

# CRITICAL THINKING

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**GOKARAJU RANGARAJU**  
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SKILL  
SERIES

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**Critical thinking is the ability to think clearly and rationally about what to do or what to believe.**

It includes the ability to engage in reflective and independent thinking. Someone with critical thinking skills is able to do the following:

- understand the logical connections between ideas
- identify, construct and evaluate arguments
- detect inconsistencies and common mistakes in reasoning
- solve problems systematically
- identify the relevance and importance of ideas
- reflect on the justification of one's own beliefs and values



## **The importance of critical thinking**

**Critical thinking is a domain-general thinking skill.** The ability to think clearly and rationally is important whatever we choose to do. If you work in education, research, finance, management or the legal profession, then critical thinking is obviously important.

**Critical thinking is very important in the new knowledge economy.** The global knowledge economy is driven by information and technology. One has to be able to deal with changes quickly and effectively.

**Critical thinking enhances language and presentation skills.** Thinking clearly and systematically can improve the way we express our ideas.

**Critical thinking promotes creativity.** To come up with a creative solution to a problem involves not just having new ideas.

**Critical thinking is crucial for self-reflection.** In order to live a meaningful life and to structure our lives accordingly, we need to justify and reflect on our values and decisions.

## **Benefits of critical thinking**

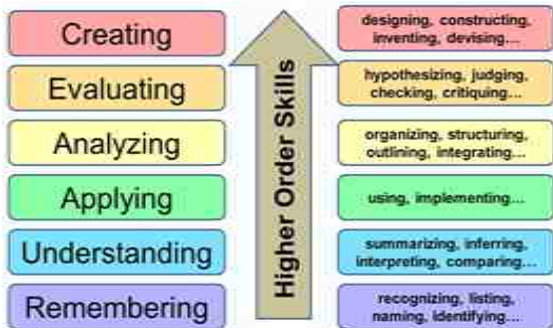
Critical thinking empowers and improves chances of success

- in a career
- as a consumer
- in social roles in our community
  - o personally, essential to personal autonomy
  - o socially, essential to democratic system

## **Aspects of critical thinking**

- Issues
  - o factual
  - o interpretive
  - o evaluative
  - o mere verbal dispute
- Claims
  - o truth-statement with adequate support
  - o assumption: claim without support

- ⊙ hidden assumptions undermine reliability of reasoning
- Resolving obstacles to critical thinking
- *Obstacle—relativism or subjectivism*
- Remedy—patience and tenacity in pursuit of the truth
- *Obstacle—egocentrism and ethnocentricity*
- Remedy—intellectual humility
- *Obstacle—intimidation by authority*
- Remedy—intellectual independence
- *Obstacle—conformism*
- Remedy—intellectual courage
- *Obstacle—unexamined and inferential assumptions, and presuppositions*
- Remedy—examination of assumptions



## Critical thinking in your life

- **Personal Life**

- What constitutes a healthy diet?
- Which investment is better for my family? Why?

- **Professional Life**

- In what ways can we improve our product?
- How do the actions of our company affect others?  
The environment?

- **Academic Life**

- What are the main points of this text?
- Which major should I choose...why?

- **Spiritual Life**

- How do these teachings apply to my life?
- Are there contradictions in what is being said?

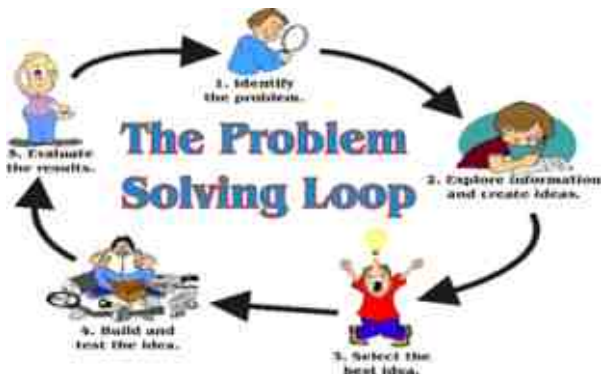


## **Skills to be cultivated for critical thinking**

- Become an active learner
- “Chase” answers.
- Actively seek out solutions.
- Go to the answer, don’t wait for it to come to you.
- Attend class regularly
- Take advantage of extra credit opportunities.
- Participate in discussions.
- Talk with your professors.
- Read textbooks
- Take notes and outline information.
- Review notes and try to put them in your own words.
- Attend Tutoring
- Become open-minded
- Is it possible that there are multiple correct answers?
- You might be wrong. Why?
- Try and approach problems from a different perspective.
- Keep an open mind
- Your perspective is yours. Others have different perspectives.



- It is possible that you are “wrong” and that others are “right”.
- Get comfortable with being “wrong”. Learn from it.
- Consider many different viewpoints.
- Think before you act
- Separate your feelings from the facts.
- Am I acting because of an emotional impulse, or because it is logical?
- Do I believe something because of the logic behind it?
- Separate Emotions from Facts
- “Thinking” and “feeling” are not the same.



## **Problem solving**

- Reorganize
- List the topic, issues, and main points.
- Paraphrase.
- Summarize.
- Understand
- Put concepts into your own words.
- Relate the information to what you already know.
- Restate the information.
- Hypothesize
- Make an interpretation of the information based on you's
- This interpretation will then be analyzed logically.

