

WHAT OUR STUDENTS HAVE TAUGHT US ABOUT CRITICAL THINKING*

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Six critical thinking lessons learned from students of a family and consumer sciences class on family social issues are shared here. They are: 1. It is more difficult than both students and instructors thought. 2. Students perceived the environment in which they practiced critical thinking as non-ideal. 3. Class members helping each other were an essential part of the learning process. 4. Personalizing issues had both positive and negative affects on learning. 5. Role play was a particularly important activity for expanding students' viewpoints. 6. Individual self-assessment of their own criteria for learning frustrated many students. As an overall assessment, students reported that the skills they had polished were going to be useful for them outside of class. Reflection on these lessons can expand the critical thinking process as educators endorse helping students use critical thinking in deciding what to believe and how to act.

According to Norris and Ennis (1989, p. 1), critical thinking is "reasonable, reflective thinking that is focused on deciding what to believe and do." It fits well with aspects of critical pedagogy directed toward social change. Thus, critical thinking is a process that many educators believe is important for students to learn so that they can be informed participatory citizens. Ideas for helping students learn to think critically are common in the literature, although what really happens in classrooms with this type of teaching/learning has not often been reported from the students' perspectives. This article shares student perspectives from a class that attempted to expand students' thinking about family social issues.

In a formal study of one college class (Smith & Kienzler, 2003), 18 undergraduate sophomores, juniors, and seniors (including four adult students 25 or over) provide insights into learning the critical thinking process. Half of the students were taking a required course; the other half had selected the course as an elective. The class encouraged students to practice applying the critical thinking process to personal, family, and social issues, e.g. living together before marriage, sharing beliefs contrary to those of their families, and gay rights. Students selected issues on which to present opposing views, to role play related scenarios, and to form appropriate questions to evaluate the process. Data on their critical thinking processes were collected from transcriptions of video tapes of all class periods, student journals, and student class work. Data were analyzed by two researchers using ethnographic case study methodology. Findings revealed a number of lessons for other critical thinking teachers to contemplate.

One, critical thinking is hard--harder than students or teachers expected (Brookfield, 1994; King, 1992). One student verbalized this insight at the end of a period focusing on extensive, involved discussion about teaching sexuality in the classroom. When asked if it would be interesting to continue this discussion, her answer was no. Her justification was that she had already thought so hard she had a headache. Another student in a different class period said:

Others of us have a tough time with that [critical thinking]. . . . We should help each other, go the extra mile and help each other. . . . That's why we're in this class, to learn how to do it, and we should go out of our way to help each other. Because I'm having a tough time with it, and I see other people are too. (Tape 15, pp. 2-3)

Instantly, another student agreed. This student added: "It's something that needs a lot more than one course and a lot more hours learning. . . . There are techniques in it that are very hard" (Tape 3, p. 3).

One of the major reasons critical thinking is hard is that it requires students to work on two kinds of learning, both content and process, at once (e.g., Huba & Freed, 2000, p. 215-16). The content was often illusive, depending on the perspective (economic, social, political) being applied to the issue. There was no single source dealing with the content from all perspectives of the issues. Students had to be willing to find content in magazines, books, web pages, and through personal contacts. It was hard for them to consider content for multiple sides of a given issue; students were familiar with taking only one stance on an issue. Even assigning facts to the pro and con sides of the issue was not easy. One student says, "I did not read the 'yes' [side of the] issue so I wouldn't get it confused with the 'no' [side of the] issue" (Tape 14, p. 16).

The textbook for the process (Browne & Keeley, 1994) was a standard text written on a freshman level, and students thought the process described was quite simple until they tried to practice it. With some practice, they were able to hone the skills of defining issues, clarifying terms, identifying assumptions of others, and evaluating. However, the skills of questioning one's own assumptions, of gathering adequate evidence, and of constructing a persuasive rationale remained somewhat elusive to many, even by the end of the semester. Beliefs, which are hard to change (Douglas, 2000), also played a role. Too often class discussions would turn away from examinations of assumptions and consequences to statements of "I think/I feel" involving previously held unexamined beliefs and ideas.

