Valuing Connected Knowing in the Classroom

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During the 1980s, critical thinking and how to teach it was the topic of numerous conferences, the subject of books and articles, even the basis for revamping curricula. I don't believe that all of the people who used the term critical thinking always meant the same thing by it, although there was probably a large commonality of meaning. I understood the term to mean thinking that goes beyond the superficial. I guess that makes sense, level of thinking (Perkins, Allen, and Hafner [1983]). More specifically, critical thinking is thinking that examines assumptions behind conclusions. It is rational—it is reasoning that is uncontaminated by emotions or personal feeling. It is rigorous—it seeks and finds the "holes" in an argument, the alternative explanations of a phenomenon, the contradictions of a mission statement, the implications of a policy change.

Because critical thinking is important thinking, it is essential that educators describe critical thinking skills, identify impediments to critical thinking, and teach their students how to use critical thinking to avoid sloppy, biased, incomplete conclusions. I preach the virtues of critical thinking to my college students, both first-year students and seniors alike, and I deliberately create assignments that will enhance their critical thinking skills.

But one semester, as so often happens in my teaching, my students took me at my word and forced me to rethink some assumptions. I had asked for a critical analysis of an experiment and they gave me a list, quite snide in tone, of every possible shortcoming they could think of in the experiment. As the semester moved along, class discussions of course readings came to involve more and more eye-rolling, more and more expression of incredulity that this or that author actually got a paper published in a respectable journal. A common example of such criticism is one familiar to those who teach developmental psychology: students will assert that Jean Piaget's entire theory of child development is worthless because he used only three subjects in his infancy studies—and all of them were his own children! For some students, this was great fun—there is a certain liberation in finding and labeling the foibles of academic giants and demi-giants. Still, I couldn't help but feel sometimes that students were missing the point. And, the situation worsened when students were called on to critique each other's presentations. I vividly remember the day one of our more reticent majors, a woman, got up to describe her current idea for her senior thesis, only to be lambasted by another major, a young man, who assured her and the rest of her audience that, having acquired much expertise in her topic over the years, he was sure he had identified the fatal flaw in her thinking.

Appreciative Thinking

I fretted a bit about how to inculcate in my students what I wanted to call appreciative thinking—thinking that honors the contribution that a particular writer, however controversial, has made, that shows respect for the difficulty of actually doing research. I tried to lecture my students about appreciative thinking. But again, what resulted wasn't exactly what I had in mind: "I think Piaget was really cool, studying his kids and all, and I'm really glad he did because he taught us all about how important kids are." Many students rolled their eyes when someone made a comment like that. At some points, so did I. Appreciating a writer, or an experiment, or a theory simply didn't seem as rigorous as did challenging, rebutting, rethinking. It seemed to take a lot more intellectual power to mount, or attack, an argument than it did to notice and build on the strengths of someone else's position. The attackers simply seemed smarter. Fortunately, my former undergraduate thesis advisor came, indirectly, to the rescue once again. Blythe McVicker Clinchy, a developmental psychologist from Wellesley College, reported on collaborative research performed at Wellesley and other places. She and her co-authors had been trying to apply the developmental scheme of William Perry to females. Perry had worked with undergraduates

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(most of them male) at Harvard during the 1940s and 1950s. Clinchy and her colleagues set out to apply his scheme to women and elaborate on Perry’s outline (Clinchy 1990). In doing so, they started to notice that their female participants often gave responses that did not quite fit the Perry scheme. A full description of their conclusions is beyond the scope of this article (see Belenky et al. 1986/97), but I focus here on the differences they found in their work with an all-female sample.

**Separate Knowing and Connected Knowing**

Belenky et al. (1986/97) made a distinction between two kinds of knowing or of relating to knowledge. The first, called *separate knowing*, is the kind identified by Perry and others, and it maps pretty directly onto what others have called “critical thinking.” Belenky et al. (1986/97) describe separate knowing as objective, detached, and adversarial in nature. Separate knowing is the rigorous, critical kind of thinking described at the beginning of this essay. Separate knowing is taking nothing at face value, taking no assumption for granted. Separate knowing involves evaluation of premises and the construction of arguments. Separate knowing involves “look[f]ing for what is wrong with . . . a text or a painting or a person or anything at all” (Clinchy 1990, 61).

Clinchy and her colleagues distinguished separate knowing from another form of knowing, which they call *connected knowing*, more prevalent among their female respondents. Connected knowing is personal and collaborative and draws on personal experiences and reactions. Connected knowing involves putting oneself into another’s frame of reference to try to understand how a text or painting or person or anything at all came to be, how it or such things make sense. Connected knowers try to ally themselves, or attach themselves, to another’s point of view to try to see things through that other person’s eyes. Connected knowers try to empathize with the other person and to refrain from judgment:

> So, while the separate knower takes nothing at face value, the connected knower, in a sense, takes everything at face value. She doesn’t try to evaluate the perspective she is examining; she tries to understand it. She does not ask whether it is right; she asks what it means. When she says, Why do you think that? she doesn’t mean, What evidence do you have to back that up? She means, What is it’s experience led you to that position? She is looking for the story behind the idea. The voice of separate knowing is argument: the voice of connected knowing is a narrative voice. (Clinchy 1990, 64)

My first reaction to this work was (I’m a little embarrassed to admit) quite skeptical. I prided myself on my well-honed skills of rigorous and objective thinking. Clinchy and her colleagues seemed to be characterizing those skills as “unfeminine.” I worried greatly about making gender-related claims of a new way of thinking: that women would be relegated to one style and men to another, with the latter inevitably being the one more prized. In other words, I didn’t want any research to support a proposition that women can’t be good, systematic, rigorous thinkers.

