

1. LEVELS OF THINKING

Pre- conventional

Individuals at this level are characterized by the following;

- Operate on Animal- like instinct
- No rationality
- No sense of right and wrong, cannot sense moral value
- Operate on reward/ punishment principle
- Hence are not responsible for their actions.

Conventional

Individuals at this level are characterized by the following;

- Emergence of rationality
- Concept of right and wrong
- But the individual is limited to the socially approved, popularly accepted ways of thinking
- social approval provides the rationale for action and conduct
- One defers to society, one sees oneself in terms of society, hardly questions society
- Conformity to authority is thus the hallmark of this stage.

The problem with this way of thinking is:

- that, society takes advantage of individuals and may lead them astray
- Irrationality of mass thinking
- Society tends to be paternalistic and authoritarian

Post- Conventional (Autonomous)

This level is also called the autonomous stage and is characterized by;

- Autonomy of thought and action.
- Originality of thought
- Grounded in the belief that we ought to think for ourselves
- Characterized by reflective thinking

- Individual is self-directed as opposed to being other-directed
- Individuality fully developed
- Individuals fully reflect on socially accepted values, norms often radically questioning their underlying basis.
- Individuals manifest a highest degree of creativity, innovation and critically
- Such individual transcend society, hence they can correct, change, society.

Note: Accomplished thinkers not only have systematically taken charge of their thinking, but are also continually monitoring, revising, and re-thinking strategies for continual improvement of their thinking. They have deeply internalized the basic skills of thought, so that critical thinking is, for them, both conscious and highly intuitive. As Piaget would put it, they regularly raise their thinking to the level of conscious realization. Through extensive experience and practice in engaging in self-assessment, accomplished thinkers are not only actively analyzing their thinking in all the significant domains of their lives, but are also continually developing new insights into problems at deeper levels of thought. Accomplished thinkers are deeply committed to fair-minded thinking, and have a high level of, but not perfect, control over their egocentric nature.

2. **DEFINITION OF CRITICAL AND CREATIVE THINKING**

Critical thinking

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness.

It entails the examination of those structures or elements of thought implicit in all reasoning: purpose, problem, or question-at-issue, assumptions, concepts, empirical grounding; reasoning leading to conclusions, implications and consequences, objections from alternative viewpoints, and frame of reference. Critical thinking - in being responsive to variable subject matter, issues, and purposes - is incorporated in a family of interwoven modes of thinking, among them: scientific thinking, mathematical thinking, dialectical thinking, anthropological thinking, economic thinking, moral thinking, and philosophical thinking.

Critical thinking is therefore:

- A higher level thinking, as a mental activity it is self- directed activity.
- Guided by reason, it seeks evidence for claims.
- Reflective, it attempts to go deeper into things and avoid deceptive situations.
- thinking that facilitates good judgment ,one is able to make more rational judgment
- thinking that is purposive, intentional, deliberate and focused not merely accidental and spontaneous

A critical thinker is thus one who is;

- Autonomous (thinks for oneself)
- Who does not accept what has not been proved and well demonstrated
- One who doubts, questions, takes nothing for granted and acts on conviction
- Who distinguishes between appearance and reality

Creative Thinking

Creative thinking refers to the formation of possible solutions to a problem or possible explanations of a phenomenon. It entails bringing into being of something which did not exist before, either as a product, a process or a thought, or working on the old with a view of producing a harmonized new.

Creativity is demonstrated if we:

- Invent something which has never existed before
- Invent something which exists elsewhere but you are not aware of
- Invent a new process for doing something
- Reapply an existing process or product into a new or different market
- Develop a new way of looking at something (bringing a new idea into existence)
- Change the way someone else looks at something

Creative Reasoning is characterized by imagination, innovation and originality in the generation of ideas.

Imagination – ability to be creative, new interesting ideas or insights

Innovative – ability to be inventive, introduce new ways of thinking

Productive – generation of something new and of value to human wellbeing

Improvement – ability to better human wellbeing

Creativity implies – reasonableness, independence, hardwork – which enable individuals to solve problems and make decisions and choice

Criticality and Creativity

Criticality and creativity are two sides of the same coin.