It's very easy when presenting an argument to say I feel or I think. But when you do that you weaken your argument and it doesn't come across presenting a side of an issue. It sounds like you are presenting more your feelings. And that's what we're trying to overcome in this class. And what is a fact and what is an opinion. (Tape 28, p. 2)

Students found trying to articulate their view in successful communication, combining both content and process together into one successful package, a momentous task. Even when they did accomplish this task they frequently did not recognize their accomplishment and were still prone to ask, Did we do it correctly? In a specific class period requiring them to role play being the teacher and answer common student questions about the critical thinking process, they managed process and content very well, but they failed to appreciate their own performance and tried to return to the standard teacher-as-authority practice. Students made this point clearly in their comments on feedback:

Student 4: "I would be more intimidated by what you [professor] had to say than by what my peers had to say."

...

Student 14: "Because you have to grade. We're not going to put the grade on the GPA on her. You are. That's why she's more interested in what you have to say."
(Tape 28, p. 10-11)

Although evaluation of self and others had been emphasized throughout the semester, evaluation by the teacher was still seen as more important than their own or peers' evaluations of their work.

Two, students had to learn to work in what they considered a non-ideal environment for classroom work. Students came with a common opinion of what would be an ideal environment: it would be one in which the group held similar opinions, were all interested in the issue discussed, and had adequate time for leisurely discussion. However, in reality finding an issue of equal interest to all was impossible for them. Furthermore, personality differences in non-ideal groups made sharing opinions difficult, but they also taught students to produce even when involved in an uncomfortable social setting.

Sometimes that setting was uncomfortable indeed. One student reported, "When we do group work, I'm not comfortable with the people in my group. . . . I don't enjoy it" (JournalStu3, 3/22). Students learned to confront non-ideal situations, including students who did not think as they did, with an open mind:

Well, I'm starting to feel more comfortable with this class. YEAH!! On Monday I had my one-on-one discussion with [my partner]. In the first place, this was the only subject [my partner] wanted to do it [presentation] on [Is the Greek system a positive?] I felt somewhat awkward because she is in a sorority [writer is not] and I didn't want to offend her with my argument. I don't think this affected me too much. . . . I really tried to keep it as objective and unemotional [as possible].
(JournalStu11, not dated)

Part of the non-ideal environment is awkward time constraints such as inconvenient ends of class periods and mid-term tests. This constraint taught students time management skills needed to work around timing obstacles:

I do hope I can manage my time well so that I can pay full effort and attention on the assignment. . . . It [antecedent not clear] may cost me more time when we now have to work in pairs since I have to start my research again. (JournalStu5, 3/20)

Dialogues take time to develop. Students had to learn that dialogues also could not be exactly recreated; class period ends cut them off at inconvenient points, and frequently students were not interested in returning to the thought-provoking stances that were being successfully developed during the preceding period. However, they often left the classroom still discussing the topic among themselves. These time constraint issues reflect some of the constraints of standard academic terms, with their set number of minutes in each period and set number of weeks in each term. More creative work is needed in academia on ways to make this structured environment more learning friendly.

Three, this particular kind of learning is not something students can do by themselves; they need classmates to facilitate the process. One student said, "Finding the evidence and deciding how good the evidence is can be difficult. It's easier to find evidence and

decide its value in a group because others can bring insight to the value of evidence" (JournalStu3, 2/15).

Students commented on multiple occasions that this was a class they could never make up if they missed it, unlike their other classes where they could just borrow notes or read the book.

I mean [other classes] are not totally like this class. But if you're not here there's no way you can be doing the process, make the process up. You're missing out on that. That's not something you can go study and be able to catch up on. It's something you have to be here and experience to gain the knowledge of. (Tape 27, p. 1-2)

This commitment to participate can facilitate cooperative learning, where students actively help each other learn. Cooperative learning requires engaged persons who are willing and able to challenge each other to create new understanding. All members of the community are important; class attendance is important. This cooperative learning community is particularly suited to problem-solving tasks with more than one feasible solution (Lenning & Ebbers, 1999).

Four, students needed to get past their personal discomforts for the best learning to occur. In the beginning some were uncomfortable speaking their minds on personal topics: "My husband of nineteen years left our marriage about four years ago, so thinking about marriage success and failure is hard to look at objectively" (JournalStu6, 1/23). Some were not comfortable with the expression of multiple viewpoints: "[S]ome people [are] not giving others the chance to be right. This is especially sad in this class where we should be able to explore ideas and keep our minds open to new possibilities" (JournalStu18, 2/8). Others were uncomfortable not being sure of where the dialogue would go. They had to learn that they could not control a discussion: "Today my group was in charge of leading the discussion; it still didn't flow very well...then to have to call on your peers as fellow members of the class is very difficult for me" (JournalStu12, 1/30).

