Virtual Dust on a Bookshelf: Abandoned Wikibooks by and for Writing Students

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Within composition and rhetoric, scholars embraced wikis and their predecessors. We included students in the creation and maintenance of collaborative open source writing projects, hoping these projects would become exemplars of sustainable living texts. Sadly, the Wikibooks texts *Rhetoric and Composition* and *Professional and Technical Writing* offer examples of student-led writing projects that now collect virtual dust on the Wikibooks library shelves. Both projects were last revised significantly in 2010, with only minor edits in the eight years since. Similar neglect affects other open source publishing efforts. What contributed to Wikibooks failing to attract new and ongoing collaboration? Why did readers not embrace the texts? Can the projects be revived—and should they be? Identifying why the projects did not achieve sustainability might help us avoid embracing digital writing technologies that fade as quickly as these Wikibooks did.

Wikibooks and Unrealized Potential

This paper explores the current state of the Wikibooks library, presents data on Wikibook collaboration trends, examines potential explanations for these trends, and concludes by asking if our disciplines can, and should, actively attempt to revive neglected crowdsourced, open source texts.

When Matt Barton (2008) guided his students at St. Cloud State University of Minnesota through the creation of the Wikibook *Rhetoric and Composition*, some of us anticipated a wave of similar efforts. I encouraged students at the University of Minnesota, Twin Cities, to create the *Professional and Technical Writing* text in 2008, as one of several project choices for collaborative groups. Swept up by my idealism, I posted to various mailing lists and online forums seeking involvement by students at other universities. I dreamed of a project that would expose students to collaborative writing in a complex online setting. Students enthusiastically embraced this project and several others intended to offer authentic audiences for writing. According to the Wikimedia Foundation, 2007 was also the peak for collaboration on

Wikipedia. As data in this paper demonstrate, the two books were largely abandoned within three short years.

Barton (Cummings and Barton, 2008) expressed concerns that wiki projects might turn into "virtual Roanokes," a prescient fear. My technical writing students at three universities contributed to a half-dozen Wikibooks between 2007 and 2013, on topics including AppleScript programing and Podcasting, known as "audio drama" at the time. Each of these books has been neglected for several years. After an initial burst of enthusiasm for online publishing on a topic, collaboration lasts two to three years before dropping precipitously. Without constant encouragement and support, online texts appear unsustainable.

Crowdsourced Academic Texts

Composition and rhetoric scholars have a tradition of embracing innovative technologies for planning, composing, publishing, distributing, and consuming texts. As early as 1984 our discipline welcomed *The Computer in Composition Instruction* (Wresch), a collection featuring scholars including Hugh Burns, Lillian S. Bridwell, and Cynthia L. Selfe. For more than three decades we have sought out and embraced technologies that enable collaborative writing and publishing. Many of us embrace collaborative, social pedagogies and we believe students should create works with authentic audiences. Major figures in writing studies have embraced technology in their teaching and their scholarship, as symbolized by the annual Computers and Writing conference.

For these reasons, we naturally embrace wiki authoring platforms. The first wiki was created in 1994 by Ward Cunningham, who envisioned a Web-based, multiuser version of Apple's HyperCard authoring tool (Cunningham and Leuf, 2001). With the slogan "Open Books for an Open World," Wikibooks launched during the summer of 2003 according to domain registration records and the Wikibooks "Welcome" page (Wikimedia Foundation, 2017). Wikibooks are, as the name suggests, complete book-length digital texts based on the same World Wide Web technologies as the article-based Wikipedia. The guidelines on "What is Wikibooks" state: "Wikibooks is for textbooks, annotated texts, instructional guides, and manuals. These materials can be used in a traditional classroom, an accredited or respected institution, a home-school environment, as part of a Wikiversity course, or for self-learning."

The Wikimedia Foundation anticipated the creation of open source reference books and textbooks equal to those issued by traditional academic publishers. The foundation anticipated experts would engage with the crowdsourced efforts, ensuring that the books would meet or exceed academic stan-

dards for content and research. Citation and indexing standards emerged, reflecting the digital nature of the texts while respecting academic traditions.

