Putting It All Together: Incorporating "SoTL Practices" for Teaching Interpersonal and Critical Thinking Skills in an Online Course

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Views of critical thinking were culled from the literature and developed into a scholarship of teaching and learning (SoTL) model that was implemented into the Internet course, "The Politics and Psychology of Hatred." Assessment of student course postings demonstrated a strong relationship between interpersonal skills (referred to in the curriculum as "course etiquette") and advancement on the levels of critical thinking. The implications of these findings are discussed.

Understanding Critical Thinking

Hutchings and Shulman (1999) define the scholarship of teaching as based in a process of critical questioning and answering. As such, it seems important to assess methods by which critical thinking skills can be developed and nurtured in students. Theories of critical thinking are numerous in the scholarship of teaching and learning literature but, in our experience, few efforts have been made to demonstrate how critical thinking can be taught in courses. Before outlining the critical thinking model that we developed and use in an Internet course on the Politics and Psychology of Hatred, let us quickly summarize a few of the models we drew from to create the version that we found well-suited for teaching interpersonal and critical thinking skills in an internet course (Osborne, Kriese, & Tobey, 2008). Kuhn (1999) presents a developmental model of critical thinking that begins with the question, "do we really know what critical thinking is?" Indeed, critical thinking may be a "buzz phrase" that many use without truly knowing what it is, how to foster it, or even how to measure it or recognize when students are (or are not) using it. This task of defining critical thinking must be addressed before any critical thinking framework can be integrated into a course.

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Before we can determine how to develop assignments that foster the elements of critical thinking, we must understand – really understand – those elements. Kuhn (1999) starts with the assumption that critical thinking involves cognitive competencies that are meta-knowing. These second-order, meta-knowing skills involve an awareness of how self and others "know." Kuhn expands this notion further by distinguishing three broad categories of meta-knowing: (1) metastrategic, (2) metacognitive, and (3) epistemological (1999). Let us quickly define each of these before connecting them to the critical thinking and interpersonal skills frameworks constructed for our course.

The *metastrategic* way of knowing involves an ability to select and monitor the thinking strategies that one uses. With this level, students are encouraged to

ask what they know and to consider how they know it. It is our experience that students are not typically encouraged to consider thinking strategies. In fact, there may be a general (unspoken) assumption in teaching that students already know "how" and "when" to think. We will revisit this point by articulating the critical and interpersonal skills we expect from students and, further, how we describe to students how such skills will be factored into the grading.

Metacognitive knowing, according to Kuhn (1999), operates at the level of declarative knowledge. What Kuhn appears to mean by this is "fact"-based information. In other words, it is important to provide students with the opportunity to "tell you what they know." Students should be able to describe their own thoughts and thought processes without necessarily understanding the significance or ramifications of that knowledge. Before one can worry about "how" one knows or the impact that knowledge has on others, one must first express "what" one knows. We refer to this expression of knowledge as *recitation*. The *recitation* process is described as a statement of known facts or opinions. A critical element of this step is to acknowledge what aspect(s) of what is being stated are factual (declarative) and what is based on opinion. It is not assumed that students will know to separate facts from opinions in their own thinking without being told to do so, shown how to do so, *and* being held accountable for doing so.

> **Students should be able to describe their own thoughts and thought processes without necessarily understanding the significance or ramifications of that knowledge.**

Epistemological knowing involves understanding how one's knowledge (and what one knows) fits into the broader range of what people know. It involves an awareness of how people – in general – know something and how one – individually – knows it. Kuhn (1999) argues that meta-knowing is developmental in nature. By referring to meta-knowing steps as "developmental," Kuhn (1999) implies an interactive (nature *and* nurture) process. In other words, one's experiences will determine the extent to which one is able to progress from metastrategic to metacognitive and, eventually, to epistemological knowing. We build upon this notion by incorporating both individual and group assignments into our course that require students to practice with this progression of critical thinking. Critical thinking, in Kuhn's model (1999), does not happen by accident nor will it happen without experiences that require one to practice it.