On the other hand, the atmosphere surrounding the unfettered critical thinking of my students and some of my colleagues could be downright depressing. Given that any psychological study or theory can be fairly easily “ripped to shreds,” it wasn’t exactly easy or fun to try to put forward my own ideas at conferences or in journal articles. My students, too, were often silent when asked for their own ideas on the nature of some psychological phenomenon, perhaps for fear of having their tentative ideas “torn apart.”

**A Classroom Research Project**

This situation led me to think more about the usefulness of the separate/connected knowing ideas. I’ve never been a big fan of interview data (like that collected by Clinchy and her colleagues), and I was trying to “jazz up” a course in cognitive psychology I was teaching. So, in preparing a course project, I drafted a questionnaire version of the interviews Clinchy and her colleagues had used. It included statements to measure agreement with both separate knowing and connected knowing statements. I faxed a preliminary copy to Blythe Clinchy, who graciously edited it, and my students gave the instrument to 128 college students that spring.

The clarity of the results was surprising. First of all, both the separate and the connected scales showed very good “internal reliability,” a psychometric property important for questionnaires. And this on our first try! The predicted gender difference also occurred (with Carleton College students, who, in many of my other research studies, have not exhibited gender differences found with other populations). Females consistently rated their agreement with connected knowing statements higher than their agreement with separate knowing statements, as predicted. However, and somewhat surprisingly, males showed only a slight, but non-significant difference in their rating of separate knowing statements vs. their rating of connected knowing statements.

We also found that the ratings of the two types of statements were uncorrelated. This suggested that separate knowing is not the opposite of connected knowing but, rather, a style of thinking that is independent of connected knowing. That is, one can be a fluent separate knower, a fluent connected knower, or both a fluent connected and fluent separate knower. That conclusion was important to me because it suggested that the kind of empathic, appreciative thinking I wanted my students to show a little more of could coexist with the kind of rigorous and logical thinking I also value.

Since that first study, we have run a number of others, mostly on college students but some on high school students (Galotti et al. n.d.). We have compared scores on the separate and connected knowing scales to performance on the Raven’s Advanced Progressive Matrices (Raven, Court, ...
and Raven 1985), a nonverbal intelligence test, and found no correlation. In other words, it is not that academically talented students show a stronger preference for separate or for connected knowing. We also compared scores on the separate and connected knowing scales to performance on a set of deductive and inductive reasoning problems, again finding no correlations. These findings led us to conclude that the separate and connected knowing scores we obtained reflect not learning capacities or intellectual power, but, rather, learning attitudes or styles.

The metaphor I have found to be useful in understanding a possible educational application of these results is one of bilingualism. When we teach our students French or Spanish or Chinese, it is not with the goal of decreasing their skills in English. To the contrary, we believe and hope that the learning of a second language might sharpen their understanding of the first. There is good empirical evidence to suggest that bilingualism promotes some cognitive flexibility (Hakuta 1986).

Likewise, it seems to me that if our educational system can find creative ways of promoting connected knowing, it need not be to the detriment of separate knowing. The two styles are separate and independent. Learning one style, however, may enhance knowledge of the other, and being a "bilingual" knower may promote a degree of cognitive and intellectual flexibility.

Collaborative Thinking Applications

In my own teaching at a liberal arts college, I've been experimenting with different assignments and classroom activities, and I've found that "connected knowing" activities are pretty easy to incorporate. Here are a few specific suggestions:

1. In problem-solving classes (such as math), break the students into small groups of, say, four. Ask one person to talk aloud as he or she tries to solve a problem. Ask the other students to observe his or her style of approaching the problem (regardless of whether or not the solver is solving the problem "correctly"). What does the problem-solver seem to be doing? After some time, give another problem. Have another student in each group be the solver; the others observe as before. Repeat until each student has been the solver. Now have the groups discuss the different problem-solving styles they have seen.

This exercise can achieve a number of goals. First, it can help your students to experience a different set of questions from those they are used to focusing on. They need to ask, What is this person doing and why is this person thinking correctly (or incorrectly)? Second, it can expose all of your students to different styles. Third, it can focus students on the process of problem solving, not just the solutions. Fourth, it gets everyone to take an active role and to pay attention to his or her own personal cognitive experience of the process.

2. In a social studies or language arts class, use role-playing activities. Have students present an issue from a particular point of view, one that they needed to research to understand. In an extended unit, students can do this kind of activity twice, each time taking a different point of view. Analysis of different accounts of the same news story from different perspectives makes a similar point.

Here again, the teacher reinforces the notion that people from different backgrounds or experiences might have different perspectives on an issue. The teacher encourages students to adopt a different frame of reference and to "think a mile in another's shoes," to corrupt a phrase.

3. In an art, music, or literature class, have students encounter a work and write an open-ended response to it. Have each student (who is willing) read what he or she has written. Ask the class to note patterns in the responses. Are women and men responding in different ways? Are older or younger students? Can students talk about why they think they have responded the way they have? Again, the emphasis is on being descriptive, not evaluative, and on promoting collaborative thinking in the classroom.

In Conclusion

Many other questions have been raised by the work on separate and connected knowing, and some of them are being addressed in ongoing studies. For example, do students with a definite preference for connected or for separate knowing do different things or follow different strategies when learning material? Do they thrive in different classroom settings? Does a more comfortable learning environment (e.g., one congruent with their preferred learning style) directly or indirectly affect their motivation, perseverance, or achievement? What are the most effective methods for promoting "bilingual" knowing and "collaborative" thinking?

These are important questions that as of yet have no empirically based answers. As a teacher, however, I do not feel I can wait for the definitive answers to those questions before responding in my classroom. Thus, I am always trying to think of ways to strengthen critical thinking with new ways of promoting connected and collaborative thinking as well.

REFERENCES


