Dr. Amy Acton and her team began the process of developing an e-textbook for PUBHLTH2010: Introduction to Global Public Health suitable to replace existing print textbooks in the field. This textbook will provide a core curriculum, making use of digital features to enhance the delivery and currency of information. In addition, Dr. Acton developed a pedagogical model that guides students to develop and contribute material to the e-textbook, the best of which may be incorporated into future editions. The text and curriculum will serve as the basis for the increasing number of sections of this gateway course and be available for adoption by students and instructors at other institutions. During this grant term, the team was recruited, the textbook was planned in detail, technological tools were chosen, design templates were established, and a first chapter was composed.


**Overview**

Dr. Acton formed a team of student-editors—former students in the course—to compose a new etextbook for the undergraduate Introduction to Global Public Health. Existing paper textbooks on the subject were unsuitable: quickly outdated and lacking the passion that Dr. Acton believes is crucial for motivating students. The Impact Grant funded a year-long effort to build the editorial team, choose appropriate technology, develop processes and standards for composition and editing, and pilot the initial distribution of the etextbook to students.

**Outcomes**

The project was a success. The chapter that the team produced during the Impact Grant pilot phase was well-received by students and helped them to produce quality "TED-talk" assignments. Student ratings of technology use, the course and its content, and the College of Public Health all improved. While less of the textbook was completed during the grant than had been originally hoped, all the pieces are in place to enable future chapters to be produced more quickly. Dr. Acton has composed a detailed plan for the content of future chapters, a high-functioning team has been established, and production processes have been refined.

**Process analysis**

The CPH and ODEE teams developed an effective working relationship over the course of the grant project. Regular meetings proved important to maintain effective communication and progress. Most important was the enthusiastic participation of team members. As in any project, some aspects could have worked better. Uncertainty about which ebook technologies to use—the field is currently in a state of flux—meant that some time was used less effectively than if the tools had been chosen earlier.

**What we learned, in a sentence**

Students are capable of more than most people think, and should be included as co-creators in more learning technology projects.
College of Public Health

Project lead

- Amy Acton—Clinical Assistant Professor "Introduction to Global Public Health" Editor, "An Innovator's Guide to Global Public Health"

Undergraduate Student editors (from BSPH and GPH Minor)

- Sarah Newman—Public Health ’15 (Minor in Statistics)
- Meaghan Novi—English ’13 (Minors in Global Public Health and Global Development)
- Helina Selemon—Microbiology ’12
- Yibo Shao—Nutrition ’13 (Minors in Global Public Health, Statistics, Biology)

Project contributors

- Michael Bisesi—Senior Associate Dean CPH and Director, Center for Public Health Practice
- Anand Khurma—Instructional Development Specialist, Center for Public Health Practice
- Chris Rea—Doctoral Candidate CPH and Teaching Assistant, Introduction to Global Public Health
- Don Shymanski—Director, CPH Information Systems
- Katherine Renick—Manager, Research Administration Services, CPH
- Daniel Sabatino—Web Application Developer, CPH Information Systems

Office of Distance Education and eLearning (ODEE)

Project lead

- Henry Griffy—ODEE Grants Support

Project contributors

- Robert Griffiths—Director, Digital Scholarship and Development
- Tom Evans—ODEE Sr. Instructional Designer and Open Courses Coordinator
- Eric Schnell—University Libraries
- Stephanie Rohdieck—University Center for the Advancement of Teaching
Project Overview

The goal of this Global Public Health Impact Grant Project Team was and is to enable the continued growth and expansion of undergraduate education in Global Public Health while maintaining outstanding student engagement and interaction; we aspire to create a new teaching model for the gateway course, PUBHLTH 2010, in which students are co-creators and co-curators of an "Introduction to Global Public Health" e-textbook.

Build a Foundation for an Authoritative and Marketable, Dynamic, Interactive e-textbook that Incorporates Student-contributed Material

- Build an e-text frame/container for existing course content with a chapter for each item of existing course content, that item linked and/or embedded, and an introductory description.
- Draft a table of contents for the complete textbook, as well as a description of the structure and contents of future chapters.
- Maintain the highest standards of accessibility, usability, and interoperability.

Modify Curriculum to Integrate the e-textbook into Teaching and Assignments: (e-textbook/instructor to students)

- Incorporate relevant portion of the textbook into at least one suitable part of the Spring 2013 pilot of the course.
- Develop standard documentation and training to enable students to use advanced features of textbook.

