Establishing and Atmosphere for Critical Thinking in the Online Classroom

Ronald G. Steadman

Grand Canyon University

Abstract

Metacognition is a crucial element in the educational process. The following article examines the use of a quiz/poll CAT in an online classroom to stimulate student engagement with the materials thus establishing an atmosphere for critical thinking. A quiz/poll CAT designed to capture student interest and engagement with course content and principles through the use of parabolic scenario’s and points of common reference is explained and its underlying inspiration explored.

*Keywords:* creating interest, student engagement, critical thinking, parables, quiz/poll CAT, common reference, links, follow-up

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 Marketing companies are masters at capturing subtle truths and spinning those truths to promote their products. A Liberty Mutual Insurance television advertisement includes the observation, “We are beautifully imperfect people living in an imperfect world” (Liberty Mutual Insurance, 2013). Daily life reveals the wisdom of this observation; humans are imperfect beings; and, the world in which we live is far from perfect. The subtle message is this – people need to be shielded from the foibles of imperfect people and the imperfections inherent in this world.

 Stauffer’s Lasagna aired a television advertisement earlier this year that captures the essence of the dilemma faced by modern educator’s – attracting the undivided attention of young men and women living in a technological age. In this advertisement, a teenage girl is shown engrossed in communicating with her friends via her cell phone as her mother prepares dinner and places it on the table. The teenager takes one bite of the Stauffer’s Lasagna and lays her cell phone aside; even ignoring its ring, to the amazement of her parents, as she indulges in the tasty meal (Stauffer’s Frozen Lasagna, 2014). Something captured her undivided attention!

In the contemporary online classroom, the instructor must find methodological vehicles that present the subject matter in a manner that captures the undivided attention of the student while the student learns those things that will better prepare her or him to meet the challenges of the world and its imperfections. Designing tasty meals for student consumption is no easy task.

**Overview**

 For the online instructor, it is not enough to master the curriculum and its applications; the information must be presented in a manner that helps the student understand he or she is better prepared and shielded in life with this knowledge. The material must capture the imagination if it is to be deemed salient and worthy of inculcation into the student’s life.

The following presentation will focus on capturing the student’s interest through the use of a quiz/poll in the initial stages of an online classroom. The poll, which is the subject of this paper, was developed for use in CWV-101 with a multi-tiered objective: (1) capture the students’ interest; (2) allow the students to self-assess individual perspectives through a non-confrontational process; (3) encourage critical thinking; and (4) provide a framework for further analysis and interaction. Focus will be placed on the specifics of this quiz/poll and the inspiration behind its development.

“Learning is a complex process . . . it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom” (Astin, et al, 1996). Preparing students for “both academic success and performance beyond the classroom” (Astin, et al, 1996) is the goal of the quiz/poll presented and explained. Each academic discipline and individual classroom strives to achieve its part of this overarching goal. Therefore, the suggested methodology should be adapted to each specific discipline by a careful analysis of the core principles of that discipline and a reflection on the obstacles that inhibit the student from full engagement in the course materials.

**Academic Focus**

 Methodologies that stimulate critical thinking are once again being placed at the forefront of public education in Colorado, and other locations around the country, with the institution of new standardized tests premiering in the 2014-2015 academic year:

It’s the end of an era for educational policy in Colorado . . .

 Instead of measuring rote learning, students’ critical thinking ability will be put to the test, with the thought that if students grasp how to identify problems and arrive at solutions, they will be better prepared for college or the workforce. (Kelley, McGraw, & St. Louis-Sanchez, 2014, p. 1)

Implicit in the “50 CAT’s developed by Angelo and Cross (Cunningham & Moore), and in Gaeddert’s reflection on Lowman’s 1996 research that “instructional practices must interact with strategic learning practices for learning to occur” (Gaeddert, 2003, p. 48), is the centrality of critical thinking to the educational process; metacognition is in focus. Learning occurs when the student is able to practically apply the lessons of the classroom in their chosen discipline. Helping students develop critical thinking skills is vitally important for the Christian university as it prepares young men and women to succeed in and influence the world.

