A Seed Enterprises Management Institute (SEMI)

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MANAGING OPERATIONS

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CRITICAL THINKING

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CRITICAL THINKING

Why are you in business?

A. To make profits

B. Add value to customers

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C. National development

ANALYTICAL THINKING AND LATERAL THINKING

- This is as opposed to analytical thinking and lateral thinking. There is a difference, according to Jon Warner:

- *Analytical thinking* mainly aims to *review the data/information* we are presented with (for relevance, patterns, trends etc.)

- *Lateral thinking* aims to put **data/information into a new or different contex**t (in order to generate alternative answers or solutions)

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- *Critical thinking* aims to make an *overall or holistic judgment about the data/information* which is *free from false premises or bias as much as possible*.

ANALYTICAL THINKING AND LATERAL THINKING

- "Critical Thinking is reasonable reflective thinking focused on deciding what to believe or do ... critical Thinking is best understood as the ability of thinkers to take charge of their own thinking."

- In other words, a critical thinker will ask, "**Is that really true? How do you know? Show me the evidence. Is that evidence reliable?**"

- Real critical thinking exercises seek truth. It takes daring and independent thought to stray from conventional thinking and discover truths previously unfound. It could be said that critical thinking is at the heart of dispelling great myths about our world and changing the way a society views and acts in their world.

WHAT IS CRITICAL THINKING?

✖ 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

WHAT IS CRITICAL THINKING?

- Critical thinking is not a matter of accumulating information. A person with a good memory and who knows a lot of facts is not necessarily good at critical thinking. A critical thinker is able to deduce consequences from what he knows, and he knows how to make use of information to solve problems, and to seek relevant sources of information to inform himself.

- Critical thinking should not be confused with being argumentative or being critical of other people. Although critical thinking skills can be used in exposing fallacies and bad reasoning, critical thinking can also play an important role in cooperative reasoning and constructive tasks. Critical thinking can help us acquire knowledge, improve our theories, and strengthen arguments. We can use critical thinking to enhance work processes and improve social institutions.

- Some people believe that critical thinking hinders creativity because it requires following the rules of logic and rationality, but creativity might require breaking rules. This is a misconception. Critical thinking is quite compatible with thinking "out-of-the-box", challenging consensus and pursuing less popular approaches. If anything, critical thinking is an essential part of creativity because we need critical thinking to evaluate and improve our creative ideas.

Probability as basis of inference

What inference would you draw from this and why?

Is there any reason why you should not think this man is the owner of the house?

Would you say with certainty that this man is a burglar?

Probability as basis of inference

If you have dislike of people with face masks, what influence would this have on the inference you draw from this and why?

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. But critical thinking skills are not restricted to a particular subject area. Being able to *think well and solve problems systematically* is an asset for any career.

* **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. The new economy places increasing demands on flexible intellectual skills, and the ability to analyse information and integrate diverse sources of knowledge in solving problems. Good critical thinking promotes such thinking skills, and is very important in the fast-changing workplace.

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

* **Critical thinking promotes creativity.** To come up with a creative solution to a problem involves not just having new ideas. It must also be the case that the new ideas being generated are useful and relevant to the task at hand. Critical thinking plays a crucial role in evaluating new ideas, selecting the best ones and modifying them if necessary

* **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. Critical thinking provides the tools for this process of self-evaluation.

* **Good critical thinking is the foundation of science and democracy**. Science requires the critical use of reason in experimentation and theory confirmation. The proper functioning of a liberal democracy requires citizens who can think critically about social issues to inform their judgments about proper governance and to overcome biases and prejudice.

THE FUTURE OF CRITICAL THINKING

* In January 2016, the World Economic Forum issued a report "The Future of Jobs". It says:

* The Fourth Industrial Revolution, which includes developments in previously disjointed fields such as artificial intelligence and machine-learning, robotics, nanotechnology, 3-D printing, and genetics and biotechnology, will cause widespread disruption not only to business models but also to labour markets over the next five years, with enormous change predicted in the skill sets needed to thrive in the new landscape.