

The Postgraduate College Obafemi Awolowo University, Ile-Ife, Nigeria



Webinar on Optimizing the Research Potentials of OAU Graduate Students:

Building Critical Thinking Skills and Interrogating Literature

Akanni Akinyemi

Professor, Demography and Social Statistics,
Obafemi Awolowo University, Ile-Ife, Nigeria.

December 21st, 2020.

Disclaimer: Some of the views expressed in this presentation were sourced from websites of some universities including the Universities.

Learning Objectives

At the end of the Session, participants should be able to:

- Identify and describe important skills for Critical thinking
- Understand the importance of critical thinking in graduate training
- Engage Root Cause Analysis in problem solving
- Engage literature to build evidence for critical training

Critical thinking in practical terms



The significant problems we face cannot be solved at the same level of thinking we were at when we created them. *Einstein*



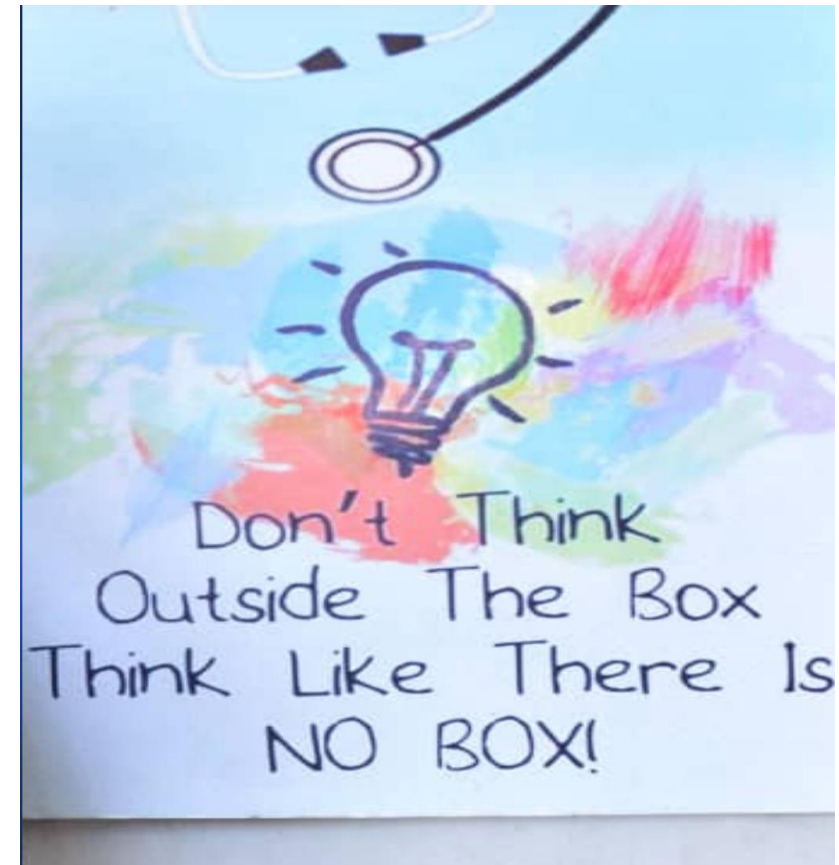
Critical thinking is reasonable reflective thinking that is focused on deciding what to believe or do . *Ennis*

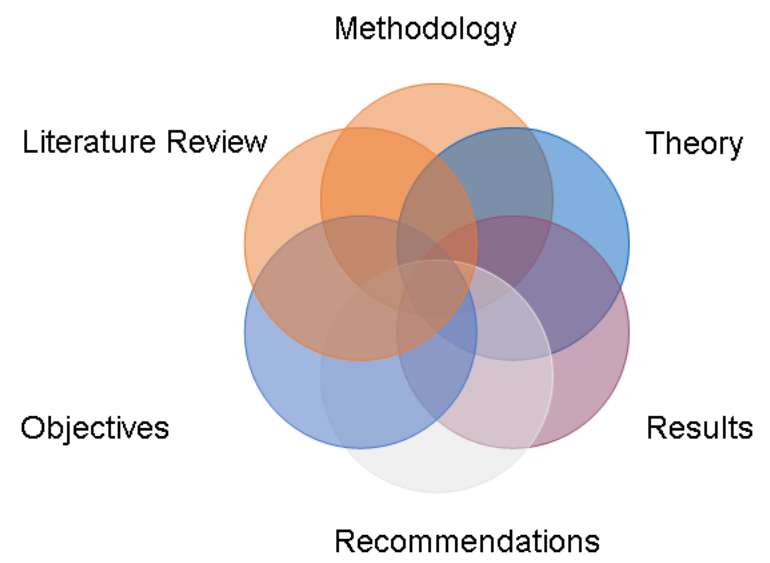
... Most formal definitions of critical thinking include the intentional application of rational, higher-order thinking skills such as analysis, synthesis, problem-recognition and problem-solving, inference and evaluation. Angelo (1995).

