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Opening Up to OERs: Electronic Original Sourcebook vs. Traditional Textbook in the Introduction to American Government Course

Shawna M. Brandle

Abstract: Traditional American Government textbooks are expensive and often unpopular with students. New technologies and Open Educational Resources (OERs) open up the potential for change, but questions of quality are ever present: can OERs really help students learn better, or are they just cheaper? I developed an OER based on original sources and compared student learning outcomes with the OER section to those in a free digital textbook section. While the OER I created did not work as well as I had hoped, I nonetheless developed a redesign of my course and my approach to teaching, which is the true benefit of adopting OERs.

Keywords: OER, open educational resources, political science education, teaching American government, textbook

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Teaching basic Introduction to American Government classes is the stock and trade of the community college Political Science professor. It is an essential course, as it establishes civic literacy and critical thinking skills for students, both of which are transferable far beyond the classroom. But traditional American Government textbooks are extremely expensive and, in my 11 years of teaching experience, almost universally unpopular with students. New technologies and Open Educational Resources (OERs) open up the potential for change, but questions of quality are ever present: can OERs really help students learn better, or are they just cheaper? I began this project looking for a way to replace expensive introductory textbooks, not quite sure of what that replacement would be. I ended up developing an OER sourcebook, which despite my high hopes did not result in drastically higher student grades or higher levels of student

satisfaction with the course materials. Nonetheless, I consider the project a success, as it led me to really consider my course learning objectives and how I assess them. It is this snowball effect of rethinking the approach to a course that is the true benefit of adopting OERs, outweighing even the significant benefit of saving students money.

Before discussing the method and results of my project, a review of the justification for using OERs and of the existing literature on OERs and teaching with original sources is necessary.

Why Say No to Traditional Textbooks?

Basic Introduction to American Government courses are often just that: basic. They frequently rely on an expensive textbook to provide easily digestible chunks of American government facts to students. The excuses for this are easy to come by; chiefly, students need a basic textbook because they do not have the background knowledge or analytical skills developed yet to handle original sources. Yet using a textbook has downsides. First and most obviously, the cost imposed on students can be onerous. The College Board estimates the cost of required books and supplies for college at \$1200/year (2016). The cost of textbooks has increased exponentially over the last 30 years, with an increase in cost of 812% since 1978. Over the same time period, textbook costs increased even faster than other booming areas, including medical services, housing prices, and general inflation, by 237%, 487%, and 562%, respectively (Perry 2012).

Looking more specifically at political science, it is all but impossible to find an introductory American Politics textbook for less than \$50, and many retail for upwards of \$100. Current

editions of some of the texts I have used in the past all retail for at least \$75.¹ To put this number in context, while Kingsborough Community College is located in New York City, a command center of the global economy with an extremely high cost of living, more than 60% of the student population comes from households with annual incomes less than \$30,000 (2014 Student Experience Survey).

The high cost of textbooks is a tremendous hardship for many students; financial pressure is often cited as a reason for dropping out of college. Johnson et al (2009) found 31% of young adults who left college gave not being able to afford tuition and fees as the major reason, with an additional 21% listing financial pressure as a minor reason. The high cost of textbooks only adds to that financial pressure. The same study also found that 36% of students who did not graduate thought the statement “The cost of textbooks and other fees besides tuition affected me financially” described them a lot, and an additional 24% thought that it described them a little. (Johnson et al 7) A Florida Virtual Campus survey of 40 public colleges and universities found significant evidence that the high cost of textbooks was negatively impacting students in a variety of ways. 66.6% of students reported not purchasing the required textbook for a class because it cost too much. 37.6% of students surveyed said they earned a poor grade because they could not afford to buy a textbook, 19.8% said they had failed a course because they could not afford to buy the textbook. Furthermore, almost 50% of students reported that they take

¹ Lowi et al’s *American Government: Power and Purpose* (Brief Thirteenth Edition, 2014 Election Update) from 2015 retails for \$79.66 on Amazon, while Ginsberg et al’s *We the People* Eleventh Edition from 2016 is listed for \$144.47.

fewer courses because of the textbook cost (47.6%), or do not register for specific courses because of the textbook cost (45.5%) (2016 Student Textbook and Course Materials Survey)

OERs have been suggested as an alternative to costly textbooks and learning materials.

