.

Challenging assumptions: Encouraging students to consistently question presented hypotheses and review assumptions based on available evidence.

Despite the importance of critical thinking, some challenges may hinder its implementation in curricula:

Curriculum density: Teachers may struggle to allocate sufficient time for critical thinking methods amid dense curricula.

Cultural resistance: In some cultures, critical thinking may be viewed as challenging authority or traditions, as it involves scrutinizing and evaluating ideas and beliefs critically. This may lead to challenging traditionally accepted ideas or certain axioms, resulting in resistance from some teachers to this educational approach.

Teacher training: Teachers must receive ongoing training on how to integrate critical thinking into classrooms using effective strategies.

Therefore, developing critical thinking skills through curricula is crucial to adequately preparing students for future challenges. Achieving this depends on redesigning curricula to encourage deep thinking, continuous inquiry, and critical analysis through innovative teaching methods and appropriate instructional strategies. Curricula can effectively enhance students' critical thinking skills, qualifying them for active participation in society and informed decision-making across various life domains.

#### **4- PRACTICAL EXAMPLES OF CURRICULA INCORPORATING CRITICAL THINKING.**

This article aims to bring the topic closer to the reader by presenting practical examples of academic curricula that include critical thinking as part of teaching strategies. The goal is to

help readers understand how to integrate critical thinking skills across various academic disciplines.

#### 5.1. - *Natural Science Curricula:*

In natural sciences, critical thinking can be developed through strategies like inquiry-based learning, where the student becomes the focus of the educational process, discovering knowledge independently by asking questions, collecting data, and analyzing it to reach scientific conclusions.

- **Scientific experiment:** Students can conduct an experiment on the effects of light on plant growth. Instead of providing them with final results or ready-made answers, they are encouraged to formulate hypotheses, collect data using various tools (such as light and temperature measuring devices), then analyze the data to determine the relationship between light and plant growth. During this experiment, students must use critical thinking to analyze their results and conclusions.
- **Environmental issues analysis:** Students are given video clips or excerpts from environmental reports on issues like global warming or pollution. They are then asked to evaluate the different evidence and viewpoints presented in these reports and propose their own solutions based on the evidence.

#### 5.5 - *History Curricula:*

History is considered one of the subjects that provides excellent opportunities to apply critical thinking through analyzing historical events, evaluating sources, and deducing consequences and alternative interpretations.

- **Historical source analysis:** Students can be presented with texts from various historical sources (such as political speeches, excerpts from personal memoirs, or old newspaper reports) about a specific historical event. They are then asked to assess the reliability of these sources, analyze different perspectives, and compare the historical narrative with other available evidence. The goal is to encourage students to think critically about how personal biases or political interests may influence the framing of historical events.
- **Re-evaluating historical events:** When studying a particular war or social movement, students can analyze questions such as: Were there alternatives to war? Could peaceful solutions have been reached? What if events had unfolded differently?

#### 5.3 **ARABIC LANGUAGE AND LITERATURE CURRICULA:**

In this subject, students are encouraged to analyze literary texts and literary criticism by examining style, objectives, symbolism, and semantic implications in literature.

- **Literary text analysis:** After reading a literary text (short story, poem, or play), students are asked to consider the implicit messages conveyed by the text. They can analyze characters and their relationships, the social and historical context of the text, and extract the main themes presented by the author. This encourages students to evaluate the literary style and writing techniques used.
- **Comparison of literary works:** Students can compare two literary works from different time periods, such as an old and modern novel. They are asked to reflect on how

each work represents its social and cultural era, as well as how literary techniques such as narrative, characters, and setting were employed.

#### 5.5 **MATHEMATICS CURRICULA:**

Mathematics is considered one of the subjects that enhances critical thinking by focusing on problem-solving strategies. Instead of presenting fixed methods for solving equations, students can be encouraged to think critically about solving problems in multiple ways.

- **Solving complex math problems:** Rather than providing only one solution to math problems, students are challenged with complex problems and asked to choose or design the most appropriate method to solve them. For example, in studying algebraic or geometric equations, students can use multiple methods to arrive at the same result, enhancing their critical thinking about the most suitable approaches to problem-solving.
- **Applied mathematics challenges:** Students can be stimulated to think critically by using mathematics to solve real-world problems, such as calculating a project budget or analyzing economic statistics. This type of exercise encourages students to apply mathematical skills practically while also prompting them to consider the limitations and assumptions underlying different solutions.

#### 5.5 **SOCIAL SCIENCES CURRICULA:**

The opportunity in this subject lies in integrating critical thinking through the analysis of contemporary social and political issues, examining available evidence to reach objective conclusions.

