How I finally got the wheel to turn for my students

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Once upon a time...

- I used to lecture in class
- I felt I had to cover all the material in class or students would not get it
- I did not trust students to learn without me telling them the facts
Along came a champion

- I found out I was the critical thinking champion for the AS program in veterinary technology...surprise!
- I did not know much about critical thinking
- I knew it would be more work
Implementation

- I tried using the wheel in my classes (in class & online)
- Students balked at the work load & thinking
- My thinking improved
- Their thinking improved
- I tweaked things
I’m still tweaking...

- Students reinforced my use of critical thinking strategies by thinking better
- We had thoughtful discussions
- Their work was exciting to score
- They could apply what they learned with their patients
- I was learning what worked!
How it all began...
What I did...

- Added a critical thinking component to discussion topic assignment: online & in class
- Students used it to create weekly written assignments (11 assignments total)
What I did...continued

- On campus students discussed all four topics within a small group; online students could read posts written on all topics.
- Students critiqued another student’s written work with the critical thinking grid.
- I’m still doing this, but I’ve modified it...
Critical thinking rubric

- Well, it is too big to put here
- Email me & I’ll send it to you: 
  price.ginny@spcollege.edu
- Remember to put critical thinking in the subject box in case you go to spam
Critical thinking grid

Purpose: Does the student write a clear purpose statement explaining what they may gain from learning the information contained in this topic?

Key Items in Topic: Does the student clearly include all the items asked for in this topic? Do they accurately identify the core issues and appreciate their depth and breadth?

Modified from: Foundation for Critical Thinking
Critical thinking grid

Point of View: Does the student identify the points of view of people and animals discussed in the post? Do they identify their own point of view?

Information: Does the student use information from assigned reading sources and are they properly cited in text and at the end of their work?

Modified from Foundation for Critical Thinking
Critical thinking grid

Concepts: Does the student use examples from their personal experience that enhance understanding of the concepts included in the topic; concepts may include such things as types of learning, types of behavior modification, or other broad categories of ideas (tameness & domestication).

Modified from Foundation for Critical Thinking
Assumptions: Does the student accurately identify their own assumptions (things taken for granted) related to this topic? Does the student make assumptions that are consistent, reasonable, & valid? Does the student identify other's (animal's or client's) assumptions?
Critical thinking grid

Inferences: Does the student make cause and effect statements? For example, because I overslept I am late to work. Does the student make deep (rather than superficial) inferences? Are the inferences consistent? Inferences should be specific.

Clinical Application: Does the student write a statement explaining how they could apply what they learned from this topic in hospital with their patients?

Modified from Foundation for Critical Thinking
All posts require:

- **Issue Post (1 @ 10 points):** Due Friday, incorporate all 8 elements of reasoning from the Critical Thinking Grid
All posts require:

- Response Post (1 @ 10 points): Due Sunday, critique classmate’s post incorporating comments on all 8 elements of reasoning from the Critical Thinking Grid, comments should include an example of how student fulfilled requirement or a suggestion on how they could.
Topic example: Topic 2

- Discuss how tameness and domestication differ.
- How do these principles affect an animal's fear?
- Describe a fearful patient of yours.
## Scaffolding the lesson

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| Lesson one, two, three, four & five | Use 8 elements of reasoning as headings  
List responses as short sentences or bullets |
| Lesson six, seven & eight | Use 8 elements of reasoning as headings  
Use complete sentences with sources as responses |
| Lesson nine, ten & eleven | Write responses as an essay using the 8 elements of reasoning as headings |
New Topic Two

Purpose: What might you gain from learning about this topic?

Key Items:

- Discuss how tameness and domestication differ.
- How do these principles affect an animal's fear?
- Describe a fearful patient of yours.
New Topic Two

- **Point of view:** What are the points of view of animals and people discussed in your post?
- **Information:** What information from the assigned reading was relevant to this topic? What other scientific source could add to the topic?
New Topic Two

- Concept example: What personal experience could you share on this topic? How does it relate to the concepts in this topic?
- Assumption: What do you take for granted on this topic? Have they changed since you learned this information?
New Topic Two

- Inference: What cause & effect statements can you include to elaborate on this topic?
- Clinical Application: How could you apply what you learned from this topic as a veterinary technician?
# Scaffolding the lesson 2

| lesson one, two, three, four & five | use 8 elements of reasoning as headings  
| list responses as short sentences or bullets |
| lesson six, seven & eight | use 8 elements of reasoning as headings  
| use complete sentences with sources as responses  
| Think with more depth & breadth |
| lesson nine, ten & eleven | use 8 elements of reasoning as headings  
| use complete sentences with sources as responses  
| Think with even more depth & breadth |
Learned something...

- Went out to Berkley, CA to the International Critical Thinking Foundation conference.
- Wow!
- Recommend it highly!
- Learned something new about using the wheel with students...
Thinking about trusting…

- For spring I want to change the topics to better match the wheel as presented by the Critical Thinking Foundation.
- Students have shown me they can learn well if I facilitate their thinking.
- The class is more interesting for all of us.
- Patients are getting better, empathetic care.
Let’s try for ourselves...
Think about learning

- Split room into student & teacher
8 Elements of the wheel

- Purpose?
  - What can you as a student gain from learning?
  - What can you as a teacher gain from learning?
- Let’s share!
8 Elements of the wheel

- Questions we are trying to answer
  - What are the questions when learning as a student?
  - What are the questions when learning as a teacher?
- Let’s share!
8 Elements of the wheel

- What information do we need?
  - What information do students need to learn?
  - What information do teachers need to learn?
- Let’s share!
8 Elements of the wheel

- Inferences - cause & effect statements
  - What inferences do students have about learning?
  - What inferences do teachers have about learning?
- Let’s share!
8 Elements of the wheel

- Concepts
  - What concepts do students need to know about to learn?
  - What concepts do teachers need to know about to learn?
- Let’s share!
8 Elements of the wheel

- Assumptions – take for granted
  - What do students assume about learning?
  - What do teachers assume about learning?
- Let’s share!
8 Elements of the wheel

- Implications & consequences
  - What are the consequences of learning for students?
  - What are the consequences of learning for teachers?
- Let’s share!
8 Elements of the wheel

- Points of view
  - How do student’s view learning?
  - How do teacher’s view learning?
- Let’s share!
Parts of Thinking

- Points of View we need to consider
- Purpose of our thinking
- Implications and Consequences of our thinking
- Questions we are trying to answer
- Assumptions we are taking for granted
- Information needed to answer the question
- Concepts or key ideas we are using in our thinking
- Inferences or conclusions we are coming to
Resources

- www.criticalthinking.org
- http://www.spcollege.edu/criticalthinking/resources/games.htm
- http://criticalthinkinginst.wetpaint.com/
- http://www.iime.org/documents/elo.htm
- http://www.etsu.edu/criticalthinking/default.asp

**EACH OTHER & STUDENTS!**