UNESCO defines OERs as “teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions” (2012 Paris OER Declaration). Hilton III et al (2014) calculated the money spent by 3,734 students using OERs in two semesters compared to their counterparts in courses using traditional textbooks. Students using OERs saved \$338,337.74 in total, about \$90 per course, and over \$900 per year. While some students receive financial aid packages that include assistance for books, textbook costs represent a significant burden on individual and institutional resources that could be spent on other things.

Even though the potential for saving students (and their colleges) thousands of dollars is compelling, quality must come first, and it is here that OERs have struggled to find acceptance and wider adoption. Some faculty are skeptical of assigning textbooks or readings that have not been put out by traditional publishers, but recent research shows that these fears are unfounded, whether measuring the quality of OERs by faculty perception or student success in courses using OERs. In their 2014 survey, Allen and Seaman found that “Nearly three-quarters of faculty [who have knowledge of both OERs and traditional resources] consider the quality of open educational resources to be the same as or better than that of traditional resources” (p26).

Fischer et al (2015) conducted a multi-institutional, multi-disciplinary study covering 15 undergraduate courses at 10 different colleges, and found “on three key measures of student success—course completion, final grade of C- or higher, course grade— students whose faculty chose OER generally performed as well or better than students whose faculty assigned commercial textbooks” (p168).

While cost was the original inspiration for my exploration of OERs for teaching American government, there were other factors to consider as well. In addition to cost, there are potential academic benefits to using a free digital sourcebook as the primary text in an introductory American Government course. Sewall (1991) argues for the importance of social science textbooks in the k-12 environment, but decried the unappealing options available. “Textbooks Today and Tomorrow” (2014) recounts the conversation of history faculty who write textbooks on the value of textbooks. These authors point out that the sales mechanisms of textbooks, particularly rental and buyback programs, might be partially to blame for students’ perception of textbooks as disposable and not essential. They also discuss student feedback about if and how to include different ethnic and religious perspectives in history- students want to be able to see themselves in their textbooks, and it is not possible to include them all in a mass-market text. The need for culturally responsive teaching materials is extremely important in American Government, but many traditional textbooks are lacking in this area. In justifying textbooks as worthy of literary study, Issitt (2004) recounts the apparent conflict over textbooks in academic settings- they are frequently derided, but nonetheless present in most educational settings, “Whilst as teaching vehicles textbooks are scorned by many in the teaching profession as poor

and insufficient and as assuming a basically passive learning style, studies show that they are extensively used” (p683). Textbooks are often lengthy and dry, making students less likely to invest their money in purchasing them or their time in reading them. In their study of finance students, Berry et al (2010) found that “Even though students know it is important to read, know the professor expects them to read and know it will impact their grade, most students still do not read the textbook” (p38). Berry et al also reported that students request more focus from faculty- instead of a whole textbook and lots of ancillary materials, they want to know exactly what the professor wants them to focus on. Inspired by this research, the high and increasing cost of textbooks, and by observation of student behaviors from more than a decade of teaching Introduction to American Government, I decided to develop a sourcebook, which could be shorter than a full-sized textbook, in the hopes that students would be able to focus in on the challenging material. This approach would not only help students learn the content of American Politics, but it would also help them develop analytical skills that would transfer to all of their other courses. Albert and Ginn (2014) compared students using a traditional textbook for Introduction to American Government with those in a section using Alexis de Tocqueville’s *Democracy in America* as the required reading, finding that the original source “approach appears to be more successful in educating the students on the basics of American Government than the traditional textbook method”(174). They further found that not only did students in the primary source section score better on content mastery, they also showed more enthusiasm for their assigned reading and increased their “understanding of, and commitment to, civic virtue” (174).

Furthermore, Introduction to American Government lends itself naturally to the development of Open Educational Resource (OER): much of the information and many of the documents essential to the study of the topic are already in the public domain and many of them are already digitized. Although organizations like CK12, 20 Million Minds, and OpenStax have been developing high quality free digital textbooks and other OER for both high school and college courses, none of these organizations had released a textbook or comprehensive resources for American Government as of January 2015.²

Reexamining What and How We Teach, or Methodology of the Project

I began this project with the goal of creating a replacement for a traditional textbook, but that soon led to much bigger questions: what is the best version of an Introduction to American Government course, and how can I make a sourcebook that would help to create that best version? What began as a simple substitution of original sources for a traditional textbook snowballed quickly and organically into a reflection on what the Introduction to American Government course should be, and what I wanted students to get out of it.