**Core Concerns for the Christian University**

 Critical thinking aims, at its core, to help individuals reach informed and valid conclusions. If the base from which an individual draws for their analysis is faulty the conclusions drawn will yield little benefit. The Christian university is charged with teaching accurate academic information in an atmosphere that challenges the students to look to universal truth for analysis and application. Ravi Zacharias succinctly phrases this idea with, “Truth demands investigation and commitment. Our conclusions must be in keeping with Truth that can be tested. To be handcuffed by a lie is the worst of all imprisonments” (Zacharias, 2001, p. 8).

 The Christian university and the individual Christian look to Jesus as the ultimate standard and source of truth. “One cannot find final refuge both in the Buddha and in the Christ. They are contradictory, antithetical. Such is the nature of truth claims, in religion and elsewhere. Truth claims exclude whatever contradicts them” (Groothuis, 2000, p. 273). Academic excellence joined with ultimate truth is the goal of the Christian university.

Jesus had no problem attracting the undivided attention of His disciples (Matt. 5:1; John 1:44-49), of the masses (Matt. 5:1; 8:18; Mk. 1:45; Lk. 6:17), or of those who opposed His teaching (Matt. 4:3; 8:34; 22:15-18). Therefore, the methodology he employed should be considered and analyzed by instructors in designing lessons for the contemporary classroom. Modern technologies and instructional methodologies have yielded, and will continue to yield, new avenues through which the educator can interact with the interest of students. With a goal of attracting the undivided attention of student’s to stimulate their thought process, and the commitment to integrating the lessons of the classroom to life situations, much can be learned from Jesus – the great teacher. Integrating the wisdom of teaching exhibited by Jesus with modern technologies and methodologies in the online classroom can yield the best of both.

**Premise for the Methodology**

 Jesus often taught using parables, “primarily designed to instruct” (Pentecost, 1982, p. 9). As Fee and Stuart point out, “Luke specifically says that Jesus told parables *to* people (15:3; 18:9; 19:11) with the clear implication that the parables were to be understood” (Fee & Stuart, 2003, p. 150). It is this understanding that led to the development of the quiz/poll that is the subject of this writing.

 The parables are often thought of as simple stories that relate spiritual truth (Fee & Stuart, 2003; Klein, Blomberg, & Hubbard, 2004; Pentecost, 1982). Fee and Stuart term a story, such as “The Good Samarian . . . a true parable” (Fee & Stuart, 2003, p. 151). They also list “similitude”, “metaphor”, and “epigram” as other types of parabolic instruction (Fee & Stuart, 2003, p. 151). Klein, Blomberg, and Hubbard cite Dodd’s classical definition of a parable, “a metaphor or simile drawn from nature or common life, arresting the hearer by its vividness or strangeness, and leaving the mind in sufficient doubt about it precise application to tease it into active thought” (Dodd, 1935, p. 16 as quoted in Klein, Blomberg, & Hubbard, 2004, p. 412). Tapping into common experiences and perceptions in a manner that stimulates “active thought” (Dodd, 1935) is critical thinking.

**Development and Evaluation**

 Example 1 contains a copy of the quiz/poll posted in the Discussion Forum of recent CWV-101 classrooms facilitated by this writer. The quiz/poll was developed and amended over several sessions of CWV-101; incorporating student responses, student feedback, and input from others ranging in age from their early 30’s to their middle 60’s. This process is in keeping with Gaeddert assertion that, “an educational system that values student input and seeks to connect teaching with learning is vital” (Gaeddert, 2003, p. 51). The Advisory Committee for Academic Assessment at Kent State University illustrates the need for continued reassessment with a wheel outlining the process as “Identify Goals, Identify Objectives, Specify Approaches, Specify Measures, Share Results, Makes Changes, Identify Goals, and so forth,” (Kent State University). Valuing “student input to connect teaching with learning” (Gaeddert, 2003, p. 51) may result in further revisions to the following quiz/poll. The version presented in Example 1 resulted in active student participation and extended conversation regarding the underlying principles of worldview (the subject of the course in which this quiz/poll was placed).