From Kuhn's theoretical notion of critical thinking, we sought guidance on how to break critical thinking down into its component elements – elements that could be specifically integrated into a course and assignments within that course. In other words, we asked the question, "now that we know the theoretical foundations for critical thinking, what would examples of critical thinking look like?" We found answers to this question in the works of Paul and Elder (2002), and Smith (2002). Paul and Elder (2002) suggest that critical thinking involves integrating one's thoughts, feelings and desires. By understanding the relationships among thoughts, feelings and desires, Paul and Elder (2002) assert that we can become routinely aware of and able to evaluate our feelings. In this way, feelings can *inform* our thoughts rather than override them.

In the context of our project, this notion of integrating thoughts, feelings and desires provided us with the framework we needed to move from the theoretical foundation provided by Kuhn to a step-wise approach we could outline for students. What we sought was a method for outlining the progression of critical inquiry and thought that we expected from students. We wanted something "visible" that could be provided to students and to which their work could be held accountable. We turn to that framework in a moment, after briefly considering how we might approach measuring whether students have achieved the "critical thinkers."

To address this question, we turned to the work of Randolph Smith. Smith (2002) asserts that critical thinkers possess seven characteristics: (1) critical

thinkers are flexible – they can tolerate ambiguity and uncertainty, (2) critical thinkers identify inherent biases and assumptions, (3) critical thinkers maintain an air of skepticism, (4) critical thinkers separate facts from opinions, (5) critical thinkers don't oversimplify, (6) critical thinkers use logical inference processes, and (7) critical thinkers examine available evidence before drawing conclusions (Smith, 2002). We perceived Smith's (2002) characteristics as identifiable "markers" we could look for in assessing student work. Doherty, Hansen and Kaya (2007) remind us, however, that, after we employ these characteristics of critical learning, we need to return to them periodically to see if they have become a part of students' regular thought patterns. When students make these habits their own, they develop a vested interest to make sure that these habits continue. In short, when students **own** critical thinking habits they are more in control of not only when and what they think but also how they think (Doherty et al., 2007).

Clearly there are many more examples of, definitions for, and research about critical thinking. However, these four methods (Kuhn, 1999; Paul & Elder, 2002; Smith, 2002; and Doherty et al., 2007) allowed us to: (1) build a theoretical foundation for the kind of thinking we wanted to foster in our course, (2) delineate the elements that separate critical thinking from other forms of thinking, and (3) build an active framework that could be described to students, incorporated into assignments, and built into the assessment methods we use for those assignments. In other words, we utilized the four methods above to develop: (1) the course, (2) the assignments and, (3) the grading system we used such that critical thinking could be outlined, developed and demanded from our students. The framework we developed is summarized as follows:

> **When students *own* critical thinking habits, they are more in control of not only when and what they think, but also how they think.**

1. <u>Recitation</u> – state known facts or opinions. A critical component of this step is to acknowledge what aspect(s) of what is being stated are factual and what are based on opinion.
2. <u>Exploration</u> – analyze the roots of those opinions or facts. This step requires digging below the surface of what is believed or known and working to discover the elements that have combined to result in that fact or that opinion. This involves analysis without an attempt to comprehend the impact of those facts or opinions.
3. <u>Understanding</u> – involves an awareness of other views and a comprehension of the difference(s) between one's own opinion (and the facts or other opinions upon which that opinion is based) and the opinions of others. To truly "understand" our own opinion in relationship to others, we must initiate an active dialogue with the other person about his or her opinions and the roots of those opinions. In other words, once we become aware of the roots of our own opinions, we must understand how to discover the roots of the opinions of others.
4. <u>Appreciation</u> – a full awareness of the differences between our views and opinions and those of others. To truly appreciate differences, we must be aware of the nature of those differences. The active dialogue undertaken in the third step (understanding) should lead to an analysis of the opinion as recited by the other. The result should be a complete awareness of the similarities and differences between our own opinions (and the roots of those opinions) and those of the "other." Although we may still be aware that our opinions differ, we are now in a position to truly appreciate and value those differences.

