The Global Text Project

Richard T. Watson
University of Georgia, rwatson@terry.uga.edu

Donald J. McCubbrey
University of Denver, dmccubbr@du.edu

KENNESAW STATE
U N I V E R S I T Y
COLES COLLEGE OF BUSINESS
Department of Information Systems

The Global Text Project

Richard T. Watson
Department of MIS
University of Georgia
Georgia, USA
rwatson@terry.uga.edu

Donald J. McCubbrey
Daniels College of Business
University of Denver
Denver, USA
dmccubbr@du.edu

ABSTRACT

The Global Text Project is intended to create global free textbooks for students in the developing countries. We argue that two key technological and social developments offer an opportunity to create a new model for textbook publishing. First, the Internet is a low cost channel for distributing information products in digital form. Second, global digital communities have created the platform for collaborative creation of content. Through this model a free and open content library will be developed for students covering all major subjects for an undergraduate education. This project is a contributory measure to the global efforts to address the educational resource constraints in resource poor environments in the world.

Keywords

Education, Developing countries, social networks, textbooks, open content

The Global Text Project

A GLOBAL PROBLEM

Poverty ensnares more than half the world's population, which lives on less than two dollars per day. We all have a responsibility to do something for our fellow humans and find ways to use our skills and knowledge to make some effort, however small, to address this global problem. Mass education is an effective means of leveraging many out of poverty, and investments in educational materials have a return up to 14 times that of the return on physical resources (Filmer & Pritchett, 1997). Textbooks are intrinsic to nearly all educational systems; however, the developed world's textbook business model does not meet the needs of those in the developing world. For example, a Biology textbook priced at $108 in the U.S. sells for $51 in Africa.[1] The U.S. GNI per capita is $41,400. In Uganda it is $250.[2] Obviously, a different publishing model is needed to provide access to the educational resources that are essential for the mass education of the world's poorest inhabitants. We have established the Global Text Project[3] to develop and disseminate open content electronic texts as an alternative publishing model to meet the educational needs of the developing world.

It is common for teachers and professors in most academic subjects to design their courses around a textbook, which provides a structured approach to learning from an authoritative source. Those with a comprehensive understanding of a topic typically write textbooks, and they have the experience to decide what should be covered. Thus, textbooks and their authors play a pivotal role in mass education. Hence, we need to find a means of delivering textbooks at affordable prices, and ideally without cost, to the students of the developing world.

There are two key technological and social developments that point to an opportunity to create a new model for textbook publishing. *First*, in the last decade we have discovered that the Internet is a low cost channel for distributing information products in digital form. *Second*, global digital communities have emerged that willingly collaborate to create content (e.g., Wikipedia) and software (e.g., Linux) that are freely available to all. These communities are reliant on the Internet to support their open collaboration.

There is a third element that also potentially plays a critical role in our endeavor. The world has 132 million university students, a massive relatively untapped intellectual resource. Too frequently, their intellectual efforts (e.g., assignments) are discarded at the end of the term. Professors need to develop infrastructures that enable some of this intellectual talent to be harnessed for the benefit of the global community. Our experience in working with graduate students to develop an XML textbook (Watson & others, 2004) was enlightening. We learned that students with appropriate supervision can develop a useful textbook and were highly motivated by the assignment.

---

[1]   http://www.maketextbooksaffordable.com/newsroom.asp?id2=15618
[2]   http://worldbank.org/
[3]   http://globaltext.org

The Global Text Project aims to exploit the two previously mentioned developments, the Internet and global electronic communities, to engage the dormant global asset of university students, and to marshal the world's academic and practitioner communities to create collaborative free textbooks for students in developing countries.

Textbooks are required across the board, from kindergarten to doctoral programs. As professors at university business schools, we are most familiar with the university system and also know how to operate in the international academic environment. It is sensible for us to focus on the area where we have the most domain knowledge. Thus, we have decided to concentrate on undergraduate courses at a comprehensive university, though the general model is applicable to any educational text.

OPENNESS FIT

Engaging a community in the open production and sharing of intellectual works has been the goal of the World Wide Web since its creation at CERN in 1990. However, the openness of the methods by which these intellectual works are created and shared varies considerably. We can identify four dimensions of openness: access, editing, reviewing, and timeliness (see Table 1), and our choices are shown in bold.