Part of the discomfort involved is that critical thinking is frequently emotional (Ben-Ze'ev, 1995), challenging personal beliefs or habits. Persons feel strongly about their beliefs and stubbornly resist new information that would mean changing them (Douglas, 2000). But, emotions and personalization are qualities which students thought were inappropriate for the classroom. A student commented in her journal that dialogue in public was difficult for her because she kept tearing up:

Many times I never do state my feelings because I'm concerned of being WRONG [sic] or made a fool of for what I believe. Because of my emotional self I do find it hard to be wrong or proven not so correct. . . . I just struggle with showing BIG emotions when being wrong. . . . When talking in class though, in my pair discussion, I felt safer stating my side [without] facing embarrassment of possibly tearing up like I do quite often. (JournalStu1, 3/29)

On the other hand, personalization allowed them to tell their real-life stories and relate personal experiences which helped them connect to the issues being discussed.

Five, role playing was valuable for taking pressure off the student, because the viewpoints were stated as those of characters, not students. Furthermore, role play used to

enhance critical thinking can broaden students' knowledge and acceptance of others' views. Students in this class watched a video that showed two students doing role plays of sensitive issues, such as sex education in school and stepchild-parent relations, and another student asking questions of the role players after the scenarios. When the class did their own scenarios they took the task seriously and developed scenarios that stimulated the rest of the class to ask questions. There were no journal entries or class comments on the tapes that indicated negative feelings about the role plays.

In this class, characters for role playing came from short stories on family issues or students' personal experiences. Playing a role, students could say things they would not say as themselves; they also learned to appreciate different viewpoints:

I feel the role playing is becoming quite beneficial. It's getting people to ask the right questions and look at issues through other people's eyes. It's surprising when playing another role you really "get into" it. I feel I'm actually this person who I'm playing. . . .It also is making us look at the issue and define people's true motives and feelings. We're becoming more of a "critical thinker"! (JournalStu11 4/19)

Literature furnishes a number of other examples of role play possibilities, e.g., simulated situation (Mindich, 2000) and designated roles for a question and answer session after role play (Devet, 2000). The regret was that the semester ended before the full potential of role playing could be reached in this class.

Six, self-assessment is hard--even harder than anticipated. Traditional grading usually involves external validation and competition among the group members. Getting students to be comfortable with their own learning, and to provide their own validation, was very difficult (Huba & Freed, 2000). When given the opportunity to set their own critical thinking objectives and the objective criteria for measuring achievement of those objectives, students floundered. This individual responsibility for learning did not fit with their preconceived notions of how grades are determined. Even setting the objective was difficult for them.

I must admit the first couple of weeks . . . were somewhat stressful in the sense of me not quite grasping what was expected of me in this class. It wasn't until I realized that it wasn't about what [the teacher] wanted from me but what I wanted to learn from the class [that the stress stopped]. (SelfevalStu11, no date).

[We] are going to have a lot of trouble with all this freedom. We are so programmed to do what our superiors want from us, to be totally free to do our assignments as we like is almost more difficult than if we had been given strict guidelines (JournalStu18, 1/24).

The difficulty with measuring their own performance is voiced as a frustration with success that is not measured in the traditional areas of reading, note taking, and parroting back information. Students who were successful in traditional academic venues such as large lectures and multiple choice tests were resentful of their ineptness with the new skills required in this critical thinking class.

One interesting aspect of assessment that both professors and students learned is that all efforts to do critical thinking do not have to be successful for students to learn: "Frustration is not

always a bad thing" (JournalStu15, 2/22). As one student pointed out, her group should have done more research on the issue they were presenting, but their failure to do so gave her the real life opportunity to present her perspective of the issue under real life exigencies which generally do not encourage a trip to the library. Presentation of a flawed argument gave them an opportunity to view the weaknesses of their argument and improve next time:

[Student name] did a good job with her evidence. She may have been a bit more prepared than I was. Next time I am going to make a list or write a short paper [before a presentation]. I need to be better organized (JournalStu13, n.d.).

Although they may have had difficulty in assessing themselves, students felt free to assess the course. After getting off to a shaky start in which they frequently wrote about feeling lost, most students were convinced of the value of critical thinking by the end of the course.

