

Faculty Innovator Grant 2006  
Center for Learning Technologies

Final Report Form

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Project Title: (10 words or less)	Developing a Wikibook as an Interactive Text Alternative

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1. Describe the specific teaching and learning issues being addressed by the proposal.

*Textbooks as educational tools are outdated in four important ways.*

- First, the fact that they have a lengthy publication schedule (normally in the area of three years from beginning to end) means that they will inevitably include outdated information as part of the final product. Knowledge and information change at too quick a pace for this to be acceptable.*
- Second, because there are a relatively small number of people involved in the production process, there is, by necessity, a limitation on the perspectives that can be included.*
- Third, they are a passive medium for transmitting information. The reader takes no active role in the development of the knowledge, they are simply expected to read and digest that information.*
- And fourth, they are limited by the bound paper form. The book itself cannot include video, audio or other multimedia presentations, and although publishers have tried to minimize this issue by including CD-ROMs with their texts, these are, at best, "add-on" solutions that do nothing to improve the built in limitations of the paper form.*

*Each of these four issues limits the teaching and learning process by placing barriers between the participants and the content.*

*Unfortunately, these four weaknesses are inherent in the textbook format, and cannot be overcome as long as we continue to depend on them as a source of knowledge. In order to counter these issues, we propose the use of Wikibooks to create an open-source textbook development process. Using the consumers of the knowledge (students) as the producers of the form of that knowledge as well, we hope to more actively involve them in the learning process, widen the perspective involved with the presentation of the material, more quickly adapt texts as new knowledge dictates, and present the material in a more dynamic form.*

2. Describe the revised specific teaching and learning issues being addressed by the proposal (if applicable):

*The teaching and learning issues did not change.*

3. Describe the development activities involved addressing the learning or teaching issue.

*During the Summer of 2006, the instructional leaders of the course met regularly to design the course. Included in the design discussion were specifics concerning the organization of the textbook, the chapter and subchapter topics, the dynamics of student participation (such as, selection of topics, submission of topics, reading of topics, and rating of topics).*

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*During the Fall of 2006, a research and organizational committee comprised of a cohort of graduate students and the instructional staff of ECI 301 functioned as a research and development consulting group. This group was tasked with formulating and exploring research into the efficacy of the Wikibook design process – including data collection and monitoring student responses. Additionally they provided support for needed real-time modifications in the Wikibook development process, the most important of which was the development of a series of tutorials to assist students with the logistics of the wiki process.*

4. Describe the learning outcomes attained by the project.

*The initial proposal included three learning outcomes.*

- Learning Outcome #1: Students will assist in the development of an online textbook of their own learning materials.** *This was completed using the Wikibook protocol, and is now in a second edition. Access to both the first and second editions can be found at [http://en.wikibooks.org/wiki/Social\\_and\\_Cultural\\_Foundations\\_of\\_American\\_Education](http://en.wikibooks.org/wiki/Social_and_Cultural_Foundations_of_American_Education)*
- Learning Outcome #2: Students will effectively track their progress and contribution to the textbook using a blog.** *Blogs were not required due to the availability of Discussion pages on each Wiki page. These discussion pages were intended to allow the students to interact and describe their decision making process for the development of their selected topic. This aspect of the process made only a minimal contribution, as students did not utilize the Discussion pages regularly.*
- Learning Outcome #3: Students will be more actively involved with the format of the content.** *For the purposes of comparison, a survey was administered to the students in the Summer of 2006 (the last semester where the traditional text was utilized) and the Fall of 2006 (the first semester of the Wikibooks process). This survey was designed to gather information on student perceptions and usage of the textbook. The results were very encouraging.*

*Analysis of these data showed that a higher percentage of students stated that they used the Wikibook frequently than students in the summer had used the traditional textbook. The percentage of students stating that they never used the text to prepare for the course dropped from 37.5% with the traditional book to 5.3% with the Wikibook. The percentage who indicated that they learned “nothing” from reading the textbook dropped from 27.5% in the summer to less than 1% with the Wikibook, while the percent saying that they learned “a fair amount” or “a great deal” rose from 45.0% to 83.9%.*

*During the summer, 100% of students stated that they spend 2 hours a week or less reading the textbook, with 50% saying they spent 0 hours a week reading. The percentage indicating that they spent no time each week*

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*reading the textbook dropped to 4.3% in the fall, with nearly 33% of the students indicating that they spent at least 3 hours a week reading the textbook.*

