



A JOURNEY FROM EDIFYING CRITICAL THINKING TO PROBLEM-SOLVING

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ABSTRACT

Instruction and practice are required to develop critical thinking skills. An educationalist at the institution can develop pupils' critical thinking by following some suggestive measures: 1. In place of lectures and memorization, it incorporates active learning strategies. 2. It utilizes techniques to assess students that provide an intellectual challenge instead of memory recall in the assessment process. 3. Rather than focusing on the content It centers on instruction in the learning process. A number of factors can inhibit critical thinking instruction. Lack of training, limited resources, preconceived notions, and time constraints all act against critical thinking. Furthermore, teachers may help students develop their critical thinking skills by actively involving them in project-based and collaborative activities, modelling the thought process, and employing effective questioning tactics. Students consume information rather than receive it. The article argues that rather than the dominant paradigm, a shift in pedagogy and curriculum is required that emphasises critical thinking and problem solving within the social construct.

INTRODUCTION

“The test of first-rate intelligence is the ability to hold two opposed ideas in mind at the same time and still retain the ability to function”-F. Scott Fitzgerald

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What does critical wondering rely on? Based on the crucial thinking network definition, vital wondering is a method with the aid of which one actively conceptualises, applies, analyses synthesises, and evaluates statistics obtained thru statements, enjoy, mirrored images, rational, or conversation, as either reference to beliefs and actions. A related method to essential wondering is thinking about the thinking process known as meta-cognition (Tempelaar, 2006) or "considering thinking", as clear with the aid of Flavell (1979). critical thinking capabilities remain vital because they allow college students "to deal correctly with social, scientific, and practical problems" (Shakirova, 2007, p. forty-two). Truly put, students who assume severely can resolve problems efficiently. Merely having understanding or information isn't sufficient. Students must be capable of resolving troubles to make effective decisions and capable of assuming critically.

For almost three hundred years, American officers have emphasised ten massive schooling goals:

- essential educational skills,
- critical thinking and
- resolving difficulties,
- work attitude and
- social skills,
- citizenship,
- body fitness,
- emotional health,
- arts and literature, and
- Direction for professional activity.

Many professors struggle to interact with college students in important wondering sporting events, and students seldom follow essential questioning capabilities to address complex, real-international situations.

Our tutorial techniques may additionally keep the vital thing to the answer. Should we not begin by teaching the students how to suppose? Many teachers educate college students on what to assume. It is abnormal that we think pupils to research yet infrequently educate them about learning." even though statistics is critical, so is the method through which students explore.

This has examined essential thinking in connection to instructional approaches, demanding situations, and some robust procedures for incorporating vital wondering within the classroom.



Connection amid critical thinking and instructional method

The application of content, the learning process, and evaluation methodologies must all be prioritised. Teaching methods that encourage memorising (sometimes transient knowledge) do not encourage critical thinking. Critical thinking instruction employs questioning approaches that challenge students to examine, synthesise, and evaluate material. It necessitates that students employ higher-order thinking abilities rather than remember material or accept what they read or are taught without critical thought. According to research, lectures and memorising do not result in long-term knowledge.

Graded tasks, quizzes, and examinations should be more of an intellectual challenge than a test of memory. Essay questions and case studies, for example, encourage students to apply their knowledge to new scenarios. Multiple-choice tests should encourage thinking rather than facts.

Barriers

Teachers' ability to manage critical thinking in the classroom is jeopardised by the current educational trend of standardising curriculum and focusing on test outcomes. The emphasis on "teaching to the test" shifts focus away from student-centred education and toward the subject. The scientific method is a systematic and procedural approach to the process of thinking that is usually used to compare critical thinking. Teachers are generally inexperienced in essential thinking techniques, and integration is inhibited by a lack of training, information, assumptions, and time. Preconceived beliefs about the curriculum impede teachers' and students' ability to think critically about it.

Personal prejudice and partiality, for example, prevent critical thinking by obviating analytical skills. Time limits are impediments to incorporating critical thinking.

Instructional Strategies

Even when the traditional hurdles are removed, critical thinking demands more than participation. It entails pupils' independent discovery of information. In a study of student learning (Nokes, Dole, & Hacker, 2007), students who employed heuristic tactics to solve problems consistently outperformed those who studied using traditional textbooks and lecture methods on content-based tests. Heuristic teaching approaches allow students to "learn, find, comprehend, or solve issues on their own, such as via experimenting, analysing probable answers or solutions, or trial and error" (Dictionary.com, 2007, p. 1). According to a similar study, problem-based learning activities promoted "critical thinking and problem-solving



skills; active participation in the learning process including self-direction, identification of own learning needs, teamwork, creative discussion, and peer learning; and the integration and application of knowledge."

Kumar and Natarajan (2007) discovered that problem-based learning settings improve students' critical thinking abilities and information acquisition. Work-based learning is a similar notion. Work-based learning (WBL), as defined by Brodie and Irving (2007), "is based on the inter-relationship and inter-dependency between understanding learning, critical reflection, and the identification and development of competence within a WBL environment" (p. 11). Many scholars in business education have focused on critical thinking. Celuck and Slama (1999) explored strategies for incorporating critical thinking skills into business classes. Other studies (Catanach, Croll, & Grinaker, 2000; Saraoghu, Yobaccio, & Louton, 2000) investigated hands-on activities that required students to use their hands. Almost all research that proposed ways for integrating critical thinking skills highlighted the components of modeling, questioning, and leading student practise.