Understanding "Understanding"

In our view, it is important to acknowledge that "understanding" does not mean to "accept." The goal is not to get everyone to agree; the goal is to get people to truly explore and understand how and why opinions differ. To understand means to realize the circumstances and motivations that lead to differences and to realize that those differences are meaningful. It is our belief that discussing social issues (such as prejudice or racism) *without* requiring students to explore the roots of their views, understand the roots of other views, and appreciate the nature and importance of different views about those issues perpetuates ignorance. To raise the issue without using a critical thinking framework may simply reinforce prejudices by giving them voice without question. Among the various rubrics that can be used to undertake such an assessment of critical thinking, Coster and Ledovski's (2005) tool comes to mind. They assess students in three categories and rate them from high ability and low ability. These categories are: (1) contributes to the discussion, (2) presents one's own opinion on the issue and, (3) assesses the quality of support available (Coster & Ledovski, 2005).

To understand means to realize the circumstances and motivations that lead to differences and to realize that those differences are meaningful.

Enhancing Critical Thinking

The process of implementing critical thinking into our course began with the theoretical framework already outlined (Kuhn, 1999) and then proceeded to the design phase in which we used the work of Paul and Elder (2002), Smith (2002) and others to design a critical thinking framework that provided guidance for students on the elements of critical thinking and an understanding that these elements build upon each other. Finally, we progressed to a stage of course and assignment construction. In other words, knowing what critical thinking is, being able to break down critical thinking into its component elements, and demonstrating these elements to students to prepare students to engage in critical thinking. These skills must be practiced within the course and the assignments within that course. So, we set about the task of constructing assignments that would require all elements of critical thinking; that would foster student growth along this developmental continuum of critical thinking (Kuhn, 1999); and that would hold students accountable for demonstrating growth along that continuum.

Before ever teaching the course the first time, however, we knew we wanted to teach the course online. The reason for this, initially, was simple: our university wanted faculty to develop online courses with consistent content. Our early experiences in teaching the course online, however, taught us that the course is very well suited to an online format, primarily due to its exploration of sensitive and controversial topics (for more discussion of this issue see Osborne, Kriese, & Tobey, 2008). While constructing the course site and the assignments, we utilized the advice of MacKnight (2000) on how to teach critical thinking skills through online discussions. MacKnight (2000) spells out what students and faculty <u>must</u> be prepared to do in order to facilitate critical thinking with online discussions. In particular, students must have a clear understanding of the assignment and possess the social skills necessary to:

- ask the right questions,
- listen to each other,
- take turns and share work,
- help each other learn,
- respect each other's ideas,
- build on each other's ideas,
- construct their own understanding, and

- think in new ways. (MacKnight, 2000, p. 39)

Additionally, faculty must support disciplined discussions by:

- maintaining a focused discussion,
- keeping the discussion intellectually responsible,
- stimulating the discussion by asking probing questions that hold students accountable for their thinking,
- infusing these questions in the minds of students,
- encouraging full participation, and
- periodically summarizing what has or needs to be done (MacKnight, 2000, p. 39).

Potts (1994) outlined "best practice" methods for teaching critical thinking. Although many overlap with what we have already outlined, one suggestion stood out to us as we contemplated building a course and assignments that incorporated the best practices we had gleaned from other researchers and teachers. Potts (1994) suggests teaching students to build categories. In Potts' own terms, "students often are given (and asked to memorize) explicit rules for classifying information" (1994, p. 2). But students learn little about how to develop the rules themselves when they are provided. Instead, Potts (1994) suggests that students be expected to discover the rules needed to build the categories of thinking (and knowledge) required in the course. One of the keys to this approach is to assist students in this development process without "giving" them the rules.

Building Interpersonal Skills for Critical Thinking

Last, we encountered numerous references to interpersonal skills as an aspect of critical thinking (Halpern, 1996; Halpern, 1999; Klaczynski, Gordon, & Fauth, 1997; MacKnight, 2000; Hansburg & Silberman, 2005). In other words, critical thinking is not just a skill that one holds individually. As Gokhale (1995) outlined, critical thinking can best be fostered collaboratively. As such, we felt it was necessary to combine critical thinking and interpersonal skills training in our course. We outlined these skills in the form of course "etiquette" and held students accountable for demonstrating these skills so that a safe learning environment was maintained in our course.