I was not raised in an environment that analyzes reasons. I think I was raised by my parents more with the goal of understanding things than questioning them. This course has opened a new world to me. One that I would like to explore more thoroughly. (SelfEvalStu15, 5/3)

I think I've learned a lot more than I ever anticipated in this class. I even overcame some of my shyness and reluctance to speak. I think I gained a lot of positive things from this class, and things I can implement [in] other parts of my life. (SelfevalStu16, 4/30)

Recommendations

The six basic insights from students on learning the critical thinking process lead to the following classroom recommendations. All of these recommendations are to supplement, not replace, basic core knowledge necessary for informed dialogue on the issue.

Perhaps the most important insight is that since critical thinking is hard to learn, students need continual opportunities to practice. Students can practice finding the assumptions in textbook chapters or newspaper articles. When students encounter opposing views on complex family and social issues, they can practice expanding the two views to multiple perspectives to avoid labeling one perspective right and the other wrong. Students can examine the evidence and argumentative progression in relevant editorials. They can write five-minute papers practicing some of the above skills in writing. Finally, they can write weekly learning journals to document their own learning.

To provide a more learner-friendly environment, teachers can investigate the possibilities of longer class periods: two 75-minute periods instead of three 50-minute periods, or even a 150-minute period once a week, in which a variety of activities are used to provide active learning in the classroom. Ideally, critical thinking skills will become second nature and students will practice them in environments outside of the classroom--when they watch television, go to the movies, or dialogue with roommates, friends, and family.

Because critical thinking is best learned in a group environment, students need continual opportunities for cooperative learning. In addition to special group projects, which seem widespread in our classrooms, students could experience frequent partnering or small groups to process problems presented in the lecture or textbook. These cooperative experiences are good

ways to vary student experiences in large lectures. Furthermore, they can help students move past personal discomforts by sharing their thoughts with just a few students at a time. Students can "hide" their response within that of the group. They can also learn to value and respect themselves and each other as they open up to others' thinking. More opportunities for role playing could also stimulate this kind of learning.

Students need new opportunities for self-assessment. Term papers, oral presentations, and group projects should be accompanied by students' evaluations of the work's strengths and weaknesses based on identified criteria. At least one project in each course could allow students to set their own goals and assessment criteria, including an argument for the importance of the criteria chosen. Final course evaluations of teachers should be accompanied by final self-evaluations of the student's own efforts and growth from the course.

Critical thinking is not a process used only occasionally, but a complete way of thinking. Making it a basis of every course could facilitate more questioning attitudes, logical thinking, and clearer communication by students and teachers alike. We invite you and your students to try the process more often, making critical thinking the main road in the education journey instead of the road less traveled.

References

- Ben-Ze'ev, A. (1995). Emotions and argumentation. *Informal Logic*, 17, 189-200.
- Brookfield, S. (1994). Tales from the dark side: A phenomenography of adult critical reflection. *International Journal of Lifelong Learning*, 13, 203-213.
- Brown, M. N., & Keeley, S. M. (1994). *Asking the right questions: A guide to critical thinking*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Devet, B. (2000). Role-playing in a question-and-answer session. *Business Communication Quarterly*, 63, 79-82.
- Douglas, N. L. (2000). Enemies of critical thinking: Lessons from social psychology research. *Reading Psychology*, 21, 129-144.
- Huba, M. E., & Freed, J. E. (2000). *Learner-centered assessment on college campuses: Shifting the focus from teaching to learning*. Boston: Allyn & Bacon.
- King, P.M. (1992). How do we know? Why do we believe? *Liberal Education*, 78, 2-9.
- Lenning, O.T. & Ebbers, L.H. (1999). The powerful potential of learning communities: Improving education for the future. Washington, D.C.: Eric Clearing House on Higher Education, The George Washington University, vol. 26(6).
- Mindich, D. (2000). The Ada Valley simulation: Exploring the nature of conflict. *English Journal*, 89, 32-39.
- Norris, S. & Ennis, R. (1989). *Evaluating critical thinking*. Pacific Grove, CA: Midwest Publications.
- Smith, F. M. & Kienzler, D. (2003). The use of the critical thinking process by family and consumer sciences students. *Kappa Omicron Nu FORUM*, 14(2), 1-22 [on-line serial]. Available: www.kon.org

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