They are inextricably connected, intertwined and reinforce each other to improve reasoning

Creativity	Criticality
-Generative thinking	-Evaluative
-Produces, ideas materials	-It assesses
-Proposes – alternatives,	-Critiques what creativity generates
-Options, solutions, decisions	- Points out strengths and weaknesses -Defends by giving justification

If critical thinking judges something as being wanting, it means, creativity must generate further information.

3. CHARACTERISTICS OF A CRITICAL AND CREATIVE THINKER

Essential Characteristics of a Critical and Creative Thinker

- believes in supremacy of reason as the beacon of existence
- willingness to spend time reflecting on the ideas presented
- ability to evaluate and solve problems as they come
- logical and sequential thinking without appealing to emotions
- diligent in seeking out the truth
- eager to express their thoughts on a topic
- exercise the highest level of patience
- ability to tolerate ambiguity
- seekers of alternative views on a topic
- ability to persevere and endure with a view of attaining truth
- intellectual courage as to pursue issues to their conclusion end

- open to new ideas that may not necessarily agree with their previous thought on a topic
- able to base their judgments on ideas and evidence
- able to recognize errors in thought and persuasion
- able to recognize good arguments from bad and fallacious arguments
- willing to take a critical stance on issues
- willing to accept mistakes, correct them and apologize
- able to ask penetrating and thought-provoking questions to evaluate ideas
- in touch with their personal thoughts and ideas about a topic
- willing to reassess their views when new or discordant evidence is introduced and evaluated
- able to identify arguments and issues
- able to see connections between topics and use knowledge from other disciplines to enhance their reading and learning experiences

4. THE IMPORTANCE OF CRITICAL AND CREATIVE THINKING

The value and importance of Critical and Creative Thinking cannot be underestimated

- Critical and Creative Thinking inculcates habits of thought- the ability to think outside the box and use reason as the locomotive to existence.
- Encourages breadth of vision- the ability to see things from different points of view
- It gives us a sense of self-perspective in our activities, and our lives: the ability to examine alternatives and choose those relevant to ensuring we live an examined and worth life.
- Its concerns are very abstract but with immense practical value: the ability to translate ideas (theory) into practice through action.
- Its interest and value lies in its ability in helping us to understand ourselves and our world better and more deeply than we otherwise would, and in permanently altering our approach to our lives and our relations to others through encouraging a lifelong habit of reflection on them.
- The study of Critical and Creative Thinking is a process whose continuance can immensely enrich one's life, and can open to one view that would otherwise be closed or overlooked.
- Its serious study can greatly enhance one's analytical, critical, evaluative and interpretive abilities,
- Its grasp can greatly enhance one's ability to express oneself clearly and to formulate and respond to arguments in speech and writing effectively.

- Critical and Creative Thinking provides one with general problem-solving skills, skills in analysing concepts, definitions, arguments and problems.
- It enables one to organize ideas and issues and to extract what is central to an issue from a mass of information.
- It enhances one's ability to question deeply one's own framework of thought
- Critical and creative thinking equips an individual with the ability to reconstruct sympathetically and imaginatively the strongest versions of points of view and frameworks of thought opposed to one's own
- It inculcates in one the ability to reason dialectically (multi-logically) in such a way as to determine when one's own point of view is at its weakest and when an opposing point of view is at its strongest
- It helps one both to make fine distinctions and to find what common ground between opposing positions is.
- Critical and Creative thinking encourages one to synthesize or bring together a range of different views into one more comprehensive and coherent position.
- Critical and Creative Thinking improves one's communication skills, through improving one's ability to present ideas in well-constructed, systematic arguments, to express what is unique about one's views, and to explain difficult material.
- These skills in presenting well-thought-out arguments, clear formulations, and apt examples, in turn lend one's arguments persuasive power.
- The give and take of critical and creative thinking based discussions improves one's ability to think on one's feet, and to indicate why one's own views are to be preferred to others.
- Critical and creative thinking aids one in recognizing when and in what respect one's own views may be incorrect, and what must be revised or discarded and what can be retained.
- Critical and Creative Thinking lays emphasis on clarity and rigor of argument, the apt use of example and illustration, and sensitivity to the strengths and weaknesses both of views one is examining and of one's own view thus making ideas that determine good living more explicit and relevant.
- Critical and creative thinking plays an important role in social change- institutions in any society (courts, governments, schools, businesses etc) - are products of a certain way of thinking.
- Critical and creative thinking helps us in uncovering biases and prejudices.
- Critical and creative thinking is a path to freedom from half-truths and deceptions as it opens up one's mind in seeing things independent of emotions, native biases and from different perspectives.
- The willingness to change one point of view as we continue to examine and re-examine ideas that may seem obvious is a major component of critical and creative thinking. Such thinking takes

time and the willingness to say three subversive words: "*I don't know.*" Means need to learn and not an expression of ignorance