### Analyze the information

- Split the information into parts.
- Figure out how the ideas are related or connected.
- Ask questions: Why? What? Where? Who? When? How?
- Compare and contrast the information.

## **Cubing**

- Cubing allows you to look at a subject or problem from six different points of view. It is an excellent exercise to illustrate how critical thinking techniques can be put into practice. Do each of the six steps in order, and do them quickly.

### **Step 1:** Describe (3-5 min)

- Write in detail about the subject. What the subject looks like, feels like, etc.

### **Step 2:** Compare/Contrast (3-5 min)

- What is similar to your subject? How are they similar?
- How does your subject differ?

### **Step 3:** Associate (3-5 min)

- Relate the subject to some of your memories.
- What comes to mind when you think of the subject?
- This side of the cube should be very personal.

### **Step 4:** Analyze (3-5 min)

Break the subject down into parts, and explain the significance of each.

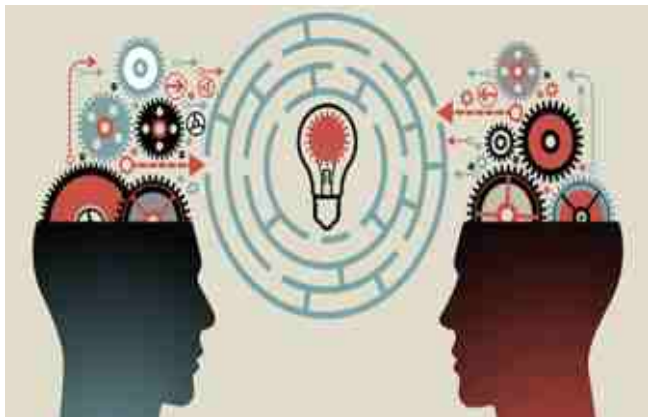
- Interpret the meaning of the topic.

**Step 5:** Apply (3-5 min)

- How can you use the subject?
- Is there any way to apply this subject?

**Step 6:** Argue (5 min)

- Take both sides of the subject.
- Argue for the subject.
- Argue against the subject.
- Remember to keep an open mind.
- Why is this subject important?



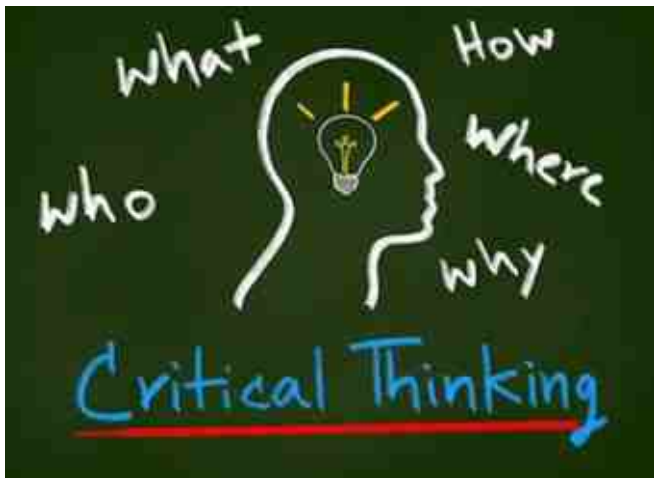
## How Can One Become a Critical Thinker?

- By asking pertinent questions (of self as well as others);
- By assessing statements and arguments;
- By developing a sense of observation and curiosity;
- By becoming interested in finding new solutions;
- By observing with an open mind;
- By making assertions based on sound logic and solid evidence;
- By sharing ideas with others;
- By becoming an open-minded listener and reader;
- By engaging in active reading and active listening!



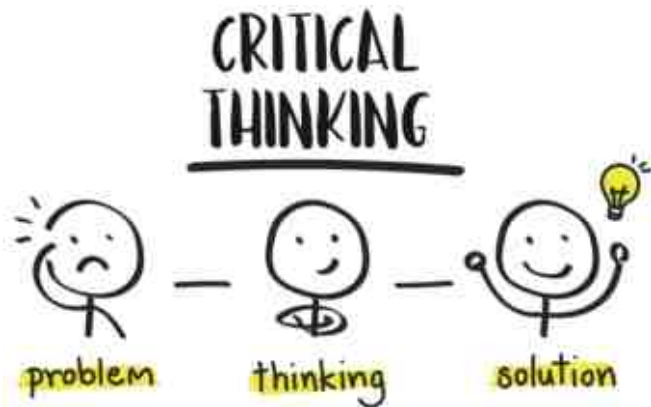
## A Comprehensive Thinking Strategy

- **Step 1:** Identify facts and opinions
- **Step 2:** Check the facts and test the opinions
- **Step 3:** Evaluate the evidence
- **Step 4:** Make your judgment



## Strategy for Problem Solving

- **Step 1:** Be alert for problems
- **Step 2:** Express the problem
- **Step 3:** List possible solutions
- **Step 4:** Select and refine your best solution



## **Guidelines for Successful Relationships**

- Acknowledge other people
- Be generous with compliments, stingy with criticism and/or advice
- Keep your moods to yourself
- Expect more of yourself and less of others
- Make allowances for differences of opinion
- Be sensitive to others' feelings
- Balance talking with listening
- Think before speaking





## Finally

- Critical thinking is “higher level” thinking
- It often requires us to think “outside the box”
- Many occupations/careers require critical thinking
- The things we enjoy in everyday society are the result of critical thinking
- By adopting certain habits and behaviors we can learn to think critically.





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