*The students were also asked to indicate what percentage of their learning was from the textbook and what percentage was from the lectures or other online materials. During the summer, 72.5% of students stated that less than 30% of their learning was from the text, with only 5 percent saying that more than 50% was from the text. With the Wikibook, only 18.7% of students stated that they learned less than 30% from the textbook, and 44.4% said that at least 50% of their learning was from the text. More than 10% indicated that at least 70% of their learning came from the text. We considered this balance ideal – as our objective was to have one half of the course learning coming from activities associated with the development and use of their Wikibook.*

*When asked to indicate how actively they were involved with the text, 41.5% of summer students indicated that they had no involvement, and 22% indicated active or very active involvement. With the Wikibook process, less than 1% said that they had no involvement, and 61% stated active or very active involvement.*

*Students were also asked to compare the textbook used in the course with textbooks in other courses. During the summer, 12.5% said the textbook was “much worse” and 47.5% said it was “better.” With the Wikibook, only 1.1% said that the textbook was “much worse” and 58.8% said that it was “better.” The percentage of students saying that the textbook was “much better” more than tripled from 5% in the summer to 16.6% in the fall.*

*The percentage of students who indicated that they used the textbook “a lot” and their grade would be affected if it were eliminated from the course rose from 12.5% in the summer to 31% in the fall. The percent who said that the textbook was “worthless” and it would not affect their grade to eliminate it fell from 22.5% in the summer to 1.6% in the fall.*

5. Describe unexpected outcomes, if any.

*The most unexpected result was the extent of student buy-in to the process. It was assumed that students would enjoy the process and would be more involved; however, as the results described earlier show, the extent of student participation and empowerment was remarkable.*

6. Describe the impact of the completed project on your colleagues, department, college, or community.

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*A Brown Bag lunch was conducted in January of 2007 to present the project and the survey results to colleague. This presentation engendered a good response. There is much interest in the capabilities of the project. One faculty colleague, Dr. Joan Hecht, who has a joint appointment with Thomas Nelson Community College is asking her students to join ours in preparing topics for the 2<sup>nd</sup> edition. Another colleague, Dr. Gail Dickerson, joined by the Education Research Librarian, Nancy Shafer, is working with Dwight Allen and Peter Baker to develop a grant to continue exploration of the Wiki process in relation to its credibility and effective use.*

7. Describe how the project can be a model, template, or prototype for use by other instructors.

*This project can easily become a template to follow with other large classes (or for collections of smaller classes working together), as demonstrated by Joan Hecht's current exploration and other colleagues expressed interest in trying variations in their classes. One doctoral student is trying the process with a 12<sup>th</sup> grade IB class at Granby High School in Norfolk. In order for successful implementation, there is a need for instructional support – in the form of thorough pre-planning of the textbook's outline of topics, and technical support – in the form of wiki processes and the rating scale implementation.*

8. Describe the technology used to help address the issues described in the proposal.

*Much of the technology used in this process is publicly available. The Wikibooks process is a subset of the Wikimedia organization (which runs Wikipedia, among others). Internet access is required in order to access the text for the purposes of reading and editing. The only technology used that required on-site technology support was the rating scale used for each submission. This process utilized a Filemaker Pro database and server, which is housed in Dr. Allen's office.*

9. Describe products, if any, that are a result of the project.

*There are now two editions of the textbook. The first edition includes 15 chapters and 87 subchapter topics – each chapter also includes a series of supplemental submissions. These are the students submissions which were not selected to be included in the "final" version of the first edition. The second edition of the text includes 20 chapters and 149 possible subchapter topics. It is still under development.*

10. Describe the future plans for this project, if any.

*As the instructional design is in place, the textbook process will continue as a central element of ECI 301 in coming semesters. The process lends itself to expanding the present text (which is the current semester's plan) and also refining existing content. Both of these tracks will be explored.*

11. Attach a financial report with updated Budget Plan Matrix.

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**Final Budget Matrix**

<b>Budget Item (equipment, personnel, software, etc.)</b>	<b>Qty</b>	<b>Total Cost</b>	<b>Source of Funds</b>	
			<b>Amount from FIG</b>	<b>Amount from Other Source</b>
Principal Investigator Stipends	2	\$2000	\$2000	\$0
Educational Reviewer Stipends	5	\$1000	\$1000	\$0