Adapt Assignments to Generate and Capture Content for Future Versions of the Textbook: (students to e-textbook/students)

- Images that are submitted as part of the "This is Public Health" archival image gathering assignment will serve as illustrations for Chapter One.
- Group presentations that students give in the middle of the term will be captured in forms suitable for use in the e-textbook and/or course materials for future semesters.
- The "TED Talk" presentations that students produce at the end of each term will be captured in forms suitable for use as e-textbook and/or course materials for future semesters.
- Design routine ways to capture and catalog each assignment, including relevant rights and permission information.
**Design Sustainable Editorial and Distribution Models for the Textbook and Curriculum: (overarching organizational model)**

- Establish a workflow to review, select, and edit student-generated content.
- Hire and train student editors to manage that workflow and curate student-generated material for the e-textbook and course.
- Choose and implement appropriate distribution model (pay, open-access, hybrid) and set up rights and permission-gathering protocols accordingly.
- Build list of likely Grants and Funding Sources (Top Ten).

**Project and Process Goals**

- Identify, master, and utilize cutting edge educational technology to benefit the students
- Create an inspiring, more personal educational experience in a learning community, similar to that of a small liberal arts college, but within the large institution of OSU (best of both worlds)
- Consider new ways to engage students in the community as part of the class experience, both locally and internationally (service learning)
- Instructors will develop best practices for incorporating student work into course materials
- Instructors will develop best practices for producing and delivering course-specific e-books
- Students will gain basic knowledge about the nature, history, and practice of Public Health as a global practice
- Students will gain research skills for learning more about Public Health using electronic resources
- Students will demonstrate the ability to integrate their abstract knowledge about Public Health with their own experience
- Students will gain skills of researching and presenting information about specific topics in Public Health in multiple formats.
Goals achieved

• Drafted a table of contents for the complete textbook, as well as a description of the structure and contents of future chapters.

While the chapter produced during the pilot was less of the textbook than we originally hoped to complete during this year, a detailed plan for the remainder of the textbook was composed during the pilot. That plan maps etextbook content to multiple accreditation systems, while also providing detailed guidance about what each chapter should contain.

• Maintained the highest standards of accessibility, usability, and interoperability.

The team consulted with Ken Petri to better understand how technology can empower students with disabilities. Composition procedures were designed to incorporate accessibility best practices, such as including a description of all pictures that would be interpreted by "reader" tools.

• Incorporated relevant portions of the textbook into one suitable part of the Spring 2013 pilot of the course.

We completed the final chapter, *Integrate, Innovate, and Inspire: Discovering Your Passion in Global Public Health* and implemented it for use in the last 5 weeks of class as a companion and guide to the final project.

• Hired and trained student editors to manage that workflow and curate student-generated material for the e-textbook and course.

We were fortunate to be able to hire and compensate 4 student editors who joined our team in January. Three graduated and one is remaining as Chief Editor, a paid position. We have engaged additional students as junior editors (unpaid) and are working on a business plan in which we will document alternative compensation mechanisms suggested by students.

• We successfully identified and utilized cutting edge educational technology to benefit the students.

As noted above, identifying suitable technological solutions was not easy. Most e-text creation tools present some combination of three shortcomings: they require complex configuration and training; they provide a restricted feature-set (including limited ability to produce accessible content); and/or they produce content in formats that can only be viewed on a limited number of devices.
Ashley Miller (Digital First) played a crucial role by teaching the team to combine the Mac Pages and iBook Author applications with other tools to develop a relatively flexible and simple procedure for converting content into e-text format.

- We began the creation of an inspiring, more personal educational experience in a learning community.

We look forward to watching this community expand with additional classes. An unanticipated benefit was the number of students from the current class who volunteered to become junior editors; others are working to create stories from their summer travels abroad.

- We considered new ways to engage students in the community as part of the class experience, both locally and internationally (service learning).

As noted above, we have students traveling abroad and documenting global health issues for submission to the book. In addition, we created a student-led initiative entitled EnCompass (Empowering Neighborhood of Columbus) in which undergrad students help patients navigate the social barriers to health. They are beginning implementation at OSU East and Broad Street Presbyterian Food Bank and have created an Advisory Board of hospital and community executives to guide them. Dr. Acton and Chris Rea are traveling to Rwanda this summer to explore a complementary international service learning opportunity for undergrads in partnership with the Columbus Zoo.

- Instructors are continuing to refine best practices for incorporating student work into course materials.

We most recently met with copyright experts to guide creation of a system to appropriately document and store student content and permissions. Students selected Box and Google doc folders (with CPH hard drive backup) as the most useful tool for curation.

- Instructors continue to develop best practices for producing and delivering course-specific ebooks.