**The Quiz/poll**

 This quiz/poll was designed to stimulate thought and further discussion regarding specific philosophical questions inherent in the study of worldview, among which are: (1) Do underlying assumptions affect a person’s perceptions, attitudes, actions, and interactions? (2) Does truth exist? (3) Do people live life as if there is a known reality? (4) Are the worldview assumptions of a source important in analyzing and assessing the data they assert? Following is an explanation of the thought process behind each question and how that question is intended to stimulate thought and conversation regarding one of the preceding questions.

**Story Parable**

 Question 1 developed from the concept of a story parable; it contains a scenario with which most in our society can identify – the purchasing of a gift for the wedding of a close friend or relative. Because the intent of this quiz/poll is to stimulate thought, the completion of the scenario is supplied by the student and not within the story itself. In the scenario presented, ambiguity and alternatives were removed to force the respondent to choose from one of the available options; a, b, c, d, or e. Had ambiguity and alternatives not been removed the students may have had the tendency to avoid the premises of this scenario by offering alternatives such as shopping on a different day, finding a sitter for the child, and so forth. This question was designed to help the student understand the relationship between perception and reality; although each student may perceive the need to monitor the child differently, reality is obvious in the existence of the store, the need for the gift, and the presence of a young child.

**A Relatable Situation**

 Questions 2 and 3 relate to reality and assumptions. Question 2, as does question 1, presents a scenario of common reference – attending a sporting event at a major league ballpark; once again ambiguity is removed because the ticket was purchased from the major league ticket office (had the ticket been purchased from any other outlet there may have been the tendency to doubt its authenticity). Reality is addressed in that the organization issuing the ticket is a real entity and that stadiums contain real seats. Assumptions are addressed in the perceived authenticity of a ticket purchased from a major league organization and in the trustworthiness of seats in a major league ballpark.

**Common Assumptions Considered**

 Questions 4a, 4b, and 5 relate to underlying assumptions that are often not analyzed as to their validity but wield considerable influence in addressing the issues of life. Question 4a is intentionally ambiguous to illicit uninhibited responses to questions 4b – “Briefly explain your rationale” (see Example 1). Paraphrases of sample responses to question 4b are included in Example 2 that are indicative of often unrealized worldview assumptions. Individualism, “the belief that the individual is the primary reality and that our understanding of the universe and lifestyle should be centered in oneself” (Wilkens & Sanford, 2009, p. 27); Postmodern Tribalism, the belief that “A person’s real identity is not found in some general concept of human nature, but in her or his cultural particularity” (Wilkens and Sanford, p. 141); Moral Relativism, with the underlying belief that “Truth is relative to the interests and projects of the person claiming truth” (Wilkens & Sanford, p. 83); and Christianity, which provides “an assumption from which all truth, goodness, and beauty can be explored” (Corduan, 1997, p. 267) are among the most common worldview assumptions identifiable in the rationale student’s supplied in support of their reasoning (see Example 2).

**Source and Context**

Questions 6 and 7 relate to information and its source. Implicit in these questions is whether or not assertions can be understood and accepted apart from the worldview and motivations of the one making the assertions. Information is inextricably tied to its source. Valuable information can be derived from a source, regardless of the worldview assumptions of the espouser of the information; however, interpretation and application of information is linked to worldview assumptions. The source for the quote of question 6 is not revealed on the initial posting (Example 1) in an effort to avoid bias prior to the consideration of the words and their import (the speaker and source are revealed and cited when the results are posted – Example 2).

**Follow-up**

When the results of the quiz/poll are posted in the Discussion Forum (Example 2), follow-up questions are included to stimulate further dialogue and analysis of the quiz/poll and student responses. Simply posting the tabulated results, coupled with the intended link between the questions and follow-up questions, reassures students the exercise was intended to stimulate critical thinking and analysis. This method indicates that student’s individual opinions are valued and accepted without judgment. Further analysis of the consistency of the individual students thought process and worldview assumptions are subtly encouraged through the initial stimulus this quiz/poll provides.

The results derived from this quiz/poll have been extremely encouraging, generating responses from well over half of the class. Response rates range from a low of 17 out of 25 (68%) to a high of 27 out of 27 (100%). The responses to the final follow-up question of the results post (Example 2) – “Did you enjoy this exercise?” – have been even more encouraging. Many students indicate a desire for more such exercises; and, those who indicate such a desire tend to respond to additional postings. Those students also exhibit a greater engagement with the course materials in their Discussion Forum posts throughout the course.