Wiggins and McTighe's (2005) seminal *Understanding by Design* is aimed mostly at K-12 educators, but their approach to starting at the end of a course and working backwards is equally applicable to higher education. Wiggins and McTighe believe "we cannot say *how* to teach for understanding, or *which* material and activities to use until we are quite clear about which specific understandings we are after and what such understandings look like in practice."⁽¹⁴⁾

² *American Government*, by Krutz, Waskiewicz et al was released by Openstax in January 2016, but this author was not aware of the release prior to the start of the experimental classes in February 2016. This source will be further addressed in the discussion section.

Therefore, before I could determine what readings I needed to include in an OER course, I had to first settle on learning objectives. Specifically, what do I want the students to know and be able to do at the end of the course? Once I chose specific learning objectives, I had to consider how I would assess whether students had achieved those learning objectives: what types of examinations, projects, or other assessments would demonstrate student learning? Only after these important steps could I actually address the question I had meant to start with: what must students read to successfully achieve the course's learning objectives?

Most of the students who take Introduction to American Government at Kingsborough do so not out of a love for the subject, but to fulfill a requirement for either the Liberal Arts or Criminal Justice majors.³ What this means in practice is that many of my students will never take another political science class. As a result, I selected specific content- and skills-based learning objectives that would be useful to all students and transferable to their other courses of study and their professional lives, even if they choose never to study political science again.

First, I selected the standard “content” learning objective of most Introduction to American Government courses: by the end of the course, I wanted students to have a working knowledge of the evolution and functions of American government. I also wanted students to be empowered by this content knowledge, to understand that there are ways for them to be involved in American government and to seek to effect change on issues that matter to them. The importance of learning about their ability to participate in American government, to be civically

³ There is no political science major offered at Kingsborough Community College.

engaged, is also supported by Kingsborough's view of the course: Kingsborough requires two civic engagement experiences for graduation, and Introduction to American Government automatically serves as one because civic engagement is inherent in the course.

I operationalized this learning objective by examining each topic on my syllabus, and asking: what did I really want students to know and be able to explain from each section? This process led me to develop a series of guiding questions: what should a student be able to answer from the assigned reading and discussion time in class about each of these topics? Although it was the general outline of my course, refined over a decade of teaching, I had never laid it out in one place before. Because I wanted to adopt OERs, however, I now had a list of guiding questions, approximately 6-7 broad questions on each topic in the course, which I could use to assess whether students had learned the essentials elements of each section of the course.

I also chose several skill-based learning objectives that, while not specific to the course content, are incredibly useful skills for college students that are often not taught explicitly. By the end of the course, I wanted students to be able to read and interpret challenging original texts, many of which are written in language that is old and unfamiliar to contemporary students. I wanted students to develop digital literacy for supplemental research to help them work through complex texts, while also developing the skills to critically evaluate Internet sources for bias and quality. I chose to make these explicit learning objectives in the course because while essential to success in today's world, these are not skills that students are born with -- they must be developed and practiced in a supportive environment.

Having settled on the learning objectives, I then needed to decide on assessments: how would I assess the degree to which students had achieved the learning objectives I set out? For the first content-related learning objective, understanding the function and evolution of American government, I decided on a combination of online quizzes administered through Blackboard (worth 10% of the final grade) and traditional in-class exams (3 midterms and a final exam were offered, with only the highest two grades counting, worth 50% of the final grade). The online quizzes were explicitly open-book and had only 4 questions for 10 minutes, with the goal of encouraging students to look up answers in their assigned readings or other sources if they were so inclined. The exams were made up of multiple choice questions, worth 84 points, and three out of a choice of five written questions, worth 24 points (8 points/answer). This combination was designed to assess students' ability to understand and explain the function and evolution of American government. I included a written section because multiple choice questions limit students' abilities to demonstrate fully their understanding of concepts; written questions provide more space for students to show what they have learned with more depth and nuance. This increased space, however, sometimes comes with increased anxiety, especially for students who are nervous test-takers, new students not confident in their writing, and/or English language learners. Because a high proportion of my students are represented in these groups, I had begun to give students the written questions shortly before the exams so they could prepare answers. This approach allowed students to learn the content from the process of preparing for the exam, while simultaneously reducing testing anxiety and improving grades. Thanks to the process of adapting my course to OERs, I realized that I now had a list of questions that I wanted the

students to know the answers to. What would make better questions for an exam than the very questions I wished to assess their learning on? There was no need to conceal what I wanted students to learn from the students, so I decided to use my guiding questions explicitly as guides to the course, and to give them to students at the beginning of the course so they could use the questions to structure their reading and studying throughout the course instead of right before the exams.⁴