Our experiences with the first chapter are informing our second go around and we will continue to tweak the process with the goal of creating a template for future editors as well as others who are interested in the process.
• Students gained basic knowledge about the nature, history, and practice of Public Health as a global practice as demonstrated by their class work and final essay.
• Students successfully gained research skills for learning more about Public Health using electronic resources as demonstrated by their midterm and final project work.
• Students demonstrated the ability to integrate their abstract knowledge about Public Health with their own experience.
• Students gained experience researching and presenting information about specific topics in Public Health in multiple formats (as above).

The final pilot chapter allowed students to identify their passion within the field and give a successful "TED-talk" which integrated their knowledge of the field, identified innovative solutions to pressing global public health issues and inspired the entire class to learn more. (Demonstrated in discussion board conversations, final essay, survey results).

**Goals partially achieved**

• Developed standard documentation and training to enable students to use advanced features of textbook.

We held a special in-class session with our student editors for both sections of PUBHLTH 2010; they were able to demonstrate access and trouble shoot in a very "peer-peer" dialect. Their presence inspired others to participate in our ongoing e-book project as junior, and one-day senior, editors.

• Images that were submitted as part of the "This is Public Health" archival image gathering assignment will serve as illustrations for Chapter One.

This effort was an adaptation of an already existing assignment. We successfully collected the pictures and will use them in the creation of Chapter One (Fall 2014). The students gave permission by electively submitting to a dropbox. We will continue this assignment with subsequent classes.

• The "TED Talk" presentations that students produce at the end of each term were captured in forms suitable for use as e-textbook and/or course materials for future semesters.

During Fall semester we used a tripod single camera and lecture-capture system to record the TED talks of those students interested in submitting to the e-book. We found this system to be too cumbersome while resulting in poor quality recordings; we have decided to explore having a "best-of" event at the end of the year where we do more professional videography. Currently each class votes for the top three TED talks. What we envision is an evening event for all public health undergrads through our student organization, Buckeyes4PH. Students will improve and repeat their talks for recording purposes; a much broader audience will get exposure to their
innovative ideas. We would love to see this become an anticipated annual event for our CPH community.

• Designed routine ways to capture and catalog each assignment, including relevant rights and permission information.

This aspect of the project is continuing to evolve. We originally anticipated using OJS software but, given the simplicity of our submissions and the shortage of time to train our editors, have instead used "box" cloud-based storage mechanisms and google docs, with folders coinciding to each chapter. The Chapter X references were captured using Mendeley but we anticipate using EndNote in the future.

• We are continuing to establish a workflow to review, select, and edit student-generated content.

As mentioned above, our initial solutions are being reconsidered. Student Editors are now repeating the process to create additional chapters; they are reviewing and documenting procedures to create an more streamlined workflow.

**Goals not achieved**

• Chose and implemented an appropriate distribution model (pay, open-access, hybrid) and set up rights and permission-gathering protocols accordingly.

This aspect of the project is continuing to evolve with a final business plan expected Fall Semester.

• Built list of likely Grants and Funding Sources (Top Ten).

We have found ourselves reconsidering budget and compensation and will create a business plan as above as well as continue to research alternatives. We plan to do a focus group when students return this fall to explore this issue. We feel that we can consider grants after one more year of evolving the e-book.

**Goals not actively pursued**

• Built an e-text frame/container for existing course content with a chapter for each item of existing course content, that item linked and/or embedded, and an introductory description.

After preliminary exploration of alternatives, it was decided that this conversion would not provide enough benefit for students to justify the effort required and the copyright complications it would create. Material continued to be delivered to students as Carmen content items.
• Group presentations that students gave in the middle of the term were captured in forms suitable for use in the e-textbook and/or course materials for future semesters.

We did not attempt to actually record the talks, but did have Henry Griffy do a mini-lecture on how to upload to Mendeley, a reference and resource citation open-source, cloud-based solution. We found that students were not as comfortable using the system as we had anticipated. We will be reconsidering how to best capture content from the midterm group projects over the next year.
Project Implementation

Students impacted by pilot

Approximately 120 undergraduate students in two sections of Global Public Health. In addition, the four students who served as editor were impacted.

Approximate time spent by CPH instructors, staff, and student-editors

At least 600 hours; likely more.

Budget and expenditures

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Implementation Timeline

Autumn 2012

Team convened in August for "Retreat" to begin Charter. Following completion of Charter and IRB application, production work began. We researched options for ensuring the ebook would be accessible and device agnostic. We explored curating systems and reference software. Also we wrote two blog posts for ODEE.

Spring 2013

Implementation began during Spring semester. Students were hired and trained. We drafted, edited and produced our pilot chapter. We oriented PUBHLTH 2010 students and completed pre and post student surveys per our IRB proposal. In addition, we attended the INNOVATE conference and presented a poster.
We feel that the student response to the textbook was as good as, if not better than, we anticipated, even with limited interactivity. An additional positive indicator came in the form of unsolicited student offers to become involved in writing additional chapters of the ebook.