Open source textbooks differ from open access texts, which offer free access after a work is digitally published. Open access works in composition and rhetoric follow the same workflow as other academic monographs and edited collections. Once published, the open access texts become static artifacts locked in time; there might be further editions of a work, yet these also become static editions. Open source texts, also known as crowdsourced and open content texts, rely on active community participation. Generally, a core set of contributors and editors guide Wikipedia and similar communities, just as a core set of computer programmers tend to dominate specific open source software projects (Simonite, 2013).

As with Wikipedia, many of the earliest pages created were scientific and technical in nature. Books were soon assembled on the C programming language and the TeX/LaTeX typesetting system. University students in the United Kingdom soon added study guides to the "A-Levels" to help peers prepare for the A-Level topic exams in various subjects. Unlike Wikipedia, popular culture has not come to dominate either new content creation or the most visited pages on Wikibooks.

The ideal open source books are dynamic, living works, updated and edited when appropriate. There are no editions, with the text always current. But what happens when a text fails to achieve this ideal? The Wikibooks platform in general has failed to achieve the ideal, potentially disappointing those of us working in academic disciplines that had embraced the platform for research, pedagogical, and ideological reasons.

Wikimedia, MediaWiki, Wikipedia and Wikibooks

Using Wikibooks within a writing course leads to discussions of how writing requires technology, and how writing itself is a technology (Barton, 2008; Haas, 1995). As a technical writing instructor, I use Wikibooks to expose students to the technologies of content management systems. As someone who worked in information technology for several decades, I value the distinctions between software, platforms, and solutions.

The Wikimedia Foundation is the non-profit organization that oversees the development and maintenance of the MediaWiki software and database application platform (Wikimedia Foundation, 2017). MediaWiki uses the PHP scripting language and MySQL database servers to implement a content management system (CMS) (MediaWiki, 2016). Contributors prepare content using the Wikitext markup language, which was meant to be a simplified alternative to HTML. Wikipedia and Wikibooks are collaborative projects

supported by the Wikimedia Foundation, using the MediaWiki software. As an open source platform, any individual or group can download and install MediaWiki software as a CMS.

The Wikimedia Foundation distinguishes between the MediaWiki software and the Wikibooks platform. For the purposes of this paper, I refer to the Wikibooks platform. This platform includes the PHP software, the database, Wikitext markup, templates, and extensions to MediaWiki that enhance Wikibooks.

Wikibooks Collaboration Data

Examining Wikibook activity illustrates the challenges faced by the platform and, potentially, faced by similarly crowdsourced, open source, and open content publishing communities. To examine the health and sustainability of Wikibooks, I collected data on completion status, editing activities, founding contributors, and active editors.

Alexa.com, the Internet metric provider owned by Amazon, ranks global Web traffic based on data from Domain Name Server (DNS) requests. As of April 2018, Wikipedia occupies the fifth spot in global traffic and sixth in the United States; compared to Wikibooks at position 1914 in the world and 2198 in the United States. The top 100 global sites account for over 90 percent of human readers, and it is interesting to note that "bots" surpassed human visitors to websites in 2016 (Glaser, 2017). Though Wikibooks is active, sites not in the top 500 for traffic have few human readers. We also know that editors and contributors are an even smaller percentage of visitors to a site such as Wikibooks (Simonite, 2013).

Wikibooks faded quickly, based on server activity and traffic metrics (Alexa, n.d.). The peak usage years were 2007 through 2013, a five-year window. Curiously, Newsgroups, Yahoo Groups, MySpace, AOL Instant Messenger, and other Internet based communities had similar periods of peak engagement (Alexa, n.d.). Based on Alexa data, rarely does an online technology thrive for more than five years, with disruption the norm. Dominant names fade or disappear, and Wikibooks never managed to achieve meaningful momentum like its sibling Wikipedia. The active years were only active by comparison to the current state of Wikibooks.