Critical thinking is not simply being highly critical of everyone else's thinking but your own. Anonymous (2002)

CT is a lifelong experience for an open minded person.

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.





Expected Attributes of O.A.U Graduate

- Qualities, capacities and understandings gained as a result of a university wide education (latent and manifest)
- Transcend disciplinary or subject boundaries
- Prepare graduate not only for employment but as agents for social good and social change through critical thinking.

Award of M.Sc. & Ph.D degree in O.A.U is based on

- Originality in the application of knowledge & solving problems
- Understanding of role of research
- Ability to deal with complex issues both systematically and creatively
- Qualities of sound judgement, personal responsibility and initiative, in complex and unpredictable professional environments



CT as stages of development

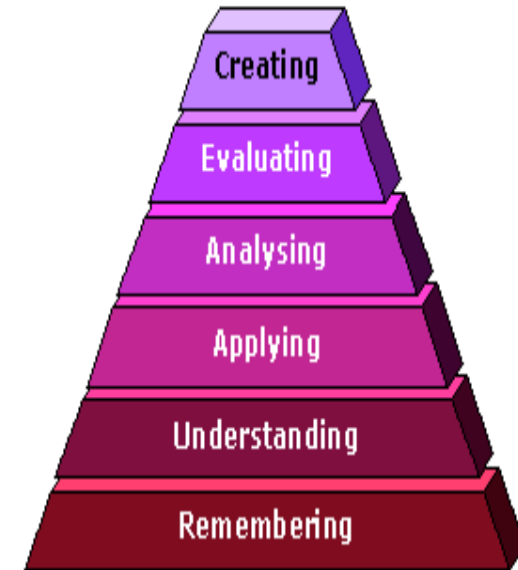
- Students (all of us) develop through stages
 - We may be at different stages in different contexts e.g. in 'real life' and in academic situations

1 Absolute knowing 2 Transitional stage
3 Independent knowing 4 Contextual knowing

Creating through root cause analysis

Aim is fully contextual thinking

Unreasonable to expect it always and early at university



Root Cause Analysis

- Investigating why a phenomenon happens the way it is rather than the surface
- Think about a child loosing interest in class
- Teenage pregnancy occurring in a particular geography than others
- Staff sleeping in the office

Bloom's Levels of Understanding

Level	Definition	Verb Examples That Can Represent Intellectual Activity
Evaluation	Appraise, assess, or critique on basis of standards or criteria	appraise, argue, assess, attach, choose, defend, estimate, judge, predict, rate, select, evaluate
Synthesis	Originate, integrate, or combine ideas into a new product or plan	arrange, assemble, compose, construct, create, design, develop, formulate, organize, propose
Analysis	Distinguish, classify, or relate assumption, hypotheses or evidence	analyze, appraise, categorize, compare, distinguish, examine
Application	Select, transfer, and use data or principles to complete new task	apply, choose, demonstrate, employ, illustrate, interpret, solve, use
Comprehension	Translate, comprehend, or interpret information	classify, describe, discuss, explain, indicate, restate, translate
Knowledge	Recall or recognition of information, ideas and principles	arrange, define, label, list, name, relate, recall, repeat, reproduce

Six Levels of Thinking

1. Remembering
2. Understanding
3. Applying
4. Analysing
5. Synthesising – creating
6. Evaluating/Critical thinking

Students need the language of their discipline
Thinkers need the language of thinking!



Bloom et al
- a classic model

Engaging literature: minimum of 20 current

Instruction	What is meant
clarify	identify the components of an issue/topic/problem; identify the main points; make the meaning plain; remove ambiguities or misunderstandings, restate something in your own words
Analyse/trends	break information into constituent parts; examine the relationship between the parts; question the information
Critical appraisal	identify what is good and bad about the information and why, probe, question, identify inaccuracies or shortcomings in the information, estimate the value of the material
evaluate, weigh up	as above but also – come to a conclusion (see below) about the information
compare	consider the similarities or dissimilarities; implies evaluation (e.g. which aspects of two or more topics/subjects are most valuable)
identify trends	identify patterns/changes/movements in certain directions (e.g. over time or across topics/subjects)

Instruction	What is meant
argue	put the case for/against a view or idea giving evidence for your claims/reasons; attempt to influence the reader to accept your view
conclude / draw conclusions	the end point of your critical thinking; what the results of an investigation indicate; arrive at a judgement by reasoning
develop a view	decide what you think (based on an argument or on evidence)
justify	make a case for a particular view; explain why something is like it is; give reasons; show adequate grounds for something
give evidence	evidence from your own work or that of others which could be checked by a third party to prove/justify what you say
summarise	briefly indentify the main points or aspects of the information, remove unnecessary detail
review	similar to summarise (see above) but usually includes evaluation, an overview, a reconsideration of something

Take Home

- Learning is beyond the class and developing CT rubs on all spheres of life
- Development is connected to CT
- Graduate training is a good entry point to engaging CT

Thank you for listening