

An Investigation on the Importance of Critical Thinking for Skill Development to Enhance the Effectiveness of the Learning Process

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Abstract: *The prominence of Critical Thinking is increasing in both educational and professional environments. Performing a query for "Critical thinking" on a widely used internet search engine will yield more than 65 million outcomes. Several research investigations have shown that critical thinking, while being an essential skill, is lacking in a substantial majority of students and professionals. Nevertheless, critical thinking can function as a beneficial instrument for cultivating aptitudes such as deductive reasoning, discernment, decision-making, troubleshooting, and analytical skills. This study explored the importance of critical thinking skills in the context of skill development, specifically in the field of education. Developing the ability to participate in critical thinking is an essential element of modern educational methods and models. The objective of this study is to establish a framework for comprehending the concept of critical thinking within the context of education. Teachers often utilize the term "critical thinking" in educational environments. Critical thinking, often known as "the art of thinking about thinking" (Ruggiero, V.R., 2012), seeks to improve an individual's cognitive capacities. The objective is to create educational environments that promote the development of critical thinking, both within and outside of the classroom, in order to facilitate the acquisition of essential skills. By teaching and actively engaging in the practice of critical thinking skills, teachers have the ability to confidently seize the chance and assume control over their own learning. Students who utilize critical thinking abilities are more likely to actively and effectively interact with the course material. They pose more demanding inquiries and actively engage in the learning process..*

Keywords: Critical thinking, education, teaching – learning process, skills development, cognitive abilities

I. INTRODUCTION

The term 'Critical thinking' emerged in the early 20th century as a descriptor for an educational objective and is thought to have been coined by the American philosopher, John Dewey. He frequently referred to it as 'reflective thinking', which he defined as the process of actively, persistently, and carefully examining any belief or supposed form of knowledge in relation to the supporting evidence and the potential conclusions it leads to.

Critical thinking is a prevalent subject in contemporary college and university curriculum. The art of critical thinking is often taught as a means to enhance thinking abilities. It entails adopting a mindset that focuses on reevaluating and transforming one's thinking process, particularly in relation to learning. Critical thinking encompasses the process by which learners cultivate and utilize cognitive abilities to enhance their understanding and refine their thinking. A person is considered a critical thinker to the extent that they consistently enhance their thinking in a deliberate manner. The fundamental concept underlying the examination of critical thinking is to identify and assess the merits and flaws in one's thinking, with the aim of enhancing the strengths and addressing the problems.

Engaging in critical thinking can significantly stimulate skill development, enhance creativity and improve time management skills (Hader, 2005). Critical thinking involves not only thinking logically and probabilistically, but also applying these skills to solve real-life problems that are not limited to specific subject matter. Engaging in critical

thinking can offer you a deeper and more perceptive comprehension of your own self. Engaging in this activity will provide you with a chance to approach the situation in a rational and unbiased manner, allowing you to be more receptive to and understanding of the perspectives and opinions of others. Anticipating future events and circumstances will empower you to confidently offer innovative viewpoints and novel understandings of challenging issues.

The word "critical" in this study does not imply a pessimistic attitude to thinking. Critical entails the assessment of thoughts, ideas, or conclusions with a conscious, imaginative, and meticulous refinement of these processes as necessary.

The origins of critical thinking can be traced back to influential figures such as Socrates, Thomas Aquinas, Francis Bacon, Rene Descartes, John Locke, and Sir Isaac Newton during its early stages. John Dewey, Ludwig Wittgenstein, and Jean Piaget, among others, have made significant contemporary contributions. The study conducted by Robert Ennis during the 1960s led to the development of critical thinking abilities that are now taught in classrooms and applied in professional settings. Ennis emphasized the importance of critical thinking as an acquired ability that can be applied in professional settings through instruction and application. Ennis determined, after much research, analysis, teaching, and practical experience, that critical thinking is primarily concerned with making informed decisions on beliefs and actions (Ennis, p. 10).

Ennis categorized critical thinking into two distinct groups: dispositions and abilities. The exemplary critical thinker, in their written works, is inclined to arrive at an accurate choice, honestly and lucidly communicate that stance, take into account alternative perspectives, strive to be well-informed, and refrain from intimidating or perplexing people. Furthermore, a critical thinker possesses the capacity to concentrate on a question, scrutinize and evaluate an argument, assess the reliability of a source, make and assess judgments, elucidate and enhance their perspective, substantiate their viewpoints appropriately, and creatively consider and incorporate the reasoning of a viewpoint while being considerate of others (Ennis, 2011).

In "The Art of Thinking: A Guide to Critical and Creative Thought," Vincent Ruggiero defines thinking as "any cognitive process that aids in formulating or resolving a problem, making a decision, or satisfying a desire for comprehension." The statement "It is searching for answers while reaching for meaning" (Ruggiero, 2012 p. 4) implies a quest for knowledge and understanding. He observes that thinking may not always be a deliberate endeavour. Subconscious forces exert influence over conscious thoughts. An instance of this phenomenon could be when one drives to a regular location, such as work, without consciously recollecting each individual landmark encountered along the road. This style of thinking occurs without significant deliberation or analysis. Undoubtedly, the brain appears to be functioning automatically in this particular scenario. Ruggiero defines critical thinking as a cognitive process that is particularly focused on problem-solving, issue analysis, and decision-making. Continuing with the previously given example, in the event that the usual road is obstructed or inaccessible, the motorist would be required to engage in careful and analytical thinking to determine an alternative path. Which path is the most direct to the destination? Which route could potentially be unobstructed, unlike the one that was encountered? What are the potential consequences if that approach were chosen? These questions exemplify critical thinking that arises from the need to address an issue.