Likewise, the pilot served to recruit and build an effective editorial team. It was demonstrated that student editors can participate effectively in the creation of an e-textbook. A team model was designed, and a plan for recruiting students who will be capable of continuing that model for the foreseeable future.

Production was delayed by difficulty identifying a suitable tool for building the ebook. Several promising tools (e.g., Mendeley, OJS, and InDesign) were either too cumbersome or limited in use. Other tools (e.g., iBook Author) were too device-specific. The current status of the most widely usable format (epub) meant that some features originally planned could not be implemented during this pilot.

We are now considering simpler solutions for curation upon which we will build our template and plan; we are now working through Pages/iBook creation and then back-ending other device versions as we anxiously await ePUB3 maturity. We assume we will need to remain flexible given the rapid changes in technology. All in all, we are very pleased and excited to continue producing additional chapters of the book.

Analysis of Data from Pilot Assessment

Data were gathered using two student surveys, one early in the course ("pre") and one during the last week of the course ("post"). Participation rates were high, with 109 students of the 120 in two sections responding to the pre-course survey and 95 students responding to the post-course survey. Responses were consistently positive. Only one question prompted more than 2 "strongly disagree" responses: 5 students strongly disagreed that they prefer e-texts to paper textbooks.

Attendance remained consistent as did grades and course SEI scores (4.9/5 and 5/5).

In order to simplify generalizations, responses were converted to integer form, then averaged, resulting in a single value to represent the general sense of the respondents. (Strongly agree = 2; agree = 1; disagree = -1; strongly disagree = -2; questions with only three possible responses were scored on a scale from -1 to 1.)

The three sub-sections below provide, respectively, some highlights of the survey results and more detailed summaries of results from the pre- and post-course surveys.
Highlights of Course Surveys

Comparisons between Pre- and Post-Course Surveys

Several questions were asked in similar forms on the pre- and post-course surveys, in order to gauge the impact of the pilot.

In summary responses indicate that students felt that instructional technology helped them:

- become more actively involved in part due to use of instructional technology (.50 -> .98)*
- engage more with the content of the course (.83 -> 1.17)
- engage more with peers (.20 -> 1.22) and feel an increased sense of community (.04 -> .98)
- gain the skills necessary for future success (.90 -> 1.05)
- complete more work in less time (.90 -> 1.23)
- make course materials and activities more interesting (.88 -> 1.22)
- * all scores are post-survey results except those which have a range; indicates a shift from a pre-survey score (reflective of students’ experiences with other courses before receiving the e-book) to a post survey score (after using the e-book in PUBHLTH 2010).

Highlights from the Post-course Survey

- Students noted they would recommend the course to a friend (1.73) and have a more favorable opinion of the College of Public Health since taking the course (1.69).
- Because of the opportunities provided in this course, they are more interested in taking additional public health courses (1.69).
- The quality of the e-text was rated favorably (all but two features > 1.0), and students were successfully able to access the book using a variety of devices (average 1.3). 12 of 94 students reported having been unable to access the book on 1 or more devices.
- Course assignments furthered interest in public health (1.52) and were meaningful (1.44).
- Students appreciated that this course allowed them to focus more on areas that interest them (1.58).
Highlights from the Pre-course Survey

- Students strongly agreed that they have easy access to technology that allows them to participate in course activities (1.53), and agreed that they prefer courses that use technology in the classroom (.97).
- Students reported limited experiences with etexts and less experience with etextbooks. Only 11% reported having read more than two etextbooks. (31% reported having read more than 2 ebooks of any kind.)
- Students were neutral in response to the statement: "I enjoy reading etextbooks" (-.05); the same question was not posed in the post-course survey.
Details from the Pre-course Survey

In addition to providing a basis of comparison for this pilot, the following data provide some information about the attitudes and experience of incoming students in the course:

- Respondents "prefer courses that use instructional technology in the classroom." (.97)
- Respondents "have easy access to technology that allows me to participate in course activities." (1.5) Only 2 respondents of 109 disagreed to any extent.
- 83% of respondents indicated that "Technology has helped me learn materials" within the past year.
- 85% of respondents indicated that their top priority when making decisions regarding textbooks is book cost, rather than book quality.
- Respondents have less experience with etextbooks than ebooks generally:
  - 89% of respondents reported having read two or fewer etextbooks as course material. (69% reported having read two or fewer ebooks of any kind.)
  - 40% reported "none." (28% reported having read no ebooks of any kind.)
  - Only 11% reported having read more than two etextbooks. (31% reported having read more than 2 ebooks of any kind.)
- Respondents report preference for paper-based books (55%), though 37% report an equal preference for paper-based and electronic books. Only 8% of respondents preferred electronic books in the pre-course survey.
- Respondents were evenly divided about the statement "I enjoy reading etextbooks." (-.05). A slight majority agreed (56/109), but the 15 who strongly disagreed outweighed the 7 who strongly agreed.
- Respondents agreed that recording student presentations improves their quality. (.71)
- Respondents generally agreed that instructional technology increases engagement:
  - "I get more actively involved..." (.50)
  - "...helps me engage with the content." (.83)
  - "...helps me engage with my peers." (.2)
  - "...helps create a sense of community." (.04)
- Respondents more strongly agreed that instructional technology improves ability:
  - "...helps me learn course concepts." (.83)
  - "...helps me gain skills necessary for future success." (.90)
  - "...allows me to complete more work in less time." (.90)
  - "...makes course materials and activities more interesting." (.88)
- Respondents strongly agreed about the overall worth of instructional technology:
  - "...is worth the time I spend to learn it." (.94) 80% of respondents agreed ±strongly.
  - "...takes up too much of my time as a student." (-.62) 77% of respondents disagreed ±strongly.
Details from the Post-course Survey

- "became more actively involved in this course in part due to its use of instructional technology" (.98)
- "helped me engage with the content of this course" (1.18)
- "helped me engage with my peers in this course" (1.22)
- "helped create a sense of community in this course" (.98)
- "helped me learn course concepts" (.99)
- "helped me gain skills necessary for future success" (1.05)
- "allows me to complete more work in less time" (1.23)
- "helped make course materials and activities more interesting" (1.22)
- "is worth the time I spend to learn it" (1.22)
- "takes up too much of my time as a student." (.66)
- "I will recommend this course to a friend." (1.73)
- "I have a more favorable opinion of the department after taking this course." (1.69)
- "prefer courses that use instructional technology in the classroom" (1.07)
- etextbook was accessible on multiple devices:
  - tried and was able to access the textbook on __ device(s)" (1.31)
  - tried and was /not/ able to access the textbook on __ device(s)." (.18)
  - "Did not take long to download or open" (1.08) (7/95 disagreed)
  - "Text was clear and easy to read" (1.21)
  - "Audio and/or video played without disruption" (.85)
  - "Images were clear" (1.14)
  - [other characteristics not analyzed here]

Respondents generally "preferred receiving information in the etextbook format more than other digital formats (e.g., PDFs, Powerpoints)" (.45) and "paper textbooks or course-packs" (.46).

The strong agreement that "Information received in the etextbook helped me prepare for course assignments and activities" (.74) may reflect that the content of the chapter was itself the assignment for the TED talks. Responses reflect strong satisfaction with the clarity of expectations for course assignments (1.19).

Respondents most strongly agreed that their experience in this course improved their appreciation of Public Health and the department:
  - "Course assignments furthered my interest in public health" (1.53). Indeed, a majority of respondents strongly agreed with this statement (56/95).
  - "Course assignments were meaningful to me" (1.44).
  - "Because of the opportunities provided in this course, I am interested in taking additional Public" (1.69), with 68 of 94 respondents strongly agreeing.

The impact of potential publication on students' effort was lower than anticipated. As many respondents disagreed (40) as agreed (40) that they "spent greater energy completing my assignment because of the potential for my coursework to become part of a future textbook." The 15 who strongly agreed with that assertion, however, raised the overall numeric equivalent to .32. The agreement of respondents that
they "would include my assignments for this course in my resume or portfolio" was also lower than hoped (.48).

- Respondents did report that the course allowed them to pursue their interests (1.58) and made them "confident in [their] ability to produce similar assignments in the future" (1.4).
- Regarding the three main technologies introduced in the pilot, respondents were clear about whether they should be included in other courses:
  - TED talks were recommended by most respondents (58%)
  - etextbooks were less widely recommended (35%)
  - Few recommended Mendeley or other citation management tool (7%)
- Finally, students were asked to indicate whether they thought a range of learning technologies should be used more, less, or about the same. In order of preference (negative numbers indicate recommendation they be used less):