I chose to assess the second content-related learning objective, civic empowerment, through a short writing assignment. Students had to write a letter to a federal government official (in either the executive or legislative branches) in which they identified a problem of their choosing in American government at the federal level and suggest a practical solution to the problem. To complete the assignment, students have to apply the knowledge they have acquired about the structures and functioning of American Government to identify a problem, their preferred solution, and the most appropriate federal government official to write to. This assignment is designed as an authentic, non-disposable assignment, as while students were not required to actually send the letters, they were encouraged to do so.

Compiling The Sourcebook: What to Use?

Michael S. Mills' (2014) guidebook *Cultivating Dynamic OER* lays out the rules and legal limits of several ways of obtaining materials for OER creation, including using self-created materials, documents in the public domain, linking, obtaining permissions, and the actual definition of fair

⁴ The guiding questions are available in the sourcebook, which is currently available on the iBooks Store at <https://itunes.apple.com/us/book/american-government-an-open-educational-resource/id1090796557?mt=11> and as a pdf at <http://bit.ly/2hHaeoy>

use of copyrighted materials. Using original sources like the Articles of Confederation, the Constitution, and the Federalist Papers had several obvious advantages. First, all of those documents were clearly in the public domain, and as such, were completely free to use in an OER. Additionally, while older original source documents might be harder for students to digest initially, the close reading, supplemental research, and critical thinking skills they develop as they work through the original sources would achieve the skills-based learning objectives of the course in ways that summaries in textbooks would not. Finally, in many cases, such as the Constitution and judicial decisions, these original documents are still the law of the land, so there is both a civic and a practical benefit to students as residents/citizens of the United States to be able to read and interpret those documents themselves, both for those documents and subsequent ones they may encounter as residents/citizens of the United States.

Using original sources worked well for the first third of the course, which covered the founding of the country, the Constitution, federalism, and civil liberties and civil rights. The original documents and relevant judicial decisions are widely available and free to use in terms of copyright, although the chapters on federalism also made use of Internet links to current news articles and websites to supplement and update the included source documents.

The rest of the course, which moved into more contemporary issues, posed two challenges in terms of free-to-use resources: a lack of openly available summaries of complex concepts for students in an introductory class, and a lack of static documents to assign for students to read within a reasonable time frame. While a learning objective of the course was to have students

read challenging, original source documents, the limit is quickly reached as to what students can learn *from* original sources without having first learned *about* those sources. On one hand, since the Constitution is both foundational and accessible, students can reasonably be expected to work with it with the assistance of their professor to glean the meaning of the document; this is fairly standard practice in most traditional textbook approaches to teaching American government. On the other hand, assigning students to read the full annual budget as a means of teaching about how Congress works, the appropriations process, or what the federal government actually does, seems unreasonable. The 2017 budget was 182 pages long, with over 50 pages of numerical tables (Budget of the US Government 2017). This is obviously too in-depth for introductory students who lack the basic knowledge of how the central organs of American government function. Learning that information is why they are taking the course, so the course must first provide students with reading or resources to help them acquire basic content. This is the stock and trade of textbooks, which, when done well, provide up-to-date information in an accessible way for students who are just embarking on a new area of study. Unfortunately, textbook publishers do so at a price, and protect their intellectual property with copyright, making most introductory summaries off limits for an OER. Similarly, recent scholarship, unless it was specifically licensed for open use, would not be eligible for inclusion without violating copyright. There have been some interesting developments using Wikipedia or Wikibooks as crowd-sourced, open source reading assignments along with editing Wikipedia entries as authentic writing assignments (see “Instructor Basics: How to use Wikipedia as a teaching tool for an introduction”), but I rejected this approach to reduce the number of changes being made to the course at once.

While no open source or free to reuse written summaries about the basic functions of American government were readily available outside of OER textbooks, reading is not the only way for students to access information. It is not necessarily even the best way for some students, as many students learn material best in multiple modalities. Chapman Rackaway found “a multimedia supplement in a class improves engagement among students and subsequently encourages higher written score performance on other assessments” (Rackaway 2012 p199).