Access	**Open**	< ----- >	Proprietary
Editing	Everyone	< ----- >	**Few**
Reviewing	Informal	< ----- >	**Formal**
Timeliness	**Dynamic**	< ----- >	Static

Table 1: Openness dimensions

Open access means that a source's content is freely available for anyone to read or download (Wikipedia or Linux), whereas, one usually pays for access to proprietary content. The capability of editing the source can vary from everyone (Wikipedia) to a few (open source software or a proprietary book). Opening editing to everyone means a topic can have a global perspective and examples can draw from the full range of human activity. In contrast, when there are only a few authors, knowledge can be limited to their locale and personnel experiences. While experts on a topic often overcome their localness through long-term focused attention on their domain, they still have difficulty encompassing the diversity provided by the pooled experiences of many distributed contributors.

Sources also vary in the level of formal reviewing undertaken before public release of the content. Open source software and academic journals are typically reviewed extensively (we treat software testing as a form of reviewing) before release. Conversely, edits to a Wikibook are immediately seen by all readers, who are in effect informal reviewers because they can correct any errors they detect. Consequently, any content developer has to decide which combination of the openness dimensions provides the best fits to the goals of the producers and the needs of the consumers. Many people are reliant on a textbook's quality. Instructor and students want to be assured that the content is correct, relevant, and timely. A textbook must be a credible

authoritative source in order to gain adoption. At the same time, we would like to engage readers in improving the content by correcting errors, maintaining the currency, adding material to cover important omissions, and providing illustrative examples and cases. Thus, we believe that the correct mix for the Global Text Project is completely open access, editing capability for few, and formal reviewing. As a result, we have designed an infrastructure to produce reputable textbooks that retains the high level of potential reader involvement of a wiki.

Timeliness is the fourth dimension of openness. Some aspects of an intellectual work start to decay in value as soon as they are released because they contain data that age (e.g., the number of university students in the world). Thus, parts of these static works can gradually become irrelevant. Alternatively, if content is dynamic and open to editing, its relevance can be maintained. Thus, Wikipedia's opening two sentences for Pluto when accessed on August 25, 2006 reads:

> **Pluto** is a dwarf planet in the solar system. *It was classified as a planet until it was determined on August 24, 2006 that it is not a true planet.*

THREE ROADS TO THE TOP OF THE MOUNTAIN

There is a Chinese saying, "There are many paths to the top of the mountain, but the view is always the same." Our view is a library of 1,000 open content, electronic textbooks, and we have identified three paths to this viewing point.

Commissioning Books

Based upon our experience with the XML text, we started with the idea of seeking volunteers to write chapters to create a text. We called for volunteers from within the academic community to write chapters for texts on Information Systems and Business Fundamentals. Our optimism for this approach has been tempered by reality. While many volunteered to write a chapter and promised to meet the deadlines we set, less than a third delivered their chapter on time, and some have still not delivered. Furthermore, individual authors write individual chapters, and there remains the major task of integrating the material to give the book some coherency.

Acquiring Out of Print Books

We have accepted and sought opportunities to speak about the Global Text Project to academics. As a result, we soon learned that there a considerable number of out of print or unpublished books that authors are willing to publish under a Creative Commons License.[4] Mergers and acquisitions in the publishing industry have caused a pruning of offerings by publishers. For example, when two publishers, who were each offering two books in Information Systems, amalgamate, the new firm will likely discard two of the Information Systems books so that it continues to offer two books. When a book becomes out of print, most publishing contracts have a clause that enables the author to regain the copyright.

---

[4]   http://creativecommons.org/

It might well be that the majority of the books we need for the library exist in out of print format, and our task is to find the authors and persuade them to let us publish the book under a Creative Commons License. The author will retain the copyright. Out of print books have a considerable advantage over commissioned books, they are complete and integrated. However, they might be out of date, but we can get students to update tables, figures, and so forth to give the books currency, and in the process students create value for other students.

Buying the Copyright

Given sufficient funding, we could simply buy the rights for a currently published book from the publisher and then release it under a Creative Commons License so that it is free forever. This approach would support a more focused approach to creating a library. For example, we have identified a set of 30 books for a core science library, and buying the copyrights for these would be a major step forward in supporting university level education in many developing economies.

