

## Chapter 5

# Synthesizing What Was Learned: Using Social Annotation With Concept Maps

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### **ABSTRACT**

*Browser-based social annotation was integrated with concept mapping for assessing graduate teacher education students' learning in lieu of a final exam. Documents annotated online were required readings of three case studies and three chapters. Concept maps were organized around the theoretical framework that underpinned all coursework. Students chose whether to work individually or cooperatively and whether to use browser-based or hand-drawn concept maps. Most students did exemplary jobs synthesizing what they had learned, representing this knowledge and understanding in their concept maps, and explaining their thinking to the class. The results suggest that this is an effective, authentic, alternative assessment approach for summative evaluation. The uniqueness and complexity of this project led to a variety of recommendations for future implementations and research.*

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## **INTRODUCTION**

Social Annotation can be a powerful tool for collaboratively responding to readings, learning about and from different peoples' perspectives, engaging in critical thinking, and getting to know colleagues, whether they are students, professionals, others, or a combination. Thus social annotation potentially has content mastery, skill development and interpersonal benefits. Additionally, social annotation can be used in conjunction with other techniques to broaden and deepen thinking and learning. This chapter describes how teacher-education graduate students used HyLighter's online social annotation system with the Institute of Human and Machine Cognition's online concept mapping (CMAP) to synthesize what they learned.

## **BACKGROUND**

### **Social Annotation**

Social annotation, commonly defined as readers adding commentary to a document, has a long history dating to the Middle Ages, when manuscripts were annotated by scholars who used the margins and spaces between lines to engage in dialogue with other readers, correct errors, debate interpretations, and learn from the annotations left behind by previous readers (Lebow, Lick, Hartman, Dalglish, & Grundmann, 2011). It has been used for many different purposes, including analysis, explanation and criticism of text and in a variety of contexts. While annotations benefit the readers who make them by signaling attention, aiding memory, making interpretations, personal connections and solving problems, they can also benefit future readers if they are explicit and understandable (Kawase, Herder & Nejdli, 2009).

Annotating documents online has become increasingly popular, and research shows that the learning benefits of online annotations surpass those done on paper (Kawase et al., 2009). Pappas (2013) identified five free online annotation tools for teachers: Diigo, A.nottate, Crocodoc, Markup.io and Bounce. However, these are different from social annotation tools, defined as "...an online social bookmarking tool that allows for annotating (adding comments, highlights, sticky notes, etc.) of an electronic resource and supports easy online information sharing" (Novak, Razzouk & Johnson, 2012, p. 40). This occurs in an online social platform which enables interactions and discussions. As Novak et al., point out, other online social document sharing tools such as Google Docs do not allow annotations. They identify

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