- **Analysis of social issues:** Students can analyze social issues such as poverty, education, or social justice by examining statistics, case studies, and previous research. They are asked to use critical thinking to evaluate proposed solutions to these issues and how public policies can be improved.
- **Study of political systems:** Students can study different political systems (democratic, authoritarian, etc.) and analyze the advantages and disadvantages of each based on historical events and social outcomes. They can also examine how political changes affect societies through case studies or classroom discussions.

#### 5.6 **ECONOMICS CURRICULA:**

Economics can serve as an excellent platform for applying critical thinking, where students must analyze economic data, understand markets, and evaluate economic policies.

- **Economic data analysis:** Students can work with economic data (such as reports on economic growth, unemployment, or inflation) and analyze them using mathematical and statistical tools, providing evidence-based interpretations and critically examining the results.
- **Studying the effects of economic policies:** Students can analyze the impact of economic policies such as taxation, government subsidies, or free trade, while evaluating how these policies affect different societal groups. They are asked to consider how policies could be designed to better reflect societal needs.

Thus, integrating critical thinking into curricula is crucial for developing students' skills. The diverse practical examples from these curricula across various fields demonstrate how

educational programs can encourage students to ask questions, analyze evidence, and propose innovative solutions. These approaches foster the development of critical mindsets that enable students to think deeply and analyze objectively in all areas of life.

## **6 CHALLENGES HINDERING THE IMPLEMENTATION OF CRITICAL THINKING IN CURRICULA:**

Implementing critical thinking skills in curricula poses challenges in many educational contexts. Despite the significant importance of these skills in enhancing students' analytical and evaluative abilities and evidence-based decision making, there are several obstacles that teachers and curricula may face when trying to effectively integrate critical thinking. Below are some of the most prominent challenges:

### **6.1. *Most teachers' focus on traditional teaching (rote learning):***

In many educational systems, the focus remains on rote memorization and recall, where information is directly transmitted from teacher to student, who is then required to memorize and repeat it rather than think critically about it. This hinders the development of critical thinking because students often lack opportunities to discuss and evaluate concepts themselves.

- **CHALLENGE:** Shifting from traditional teaching methods to interactive approaches that encourage critical thinking.
- **POTENTIAL SOLUTION:** Adopting innovative teaching methods such as project-based learning or inquiry-based learning that require students to analyze information and draw conclusions independently.

### **6.2 *Overloaded curricula:***

Teachers struggle to implement critical thinking due to dense curricula and numerous subjects. The sheer volume of topics to be covered creates time pressure in the classroom, making it difficult to allocate sufficient time to develop critical thinking skills.

- **CHALLENGE:** Balancing curriculum coverage with teaching critical thinking skills.
- **POTENTIAL SOLUTION:** Redesigning curricula to integrate critical thinking skills within subjects rather than as standalone components, facilitating their incorporation into daily activities.

### **6.3 *Lack of teacher training in critical thinking skills:***

In some cases, teachers lack specialized training in applying critical thinking skills in their classrooms. They may not have the necessary strategies to guide students in developing these skills or may be unfamiliar with teaching methods that promote critical thinking.

- **CHALLENGE:** Insufficient ongoing teacher training in methods for integrating critical thinking skills.
- **POTENTIAL SOLUTION:** Providing specialized training courses for teachers focused on enhancing their teaching skills and effectively applying critical thinking in the classroom.

### **6.4 *Resistance from educational culture:***

In some educational cultures, shifting to a critical thinking-based teaching approach is difficult, as the teacher traditionally dominates information delivery and student direction.

In such environments, teachers may resist encouraging open discussions or inquiries about the topics presented to students.

- **CHALLENGE:** Cultural resistance to change within classrooms.
- **POTENTIAL SOLUTION:** Promoting a culture of dialogue in classrooms, encouraging students to express their ideas freely, and working to transform traditional teaching patterns.

#### **6.5 Standardized tests and traditional assessment methods:**

In many educational systems, traditional assessment methods (such as written exams) do not fully reflect critical thinking skills, as these tests may focus on memorization rather than analysis, evaluation, or interpretation.

- **CHALLENGE:** Assessments focus on memorization rather than critical thinking.
- **POTENTIAL SOLUTION:** Modifying assessment methods to include analytical questions, case studies, and applied projects that require students to use critical thinking skills, while adopting alternative assessment methods to evaluate student work.

#### **6.6 TIME CONSTRAINTS AND PRACTICAL CHALLENGES:**

Limited available time to dedicate sufficient attention to critical thinking skills can sometimes pose a significant obstacle. Teachers often prioritize covering curricular content quickly, which hinders opportunities to engage students in deep critical analytical activities.

- **CHALLENGE:** Insufficient time allocated for practicing critical thinking.
- **POTENTIAL SOLUTION:** Organizing short yet effective activities that integrate critical thinking into daily routines, such as brief discussions or practical applications.

