



## Critical Thinking

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## **Q : How Can Critical Thinking be developed for my Study ?**

### **Introduction**

I am Abid Ali from Dhaka, Bangladesh. I have joined NPU in the year 2019, September as a freshman. After passing my Higher Secondary I was wandering where to study and what course I should take as my major. It was in my mind that I should go abroad for higher studies if I get an opportunity. Then the question arose was which country? Several answers were there like USA, Russia, India, China and last but not the least my home country Bangladesh!

To choose my course was little bit easier for me. On my 10<sup>th</sup> birthday my father gifted me a computer. Since then playing with computer became my hobby. It was a passion for me to work with a computer. If the hobby can be transformed into reality then it's like dream come true. Therefore, I chose Computer Science to be my field of study.

The world is now totally dependent on computer science in various aspects. We can't think of single minute in our life without computer and its relevant studies. I have huge expectation while taking this course. I will be able to learn more and more about this course. I can research various things about my passion. Moreover hopefully a bright future is waiting ahead of me after completion of my study. I can join either any established software company or I can do freelancing business.

**[1]**Listening and reading critically—that is, reacting with systematic evaluation to what I have heard and read—requires a set of skills and attitudes. These skills and attitudes are built around a series of related critical questions.

A system of questions is more consistent with the spirit of curiosity, wonder, and intellectual adventure essential to critical thinking. Critical questions provide a stimulus and direction for critical thinking.

Consequently, critical thinking, refers to the following: 1) awareness of a set of interrelated critical questions; 2) ability to ask and answer critical questions at appropriate times; 3) desire to actively use the critical questions.

One approach to thinking is similar to the way in which a sponge reacts to water by absorbing. This commonly used approach has some clear advantages. Firstly, the more information we absorb about the world, the more capable we are of understanding its complexities. A second advantage of the sponge approach is that it is relatively passive. While absorbing information provides a productive start toward becoming a thoughtful person.

The sponge approach has a serious disadvantage: It provides no method for deciding which information and opinions to believe and which to reject. Decisions become accidents of association, instead of reflective judgments.

## **Discussion**

For my study I can develop Critical Thinking as follows:

### **[8] Don't Believe Everything We're Told**

The first step to critical thinking is to consider more than one point of view. It's important to go beyond trusting what we hear or read. When learning, we should ask what evidence the source has to support their argument.

## **Not to believe everything I think**

It's easier said than done, but critical thinking requires, leave our own opinions and biases at the door and embrace other information.

## **Asking Questions**

Not sure about something we read in our textbook? Want our professor to elaborate on a claim they made in a lecture? Not to be afraid to ask.

## **Research Deeper**

The more information we have, the better. Doing our own research goes hand in hand with not taking what we're taught at face value. Research is our best friend when it comes to solving problems.

## **Evaluate our Work**

Critical thinking involves evaluating our work and the strength of our arguments to determine whether there's room for improvement.

----- A great way to develop critical thinking skills is to engage in conversations with other students – either in the classroom or common areas of our student accommodation.

There are some more ways of improving our critical thinking as follows :

### **[9]1. Encourage Project-Based learning**

To develop critical thinking, it is essential to encourage project-based learning in students.

### **2. Freedom**

Freedom to students to learn things.

### **3. Connects Stories To Related Concepts**

If students are connected stories to relatable concepts is also an essential way to develop critical thinking.

### **4. Start Analyzing And Assessing Ideas**

Analyzing and assessing the effectiveness of facts and ideas is another primary element of critical thinking.

### **5. Embrace Active Learning**

Turning students into active learners is a primary goal of teaching critical thinking. Critical thinking is an essential skill both in the classroom and in almost any career.

[H]Critical thinking is the art of making clear, reasoned judgments based on interpreting, understanding, applying and synthesizing evidence gathered from observation, reading and experimentation.

