

# 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](mailto: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?

# 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

# Critical thinking grid

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

<b>lesson one, two, three, four &amp; five</b>	<b>use 8 elements of reasoning as headings list responses as short sentences or bullets</b>
<b>lesson six, seven &amp; eight</b>	<b>use 8 elements of reasoning as headings use complete sentences with sources as responses</b>
<b>lesson nine, ten &amp; eleven</b>	<b>write responses as an essay using the 8 elements of reasoning as headings</b>

# 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

<b>lesson one, two, three, four &amp; five</b>	<b>use 8 elements of reasoning as headings list responses as short sentences or bullets</b>
<b>lesson six, seven &amp; eight</b>	<b>use 8 elements of reasoning as headings use complete sentences with sources as responses Think with more depth &amp; breadth</b>
<b>lesson nine, ten &amp; eleven</b>	<b>use 8 elements of reasoning as headings use complete sentences with sources as responses Think with even more depth &amp; breadth</b>

# 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

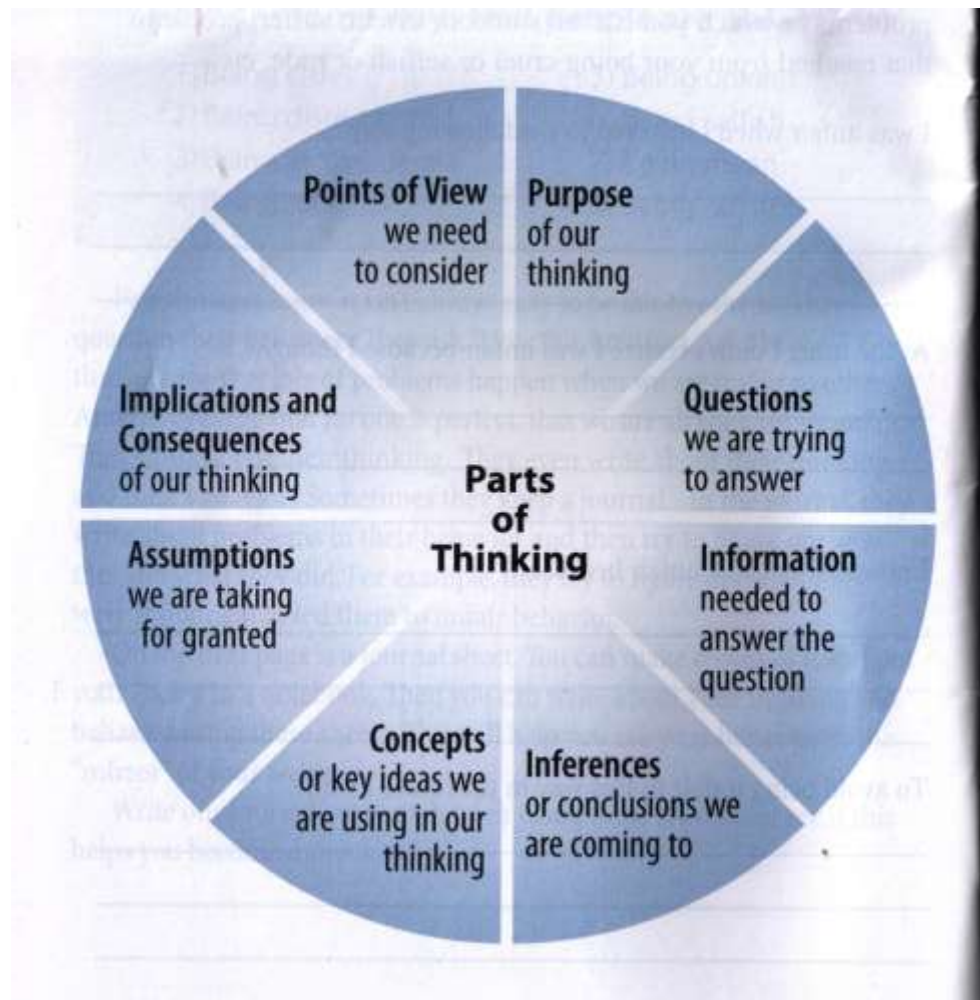
- Assumptions – take for granted
  - What do students assume about learning?
  - What do teachers assume about learning?
- Let's share!

# 8 Elements of the wheel

- Implications & consequences
  - What are the consequences of learning for student?
  - 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!



# Resources

- [www.criticalthinking.org](http://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!**