  # equivalent (more/same/less::n/a)*
  
  .48 (34/30/2::29) Mobile devices (e.g., smartphones, tablets)
  .39 (34/54/0::7) Videos (e.g., streaming media, YouTube)
  .38 (27/34/3::31) Freely available course content (e.g., iTunes U, Khan Academy, Coursera, MOOCs)
  .28 (20/33/4::38) Social Media (e.g., Twitter, Facebook, Pinterest)
  .27 (33/46/9::7) E-books or e-textbooks
  .27 (18/25/5::47) Simulations or educational games (e.g., WoW, Second Life)
  .25 (14/32/2::47) Interactive Whiteboards (e.g., SMARTboards)
  .20 (15/37/4::38) Lecture recording/capture (e.g., MediaSite)
  .19 (17/23/8::47) Polling (e.g., clickers, SMS polling)
  .15 (16/69/3::7) Web-based word processor, spreadsheets, presentation software (e.g., MS Office 360, Google Docs, Prezi)
  .12 (9/29/4::53) Podcasts
  .10 (10/78/1::6) Carmen learning management system
  .10 (12/68/4::11) Locally installed word processor, spreadsheets, and presentation software (e.g., Word, Excel, PowerPoint)
  .09 (12/37/7::38) Blogs (e.g., WordPress)
  .08 (4/28/7::56) E-portfolio
  -.11 (3/43/9::40) Wikis (e.g., CarmenWiki)
  -.13 (2/36/8::49) Synchronous Web conferencing (e.g., Adobe Connect, Skype)

* Note: technologies not widely used in this course are indicated with italics and graying of text. They have been left in the list because the student response may indicate general preference.
Next Steps

**Summer 2013**

With our remaining funds we have retained Sarah Newman to continue as chief editor and manage a team of volunteer editors. Two additional chapters are being completed this summer for use Fall Semester. In addition, we are refining our curation system.

**Fall 2013 and Beyond**

Our goal is to complete the remaining chapters by the end of Spring Semester 2014. We will then begin the revision and upgrade process, creating a editorial mechanism for constantly updating and improving the book. We hope to share our work through publications and conferences and will continue to innovate our product with changes in technology and the greater field of global public health.

Based on lessons learned from the summer editorial processes, as well as focus groups and additional student surveys, we will create a viable business plan.
Reflections about the grant process and impact on the project

What role did the Impact Grant (money and support) play in the project?

We were very conservative in expenditures relative to our initial estimates: good fortune for our project as we continue through the summer and beyond. The largest portion of our grant was utilized to employ student editors, a key factor in our ability to attract the best students and capitalize on their limited time (thus eliminating their need to maintain another job). Paid editorships legitimized the endeavor.

We feel very fortunate to have reserves to continue through the next year while we finalize our business plan and seek additional funding.

Advances in e-Book technology will continue to render our effort relatively low budget and certainly extremely cost-effective as compared to traditional textbooks.

Perhaps the most powerful aspect of the grant is legitimizing the project within the academic sphere; given the dwindling federal dollars available for research, departments give priority to those projects that are self-sustaining. The grant more than justified the release time for CPH staff and the in-kind contributions of space and software.

But beyond the impact grant funding, the hundreds of hours of consultation with our ODEE project lead, Henry Griffy, were priceless. We just couldn't have accomplished our goals without the gift of his time, and that of the many ODEE staff and interdisciplinary consultants from across campus.

Aspects of the grant process, procedures, and collaboration

Unanticipated benefits that positively impacted project success

Rare is the opportunity to spend hundreds of hours in the creative process, moving from imagined innovation to reality. Given the myriad of distractions in academic life, the ability to think is precious. The Impact Grant allows for a "sabbatical" within the work-as-usual world.
Aspects of the grant process, procedures, and collaboration that were below expectations.

All said, the pluses of our partnership far exceed the moments of dissonance. Hopefully the following will add clarity to the times when the relationship felt incongruent.

The most difficult part of the grant was the lack of a natural pace; certain creative processes seem to unfold in a less than linear way. Being innovative is often a more iterative process, necessitating forward and backward- even at times circular- movement. Sometimes the tail wags the dog (or the dog just runs amok?) and one must tolerate ambiguity and constant revision- especially when the product is as open-ended as ours needed to be.

Teams have varying personalities, as do the individual members, and investing in team building early on might be a good use of time prior to working on the charter or detailed solutions.

Perhaps a solution would be to encourage the lead to utilize a project management system that they are most familiar with from other grants/ projects.

Another idea would be to have the grant application act as the charter. Have a meeting early on to clarify and tweak the application/charter in order to assure clear expectations from both parties, than assume that to be the "Contract." Working from the template from the beginning could save time and effort.

Perhaps a mid-grant meeting and then a firm deadline for the final report would then allow more leeway for the grantee team to function in the manner most natural to that team.

One management solution Henry and I engaged were standing meetings, sans team. Those early winter mornings were invaluable.

Unanticipated risks that negatively impacted project success

None of note.
Key lessons learned

Where to begin? There were so many, some about the project, some very personal.