One explanation for this activity pattern might be that there were many new topics to address when Wikibooks appeared, since no content existed on the platform. However, the dearth of subject matters on Wikibooks to this day suggests that the "holes to fill" argument does not explain why activity rapidly declined after 2013. A narrower version of this explanation is that the technically-oriented users and contributors to the Wikimedia content plat-

forms were only interested in a handful of specialized topics. Yet, this does not explain why there are not complete texts for most popular programming languages, though many were started over the years.

The organization of Wikibooks challenges contributors and users to locate information. Categories and subcategories have similar names; the "General" subcategory exists within many primary categories. Rhetoric projects exist within the "Humanities" category and within the "Communication" subcategory of "Social Studies." To analyze contributions and edits, it was necessary to search through the Wikibooks structure manually, as topical searches did not locate all Wikibooks on rhetoric or writing.

Book completion data were verified April 30, 2018. Data on book completion statuses features the terminology from Wikibooks. A "freshly started" book might have been abandoned many years ago, but the label remains the standard within the Wikibook platform. There are ten major categories in the Wikibooks library, with varying numbers of subcategories. The Science category presents a unique problem for analysis, as interlinking of chapters and sections within books leads to 30 "complete" books that borrow heavily from other books within the system, including incomplete books.

Table 1. Status of books by category and subcategory, in Wikibook order

Official Wikibook Category	Complete	Nearing Completion	Half Finished	Partly Developed	Freshly Started	Unknown
Computing	2	1	5	8	14	6
Humanities: Literature	0	3	0	5	8	4
Science	[30]*	15	4	3	12	4
Mathematics: Applied	2	2	1	5	3	2
Social Sciences: Communication	3	0	0	2	10	2
Social Sciences: Communication: Written	5	2	2	8	8	0
Languages: Europe	1	2	5	23	26	2
Engineering: General	3	1	2	2	2	0

At the top-level of subject, the data suggest few books have reported as "Complete" by the contributors and editors. For example, Computing has three "Complete" or "Nearly Complete" works and 33 considered "Half Fin-

ished" or less, an 8 percent completion rate. Rates vary within Categories and Subcategories, but the completion rate is less than 10 percent for all sampled textbook groupings. Because anyone can create a book, it is possible that many were created in moments of enthusiasm and quickly abandoned. Editors can and do remove neglected books, but a great many neglected books remain in the Wikibooks library.

Four of the Wikibook texts we might associate with composition and rhetoric indicate they originated at universities. This suggests that instructors proposed the projects and led students through the wiki authoring process. *Rhetoric and Composition* and *Professional and Technical Writing* were outlined and organized by professors, according to the Wikibook editing logs. When a project is associated with a specific course at a university, as these texts are, we need to consider how this might negatively affect the viability of the project. The texts credits to specific university courses were created in 2005, 2008, and 2009, all within two years of the peak Wikimedia activity during 2007. This suggests the courses embracing Wikibooks followed general online collaboration trends.

Table 2. Source of original content, based on "About" or "Introduction" pages

Wikibook	Originating Team	Year
Digital Rhetoric	James Madison University	2009
Professional and Technical Writing	University of Minnesota	2008
Rhetoric and Composition	St. Cloud State University	2005
Visual Rhetoric	James Madison University	2005

The Wikibooks platform enables any contributor or editor to view the history for a text. Wikibook, as MediaWiki software implementation, provides data including the most recently added pages, the most recent modifications, and historical trends. To analyze the activity of the writing and rhetoric texts, I consulted the Wikibooks reporting system. Because the "Table of Contents" sections experience automatic updated, only content sections were considered for activity analyses.

Editing activity logs include all saved versions of a page within Wikibooks, resulting in multiple entries if a user saves work while editing. For this reason, log entries by a single contributor within five minutes of each other were counted as a single editing session. Shared computer labs might account for the same Internet Protocol (IP) address editing a page hours apart within the same day, so any gaps longer than five minutes were counted as unique editing sessions. Wikibooks does not require a user account to edit a page, which explains IP addresses in place of usernames within the logs.

