While many in academia and the professional world emphasize the importance of critical thinking skills as a core outcome of a college education, faculty often struggle to develop critical thinking exercises as core elements of their lessons/pedagogy. In an attempt to address these obstacles, Broadbear identifies the four essential elements of lessons designed to promote critical thinking: ill structured problems, criteria for assessing thinking, student assessment of thinking, and improvement of thinking.

Ill Structured Problems

According to the author, ill structured problems are those that “cannot be described with a high degree of completeness, and cannot be solved with a high degree of certainty.” Ill structure problems, in other words, do not have one right answer, but rather have only better or worse answers determined by the quality of their reasoning. Students are often initially uncomfortable with such problems, as they assume that there are objectively correct answers to all academic inquiries. It is crucial, however, that critical thinking lessons require students to persevere and overcome these assumptions, as being able to develop a reasonable conclusion is fundamental to higher level thinking skills.

Criteria to Assess Thinking

In order to effectively develop critical thinking skills, students must be offered the criteria by which logical/reasoned solutions to ill structured problems can be judged. As examples, Broadbear suggests the following criteria: clarity, accuracy, precision, depth, breadth, logic, significance, and fairness. More specifically, the author offers an example of applying clarity as a means of assessing thinking, in which students are asked to state a position on an ill structured problem, elaborate on their positions by offering details, exemplify it (give examples), and/or illustrate the position through the use of analogy, chart, or other device. Without such criteria, argues Broadbear, students will not be able to assess their own or others’ thinking, and therefore remain limited in their critical thinking skills.

Student Assessment of Thinking

Once students have been trained to recognize and apply criteria to assess critical thinking, they also need to be involved in the assessment of their own work and that of other students. Getting students to assess their own thinking depends on two factors: comfortability and accountability. As with many activities, students will often avoid engaging in assessment unless they are held accountable for it. To this end, Broadbear suggests having students turn in assessments of their own/others’ thinking as required assignments. Faculty also have to explain the importance of this activity in terms that help students become less defensive of critiques of their work.
Improvement of Thinking

The final key to developing critical thinking skills is to include strategies that help students improve their thinking into lessons. In essence, this involves creating a process for practice that includes developing solutions, assessing them, revising the thinking offered based on the assessments, and resubmitting those revisions for additional assessment. As part of this process, Broadbear suggests providing students with examples of stronger and weaker thinking that they can use as guides.

Conclusions

One of the most common fears shared by faculty in regard to adopting pedagogy/lessons centered on critical thinking exercises is the sense that will have to sacrifice content. On the one hand, developing lessons that incorporate all of the essential elements of critical thinking are highly time consuming. On the other hand, Broadbear argues that the trade-off is not as problematic as teachers might believe, as students will still be engaging content. More importantly, while students may ultimately lose some breadth of content, the gains they will make in more fundamental thinking skills are worth it.

Applications

This article offers some straightforward advice on how to structure critical thinking lessons. For any faculty incorporating critical thinking into their lessons, Broadbear offers some reasonably suggestions. It would seem important, however, to recognize that each of the author’s four essential elements would require fuller development in order to be used effectively.

Citations of Interest