Numerous other studies confirm that multimedia approaches to learning are as useful or possibly even better for student learning than traditional lectures (see for example, Williams and Harkin 1999, Buzzell, Chamberlain, and Pintauro 2002, and Niemi, Nevgi, and Virtanen 2003).

Advocates of the flipped classroom approach to teaching actually recommend students use their time outside of class to view videos of lectures, which then leaves more time in class meetings to discuss the material or participate in more active learning activities. Instead of written introductory summaries, I assigned videos from the *Crash Course: US Government and Politics* series for each section of the course. These short videos, available on YouTube, combine compelling images and cartoons with humor to explain complex elements of American government. Because they are short and freely accessible on the Internet, students can watch and rewatch them as many times as they need to absorb all of the content, from a laptop at home, on a computer on campus, or even on their phones while waiting for the bus. The videos make the information much more entertaining and accessible to students, while not sacrificing the quality of the information delivered.

The Crash Course videos were an integral part of the required course materials for this course, but it is important to note that they are not really an OER. To be a truly open educational resource, content must be freely shareable, reusable, and remixable. While the Crash Course videos are freely accessible -- meaning it is free to link to them in the sourcebook and free for students to view them -- the videos could not be downloaded or remixed. Downloading or remixing the content would violate the copyright or intellectual property rights of the content producers. Since the videos were not truly open, I briefly considered creating my own videos and licensing them via the Creative Commons, creating a truly open OER. However, the time and resources necessary to make engaging video content are not insignificant, especially when considering writing, filming, editing, and captioning. Moreover, after previewing the entire series to ensure the quality and appropriateness of the content, I found the Crash Course series aligns very nicely with the American Government content I wished students to learn; the delivery is amusing, and the videos are accessible to both hearing impaired students and students who are more comfortable in other languages via closed captioning in multiple languages. Given that many students at Kingsborough are English language learners, the captioning is a benefit that far outweighed the not-truly open nature of the Crash Course video series.

Each section of the sourcebook included at least guiding questions and links to websites and Crash Course videos for student-led learning, and where available, open source content and original source documents. Readings for the chapters on the legislative branch, executive branch, political parties, and economic and social policy were the least successful in identifying other sources and thus relied solely on links and videos; as such, those chapters were rather short

in the sourcebook, as they relied on students linking out from the sourcebook to other sites. In contrast, the sections on the founding of the country, Constitution, federalism, civil rights and civil liberties, judicial branch, political participation, and foreign policy incorporated original sources in the public domain, content that was explicitly licensed as open for reuse, and links to Crash Course videos and websites. The limitations of these content decisions will be considered in the discussion section below.

Links to individual websites and resources absolve the compiler of an OER from copyright responsibility, since no rights-restricted content is copied into the OER itself. In that sense, it is actually better than the widely practiced but questionable on copyright grounds “fair use” of photocopying articles for students to read in class, because students are empowered to seek information with the helpful guidance of a professor-suggested starting point. On more than one occasion, students went further while doing their linked-out reading, finding other articles or sources that they brought to discuss with the class. This also created frequent opportunities to discuss digital literacy in the class, allowing students to explain, defend, and critique to each other and the class what sources they believed to be reliable and their reasoning for those decisions.

Once the content of the sourcebook was selected, the actual work of assembling the sourcebook was fairly simple. iBooks Author is a free program from Apple featuring a user-friendly WYSIWYG⁵/drag-and-drop interface, which makes creating a digital book easy. Because all

⁵ WYSIWYG is short for What You See Is What You Get, which refers to programs that let the user see how their actions will be reflected in the final product as they are making it, instead of having to write the code and then run a preview. They are considered far easier for non-experts to use.

students could not be assumed to have Apple devices, the sourcebook had to be designed for operating-system neutrality. It was also designed for printability, as some students do not have tablets or laptops, or would prefer to read a printed copy. Although the book was released as an iBook -- Apple's proprietary publishing format -- through Apple's iBook store, it was also available to students as a pdf. Designing for device neutrality and printability limited the potential for interactive features. iBooks Author allows for the relatively easy inclusion of a wide variety of interactive technologies: Padlet walls for discussion, annotation features, glossaries, interactive timelines, and maps or images that show change over time, to name just a few. However, these functions had to be excluded because they would not function in an epub or pdf format. Images were included in the sourcebook only if they were licensed for reuse in the public domain.