(Burns, T., & Sinfield, S. (2016) *Essential Study Skills: The Complete Guide to Success at University* (4th ed.) London: SAGE, p94)----[H]

### **[10]Developing an argument**

Being a university student is about learning how to think, not what to think. Critical thinking shapes our own values and attitudes through a process of deliberating, debating and persuasion.

### **Academic writing**

We should also consider the language we will use to introduce a range of viewpoints and to evaluate the various sources of evidence. This will help our reader to follow your argument.

### **Developing our critical thinking**

Set ourselves some tasks to help develop your critical thinking skills. Discuss material presented in lectures or from resource lists with our peers. Set up a critical reading group or use an online discussion forum. Think about a point we would like to make during discussions in tutorials and be prepared to back up our argument with evidence.

[11]Academic success depends on a student's ability to question statements made by others, make connections, derive knowledge from collected data.

[12]People who apply critical thinking consistently are said to have a critical thinking mindset, but no one is born this way. These are attributes which are learnt and improved through practice and application. In the academic context, critical thinking is most commonly associated with arguments. Therefore need to learn how to:

1. **clarify** thinking purpose and context
2. **question** sources of information
3. **identify** arguments
4. **analyze** sources and arguments
5. **evaluate** the arguments of others and
6. **synthesize** own arguments.

### **Examples of critical thinking skills, mindsets and practices**

Below are four examples of critical thinking skills, mindsets and practices.

#### **Questioning skills**

##### **How do I apply questioning skills?**

- I question the relevance and reliability of what I hear, read or see.

- I question the authority and purpose of what I hear, read or see.

## **Analytical Skills**

### **How do I apply analytical skills?**

- I will carefully examine ideas and information.
- I systematically consider all aspects of a problem and look at each element in its wider context.

## **Evaluation Skills**

### **How do I apply evaluation skills?**

- I recognize flaws of reasoning.
- I consider what is implied in what I see, hear and read.

## **Synthesis Skills**

### **How do I apply synthesis skills?**

- I use logic and reason to formulate my conclusions and arguments.
- I use strong evidence, based on analysis and evaluation, to support my conclusions.

[2] James e Ryan using examples from history, politics, and his own personal life shows the importance of knowing how to:

- Ask questions and gain a better understanding,
- Get to be more curious,
- Push yourself to take action,
- Make your relationship stronger,



- And stay focused on the important things in life.

[3] The art of thinking Clearly by Rolf Dobelli is a window into human psychology and reasoning; how we:

- Make decisions;
- Evaluate choices and options;
- Develop cognitive biases.

Having increased logical thinking doesn't mean to ignore your emotions. It means to start from your emotions and together to move forward in life.

[4] "Being Logical" is knowing how to ask the right questions is determining our success about many things in your life:

- Influencing others,
- Getting out of tricky situations,
- Reevaluating your beliefs,
- Offering yourself and others compassion,
- Overcoming mistakes and fears.

[5] Warren Berger Shows Knowing how to ask the right questions is determining your success about many things in your life:

- Influencing others,
- Getting out of tricky situations,

- Reevaluating your beliefs,
- Offering yourself and others compassion,
- Overcoming mistakes and fears.

[6] Daniel Kahneman, shows where you can and cannot trust your intuition; how to use the two systems that drive the way you think.

The first system is fast, intuitive, and emotional; the second system is slower, based on facts, and more logical.

[7] Thomas E. Kida talks in his book very elegantly about the six basic mistakes our thinking can make. First mistake is mesmerized, second is searching to confirm what we already know, third is to discount, fourth is believing, fifth is oversimplify, sixth trust faulty memories.

[H] 'Good critical thinking includes recognizing good arguments even when we disagree with them and poor arguments even when these support our own point of view.'

(Cottrell, S. (2017) *Critical Thinking Skills*, Third Edition, London, Palgrave, p33)----- [H]

## Questions :

Q.1. Like most of the student I had two questions in my mind after completing my Higher Secondary, "For higher education why China"?

