21st Century Competency Skills – Part 1

Critical Thinking

~ Sujata C

Critical thinking is one of the 4 Cs of 21st century competency skills; the others being *Collaboration*, *Creativity* and *Communication*. These skills are essential for every student to learn in the 21st century.

4 Cs of 21st Century Competency skills

Introduction: The frontal lobe of our brain is involved in the process of thought. When we are thinking hard to figure out something, our hand invariably goes to our head to tap it or rub the forehead. It requires a good workout of the grey cells, and neuropsychologists say these actions aid the process of thinking and give some support to the brain while it is working hard. Each person, according to them, has a dominant body language during the process of thinking. They may look upwards, make facial expressions, play with their earlobes, scratch their head, hold the chin, tap their fingers, play with an object, draw doodles, or do different kinds of other activities. When we calculate figures, we use our fingers to do the counting.

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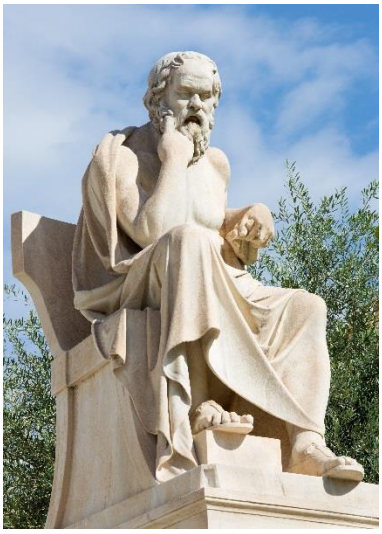
History of critical thinking: The intellectual roots of critical thinking can be traced back to the teaching practice of Socrates 2,500 years ago. He discovered a method of asking probing questions in which people could not rationally justify their claims to knowledge. The process showed that the apparently wise rhetoric of the so-called nobles of the society were full of confused meanings, inadequate evidence, or self-contradictory beliefs. Socrates established that not all in *authority* have sound knowledge and insight. He demonstrated that persons may have power and high position and yet be deeply confused and irrational. He established the importance of asking deep questions that probe profoundly into thinking before accepting ideas as worthy of belief.



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What is critical thinking? Critical thinking is all about how to use information to take wise decisions. It is a life tool essential to get through every stage of existence. Imagine you are supposed to cross a forest with thick undergrowth. The most essential thing for you would be to carry something like a scythe or a sharp object to help you cut your way through. Critical thinking is like that scythe – it helps us cut through the dogmas, opinions, noise and clutter that mask the truth to reach our goal. It enables one to take well-thought-out decisions, solve problems and avoid troublesome situations. It is important for a child to learn this skill at an early age as it would help them perform well in every sphere of life.

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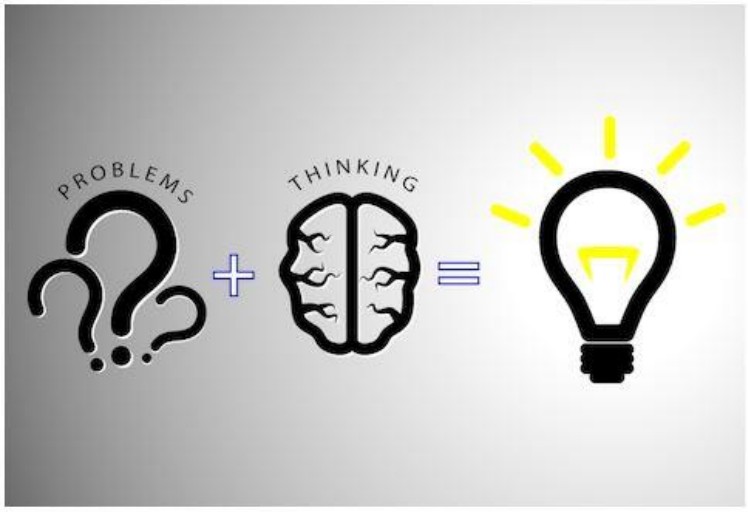
People with the ability to think critically are generally skeptical in their approach while solving a problem. However, one should not confuse critical thinking with criticism, as both are quite different from one another even though they may seem similar. Criticism is judging something based on its merits and flaws, and is mostly directed towards an individual or a group. On the other hand, critical thinking is a bent of mind that helps us to take informed decisions. It gives us the ability to think clearly and rationally, and to engage in reflective and independent thinking.

The components of critical thinking are ***Inquiry***, ***Reasoning***, ***Analysis*** and ***Inference***.