In particular, we specifically outline the "interpersonal" expectations for our course with this statement: "This is an internet course. As such, the success of the course relies on active participation by each class member throughout the entire semester. Even though we are the professors for the course, it is designed as a seminar course,

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meaning that active participation from students is essential. Although face-to-face interactions will not occur because of our use of the internet, we do expect continual communication between members of the class and the course faculty. Even though this interaction will be over the Internet, we expect students to use the same etiquette that would be used in a classroom during face-to-face interactions. This etiquette includes:

- respect for others (their viewpoints, their values, their beliefs),
- the right to disagree but requires sensitivity to the viewpoints of others,
- taking responsibility for being involved in developing the issues and topics relevant to this course,
- active participation in all elements of the course,
- continual feedback to the instructors about the course, course assignments, and individual viewpoints,
- a commitment to the mutual exchange of ideas. This means we will not isolate definitive 'answers' to the issues we raise, but we will actively explore and respect the multiple sides to those issues, and
- a responsibility to 'police' ourselves.

We are attempting to develop a community, and this requires trust. In order to develop trust, we must know that we can share our ideas and not be 'attacked.' This also requires that we allow other class members the same trust and freedom we expect."

Putting It All Together – Our Course

To summarize, here is the sequence we utilized to build our course (and the assignments for that course); this sequence reflects a scholarship of teaching inquiry model generalizable to other projects and disciplines. We
1. read much of the critical thinking literature,
2. delineated what we felt were "best practice" methods for developing a model of critical thinking (Paul & Elder, 2002; Smith, 2002),
3. molded those best practices into expectations for students (Gokhale, 1995; MacKnight, 2000),
4. developed methods we would use (as faculty) to encourage critical thinking (Gokhale, 1995; MacKnight, 2000),
5. used those best practices to create individual and collaborative assignments (Potts, 1994), and
6. developed a method for articulating the interpersonal skills necessary for critical thinking to our students (Halpern, 1996; Halpern, 1999; Klaczynski, Gordon, & Fauth, 1997; Hansburg & Silberman, 2005).

In structuring the course, we relied on the literature for guidance. We started with Gokhale's (1995) work illustrating the impact of collaborative learning on critical thinking. Gokhale found that students engaged in collaborative learning methods performed better on critical thinking test items than students completing the same assignments individually. Following Gokhale's (1995) guidance, we decided to develop collaborative assignments for our course. But collaborative assignments, while they allow for the assessment of interpersonal skills and critical thinking, are not always easy to assess for individual learning. For this reason, both individual and collaborative assignments were integrated into the course.

Our project rested on the idea that the interpersonal skills learned in our course would enhance critical thinking and these advancements in critical thinking would surely show how students would learn content in future courses. The focus of this article, however, is *not* on student performance (grades) in future courses. Our purpose here is to assess the logical but, heretofore, undocumented relationship between interpersonal skills and critical thinking discussed throughout the scholarship of teaching and learning literature, and to model a scholarship of teaching and learning inquiry framework for building a course.

Method

Two naïve raters went through the course postings from an entire semester of the internet-based, team-taught seminar course, "The Politics and Psychology of Hatred." Nineteen students participated in the course from the beginning to the end of the semester. Student posts were "graded" by faculty but not assessed as part of this project until after course grades were submitted. The raters were asked to assess the course postings for each student (at the end of the semester) using the instruments shown in Appendices A and B. The raters were trained to use the scoring systems until the correlation between their scores for a random sample of postings pulled from the course reached $r = .90$. From this point on, the ratings of the two raters were averaged for each of the participants in the study.

As a reminder, our interest was in assessing the relationship between interpersonal skills (what we called "course etiquette") and progress on the critical thinking model. For our purposes, a course posting that was assessed by raters as including "exploration" demonstrated a higher level of critical thinking than one that showed "recitation." Our guiding question was: Are higher levels of critical thinking

(moving upward through recitation, exploration, and understanding to appreciation) related to ratings of student use of the course etiquette (conceptualized by us as more effective demonstration of interpersonal skills)?