5. BARRIERS TO CRITICAL AND CREATIVE THINKING

i. Prejudice

A prejudice is a pre-judgment or a mental bias. A prejudice usually rests on emotional grounds and tends to be in line with self interest, pride or comfort

A prejudice impedes thinking by making one;

- To rationalize i.e. to find reasons to continue to believe what we value
- To recognize only evidence that is favorable e.g. to our gender, tribe group etc
- To ignore or minimize the part of evidence that is unfavorable to us
- To overestimate parts of the evidence that is favorable to us
- To see things from our limited point of view
- To be unable to draw accurate conclusions

ii. Habit

Habits form when we learn to do things repetitively often without careful reflection and criticism. Thus through habits we learn to do things only in one particular way

Habits hinder our thinking by impeding

- Our capacity for reflection and criticality
- Making us dogmatic
- Making us blind to alternatives
- Make us recognize only evidence that is familiar to us hence making it difficult to deal with new and unfamiliar situations

iii. Propaganda

Propaganda occurs when information is deliberately tainted or manipulated or distorted by the source in order to achieve a certain predetermined end e.g. political. The propagandist first tries to arouse in the people some strong emotion or desire and then through suggestion present a line of action that appears to satisfy that emotion or desire

Propaganda inhibits thinking by:

- Controlling and manipulating our thinking
- Making it difficult for us to think for ourselves
- Leading us into biased and inaccurate conclusions
- Leads to massmanship-mass media used –popular device in advertisers

iv. Authoritarianism

This the uncritical and or blind appeal to authority, leading to uncritical and unreflective acceptance of authority

This is normally grounded in the false belief that knowledge is validated or guaranteed by authority. Usually we are led astray by the prestige of authority and even fail to realize when they speak outside their area of competence. Many people rely on authority because either they have little confidence in themselves or they are intellectually lazy

Authoritarianism impedes thinking by:

- Making us accept things uncritically and unreflectively
- Making us to accept things without question
- Blocking progress in further thinking and investigation
- Making us surrender ourselves to others to think for us.

v. Paternalism

One's upbringing, the family or community life, the norms embraced and encoded in the life string of a family, and the kind of rigidity exercised within family set-up greatly determines whether an individual will grow up nurturing qualities of independence or naivety and passive surrender to the whims of environment. Many timid persons- those lacking self confidence or self trust are products of intimidating environment or humiliating life styles and experiences. Paternalism is a major obstacle to clear and critical thinking. Be it known that personality is a product of environment in which one is nurtured: - dead environment produces dead minds.

Vii. Religious Dogmas

In most of religious set ups there are rules, regulations, dogmas and principles that govern those religions. Some religious sects do not allow their flock to ask or question the authority of the shepherd; - the word of the shepherd is the law and any attempt to interrogate the shepherd's character easily leads to excommunication from the congregation. Today it is not uncommon to find in some churches cards resemblance to those used by football referees being the darling companion of the pastor or shepherd. These cards are used to determine whether one joins the inner cycle of administration (white card), whether you deserve caution and warning for attempting to talk (yellow card), and if you are established to be talking and asking so many questions detriment to the shepherd and his team of the inner cycle- and you deserve excommunication (red card). In such churches a flock is not supposed to talk but to listen and take what he/she hears as the gospel truth.

The rigidity that characterizes some religious groupings is also a major impediment to clear and critical thinking. Dogmas of certain religious groupings and churches are explicit- the roles of men and women are defined, what to wear, what to do during prayers, how to behave, when to get married and how, what to eat and what time to pray etc are all spelt out. In such establishments members are judged by the level and rate of their faith and not reason, and emphasis is laid on faith setting them free, but not reason. The buzzwords that characterize these sects are faith, submission, loyalty, obedience and generous tithing.