Thanks to Henry, we learned a tremendous amount about the process of writing, all technology aside. With a jeopardy-winning knowledge base, he w **encouraged us to explore worlds that would not have come to mind intuitively.**

Perhaps not learned, but relearned, **interdisciplinary collaboration is a asset both within public health as well as across academic disciplines.** Meeting folks from UCAT, Copyright, Accessibility, Libraries, Digital First (i-books), etc. truly expanded our vision; we move on with a wonderful network to support our work. The potential for future collaborative projects is another appreciated outcome of this process- possibly with ODEE, other Impact Grant recipients from the full spectrum of disciplines, and the many resource specialists we met. We are no longer the prisoners of our academic silos.

Another lesson: we need to **consciously create the time and space for innovative thinking and the imaginative process.** It is so easy to get bogged down with the day-to-day demands and lose sight of possibilities to be creative. Even with the added work load of the grant, we gained so much in the way of inspiration and relationships. We hope our product will be of great benefit to our students and perhaps others interested in open source e-textbooks.

**Students should truly be the center of this initiative.** It was strange to attend the Innovate Conference and not see students as presenters of innovative projects. Our student editors are the heart of this endeavor. If we are truly aiming to change the face of education and create vibrant learning communities, all community members must be part of the dialogue. The Impact Grant process presents tremendous educational opportunity in and of itself. Students should be team members, helping to create IRB proposals, timelines, objectives, pilots, etc. Frankly, who knows technology better? Or the needs of students? Our best ideas continue to be student-generated.

Personally, as team lead, I have become increasingly self-aware of the areas where I could be more effective in collaboration. I am learning to tolerate discomfort: we all encounter the unanticipated effects of our personalities on others and are ever learning how to best tolerate the inevitable conflicts that arise in a more productive manner. I can honestly say I truly admire and respect all of the professionals I have encountered, even when miscommunications and differences in opinion came to bear.
Ideas for improvement

The Impact Grant is an incredibly well conceived, urgently needed initiative. Ideas for improvement were mentioned above, but the glitches are nothing in light of the importance of this work on behalf of our students.

At the June 2013 IDEA Lab, we heard from some of the past grant recipients, a few of whom were experts in distance learning technology pedagogy and would be a wonderful addition to the traditional UCAT consultation.

Perhaps an informal meeting of past recipients to help each other trouble shoot once a quarter would be valuable. The IDEA Labs are intended to do this, however, attendance by past participants dwindles due to the frequency and repeat guests. This meta-team would benefit both ongoing projects (keeping up with the latest and greatest) and new grantees.

Suggestions for future recipients

Take the time to gel as a team.

Everything takes longer then you think it will, and then some. The grant timeline is very tight when you consider all you are trying to accomplish. Breaking the project down to "doable chunks" and planning for future expansion may help with the "overwhelm".

Three words to describe working with ODEE grant team

Where’s Henry?

The students editors have conceived a "Where’s Waldo?" running theme, where a "Henry-face-on-a-stick" will travel with students across the globe, for photo-ops in the least likely of places.

What better tribute to our fearless travel guide who navigated the treacherous world of e-books and GPH.

Describe an "ah-ha" moment during the grant project

Watching my student editors present their poster at the Innovate Conference (underscoring the importance of having students involved in all aspects of creating and implementing instructional technology). I never ceased to be amazed by their knowledge, creativity and ideas for innovation.
**Statement from the Associate Dean about the Impact of this Pilot**

We appreciate the generous support of ODEE in helping our faculty and undergraduate students to pilot the initial chapter of an Introduction to Global Health e-textbook. The preliminary survey results are very promising. CPH remains committed to the ongoing success of this project and will continue to provide our support.

The College of Public Health is committed to employing the best of instructional technology in all aspects of our student’s education. The Impact Grant has inspired our students and faculty to be innovative in designing curriculum. We look forward to future collaborations with ODEE.

**Michael Bisesi**

Senior Associate Dean CPH  
Director, Center for Public Health Practice
Survey Response

Please indicate how strongly you agree or disagree with the following statements:

1) I am satisfied with the communication I received from the ODEE staff.
   a. Strongly Agree

2) I am satisfied with the grant project contributions I received from the ODEE staff.
   a. Strongly Agree—Above and beyond what I expected.

3) I have learned the skills necessary to continue related work on my own.
   a. Strongly Agree

4) I found the ODEE staff approachable.
   a. Strongly Agree

5) The lessons learned during this pilot will guide future course design.
   a. Strongly Agree—I recently completed a UCAT Course Design Institute which helped integrate the book and the class and will most certainly affect future design.