Table 3. Books on academic writing and rhetoric, found within Social Sciences: Communication: Written

Wikibook	Status	Pages	Created	Last Edited	Last Activity
Composition	Partly Developed	1	Jun 2006	Oct 2007	Editors rejected various revisions from 2014 through 2017.
Digital Rhetoric	Nearing Completion	10	Apr 2009	Aug 2010	Minor edits to first page.
Professional and Technical Writing	Completed	72	Aug 2008	Apr 2010	MLA Citation pages updated.
Rhetoric and Composition	Nearing Completion	108	Apr 2005	Feb 2017	Commonly Confused Words page created, a single-day revision.
Visual Rhetoric	Nearing Completion	15	Apr 2005	Sep 2016	Editors merged and reorganized pages, content static since 2007.
Writing a Research Paper	Freshly Started	1	Nov 2007	Mar 2013	Editors rejected revisions in 2014 and 2018, maintaining the 2013 text.
Writing Better University Essays	Completed	17	Apr 2008	Mar 2018	Editors rejected revisionsin 2016 and 2017, maintaining the 2013 text.

Digital Rhetoric was created in 2009 as a nearly-complete work, suggesting the copying of text into the Wikibook system from elsewhere. For example, the page "Collaboration and Wikinomics" received 22,487 bytes of content in a single editing session from an anonymous IP address. The text appeared within seconds, which suggests the contents were pasted into Wikibooks.

Some automated and minor grammatical edits were made to the otherwise static *Rhetoric and Composition* and *Professional and Technical Writing* pages sampled. In each case, three or fewer characters were changed in 2017. This accounts for reports of "no significant activity" within the Wikibook system for several years, despite edits listed within page logs. Also, some additions later removed from all the texts examined were the result of attacks or exploits. The 2016 edits to *Visual Rhetoric* and the 2017 edits to *Writing Better University Essays* reflect misuses of the Wikibook for commercial purposes and the inclusion of links to suspicious websites. The single-page texts *Composition* and *Writing a Research Paper* are frequent targets for misuse, leading to rejections by Wikibook editors of additions and edits by anonymous users.

Table 4. Editing of active Wikibook pages over time

Wikibook	2006	2007	2008	2010	2012	2014	2016	2017
Composition	29	32	0	4	0	3	2	2
Digital Rhetoric: "Collaboration and Wikinomics"	-	-	-	0	0	0	0	1
Professional and Technical Writing: "Cover Letters"	0	0	16	17	1	0	0	1
Rhetoric and Composition: "Planning and Prewriting"	15	20	5	0	2	3	0	1
Visual Rhetoric: "Semiotics of Fashion"	0	6	0	4	1	2	6	0
Writing a Research Paper	-	7	1	2	0	2	0	0
Writing Better University Essays: "Main Part"	-	-	2	0	0	5	2	13

Waning Wikibooks

Before analyzing why the Wikibooks created and maintained by students of writing courses failed to achieve sustainability, addressing the general decline of Wikibooks offers insights. Overall, the decline of Wikibooks has followed the arc of other websites and technologies, as previously mentioned. The five- to seven-year cycle of web-based communities revealed by Alexa data suggests that it would have been unusual for Wikibooks to remain vibrant. The software, platforms, and services that thrive online evolve to meet changing user needs and expectations.

Wikibooks today resembles the platform released in 2003. For content collaborators and readers, the Wikibook experience has failed to keep pace with other CMS platforms. Wikibooks requires at least some markup skills, at a time when other platforms seek to simplify content formatting. In 2018 the popular blogging platform WordPress adopted a new visual content editor known as Gutenberg (WordPress.org, n.d.). Popular CMS Drupal 8 has also shifted to an integrated visual editor (Drupal.org, 2017). The WordPress and Drupal development teams have each argued that online writing should not require coding or markup skills. The popular Medium blogging service reduced default formatting options to: bold, italic, underline, two heading levels, block quotes, and links (Medium.com, n.d.).