**Conclusion**

The questions posed and the underlying principle associated with each question will vary according to the academic discipline; each academic discipline, and individual classroom, has specific concerns for needed focus. An assessment tool, such as the one explored in this writing, should ask specific “questions about educational missions and values” (Astin, et al, 1996) as they relate to the individual academic discipline and classroom. The specific questions and their underlying purposes for this particular quiz/poll were offered in explanation of the thought process of this instructor and the benefit such quiz/polls have in stimulating critical thinking in the online classroom. The use of such a quiz/poll early in class serves to stimulate the student in understanding the importance of the study and alerts the instructor to areas that need greater focus as the class moves forward. Class add-ons, such as the one described, help the student engage in the course materials at an analytical level and assist the instructor by creating greater student interaction with the materials.

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**Example 1:**

CWV-101 Module 1 Quiz / Poll:

Below are 7 questions designed to help us think in terms of how a worldview can affect perceptions and actions. Please respond to these questions by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (Record your impressions as a reply to this post.) There is no *“right*” or *“wrong”* answer to these questions; therefore, the responses should reflect your honest impressions. I will tabulate the results and post the class averages to the DQ Forum on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, along with the ideas behind the questions. This quick quiz / poll is not mandatory and will not be graded; but, responses will count toward Participation Points.

1. Imagine your active and inquisitive 3 year old child is with you as you shop at a store that specializes in fine china and other glassware to purchase a wedding gift for a close friend / relative. The store openly displays all of its products; thus affording patrons the opportunity to inspect each piece by hand. The store also has a strict policy that *“If you break it, you pay for it.”* Security cameras are positioned throughout the store to record everything that happens – allowing the store to enforce its policy. The child must accompany you into the store as you have no one available to watch him or her that day and you are out of time; the gift must be purchased today. What do you do? (Choose only the best answer.)

1. Let the child run free while you look around.
2. Keep a close eye on the child as you look around the store.
3. Warn the child repeatedly about touching anything as you try to look at the merchandise.
4. Warn the child prior to entering the store that he / she must not touch anything and keep the child close while in the store, issuing repeated warning each time you see him or her reach their hand out to touch an object.
5. Warn the child prior to entering the store, then pay no attention to what the child is doing while you shop.

2. You have purchased a ticket to an Arizona Diamondback baseball game from the Diamondback ticket office. Upon entering the stadium on the date for which you have a ticket, how confident are you your assigned seat will be available?

 very confident confident unsure unconfident very unconfident

3. T / F When you locate your seat you sit down without hesitation.

4a. Reality is different for each individual.

 strongly agree agree undecided disagree strongly disagree

4b. Briefly explain your rationale.

5. Although scientific truth is established all other truth is relative.

 strongly agree agree undecided disagree strongly disagree

6. React to the following quote: *“You are doing the right thing . . . This is a great, powerful, and symbolic act . . . O Century! O Science! It is a joy to be alive!”* (Choose the best possible response.)

1. I agree; it is good to live in a time when science and scientific discovery are receiving their rightful recognition.
2. I don’t know what it is, but something doesn’t seem right about this statement.
3. Science and scientific discovery are good, but there is more to life than science.

7. Bonus question: Would knowledge of the speaker and the setting of question #6 affect your answer?

1. Yes.
2. No.
3. Maybe.

**Example 2:**

Module 1 Quiz / Poll results:

First, I want to thank everyone who participated in this brief quiz. I hope you had some fun and had your thinking stretched in the process. Below is the rationale behind the questions followed by the class results.

The Rationale behind the questions:

Question #1 addresses real life situations – reality.

Questions #2 & 3 address assumptions.

Questions #4 & 5 address perspectives.

Questions #6 & 7 address source & context.

The results:

**Question #1 –**

a. – **\_\_\_**

b. – **\_\_\_**

c. – **\_\_\_**

d. – **\_\_\_**

e. – **\_\_\_**

**Question #2** –

**\_\_** – were ***very confident*** the seat would be available.

**\_\_** –were ***confident*** the seat would be available.

**\_\_** – were ***unsure*** if the seat would be available.

**\_\_** – were ***unconfident*** the seat would be available.

**\_\_** – were ***very unconfident*** the seat would be available.

**Question #3 –**

**\_\_ –** ***True*.**

**\_\_ –** ***False*.**

**Question #4 –**

“Reality is different for each individual.”