The primary objective of critical thinking, as observed by numerous researchers, is to facilitate problem solving. Employees are now required to possess skills in problem solving, issue analysis, and decision making. There is increasing evidence that employers have higher expectations for critical thinking skills in the workplace. A poll was conducted, in which over 400 top HR experts were asked to identify the most crucial talent that their employees will require in the upcoming five years. Critical thinking was identified as the most important factor, surpassing both innovation and the application of information technology. The response acknowledges the significant changes in the nature of work and the corresponding skills needed (Society for Human Resources Management, 2006).

Implication of Critical thinking for skill development and education

Critical thinking is a frequently used term in educational environments. Adult learners are advised to cultivate these skills and engage in practical practice. Critical thinking involves analyzing and assessing the ideas generated, forming a preliminary choice on the most effective course of action to address the problem or the most rational belief regarding the issue, and subsequently evaluating and improving that solution or belief (Ruggiero, 2012). The impact of cultivating proficient problem-solving abilities should not be underestimated. Proficiency in problem-solving can have a significant and immediate impact on individuals, with potential consequences that extend into the future.

Recognizing the fundamental need of critical thinking is essential. It is possible to teach critical thinking in a focused approach, where students are given opportunities to experience assessing and testing ideas. Acquiring critical thinking skills is not an inherent outcome of enrolling in college courses, even those that need critical thinking for academic achievement. Stephen Brookfield (1987) highlights the need of being open to experimenting in teaching as a means to model change and foster critical openness in learners. With this objective in mind, educators have the power to shape a student's acquisition of critical thinking abilities throughout their academic path.

Research Conducted on 'Critical Thinking'

The inception of research on critical thinking took place during the 1960s. Researchers have sought to elucidate critical thinking through the comprehensive examination of two primary fields in this research. The philosophical approach focuses on the principles of sound reasoning, the nature and purpose of human thought, and the cognitive abilities required for an unbiased perspective of the world. On the other hand, the psychological approach examines thinking processes through empirical research, explores individual variations in learning and thinking, and investigates problem-solving as a component of critical thinking. Next, I will provide some illustrations of research conducted on the subject of critical thinking. Kürüm (2002) conducted a study at the Education Faculty of Anadolu University. Kürüm's study aimed to define the essential cognitive skills of critical thinking and determine the specific degrees of thinking abilities that contribute to this skill. Additionally, the study sought to investigate the factors that influence the critical thinking abilities of teacher trainees enrolled in the Education Faculty at Anadolu University. The study revealed that the critical thinking abilities of teacher trainees, as well as their overall thinking abilities, were found to be at a moderate level. These abilities were influenced by various factors, including age, type of high school graduated from, score type and level in the university entrance exam, program of study, education and income level of the family, and participation in self-development activities.

Paul (1989) conducted a study on the acquisition of critical thinking dispositions in a learning setting. Paul proposes that it is possible to teach individuals the ability to be disciplined and engage in self-directed thought in this study. He argued that critical thinking was developed through the acquisition of abilities such as identifying conclusions, analyzing premises, drawing conclusions, and identifying fallacies. He suggested that critical thinking should be defined as 'disciplined, self-directed thinking that demonstrates the highest level of thinking suitable for a specific mode or field of thinking.' When teaching critical thinking, it is important to prioritize the development of fair-minded individuals who are willing to consider the interests of other individuals or groups, without being influenced by their own self-interest. Paul referred to it as the dialogical or dialectical thinking model.

Giancarlo, Blohm, and Urdan (2004) conducted four consecutive investigations to explore the assessment of critical thinking tendency in adolescents. The findings of their research offer validation for the California Measure of Mental Motivation, commonly referred to as CM3. This study was predicated on the premise that critical thinking is a disposition. It not only presented evidence of the existence of critical thinking disposition in teenagers but also offered a significant instrument for evaluating this concept. The authors' conclusion states that CM3 measures the degree to which individuals regard themselves as being willing and inclined to approach difficult problems in a systematic, innovative, open-minded, and inquiring manner.

II. CONCLUSION

Undoubtedly, critical thinking is necessary in all facets of life, but it is particularly vital for occupations that need interaction with individuals. Finkelman (2001) emphasized the importance of critical thinking in the realm of human health, namely among professionals who have a direct influence on people's lives, such as psychologists, counselors, and educators. These individuals must have the ability to think critically in both their practical tasks and managerial duties. In order to successfully integrate critical thinking into their courses, teachers and counselors must first exhibit a profound commitment to critical thinking and its fundamental concepts.

The development of critical thinking skills in an educational context undoubtedly impacts an individual's capacity to learn efficiently in a professional setting. Once obtained, these skills enable employees to engage in deep and analytical thinking about workplace issues and their own contributions to enhancing corporate cultures, as well as increasing the value of the products or services that a business provides to the community or the world.

Critical thinking is the essential foundation for important skills such as problem solving, decision making, sound judgment, and comprehensive analysis. Organizations that have the capacity to attract, retain, and develop highly talented critical thinkers have a significant and measurable advantage over their competitors in the business world (Facione, 2013).

The application of critical thinking is crucial for the development of skills, and it can be utilized in both academic and professional contexts. An individual worker's ability to transfer critical thinking skills is shown by their capacity to make effective, well-reasoned, and thoroughly analyzed decisions that directly impact their daily work life. These assessments have consequences not only for the individual worker but also for those involved in their decision-making process.

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