Q.2. Why Computer Science as major course ?

## Conclusion

[13] A.1.

For the first question I thought critically as follows:

1. China is one of the safest countries of the world.
2. The cost of studying in China is relatively lower compared with countries such as the USA, Canada, UK, and other European countries.
3. Given the guaranteed level of quality education, international students who decide to study in China are less burdened.
4. There are also many universities- and government sponsored scholarship that cover the entire cost or part of the tuition fees.
5. Studying at a good university is a priority for most international students.
6. Cost of living in China is quite affordable.
7. Most of the Chinese people are very warm and welcoming.
8. It is a huge country. During leisure we can travel beautiful places.
9. Have to adjust little bit of food habit which will ultimately help to keep fit.
10. Can learn the world's most speaking language, Mandarin.
11. After Japan and South Korea, China is in 3<sup>rd</sup> position among Top 10 Countries for Technological Expertise - Best Countries Report 2021

For Example: I am studying at NPU and is a perfect example of enjoying all the above beneficiary.

Conclusion: There was no second thought of going to any other country.

## Q.2. Why Computer Science

A.2.

1. Computer is my hobby and passion from my childhood.
  2. The world needs computer scientists. Computer programmers directly affect every aspect of our lives; we rely on computer scientists for this.
  3. Excellent graduate prospects.
  4. Good starting salaries.
  5. Needed in almost every industry.
  6. Internationally diverse.
  7. Year abroad opportunities.
  8. Studying computer science develops skills that are useful in any career. For example, being analytical and good at problem solving are essential skills any employer would look for.
  9. Choice of specialism.
  10. Unlock my creative side
- Result: Whatever I have dreamt of from my childhood, all the probability reflects that. I can't expect anything more!

Example: Huawei, Alibaba, Tencent, Microsoft, Apple.

## Conclusion

It has been proved that thinking critically will benefit us both in the classroom and beyond. We must remember: learning to think critically is a lifelong journey, and there's always more to learn.

And now that I'm in University, my professors often mention that the ability to think through and solve difficult problems matters more in the "real world" than specific content. I intend to do some research work in my master's course. Critical thinking skill would be a huge advantage there. In research work one needs to research deeper, evaluate his work,

has to think deep and differently. I have to find ways to critically think about information include conceptualizing, analyzing, synthesizing and evaluating. That information can come from sources such as observation, experience, reflection, reasoning, communication. And all this is meant to guide Beliefs and Action.

**[14]** The value of critical thinking doesn't stop with University, however. Once we get out into the real world, critical thinking matters even more. This is because:

It allows us to continue to develop intellectually after we graduate. Progress shouldn't stop after graduation - we should keep learning as much as we can. When we encounter new information, knowing how to think critically will help you evaluate and use it.

**It will help me to make hard decisions.** Equally important in the decision-making process is the ability to think critically. Critical thinking allows me to compare the pros and cons of available options, showing that I have more options than I might imagine.

**People will try to** manipulate me. At least, they will if I take everything at face value and allow others to think for me. Just look at ads for the latest fat diet or “miracle” drug—these rely on ignorance and false hope to get people to buy something that is at best useless and at worst harmful.

**It will make me more employable and better paid.** The best employees not only know how to solve existing problems—they also know how to come up with solutions to problems no one ever imagined.

To get a great job after graduating we need to be one of those employees, and critical thinking is the key ingredient to solving difficult, novel problems.

Developing critical thinking abilities translates to both academic and job success. Using these skills, students tend to expand the perspectives from which they view the world and increase their ability to navigate the important decisions in learning and in life.

Critical Thinking enhances language and presentation skills. Thinking clearly and systematically can improve the way we express our ideas. In learning how to analyze the logical structure of texts, critical thinking also improves comprehension abilities.

Wisdom comes from observation, learning, practice, and asking the right questions.

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