**\_\_** – ***strongly agree***

**\_\_** – ***agree***

**\_\_** – ***undecided***

**\_\_** – ***disagree***

**\_\_** – ***strongly disagree***

**Sample Reasoning’s:** Below are my paraphrases of the explanations for your answers to #4.

“Reality” **is** different because (either strongly agree or agree):

* *Perception different in children than it is adults.*
* *Different cultures view things differently.*
* *Differing desires.*
* *Differing perceptions.*
* *Differing beliefs.*
* *Everyone is their own person.*
* *Reality depends on the state of mind of the individual.*

“Reality” **is not** different because (either disagree or strongly disagree):

* *Reality is how things actually exist.*
* *Reality is cold, hard facts.*
* *Reality is absolute truth.*
* *There is one reality; people may think differently.*
* *Ultimate truth is established by God.*

**Question #5 –**

“Although scientific truth is established, all other truth is relative.”

**\_\_** – ***strongly agree***

**\_\_** – ***agree***

**\_\_** – ***undecided.***

 **\_\_** – ***disagree***

**\_\_** – ***strongly disagree***

**Question #6 –**

The longer quote, its context, and the speaker are revealed below.

**\_\_** – a. ***I agree; it is good to live in a time when science and scientific discovery are***

 ***receiving their rightful recognition.***

**\_\_** – b. ***I don’t know what it is, but*** ***something doesn’t feel right about this statement.***

**\_\_** – c. ***Science and scientific discovery are good, but there is more to life than science.***

**Question #7 –**

*Would knowledge of the speaker and the setting of the quote affect your answer?*

**\_\_** – ***Yes***

**\_\_** – ***No***

**\_\_** – ***Maybe***

**Questions #6 & 7** – The longer quote:

*“German men and women! The age of arrogant Jewish intellectualism is now at an end! . . . You are doing the right thing at this midnight hour – to consign to the flames the unclean spirit of the past. This is a great, powerful, and symbolic act . . . Out of these ashes the phoenix of a new age will arise . . . O Century! O Science! It is a joy to be alive!”* (Joseph Goebbels, 1933, as quoted in Bonhoeffer: Pastor, Martyr, Prophet, Spy, 2010, p. 162-163).

Now the context**:** These words were spoken by Joseph Goebbels to further inflame the crowds in 1933 as the Nazi’s burned the books of those they deemed unworthy. Among the authors of books burned by the Nazi’s that night were Helen Keller, Jack London, H. G. Wells, Erich Maria Remarque, Albert Einstein, Thomas Mann, Heinrich Heine and Sigmund Freud (Metaxas, 2010, p. 162). A look at the list illustrates that science and scientific discovery were not the defining criteria – thought and ethnicity determined who should be read and who should not.

**Some concluding thoughts: (Personal Reflection)**

Take some time to reflect on your thought process as you answered these questions:

* Did you treat each question as an isolated case or did you try to find a link between the questions as you answered?
* What assumptions or preconceived ideas influenced your answers?
* As you think about your responses, is there any contradiction in your answers? (For example, did you assume a consistent reality in Questions 1, 2, 3, and 5 – then assert that reality is different for each individual?)

For further thought:

* Would your answer to question #4, “reality,” have been different had I stipulated “ultimate reality” instead of merely “reality?” (I intentionally left this question vague to encourage thinking and analysis.)
* In responding to #5, “scientific truth,” did you impose the same standard on “scientific truth” that you imposed on other truth? (Scientific theory is not equivalent to “scientific truth;” a theory is being tested, a truth has been tested.)
* **Finally – Did you enjoy the exercise?**

I encourage your feedback on this exercise, my explanations, and my follow-up questions.

Reference:

Metaxas, Eric (2010). *Bonhoeffer: Pastor, Martyr, Prophet, Spy.* (Nashville, TN: Thomas

Nelson) p. 162-163.