6) Additional comments or feedback

Can't thank WOW and ODEE enough for supporting our project. From the point of view of a professor, I feel so fortunate to have had this opportunity to stretch the boundaries of the traditional classroom and create truly meaningful opportunities for student growth. Without the expertise of ODEE, this project would not have been possible. Much appreciation, Amy Acton
This project was successful. While the initial ambition of producing a complete textbook with full multi-media enhancement was not achieved, significant progress was made toward that goal. The time, money, and effort of the participants has resulted in the foundation of an effective working team and process, as demonstrated by the completion of the initial chapter. Relationships were formed between the Public Health team and various campus partners who will help improve future chapters and facilitate dissemination of the final product. And a plan was developed to maintain the textbook-writing team in financially and personally sustainable ways.

Project Charter to Analysis relation

This shape and scope of this project took different form than was described in the Charter. There were several differences between the project described in the Charter and the work accomplished during the Grant. The product goals -- the textbook -- were revised to be less ambitious than was described in the Charter. Rather than a complete textbook, as planned, only a single chapter was produced, and an outline for the entire book was developed. The program-building goals of the Charter, however, were mostly achieved, although they, too, were revised to be less ambitious. A team of student editors was recruited and trained. Technological tools and workflows were chosen and built to allow for consistent composition, revision, and production of future chapters in future terms. A business plan identifying sources of funding sufficient to produce future chapters and updates to the textbook was developed.

Number and roles of ODEE individuals involved in the grant project

5 ODEE colleagues participated actively:

- Henry Grify, Lead Contact
- Robert Griffiths, Support
- Tom Evans, Support
- Ashley Miller, E-publishing Consultant
- Cindy Evans, Design Consultant

Approximate number of ODEE people-hours spent on the grant project

180 hours
Reflections on the grant process—what went well

- Student ability: At the outset of the project, it was not clear what role the undergraduate students (editorial team or course enrollees) could play in the production of the textbook. Both sets of students exceeded the expectations of the other project team members, except for Dr. Acton.
- Responsiveness: throughout the project, there was consistent communication between the Public Health and ODEE teams, which made possible effective collaboration at each stage of the process, as well as timely knowledge about changes in project direction.
- Enthusiastic collaboration: Team members were open to collaboration, willing to make contact with and learn from knowledgeable campus partners, and otherwise interested in maximizing external resources for the good of the project.

Reflections on the grant process—what did not go well

- Reduced scope: As mentioned above, the initial ambition for this project were to produce a complete introductory textbook for the course. In the end, only a single chapter was finalized, and a detailed plan was developed for the remainder of the book. In retrospect, what was achieved is probably closer to what could be realistically expected given the time-frame of the grant.
- The usability of current technology:
- Continuity with large team:

Three words to describe working with the CPH Team

1. Forward-thinking
2. Enthusiastic
3. Inspiring

Describe an "ah-ha" moment during the grant project.

Two moments with the students helped me understand that they were more the center of this project than the e-textbook. The first time I attended a meeting with them and Dr. Acton, I saw how much energy and enthusiasm they were bringing to the project. Especially in the close space of Dr. Acton's office, it was quickly apparent that they had more than enough will to complete something like this. That said, I still had doubts whether students could participate effectively in producing textbook-quality material, even with Dr. Acton's supervision. Seeing the students present their poster (and a draft of the final chapter) at Innovate went a long way toward alleviating these concerns. The professionalism with which they talked to the many people who visited their table made clear that their enthusiasm was coupled with ability.
Changes to our processes from this grant experience

The vagaries of this project taught me three main lessons that will inform future grant work.

• The importance of standing meetings: Early in this project, meetings were convened only when specific work needed to be done. Partly as a result of this, some important misunderstandings emerged, primarily about the scope of the project. A single meeting quickly cleared up the confusion. More helpfully, Henry and Amy began meeting each week after that, which prevented similar misunderstandings from forming. These regular meetings also proved to be effective work time and helped maintain regular progress.

• Lessons about choosing technologies: One complication in this project involved choosing the right tool(s) to manage content and produce the etext. There are a wide range of options for both tasks, with trade-offs between the various options, including ease-of-use, quality, and accessibility of outputs. We tried a few different solutions, based on advice and our own expectations. Ultimately, several of these solutions did not work, due primarily to mismatches with team members' technological experience and preferences. These false starts delayed work. In future grants, I plan to help teams choose technological tools differently, with greater emphasis on the team's existing skills.

• Differences between Autumn- and Spring-debut timelines: This was the first Impact Grant cycle timed to begin pilots in Spring semester. In previous projects (and in Fall-debut projects), teams are able to do their preparatory work during summer, when most faculty and graduate students have fewer other demands on their time. Preparatory work for Spring courses, however, must take place during Fall semester, when most faculty and students have other courses and activities. This time-crunch can be mitigated in various ways, such as front-loading some activities normally scheduled later, but that mitigation will need to be planned into future Spring-debuting projects.