The goal of Wikibook projects was to engage students in the creation and maintenance of collaborative texts. The pedagogy included emphasizing genuine audiences, demonstrating to students that readers and contributors from around the world visited the pages. However, readership fell precipitously af-

ter 2010, suggesting other sources offered more academic value. If other students and self-directed learners were using the Wikibooks as text alternatives, these readers found other alternatives in recent years.

Dedicated Sources

The Purdue Online Writing Lab (https://owl.purdue.edu) and similar offerings from universities offer current and detailed guides to academic writing standards. Instructors and students likely trust these university-maintained sites more than the Wikibooks on writing and rhetoric. *Silva Rhetoricae: The Forest of Rhetoric*, maintained by Gideon O. Burton at Brigham Young University (http://rhetoric.byu.edu), is a complete text on classical rhetoric. I also refer students to *The Stanford Encyclopedia of Philosophy* (https://plato.stanford.edu) to research individuals and concepts within rhetoric.

As instructors, we emphasize the trustworthiness of "edu" domains and peer-reviewed journals. The rise of open access journals and books likely resulted in some decline among Wikibooks users and contributors. We consider journals more reliable than ever-changing crowdsourced open source texts. In our disciplines, open access publishing makes many journals and monographs freely available. In 2003, when Wikibooks launched, there were few open access journals. The Public Knowledge Project (PKP) had released the first version of their PHP-based open journal software in 2001 but gained greater usage with a major software upgrade in 2005 (PKP, 2016). The Public Library of Science published its first journal, *Biology*, in 2003 (PLOS.org, 2017). As of 2018, the Directory of Open Access Journals (https://doaj.org) lists 12,192 journals. Journals included in the DOAJ are encouraged to join the Open Access Scholarly Publishers Association and adhere to traditional peer review standards, according to the "Principles of Transparency and Best Practice in Scholarly Publishing" (DOAJ.org, 2018).

Other Trusted Sources

The early Wikibooks were largely technical in nature. Apple and Microsoft have made much of their technical documentation freely available, reducing the demand for open source textbooks on the hardware, software, and programming languages these companies distribute. As an example, Apple offers complete manuals and training guides for their Swift programming language. The Wikibook on Swift now opens with a link to the Apple documentation and a note that the Wikibook is not maintained. The Wikibook on FutureBASIC is likewise no longer maintained because the compiler developer offers all materials freely via download.

Reviving Interest—or Letting Go

Searching via Google Scholar and library portals reveals articles on Wikibooks within composition and rhetoric declined after 2014. Articles discussing the texts by and for our university writing students also declined precipitously after 2012. Scholarship followed general Web activity trends, as our scholars' interests shifted to social media platforms or, more accurately, returned to social media with Twitter and Facebook having replaced MySpace, Friendster, and LiveJournal as places for study. Wikibooks were only a promising location for research when the texts appeared to have a viable future.

We could revive Wikibooks through a concerted effort, requiring collaboration on the Wikibooks platform. From 2007 through 2011, I sought out other instructors who might include Wikibook projects in their writing and rhetoric courses. Though some colleagues responded with support for my efforts, none expressed an interest in class projects using the writing and rhetoric Wikibooks.

Wikibooks are unlikely to thrive in the future, especially with outdated content editing features. The texts were curiosities that technically-oriented educators embraced, while the wider Internet ignored the existence of these texts. Based on my experiences as an instructor, most students were unfamiliar with Wikibooks and few found the texts useful. My students contributed because it was the most appealing assignment choice from several options. They engaged, some enthusiastically, during a writing course. When the writing course ended, so did their contributions to Wikibooks.

It is possible that the Wikibook moment was an illusion, a goal many of us shared but one that was unlikely to achieve the same popularity as the more focused, short-article based Wikipedia. The nature of textbooks might limit the appeal of Wikibooks, and that limited appeal leads to neglect by writers and readers. Once written, the pages and books collect virtual dust on the bookshelf.

References

Alexa.com. (n.d.) Retrieved April 30, 2018, from https://www.alexa.com

Barton, Matt. (2008). Is there a wiki in this class? Wikibooks and the future of higher education. In Robert E. Cummings & Matt Barton (Eds.), *Wiki writing: Collaborative learning in the college classroom* (pp. 175–193). Ann Arbor, MI: University of Michigan Press.

