

Critical thinking

Dana adas



**We don't know
what they will
need to know.
We do know
they will need
to be **skilled** in
finding out.**

DO you agree??



**Do you want your students to
know what they need to know?**

Or simply just find out?



The teacher should:

- provide necessary information.

- Ask questions

- Help students think of solutions or measures they could take if they face similar situations in the future.



Consider--

"Critical thinking is a universal **skill** that can be accessed with equal ease by students from all cultures"(Kubota, 1999).

SO,

What skills are considered important to employ critical thinking??



Key skills in critical thinking

1. Separate fact from opinion.
2. Recognize others' opinions.
3. Question the validity of evidence.
4. Prepare persuasive arguments using evidence.
5. Ask questions.
6. Verify information.
7. Listen and absorb.
8. Resist jumping to conclusions.
9. Seek to understand multiple conclusions.
10. Seek truth before being right.

Critical thinking involves:

1. Problem solving
2. Careful examination.
3. Thinking independently from a different perspective.
4. Coming up with different solutions.
5. Self-corrective thinking
6. Analyzing and evaluating a specific problem or situation

(Pohl, 2000)

Bloom's Revised Taxonomy

Creating

Generating new ideas, products, or ways of viewing things
Designing, constructing, planning, producing, inventing

Evaluating

Judging based on criteria; experimenting, checking, hypothesizing, critiquing, justifying

Analyzing

Breaking information into parts to explore relationships
Comparing, organizing, deconstructing, interrogating

Applying

~~Using information in another familiar situation~~
Implementing, carrying out, using, executing

Understanding

Explaining ideas or concepts; Interpreting, summarizing, paraphrasing, classifying, explaining

Remembering

Recalling information
Recognising, listing, describing, retrieving, naming,

Higher order thinking

Lower order thinking



Activity:

“Not everything that counts can be counted, and not everything that can be counted counts”

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

-- Albert Einstein



DO you agree/disagree? How might these relate to your own teaching?

Storyline:

The famous Golden Gate Bridge was the largest suspension bridge in the world at the time of its completion in 1937. The chief engineer who designed the bridge, demanded extremely rigorous safety precautions that were not normally used in those times.



During those times, "one life lost for every million dollars spent" was considered normal and acceptable. Since the bridge cost \$35 million dollars, the fact that only 11 people died during its construction was a magnificent achievement.



Indeed, 11 deaths resulting from the project instead of 35 could be considered a good reduction. Does this achievement matter to the families and friends of those 11 people? What might have been done differently if the accepted standard was that nobody should die?



(reference: <http://fridayreflections.typepad.com/weblog/2007/10/not-everything-.html>)

- **Examples of Real Critical Thinking activities used by An-Najah staff members:**

Teachers could apply critical thinking by making use of the following in-class or online activities:



Critical thinking through Reflection:

Given (2002) contends that critical thinking requires the learner to think about his or her own thinking. They need to focus one's own learning in the sense that he or she considers what personal achievements they have encountered in their life and what improvements if any need to be



What do we mean by reflection?



Reflection

- means making judgments about what has happened.
- Involves self-understanding requiring contemplation and analysis.
- May involve writing down reactions
- Means evaluating knowledge
- focuses on what is known, what is not yet known, and what has been learned.

Ex: Critical Thinking (English language class)

Objectives: To apply critical thinking skills. To practice writing short paragraphs.

Students read information on how to develop their personality traits by becoming positive and effective thinkers in society

Watch two short videos with different personalities discussing “Global Warming”

Students reflect on the issue and write a short paragraph describing the character/opinion they liked/disliked. They share and compare their paragraphs.

What procedures could the facilitator follow to implement the activity?

Procedures:

- Students brainstorm as many personality traits or characteristics as possible.
- In pairs, students try to list the positive and negative characteristics in reference to their friends and relatives.
- The students watch the two videos and write down the traits of each character.



- The students are divided into small groups so as to discuss and come up with reasonable conclusions supported by evidence to justify the reason why they preferred or disliked a specific character.
- The students then write a short paragraph reflecting the good characteristics of the person whom they admired.



The written paragraphs are then subject to peer review in-class or online using the OCC (online course container). (Adapted from Brent, A. (September, 2004). Critical Thinking: What a Character. The Internet TESL Journal, Vol. X (9) <http://iteslj.org/>)



Assessment of a critical thinking task:

“Learner-centered teaching does not deny the importance of grades” ([Weimer, 2002](#)).

“Evaluation changes when teaching is learner-centered” ([Weimer, 2002](#)).



Assessment of thinking depends on many intellectual standards like what??

Accuracy: How could we find if that is true

Relevance: How is that related to the problem?

Clarity: how could you give more examples?

Precision: Could you be more specific?

Depth: what factors make this a difficult problem?

Breadth: Do we need to look at this from a different perspective?



Logic: does this make sense all together:

Significance: which of the presented facts are most important

Fairness: Am I sympathetically representing the viewpoints of others?



Click: <http://www.criticalthinking.org/store-page.cfm?P=products&itemID=190&cateID=132&catalogID=217>

Assessment rubric (online discussion forum
OCC):

You will gain 5 points if you provide:

**a reply that offers some additional,
information (gives a complete response
to all the questions). The answer should
be clear, precise, relevant, related or
contrary to others' comments. It should
provide new ideas/resources to further
discussion.**



Teaching critical thinking through picture and video analysis:

Description of Task: This task is a pre-activity since it gets the students to know the basis behind gender differences between males and females as it is part of the textbook content. The textbook contains only written texts, thus, to motivate the students to participate, the teacher brings a photo and two short videos on gender difference.



Procedures: The students watch two videos and write notes, then they have to write notes after critically thinking of a photo. The first video is about brain anatomy and it is very simple and the second one is a short speech by a doctor delimiting an important difference between males and females as it answers the question

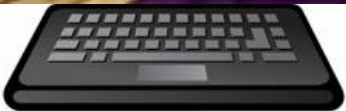


(How are males' and females' brains different? And how the piece of information given in the excerpt relate to the way men and women behave, think and use language differently) The photo is a cartoon touches upon the differences between males and females and the students have to INFER how far is it related to what the first video is about.



This activity could be implemented online or in-class and it works pretty well. The students have to answer the following questions:





- 1. How did Homer (the husband) decorate his space?
- 2. How did his wife decorate her space?
- 3. How were they different?
- 4. How to relate gender differences here to the last two videos you have already watched on gender differences?
- 5. Ask a question of your own about this cartoon?



- **Target students:** Student of University English general course (10103) taught at An-Najah National University.

Objectives:

- To apply critical thinking skills.
- To use all four language skills (integrative approach)
- To analyze gender differences.

- **IT tools:** discussion forum



Assessment: 5 points

since the activity is uploaded online, the teacher could follow Formative assessment and "continuous feedback" (Bransford *et al.* 2000, p. 140).



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