Inquiry: Two variants of the word exist in the English vocabulary – *enquiry* and *inquiry*. A quick check with the Oxford Dictionary tells us that *enquiry* is chiefly used in British English, while *inquiry* is more frequent in American English. However, in common usage, *enquiry* means the process of asking questions, and *inquiry* is used more to suggest a formal investigation. A proper inquiry needs apt framing of questions from which the answers we need can be easily reached. One should not be hesitant to ask questions out of fear of appearing stupid. There is a famous quote often attributed to Albert Einstein: *"If I had an hour to solve a problem, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question, I could solve the problem in less than five minutes."*



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Reasoning: It is a process of thinking, and logic is its first cousin. Both are essential for evaluating a situation or a problem. Reasoning is systematic, destination oriented, and follows a process. Reasons are the building blocks that determine what direction to choose, how to gather information, and how to process them.

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Analysis: To reach a sound decision good analytical skills are essential. A plan of action can be developed only after one analyses the problem they are dealing with. For instance, the SWOT analysis is a study

undertaken by organizations to identify its internal strengths and weaknesses, as well as external opportunities and threats. Before deciding on something important in our personal or professional life (for example: buying a car), we also do a same kind of analysis. After it is done, taking decisions become much easier.

Inference: Good decisions or inferences require maturity of thinking. They must involve the previous three processes and shouldn't be taken on impulse. Every decision has their pros and cons, and they must be analysed well before implementation so that the consequences can be managed efficiently. The sooner children master this skill the better it is for them to apply it in the due course of their life.

As British writer Arthur Conan Doyle said, "The world is full of obvious things which nobody by any chance ever observes," critical thinking helps develop a sharp eye and an alert mind to spot anything hidden in a plain sight.

Sujata C is a writer and editor with more than thirty years of experience. She writes on children, environment, society, as well as technology. She has also been a copywriter with an advertising agency for almost fifteen years.

Lesson Plan: Critical Thinking

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Teachers are recommended to nurture the intelligence and critical thinking abilities of students by motivating them to engage in different activities. Here are some examples.

1. **Encourage young children to read** and teach them the art of thinking through stories like *Robert Bruce and the Spider*, *The Tale of Peter Rabbit*, etc. 8-10 year-old children can be introduced to comics like *Adventures of Tintin*, *Asterix*, as well as stories of Enid Blyton, detective series like that of *Encyclopedia Brown* by Donald J. Sobol, etc. Older students can be encouraged to read works of William Shakespeare, Nancy Drew, Agatha Christie, Arthur Conan Doyle, J. K. Rowling, etc.

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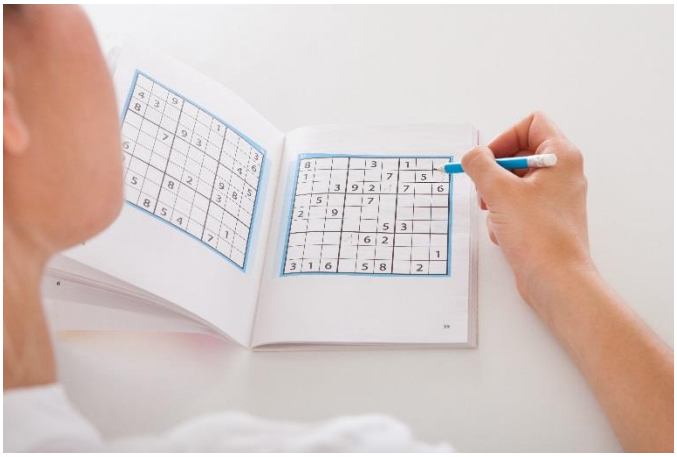
2. Ask students to **watch television shows** like *Blue's Clues*, *Curious George*, *Dora the Explorer*, etc., which would help them develop critical thinking skills as they look for clues and follow them to guess the outcome of the episodes. Older students can be motivated to watch movies and television shows based on science fictions, fantasy and thrillers, and write their reviews.

3. Encourage children to **observe the body language** (movements of hands and eyes, facial expressions, etc.) of different people, and form a critical opinion about them.



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4. Give the students different kinds of **brain-teasers (riddles, puzzles, etc.)** to solve in the classroom. They aid the growth of critical thinking as well as lateral thinking abilities.

5. Organize **classroom debates on various issues**. One can predetermine the motion of the house or make it an extempore speaking exercise. Some sample topics could include the following.

   i. Cell phones should not be allowed inside classroom.
   ii. Animal testing of products should be banned.
   iii. There should be no uniform in school.

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6. Motivate students to engage in different activities like **cooking, painting, cycling, swimming, playing an instrument,** etc. whenever they get time from studies.

7. Help students understand **different viewpoints on controversial issues**. Encourage them to analyse some popular controversies and reflect on them.

8. Ask students to read about **philosophers across the world from different ages**. They should be made acquainted with the works of Socrates, Plato, Aristotle, Gautama Buddha, etc. so that they learn to analyse every situation as informed individuals and take wise decisions.

