



# Wikibooks in higher education: Empowerment through online distributed collaboration

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## Abstract

In this case study, wiki technology was applied to the development of an introductory academic textbook on information systems. While the development, production and distribution of traditional textbooks are influenced by commercial interests, the wikitextbook was developed collaboratively by faculty and by students, and was made available online free of charge. After about two years of activity, the wikitextbook accumulated 564 sub-chapters, co-authored by undergraduate and graduate students in more than 20 classes offered by seven academic departments across three Israeli universities. We discuss the potential of wikitextbooks as vehicles of empowerment to students, teachers, and the discipline. This type of collaborative online technology intimates an influence on the status quo in academic education in favor of less empowered stakeholders. However, caution is advised in drawing premature conclusions from results reported here. The implementation of wikitextbook should be augmented by a careful study of cultural, societal, behavioral and pedagogic variables. © 2008 Elsevier Ltd. All rights reserved.

*Keywords:* E-book; Wiki; Empowerment; Education; Computer-mediated communication

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## 1. Introduction

This paper is about the incorporation of wiki technology as an alternative platform for textbooks. We discuss the role wikis may play in alleviating some of the drawbacks of the

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traditional textbooks and of the methods of higher education predicated on the commercial publisher controlling the textbook. We suggest that the introduction of wiki-based textbooks disrupt the power relations and value chain in production, ordering and maintenance of curricular material. This disruption leads to a potential empowerment of both teachers and students, as well as of the discipline's community, leading to a better curriculum. We describe an experiment of the implementation of one college-level textbook converted to an online wiki and used by numerous students in multiple classes across several universities. The results of the case study hint at some potential empowerment outcomes. We conclude by suggesting the limitations of this initial attempt, and outline further steps in exploring the potential.

### *1.1. Academic textbooks*

Academic textbooks serve as both a core component and a centralizing force in academic education. Educators use textbooks as sources of knowledge, of illustrations and of exercises. Disciplines use textbooks as the canonical repositories and vehicles for ontological definition. Textbooks epitomize the discipline's dogma and paradigms, and are tools of perpetuating these to the next generation of students (Myers, 1992; Shapin, 1995). Textbooks are also influenced by powerful economic forces. The textbook market is dominated by publishers, many of which are for-profit entities, with a significant vested interest in the promotion of their product, and with maintaining and increasing market share in a competitive industry. Academic textbooks are expensive, with prices continuously and rapidly on the rise (NACS, 2007; Pressler, 2004). The nefarious impact of commercial interests on educational systems is best exemplified in the K-12 textbook market, where centralization, consolidation and market forces have led to homogenous textbooks aimed at a lowest common denominator (Benkler, 2005).

### *1.2. Electronic textbooks*

An electronic book (or e-book) is "a book composed in or converted to digital format for display on a computer screen or handheld device" (Merriam-Webster, 2007). Electronic books in general and electronic textbooks in particular, are harbingers of the promise of a new era in publishing. The traditional array of stakeholders related to books include authors, editors, publishers, printers, distributors, and readers. In the case of textbooks, curriculum designers and educational functionaries are added to this mix. The power relations among these traditional stakeholders evolved and solidified over the last centuries. Digitizing books challenges this set of power relations.

Saving the cost of paper and printing, minimizing the process of distribution, and doing away with the problem of outdated stocks was only the beginning. Digital books are also searchable, can be conveniently annotated by the reader, and can easily incorporate multimedia as well as internal and external hyperlinks to additional sources. Digitized books require no shelf-space and can be accessed online, obviating the need to carry around a physical copy. If necessary, they can also be printed on demand (Brown & Raisamo, 1997; Brusilovsky, Schwarz, & Weber, 1996; Ismail & Zainab, 2005; Libbin, 2001; Maxymuk, 2007; Wilson, Landoni, & Gibb, 2003). When placed online, digital versions of books introduce potentially new business models, and implement novel reading regime set-

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