With the experimental sourcebook completed, the only task remaining was to select a textbook for the control section. Originally, I had planned to use a traditional textbook. I was concerned, however, that comparing a free resource to a paid paper textbook would be too different for a meaningful comparison; students might prefer the free option by default, or they might reflexively prefer the traditional approach and preemptively discredit a free digital option. To mitigate the potential problems with such a comparison, I decided to use a free digital version of a control textbook: a traditional textbook that was also a free digital resource. Lenz and Holman's *American Government* (2013) is a free digital textbook published by the University Press of Florida. It can also be ordered as a hard copy for a small fee. The textbook follows a fairly standard outline for a traditional survey of American government and includes many of the

usual textbook features: bolded key terms, chapter summary questions, and lists of web links for further research.

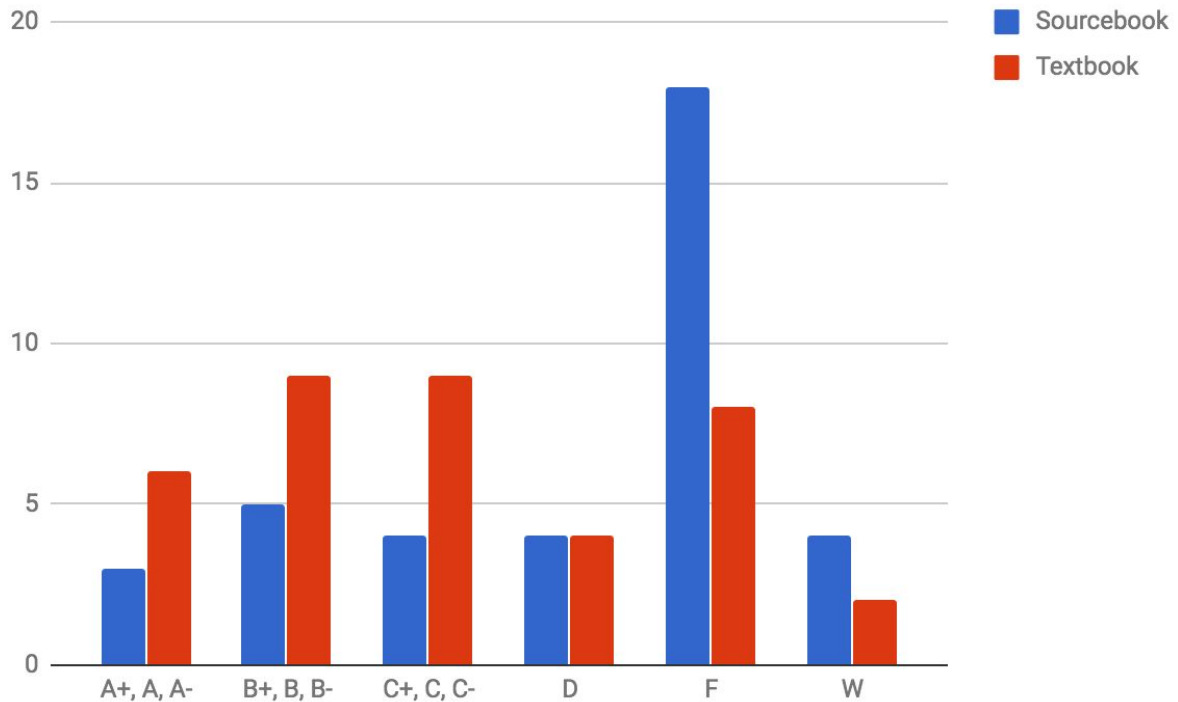
To evaluate the efficacy of the sourcebook approach to teaching, I taught two sections, one with the sourcebook and one with the Lenz and Holman textbook. I used identical lesson plans, in-class activities, lectures, class powerpoint slides, and assessments to provide for the most comparable experience so as to isolate the effects of the different reading assignments, which was the only significant difference between the syllabi of the two courses. Additionally, students in the textbook section were given the guiding questions for the semester via Blackboard, while the sourcebook students had the guiding questions embedded into each section of the sourcebook. Each section had a total enrollment of 41 students, but each section had 3 students who either never attended the class, or only attended the first day of the class but never formally dropped the course. As a result, these students were not included in this analysis, leaving 38 students per section. While large scale statistical analyses could not be conducted with an n of 76, the results are still illuminating.