Students completed a weekly assignment (responding to a discussion forum "question of the week" that was linked to some current event dealing with prejudice, discrimination or hate), three individual assignments (larger scale assignments to be worked on and posted individually), three group assignments (larger scale assignments to be worked on and posted as part of a group – students stayed in the same groups all semester), and one course project that was completed with the same group as the group assignments.

Raters (and students at the beginning of the course) were given the following definitions to use in assessing course posts for levels of critical thinking: (1) *Recitation* – state known facts or opinions, (2) *Exploration* – analyze the roots of those opinions or facts, (3) *Understanding* – involves an awareness of other views and a comprehension of the difference(s) between one's own opinion (and the facts or other opinions upon which that opinion is based) and the opinions of others, and (4) *Appreciation* –a full awareness of the differences between our views and opinions and those of others. To truly appreciate differences, we must be aware of the nature of those differences.

Results

Average rater scores were entered into a linear regression analysis using the Statistical Package for the Social Sciences (SPSS) version 11.5. The regression analysis was run for each level of the critical thinking model adding in each rating on use of course etiquette to determine which elements of course etiquette weighted most heavily for each level of critical thinking. As expected, none of the levels of course etiquette weighted on **recitation** of fact and opinion, $F(3,8)=2.105$, $p=.292$.

For **exploration**, several elements of course etiquette had significant beta weights and lead to an overall significance of $F(8,3) = 110.632$, $p=.001$. The course etiquette elements that weighted on exploration were respect, sensitivity, and mutual exchange of ideas. In terms of the third level of the critical thinking model, **understanding** views of others, again there was a significant overall effect of etiquette, $F(8,3) = 67.646$, $p=.003$, but the course etiquette item that weighted significantly was mutual exchange of ideas, $t=-3.667$, $p=.035$.

Those students who were rated most highly on critical thinking also demonstrated the most use of interpersonal skills.

Finally, there was a significant overall relationship between the highest level of critical thinking – **appreciation** of the views of others – and course etiquette, $F(8,3) = 908.845$, $p=.0001$ and the following individual elements of course etiquette weighted significantly with appreciation: (1) respect, (2) sensitivity, (3) active participation, (4) feedback to others, and (5) mutual exchange of ideas. Each of these were significant at the. 05 level.

Discussion

These findings strongly support the notion spelled out in the literature that interpersonal skills are an important element of critical thinking. Indeed, those students who were rated most highly on critical thinking also demonstrated the most use of interpersonal skills. These findings do not, of course, allow us to determine if fostering interpersonal skills enhances critical thinking or if students with enhanced critical thinking skills are also more interpersonal. But these data demonstrate a clear relationship between the two. In order to determine the order of the relationship (which leads to the other), a pre-post design would need to be employed. Still, these findings are of value to faculty in terms of demonstrating that interpersonal skills are an important element of critical thinking.

It is important to describe to students how their work will be assessed for critical thinking. To make this clear, we included a clear statement about the critical thinking model in our course syllabus. This statement is included in Appendix C.

The information provided above strongly suggests that: (1) critical thinking can be taught in internet courses, (2) interpersonal skills are an important component of critical thinking, (3) faculty and students who have not taught or taken Internet courses have strong differences in perceptions of Internet courses, and (4) differences in perceptions between faculty and students about Internet courses do not completely go away when faculty have taught such courses and students have taken such courses.

We provide data that interpersonal skills are an important component of critical thinking and we outline methods faculty can use to demonstrate, facilitate, enhance and assess interpersonal and critical thinking skills in an Internet course. We believe faculty could incorporate both of these into virtually any Internet course. Indeed, it is very important that the reader understand this point very clearly: well-designed Internet courses can provide **better** opportunities to foster the kinds of critical thinking processes we have outlined than traditional face-to-face classes. Part of this is structural. Because an Internet course does NOT typically involve lecturing and presentation of material – material is posted ahead of time for all to see and process - the majority of "class time" is spent on reflection and analysis of material and student perceptions of that material.