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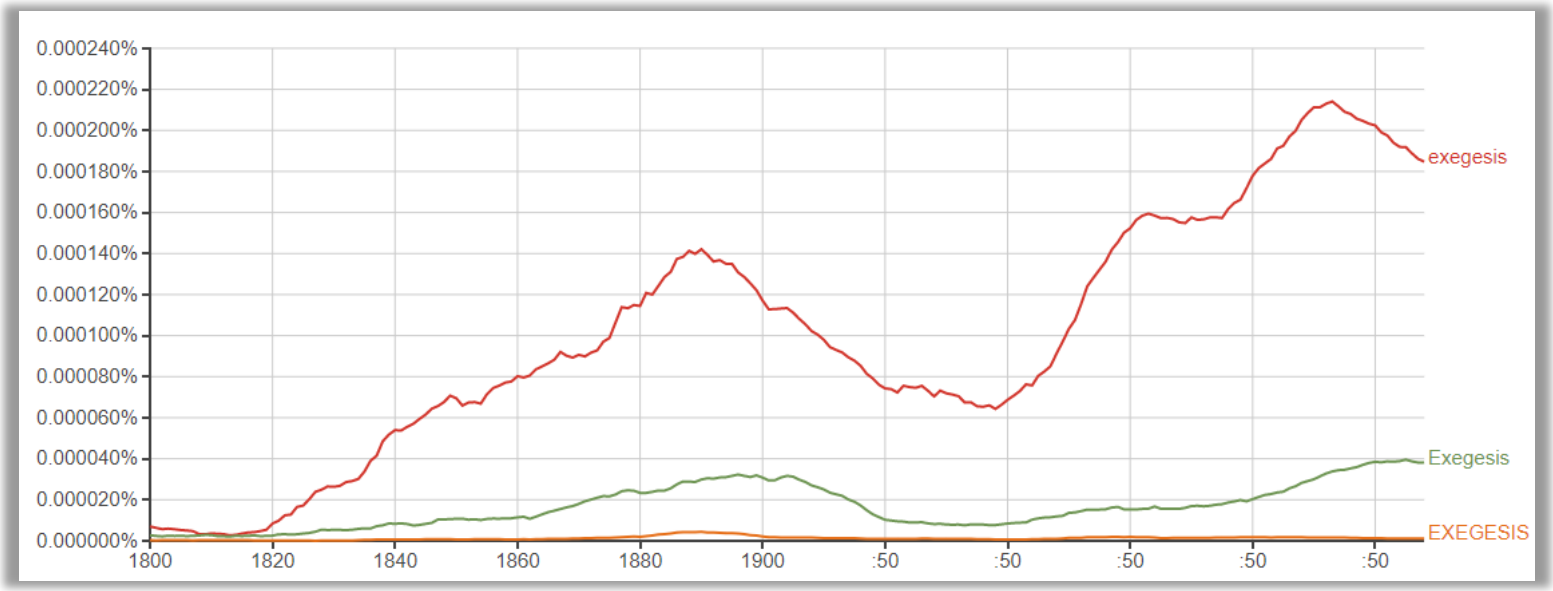
Exegesis (noun)

Pronunciation: /ˌɛksɪˈdʒiːsɪs/

Meaning: Critical explanation or interpretation of a text, especially of scripture

Origin and additional information: The word came to use in the early 17th century from Greek *exēgeisthai* (meaning, *interpret*), which is a combination of *ex-* (meaning, *out of*) and *hēgeisthai* (meaning, *to guide, lead*). The word can be compared to French *exégèse* (1705), Italian *esegesi* (1797), Dutch *exegese* (1799), and also German *Exegese* (1528). One of the earliest uses of the word can be found in Samuel Kenrick's **Tell-Troth's Reqvitall: This argument may bee illustrated with a two-fold Exegesis** (1627).

Word section: After the entry of the word *exegesis* in the English diction, it was initially used with reference to scripture: as a phrase, or sentence, etc., which paraphrases or explains another. However, this particular usage has now become obsolete as the word has got an extended meaning. Presently *exegesis* is not just limited to scripture or scriptural passages, it is also used against any critical discourse or commentary. Another rare usage of the word (also written as *exegesis numerosa*, *numeral exegesis*, or *numerical exegesis*) signifies a procedure formerly used in the numerical solution of algebraic equations.



uses of exegesis over the last two centuries

Usage:

i. *The next verse as an Exegesis to the former, doth explane the difficultie.*
(Source: **An exposition vpon the prophet Ionah contained in certaine sermons** by George Abbot in 1600)

ii. *We must…digest a long exegesis on Gorsky's failures.*
(Source: A 1998 edition of **Dancing Times**, a magazine published in the UK)

iii. *The exegesis was abandoned by Raphson and others, in favour of Newton's form of operation.*

(Source: **The English Cyclopaedia** by Charles Knight)

iv. *He weaves together critical exegesis with discussion of Kosovo, diplomacy, and the war itself.*

(Source: https://en.oxforddictionaries.com/definition/exegesis)