Chapter 3
Examples of Concept Mapping in a School Setting:
A Look at Practical Uses

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EXECUTIVE SUMMARY

Through discussions with colleagues at several different institutions and teachers from all levels in my home state, it became apparent that classroom teachers have little or no exposure to good concept mapping practices. Background information about why concept mapping should be a primary tool in everyone's "toolbox" for learning and performance success is not common knowledge. Secondly, practicing teachers need concrete ideas for using concept mapping by and with students. After a couple of years of conversations at conferences and informally surveying my own undergraduate and graduate students, I decided to make an attempt to fill in this void. In this chapter I have presented relevant information about where, when, and how to use concept mapping as well as critical "how-to" tips for implementation by interested parties.

INTRODUCTION

Most schools and colleges of education do not expose pre-candidates to the use of concept mapping with students to any measurable extent. This means that teachers arrive in the classroom with virtually no training in the best practices of concept mapping. Without formal training in the process and without theoretical information as to how and why mapping can work well for a wide variety of students, an educator is not likely to instinctively know how helpful concept mapping with students can be. Concept mapping is also called idea mapping, mental mapping or mind mapping. According to Chan (2009), a concept map is a hierarchical form of structure diagram that illustrates conceptual knowledge and relationships within a specific topic from general to specific concepts. Another way to put it could be this: "Concept mapping is a method for representing knowledge graphically" (Hilbert & Renkl, 2008, p. 53).

My utilization of concept maps throughout many years adheres to principles developed and changed over time by Buzan (1996), Mukerjea (2004) and Nast (2006 and personal communications 2006, 2007, 2010), as well as North (personal communications 1999, 2000, 2001, 2003, 2006, 2010). A synthesis of the meaning of concept mapping, to me, is a visualization of some type of knowledge that allows for relationships to be readily seen; new ideas added or changed and also may be used as an effective planning and/or presentation tool for many tasks. The technique is powerful for brainstorming, representing complex structures or ideas, helping others to understand those complex structures and ideas, as well as a quick assessment of knowledge of subject matter and promoting group understanding, learning and collaboration.

As a faculty member who regularly teaches a technology integration course to pre-teacher candidates in a university's college of education, I often informally survey students with open-ended questions about strategies learned and applied in their student teaching opportunities. Four terms of this informal survey approach and anecdotal notation during face-to-face conversations and online class meetings have provided me the information that concept mapping is either a big void in the curriculum or dismissed as a useful technique by their instructors. The informal results and discussions with colleagues at several other institutions have all led me to two conclusions 1.) Graduates leave our institutions with little or no knowledge of the large role that concept mapping can play in the development of learning in a classroom; 2.) Students in the classrooms of our graduates are being denied more successful learning outcomes and the opportunities to be more productive and engaged.

I believe that professionals who are looking to improve student understanding of content, context and connections will better comprehend the possibilities for classroom use through the presentation of concrete examples and various uses in

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