Results

If final course grades are to be the measurement for course success, the sourcebook section was not as successful as the textbook section, as shown in Figure 1: Final Course Grades. Fewer students in the sourcebook section got As and Bs than those in the textbook section, and many more students in the sourcebook section got Fs than in the textbook section. These results were

disheartening, especially seeing that 47% of the sourcebook section failed, as did 21% of the textbook section.

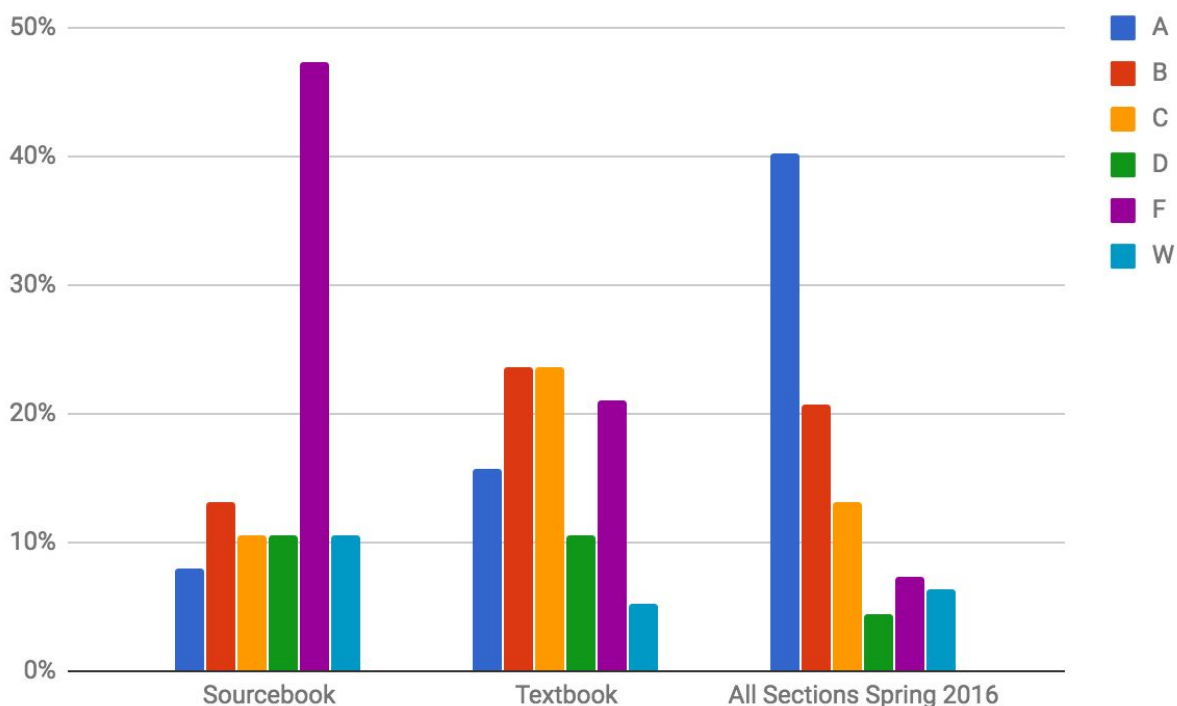
Figure 1: Final Course Grades



Before further analysis of the sourcebook and textbook sections can continue, the overall course grades must be contextualized. Figure 2 compares the final grade distribution of the sourcebook and textbook sections with the grade distributions of all sections of Introduction to American Government taught at Kingsborough in that semester. Both the sourcebook and textbook sections had overall lower grades than the other sections of the same course taught that semester.

