

A Pedagogical Approach to Writing E-books

Tel Amiel, V. J. McClendon, and Michael Orey

Educational Psychology and Instructional Technology - University of Georgia

[tamiel,vjmcclen,mikeorey]@uga.edu

***Abstract:** Electronic books, or e-books, have the potential of filling an important niche in the publishing of textbooks. We discuss two wiki-based e-books that we have created illustrating a sustainable model, which can be followed by other instructors and institutions. We consider the questions of quality and sustainability for e-books.*

Palavras-Chave: Livros eletrônicos, livros didáticos, modelo pedagógico, wiki

The Electronic Textbook

Many institutions have begun to make educational materials freely available on the Internet. Higher education institutions such as the Massachusetts Institute of Technology (MIT), and others around the world have made their course materials available cost free under OpenCourseWare (<http://www.ocwconsortium.org>). A more meager development has taken place in the development of freely available textbooks. Significant web institutions such as Google (<http://www.freetextbooks.eu/>) and the Wikipedia Foundation (<http://wikibooks.org>) have devised systems to aggregate and host open access educational materials such as textbooks. Both systems are still in their infancy. A simple search for the topic of “education” in both sites provides limited results that are lacking in content, style and scope. Just as blogs have grown substantially, but not replaced mainstream media, e-books are potentially a complement to traditional print-based publications.

In this article, we overview our experience in designing and implementing two e-books in the field of educational technology. The pedagogical model we present here addresses two concerns with current development models for electronic books. We discuss issues of *quality* in open content, and project *sustainability*, also providing two examples of mature e-books which we have devised.

Issues of Quality

Only a short time ago, few could imagine that user-designed information could overpower the authority of traditional information sources. With the rise of Web 2.0 applications, such as blogs, wikis, and other collaborative tools, authorship and credibility have been the target of renewed interest. Many blogs, some written by single users of little notoriety have become authoritative sources of information. User generated content, such as those generated in daily blogs have become more than a source of

“underground” information or opinions. Freely available, user generated news redefines the power of traditional mass media controlled information channels and its repercussions are broadly sweeping. Few would have also imagined that a free, user-generated encyclopedia would rival the authority of such traditional texts as the *Encyclopedia Britannica*. Today, many consider Wikipedia to be the first place to search for valid and trustworthy information on the Internet. The rise of Wikipedia has raised serious concerns as to the accuracy of published texts in the age of the user-publisher (Giles, 2005). Open editing can present serious concerns for those domains where reporting credibility is of the utmost concern. Open access and highly credible journals are available in almost any field of inquiry and have proven to be sustainable (see, <http://www.doaj.org>). Open access journals differ in that they are closed to editing but can allow for interactivity to play a crucial role in how content is defined. For example Innovate (<http://www.innovateonline.info/>), an online, peer-review, open-access journal incorporates user comments and discussions in every journal article published. In this sense, the quality of the finished product is guaranteed and attributed but the “content” itself can grow. Similar concerns and compromises arise in the design of open access textbooks. The open textbook can be designed in multiple ways: open editing (Wikibooks), editorial supervision (Citizendium), or completely closed (Journals). Selecting the exact point in the scale of open to closed systems can affect more than the credibility and quality of the text.

Sustainability

Open editing systems such as Wikipedia benefit from the altruistic contribution of small pieces of information by many individuals. The process of writing an academic book chapter requires sustained selfless contributions of academics presenting the concern with sustainability issues. Authors, who are usually academics in public or private educational institutions, gain no economic benefit and little professional status from developing or contributing free resources. Tenure and promotion are dependent on publishing in journal articles and to a lesser degree, editing or contributing chapters to printed books. There is little concern for the social responsibility of research and publications, with a strong emphasis on quantity rather than value. Closed systems such as those presented by open access journals permit attribution and peer-review which can guarantee professional returns to substantial effort. If academics are to contribute to creating open access textbooks, the issue of attribution and control must not be taken lightly. Concerns with altruism are at the heart of the economic model of open content. Traditional textbooks follow the sustainable model of development, which has undergone serious criticism. Since most academic books are published by *public* educational institutions, it is useful to consider how academic time, effectively under “purchase” by the public, can be used to produce something which can be easily and freely utilized by the public.