An individual must be able to turn the unorganised static information (i.e., bits of data) he or she has snoopd from textbooks and lectures into a networked knowledge chain, defined as information that is meaningful, valuable, and recognised as having value and utility and can be explained in their own words by a person.

Critical thinking skills can be improved in five ways:

- 1. Get to know the world through reading
- 2. Consider new ideas with an open mind
- 3. Seek clarification and listen actively
- 4. Become aware of your thinking or metacognition
- 5. By using tools such as brainstorming and mind mapping, you will be able to create a cohesive plan

Ten ways to help your language students think critically:

- 1. Explain to students the importance of critical thinking.
- 2. Choose topics that your students will find exciting and relevant.



- 3. You should tailor your lessons based on your student's interests.
- 4. Discussion questions should be used to encourage students to think about them.
- 5. Critical-thinking questions should be used.
- 6. Make sure you focus on real-world issues.
- 7. Engage students in thinking about how they relate to the topic.
- 8. If the issue has assumptions underlying it, challenge them.
- 9. Consider alternative solutions to the problem.
- 10. Promote the development of self-awareness and reflective thinking in students

(<http://iteslj.org/Techniques/Halvorsen-CriticalThinking.html>)

"Knowledge" is classified into three categories by cognitive psychologists:

- 1) declarative knowledge,
- 3) Procedural Knowledge and 4) conceptual Knowledge

In addition, it includes the skills of critical thinking and problem solving that are often referred to as the grey area between declarative and procedural knowledge.

Instructors should use critical questioning techniques in their instruction to engage students in the critical thinking process in order to support students' critical thinking. These studies all included the following questions:

- What are your thoughts?
- Why do you believe that?
- What is the foundation of your knowledge?
- What does it indicate and imply?
- What explains it, links to it, and leads from it?
- What are your thoughts about it?
- Should it be interpreted differently?

These questions demand students to assess their thinking's clarity and correctness, as well as its depth and breadth. Have they considered all of the options? Do they understand why they



believe as they do? Students must assess if the material they are utilising is relevant and whether their thought process is coherent. Students might begin to think about their thinking by challenging their cognitive process.

Quickness is essential when it comes to rote memory recall, yet, thinking takes time and patience. Allow kids enough time to think critically. In addition, research suggests tactics for applying questioning approaches in online learning settings (Astleitner, 2002; MacKnight, 2000). Discussion boards, virtual chat rooms, and instant messaging are debate and critical thought platforms. Instructors can challenge students while they compose their replies in synchronous situations. Although asynchronous communication does not allow for this, educators can model the critical thinking process and give exercises that include questioning tactics and critical thinking replies. It is crucial to lead students through critical thinking in all learning situations.

Significance of the study:

-Students should engage in critical thinking for the following reasons:

- 1. This helps students develop their independence and decision-making skills.
- 2. Creating new ideas and thinking creatively is encouraged.
- 3. Information is better understood and analyzed when students understand it well.
- 4. Communicating ideas and thoughts are made more accessible by using this technique.
- 5. Students learn to solve problems better through it.

(<https://journals.mindamas.com/index.php/educare/article/view/949>)

Guiding Students

In the beginning of developing learners' critical thinking skills, students may have difficulty engaging in critical thinking scenarios as passive learners' memorizers and recallers (Brown & Kelley, 1986). Rather than merely having an answer, instructors should assist students in thinking through a response to create a learning environment in which they feel comfortable (<https://utulsa.edu/fulbright-semi-finals-2022/>). In addition to providing active learning opportunities, peer coaching can foster critical thinking and critical thinking skills of students. The problem solution will be conducted by one student and the peer coach will be

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conducted by the other student on two-person teams. In solving problems, the problem-solver applies the Six Steps to Effective Thinking and Problem Solving, also known as "IDEALS" (Facione, 2007).

Identify, Define, Enumerate, Analyse, List, and Self-Correct are the IDEALS:

Identify the Issue:

I D E A L S

I-How do we determine what the real issue is?

D-Define the Context:

E-Explore the facts that surround this issue and

Count the Options: How many options are there?

A-Examine Alternatives: What is the most effective path?

D- Describe why this option is the best: Why is it the best choice?

S- Self-correct: Take another look. What did we overlook?

Students learn to solve problems cooperatively and critically by using this problem-solving strategy. Incorporating project-based learning activities is a similar strategy that gives students real-world opportunities to apply their knowledge. Use peer assessments as the last guidance to student practice to help students with critical thinking and metacognition.

CONCLUSION

The objective for educators who wish to inculcate critical wondering talents of their pupils is to conceive of them as clients of knowledge in place of recipients of data. College students' essential questioning competencies will be enhanced in studying environments that actively interact with college students in the exploration of cloth and the application of information. Critical questioning, like another talent, takes education, preparation, and endurance. If students have traditionally been requested just to don't forget fabric and not consider what they understand, they will start with opposing instructional wondering methods. They may conflict with evaluation questions that are not immediately from the textual content. College students' crucial wondering abilities can be advanced with the aid of assisting them at some stage in the technique of modelling questioning conduct.

The essential additives of problem-based totally gaining knowledge, which has been broadly used as a curriculum, need to decide the troubles and information of situation or quandary.

- Identify cause-and-effect relationships.



- learn to evaluate response options and guide actions by gaining and analysing knowledge.
- Compare the advantages and disadvantages of various options.

Execute your decision. As a result, the situation will be handled most effectively.

- Monitor implementation and outcomes and adjust as necessary.
- Both good and bad consequences of actions should be examined.

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