Chapter 4
Can Mapping Improve the Quality of Critical Thinking in Essay Writing in an Introductory Level, Core Curriculum Class?

Leonard Shedletsky
University of Southern Maine, USA

EXECUTIVE SUMMARY

This study began with the question: Can mapping improve the quality of critical thinking in essay writing in an introductory level, core curriculum class? Two sections of the course, Introduction to Communication, were compared, without mapping and with mapping. Dependent measures were: (1) the word count for summarizing the critical incident to be analyzed; (2) the number of concepts/theories employed to analyze the critical incident; (3) the number of times a connection was made between the analytical concepts/theories and the critical incident; (4) the number of words used in summarizing the essay as a whole; and (5) the total number of words in the essay. In addition, the data were analyzed for practice since there were three attempts at essay writing. Practice at writing the paper had an especial effect on writing and mapping had an especial effect on laying out the problem and applying analytical concepts to it.

INTRODUCTION

For the suitably skilled person, mapping a complex argument promotes clarity and insight, more rigorous and complete articulation, and more judicious evaluation. Teachers use argument mapping to help students acquire basic concepts, better understand how arguments are constructed, and enhance their reasoning skills. Argument mapping can be an effective way to improve general critical thinking skills. In the workplace, argument mapping can promote rational resolution in complex, fractious debates; improved communication of important arguments; and better decision making (Tim Van Gelder, 2013).

In recent years, with the onset and dramatic growth of online education, a great deal of research interest has been given over to discussion and critical thinking. After all, one of the key arguments made for online education is its ability to offer discussion as a primary way in which learning takes place. Most educators seem to agree that critical thinking is a worthy goal of higher education. It has long been known that most online courses use discussion (Berge, 1997). Time and again we are presented with the idea—the claim-- that discussion is especially well suited for online environments, that students inter-act with one another and the teacher. We are told that they debate, they collaborate and offer constructive feedback and engage one another in ideas. We are reminded that online students get more time to think about what is said; they get more time to construct their responses. They write their thoughts which some tell us increases the opportunity to be mindful. Much of the reason for discussion is the belief that discussion exercises and helps to develop critical thinking. Derek Bok has written that faculties generally agree that "teaching students to think critically is the principal aim of undergraduate education" (Bok, 2006, p. 109).

Unfortunately, research does not find real support for the contention that online education produces higher levels of critical thinking. In fact, research into critical thinking online and in the classroom finds a real dearth of critical thinking in discussion. Based on a number of reviews of the literature, it appears that the amount and the quality of online discussion are quite poor (Garrison, Anderson, & Archer, 2001; 2003; Hunt, Simonds, & Simonds, 2007; Meyer, 2003; Rourke & Kanuka, 2007). We have encountered few individual teachers or students who take real issue with this claim. Moreover, as we explore further, we begin to see that this claim holds true for much of discussion in the classroom as well. As you might expect, the low level of critical thinking evidenced in discussion is also present in students' writing (http://wsuctproject.wsu.edu/; Van Gelder, 2005). Arum and Roksa (2011) wrote: " . . . many students are only minimally improving their skills in critical thinking, complex reasoning, and writing during their journeys through higher education" (p. 35).