Textbooks tend to be very costly for the end consumer, the student. Often university students complain about the upward spiraling cost of textbooks. This is exacerbated by replacement editions devaluing earlier issues when only minor changes have occurred. This problem is exponentially larger in poorer countries and communities due to reduced income levels and import taxes and costs. Some barriers include access,

such as language barriers and availability, and cost, which tends to be prohibitive. One alternative has been the embedding of advertisements into electronic books (<http://www.freeloadpress.com>) in order to remove or reduce the costs to the end user. The Global Text Project (<http://www.globaltext.org>) follows a similar but more socially conscious model. The project calls for academics, editors, and other contributors (such as students) from many nations to have small stipends to contribute their time. The project has received a seed grant, and will seek funding by Global 1000 corporations, who will be asked to contribute funding in exchange for prominent advertising in each book. Advertising and sponsor-supported free textbook projects are a step forward, but can suffer serious constraints. This includes finding support and advertising for unpopular topics or controversial issues. Moreover, they depend on continuous external funding for sustainability.

Two Examples

Our experience with electronic books began in 2001 when one of the authors decided to incorporate the writing of a chapter as an assignment in one of his graduate educational theory courses. EPLTT (<http://www.coe.uga.edu/epltt>) became an important online resource for those interested in a wide range of learning theories, educational ideologies, practical applications, and tested approaches to authentic classroom challenges.

The World Almanac of Educational Technology (WAET, <http://www.waet.uga.edu>) is intended as a forum for open discussion across cultures of the larger instructional technology community of practice including researchers, theorists, and practitioners at all levels. The main objective of each WAET chapter is to describe relevant political, economic, and social structures that affect educational technology integration, providing both an *overview* regarding the technology integration effort in the educational system of the selected nation as well as the *context* within a “case study” of a particular student, teacher, or school.

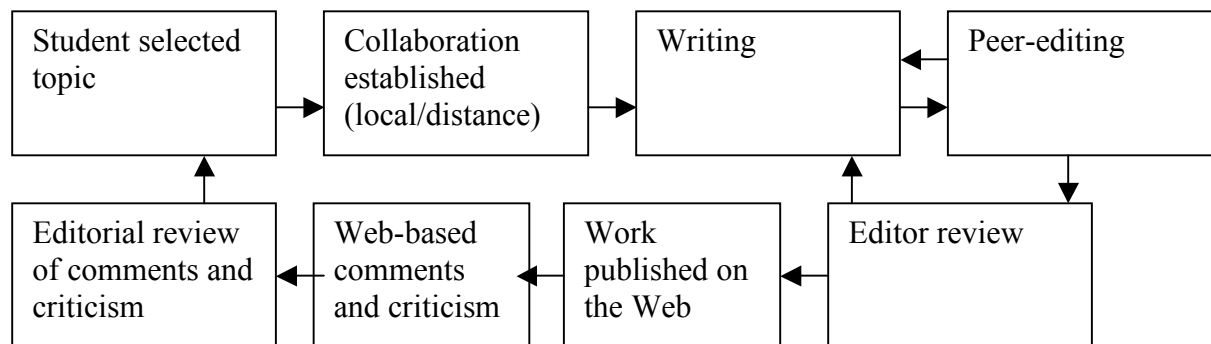
All chapters are written with several reviews taking place during a semester. There are peer reviews, faculty reviews and senior doctoral student reviews of chapters, depending on which semester the course takes place. The chapters that appear in the text have normally undergone three to five revisions. As a result, the writing of a chapter is often a very powerful learning experience for an individual or group of students.

The use of an open-editing system such as the wiki allows editors and authors to collaborate on a single, web-based document, without the need for co-location or sharing of a single file, or worrying about older versions and changes, which are automatically saved. While most of the authors so far have been advanced doctoral students, we have found that this mentorship can be a valuable stepping-stone to “open” peer review, which is afforded by the wiki framework. In essence, the final reader is a “peer” who can post his or her comments at will, and anonymously on the discussions tab, providing continuous review to the academic articles posted on WAET.

A Model

Both e-books follow a similar model, which we consider a viable and sustainable alternative to existing development models (Figure 1). The development model does not depend on external funding or resources. Students begin by selecting a topic of interest, based the course of study.

Figure 1. *E-book student writing development cycle*



Collaboration is established locally or externally. Students and their collaborators begin to write the chapter according to guidelines provided by the editor. The concern with quality begins by having academic authors (master's, doctoral) enrolled in courses which make use of the e-book. These chapters undergo continuous revisions, through peer editing, editor review, and finally, open review in the wiki. At key points (i.e. before the next course begins) the editor reviews the comments and criticisms of the chapter and compiles them for a new group of students who will revise and improve the existing chapter. Writing in these contexts becomes more than a simple class assignment. Students in both classes spend a substantial amount of time on an authentic, loosely structured task that is concerned with theory and application (Herrington, Oliver & Reeves, 2003).

Conclusion

We believe all students are capable of producing research reports and valuable content, which can be used by others. One more point should be added – an e-book improves over time. Because they are written by learners, they suffer deficiencies which are corrected over successive revisions. We hope the larger academic community can assist with this effort by contributing to existing e-books, or creating similar new texts.

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