Going forward, we will use a blend of three approaches, We plan for the near future, however, to focus on finding out of print books as this an economical and fast way of adding material to the library.

A TRANSNATIONAL MODEL

An important aspect of the open content approach is that contributions can be made by anyone. In particular, since textbooks in many fields are often U.S.-centric and frequently written by authors from developed economies they often fail to give adequate coverage to the unique environments of lesser developed economies. The Global Text Project is structured to encourage contributions of content from students and professors in other countries. This will support a transnational model for the texts (Figure 1).
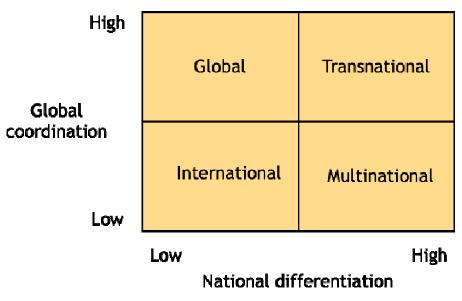

Figure 1: Strategies for international enterprises (Bartlett & Ghoshal, 1987)

There are four strategies that an international enterprise can pursue. Enterprises seeking high levels of efficiency will pursue global coordination to ensure that production, typically, occurs in those regions with the lowest total production and distribution costs. Those seeking high levels of effectiveness will aim to differentiate their products, marketing, distribution, and so forth to meet the needs of local customers. The transnational enterprise is able to combine efficiency and effectiveness to meet local needs at low cost.

The Global Text Project has some characteristics of a transnational enterprise. It uses the Internet to globally coordinate authors and enables them to collectively work on a book. Open content texts can be readily adapted to local needs, and adopters in different regions of the world can add and delete material to create a text that fits their needs.

Content developed by the global community with editorial oversight will ensure a global consensus on the quality of content. Soliciting local examples, exercises, discussion questions, and case studies from professors and students who are using the textbooks will promote an enhanced transnational and cross cultural understanding that is so important as commerce takes on an increasingly global dimension. Imagine, for example, the insights a U.S. student who has never been abroad might gain by reading and discussing a case study on the challenges of installing a networked database system in Nairobi submitted by a student from Kenya. With worldwide networks and collaboration software becoming ubiquitous, the potential exists for readers of a particular text to create a collaborative learning community.

CUSTOMER INVOLVEMENT

As the intention is to develop textbooks for students in the developing nations, we need to engage professors in these regions in deciding what books are needed and what they should contain. As a result, we have established an International Advisory Board, and we will expand this group as we grow the project.

We plan to also publish in Arabic, Chinese, English, and Spanish, so that we cover the four most widely spoken languages. We have established, or are seeking, collaborative arrangements with universities to support translation among languages.

LOOKING FORWARD

We have completed the proof of concept phase of the project. We now have five books available, including one in Arabic. A Spanish library based upon the work of scholars at the Universidad de Concepción is in preparation. The University has been paying faculty to write textbooks because of their high cost in Chile. It has agreed to contribute many of these books to the Global Text Library. We have just hired an associate editor to speed up the digital publication of books. We are also building the student operated enterprise to support marketing of the library to universities in the developing economies.

Ultimately, a free, open content library will be available for students covering all major subjects for an undergraduate education. Only by creating a library of this dimension can we effectively address the needs of higher education in the developing world.

Globalization affects all of us, but the very same forces that drive globalization also enable us to combine our talents to affect globalization. We can collectively assist many in the world to gain a better education.

REFERENCES

1. Bartlett, C. A., & Ghoshal, S. (1987). Managing across borders: new strategic requirements. *Sloan Management Review*, 29(1), 4353.
2. Filmer, D., & Pritchett, L. (1997). What educational production functions really show: a positive theory of education funding. *World Bank Policy Research Paper 1795*.
3. Watson, R. T., & others. (2004). *XML: Managing data exchange*. . Wikibooks. Retrieved from http://wikibooks.org/wiki/XML.

Authors

Richard T. Watson (rwatson@terry.uga.edu) is the J. Rex Fuqua Distinguished Chair for Internet Strategy in the Terry College of Business at the University of Georgia, Athens, GA.

Donald J. McCubbrey (dmccubbr@du.edu) is a Professor at the Daniels College of Business at the University of Denver, Denver, CO.