#### **6.7 VARIABILITY IN STUDENT ABILITIES:**

There exists a disparity in students' abilities to practice critical thinking. Some students may have educational backgrounds that better enable them to analyze and evaluate information, while others may struggle, particularly in early stages of their education.

- **CHALLENGE:** Differences in students' cognitive abilities.
- **POTENTIAL SOLUTION:** Designing interactive lessons tailored to each student's needs and capabilities, while providing individualized guidance for those requiring additional support in developing critical thinking skills.

#### **6.8 LIMITED EDUCATIONAL RESOURCES:**

Teachers may face shortages of educational resources such as textbooks or advanced technology that support critical thinking implementation. This limitation can restrict their ability to design innovative learning activities that encourage critical thinking among students.

- **CHALLENGE:** Scarcity of educational resources for developing critical thinking skills.
- **POTENTIAL SOLUTION:** Guiding teachers to creatively utilize available resources, such as internet applications or open online resources, to develop activities that stimulate students' critical thinking.

#### **6.9 ACADEMIC AND FAMILIAL PRESSURES:**

Students sometimes encounter academic and familial pressures that may affect their capacity for critical thinking, particularly when they focus on achieving high grades rather than meaningful learning. This can diminish their motivation to engage in activities requiring critical thinking.

- **CHALLENGE:** The dual pressures of academic performance demands and prevailing social norms may diminish student engagement with critical thinking development.
- **POTENTIAL SOLUTION:** Creating a classroom environment that fosters intellectual independence and emphasizes the intrinsic value of critical thinking as a fundamental skill, rather than merely a means to achieve top grades.

## 7 **CONCLUSION:**

Implementing and nurturing critical thinking skills through curricula is essential for preparing students for the future. However, this requires overcoming numerous challenges by developing innovative teaching methods, improving the learning environment, and providing adequate support for both teachers and students. Opening new horizons for teaching critical thinking skills should be a priority for educational systems seeking to enhance and develop these competencies among students.

The ability to think critically, analyze information, evaluate evidence, and make informed decisions is key to students' academic and personal success in the future. Despite challenges such as dense curricula, resistance to changing traditional teaching methods, and insufficient teacher training, striving to integrate these skills into education represents a crucial step toward improving educational quality.

Through innovative curricula, interactive activities, and assessments that promote critical thinking, students can become independent thinkers capable of engaging with complex issues in a rapidly changing world. Critical thinking should be a fundamental component of education across all subjects—whether natural sciences, literature, history, or mathematics—serving as a vital tool for developing students' cognitive abilities.

If these skills are properly activated, they will contribute to building a generation capable of addressing daily challenges and making rational decisions based on deep and objective analysis. Therefore, it is imperative for all educational stakeholders—curriculum developers, policymakers, and educational institutions—to collaborate in creating a learning environment that fosters critical thinking, given its significance in shaping students' personalities and preparing them for the future.

## 8 **BIBLIOGRAPHY LIST:**

1. Abu Jaduwa, S., & Noufel, M. (2007). Teaching thinking: Theory and practice. Dar Al-Maseera.
2. Affana, A. I. (1998). The level of critical thinking skills among students at the Faculty of Education in the Islamic University of Gaza. *Palestinian Journal of Educational Research and Studies*.
3. Al-Qawasmeh, A. H., & Abu Ghazaleh, M. A. (2015). Developing learning, thinking, and research skills (2nd ed.). Dar Saffa for Publishing and Distribution.

4. Bailin, S. (1999). Conceptualizing critical thinking. *Journal of Curriculum Studies*.
5. Dogan, I. (2018). The role of technology in developing scientific, cognitive and metacognitive thinking skills across educational stages through scientific research. *Arab Journal for Educational Studies and Research*.
6. El-Khosht, M. O. (Ed.). (2020). *Critical thinking: Its foundations and skill development*. Cairo University Printing and Publishing Center.
7. Ennis, R. (2011). *Critical thinking across the disciplines*.
8. Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. California Academic Press.
9. Fahmy, R. A. (2020). The impact of developing critical thinking skills on academic satisfaction. *Scientific Journal of Economics and Commerce*.
10. Jarwan, F. (2009). *Creativity: Concept, standards, theories, measurement, training, and creative process stages* (2nd ed.). Dar Al-Fikr.
11. Mashri, S. (2014). Critical thinking and its importance for learners in the context of e-learning. *Journal of Humanities and Social Sciences*.
12. Qar'an, M. (2016). *Learning thinking: Theory and practice*. Dar Al-Ayyam.
13. Samara, F. (2004). *Teaching: Concepts, methods, and approaches*. Al-Tariq Foundation.
14. Zaytoun, H. (2008). *Developing thinking skills: An inspirational vision for self-development*. Al-Soultiya House for Education.