Collaboration and Wikinomics. (n.d.). In Wikibook Digital Rhetoric. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Digital_Rhetoric/Collaboration_and_Wikinomics

Composition. (n.d.). In Wikibooks. Retrieved April 30, 2018, from https://en.wiki-

books.org/wiki/Composition
Cover Letters. (n.d.). In Wikibook Professional and Technical Writing. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Professional_and_Technical_Writing/Career/Cover_Letters
Cummings, Robert E., & Barton, Matt. (Eds.). (2008). *Wiki writing: Collaborative learning in the college classroom*. Ann Arbor, MI: University of Michigan Press.
Cunningham, Ward & Leuf, Bo. (2001). *The wiki way: Quick collaboration on the Web*. Boston, MA: Addison-Wesley
Digital Rhetoric. (n.d.). In Wikibooks. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Digital_Rhetoric
Directory of Open Access Journals. (2018, January 15). Principles of transparency and best practice in scholarly publishing. Retrieved from https://doaj.org/best-practice
Drupal. (2017, May 17). CKEditor module overview. Retrieved from https://www.drupal.org/docs/8/core/modules/ckeditor/overview
Glaser, April. (2017). Internet traffic from bots surpassed human-generated traffic in 2016. In Recode. Retrieved from https://www.recode.net/2017/5/31/15720396/internet-traffic-bots-surpass-human-2016-mary-meeker-code-conference
Haas, Christina. (1995). *Writing technology: Studies on the materiality of literacy*. New York, NY: Routledge.
Main Part. (n.d.). In Wikibook Writing Better University Essays. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Writing_Better_University_Essays/Main_part
MediaWiki. (2016, December 4). Welcome to MediaWiki.org. In MediaWiki. Retrieved from https://www.mediawiki.org/wiki/MediaWiki
Medium Help Center. (n.d.). Format text. Retrieved from https://help.medium.com/hc/en-us/articles/215194537-Edit-post
OA Cooperative Project. (2017, Dec 24). The open access publishing cooperative study. Retrieved from http://oa-cooperative.org
Planning and Prewriting. (n.d.). In Wikibook Rhetoric and Composition. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Rhetoric_and_Composition/Planning_and_Prewriting
Professional and Technical Writing. (n.d.). In Wikibooks. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Professional_and_Technical_Writing
Public Knowledge Project. (2016). History. Retrieved from https://pkp.sfu.ca/about/history/
Public Library of Science (PLOS). (2017). Our history. Retrieved from https://www.plos.org/history
Rhetoric and Composition. (n.d.). In Wikibooks. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Rhetoric_and_Composition
Semiotics of Fashion. (n.d.). In Wikibook Visual Rhetoric. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Visual_Rhetoric/Semiotics_of_Fashion
Simonite, Tom. (2013). The decline of Wikipedia. MIT Technology Review. Retrieved from https://www.technologyreview.com/s/520446/the-decline-of-wikipedia/

Visual Rhetoric. (n.d.). Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Visual_Rhetoric

Welcome. (n.d.). In *Wikibooks*. Retrieved April 8, 2018, from https://en.wikibooks.org/wiki/Wikibooks:Welcome

Wikibooks. (n.d.). Writing better university essays. Retrieved April 30, 2018 from https://en.wikibooks.org/wiki/Writing_Better_University_Essays

Wikimedia Foundation. (2017). About Wikimedia. Retrieved from https://wikimediafoundation.org/about/

WordPress. (n.d.). Say hello to the new editor. Retrieved April 18, 2018, from https://wordpress.org/gutenberg/

Wresch, W. (1984). *The computer in composition instruction: A writer's tool*. Urbana, IL: National Council of Teachers of English.

Writing a Research Paper. (n.d.). In Wikibooks. Retrieved April 30, 2018, from https://en.wikibooks.org/wiki/Writing_a_Research_Paper