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Randall E. Osborne has conducted scholarship of teaching projects illustrating how to: (1) maximize learning in online courses, (2) minimize the challenges of teaching in an internet format, (3) take advantage of the unique pedagogical features of online teaching, and (4) create online courses facilitating critical thinking and value exploration.

Paul Kriese' low socioeconomic upbringing near the waterfront of Buffalo, New York, and his years as a professor of political science have taught him that "we cannot reconstruct an environment of tolerance and inclusiveness unless we are teaching people to deconstruct the causes of hate in the first place."

Heather Tobey has just graduated with a B.S. degree in Psychology from Texas State University-San Marcos. She has taken a third of her classes online in order to obtain her Bachelors of Applied Science in Psychology. Without the use of the internet courses she would not have been able to pursue her educational goals as she is also a single mother of two and works fulltime.

Emily Johnson is a senior at Texas State University-San Marcos. Her broad interests include intercultural issues in psychology and helping students learn effectively in internet courses. She is now in the process of contemplating applications to graduate school.

Appendix A: Rating of Course Postings

Overall the posts from this student effectively demonstrates:

<u>Recitation</u> – state known facts or opinions.
The posts from this student clearly state known facts or opinions
```
 1--------------------2--------------------3--------------------4--------------------5
 strongly        somewhat            neither            somewhat            strongly
 disagree        disagree             agree               agree               agree
                                    nor disagree
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<u>Exploration</u> – analyze the roots of those opinions or facts.
The posts from this student effectively explore roots of opinions or facts
```
 1--------------------2--------------------3--------------------4--------------------5
 strongly        somewhat            neither            somewhat            strongly
 disagree        disagree             agree               agree               agree
                                    nor disagree
```

<u>Understanding</u> – involves an awareness of other views and a comprehension of
the difference(s) between one's own opinion (and the facts or other opinions upon
which that opinion is based) and the opinions of others.
The posts from this student reflect an understanding of the roots of the opinions of
others.
```
 1--------------------2--------------------3--------------------4--------------------5
 strongly        somewhat            neither            somewhat            strongly
 disagree        disagree             agree               agree               agree
                                    nor disagree
```

<u>Appreciation</u> – means a full awareness of the differences between our views and
opinions and those of others. To truly appreciate differences, we must be aware of
the nature of those differences.

The posts from this student reflect an appreciation for the diverse opinions of
others.
```
 1--------------------2--------------------3--------------------4--------------------5
 strongly        somewhat            neither            somewhat            strongly
 disagree        disagree             agree               agree               agree
                                    nor disagree
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Appendix B: Ratings of Course Etiquette

Track the number of times that the student named above, engages in each aspect of the course etiquette (put a hash mark for each occurrence of each aspect you encounter while reading the posts from this student):

1. respect for others (their viewpoints, their values, their beliefs),
2. the right to disagree but requires sensitivity to the viewpoints of others,
3. taking responsibility for being involved in developing the issues and topics relevant to this course,
4. active participation in all elements of the course,
5. continual feedback to the instructors about the course, course assignments, and individual viewpoints,
6. a commitment to the mutual exchange of ideas. This means we will not isolate definitive "answers" to the issues we raise but we will actively explore and respect the multiple sides to those issues, and
7. a responsibility to "police" ourselves. We are attempting to develop a community and this requires trust. In order to develop trust, we must know that we can share our ideas and not be "attacked." This also requires that we allow other class members the same trust and freedom we expect.

Appendix C: Important Notes about Critical Thinking and Course Contributions

All of your written work will be assessed on this model. In other words, all of your responses to questions must show all four levels: (1) recitation, (2) exploration, (3) understanding, and (4) appreciation. Higher grades will be given to those assignments that **clearly** demonstrate an effort to move upward on this continuum.

All course contributions (forum postings, exam answers, course papers) must be substantive contributions. *Substantive contributions are those that demonstrate*: (1) that a student has given thought to what he or she has posted, (2) that the student's comments have added positively to the discussion, (3) that the contributions adhere to the course etiquette principles outlined above, and (4) that the student has made progress along the four levels of the critical thinking model.