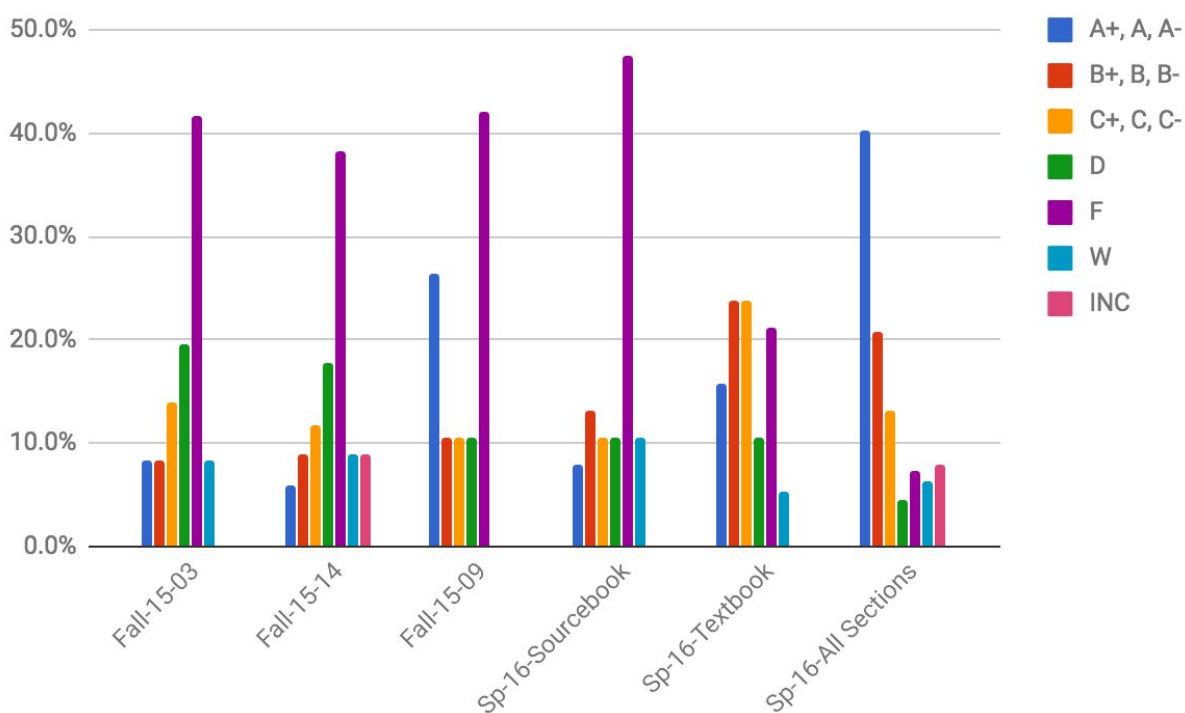
Figure 2: Grade Distributions of Sourcebook, Textbook, and All Sections Taught Spring

2016



In all of my courses, I use numerical scoring for transparency and to reduce the impact of implicit bias- all assessments are graded with numbers, not letters, and those numbers are used to calculate final grades. There is less room for bias to sneak into an equation than in a letter-based scheme. It has also resulted in overall lower student grades across my courses, as shown in Figure 3, which includes the grade distributions of my Fall 2015 sections as well. While the sourcebook section's overall grades were low, they were consistent with the grades from my previous traditional paper textbook-based approach. The OER textbook section in Spring 2016 represents a major improvement over my previous grade distributions as well as over the sourcebook section- the percentage of students failing fell by half compared to both previous semesters and the sourcebook section outcomes.

Figure 3: Grade Distributions of Fall 2015 Sections, Sourcebook, Textbook, and All College Sections Spring 2016



While more students failed the sourcebook version of the course than the textbook version, looking at the specific assessments in the course tells a different story. Table 1 shows the grades on the three exams for both sections, broken down by multiple choice and written component score. While the textbook section had higher averages overall on all three exams, the distance between the two sections was small on the first exam and narrowed as the course went on. Also, it should be noted that in both sections, the exam grades were not high at any point in the semester. The written section scores were extremely low, though they did improve in both sections as the course went on. All students were given the possible list of questions for the written section as guiding questions on the first day of the semester. Students did better on this part of the exam in both sections as I learned to remind the classes throughout the course that

they should be working on the questions as the semester went on, not just the night before the exam.

Table 1: Exam Averages

	Exam Average (out of 100)	
	Sourcebook	Textbook
Exam 1	58	64.81
Multiple Choice (out of 84)	50.18	54.59
Short Answer (out of 24)	9.57	10.5
Exam 2	52.7	53.78
Multiple Choice (out of 84)	40.58	41.56
Short Answer (out of 24)	12.11	12.22
Final Exam	54.26	57.16
Multiple Choice (out of 84)	40.08	41.81
Short Answer (out of 24)	14.17	15.34

The sourcebook section had 33 students, 34 students, and 23 students take the exams, respectively, while the textbook section had 37 students, 37 students, and 32 students, respectively.⁶

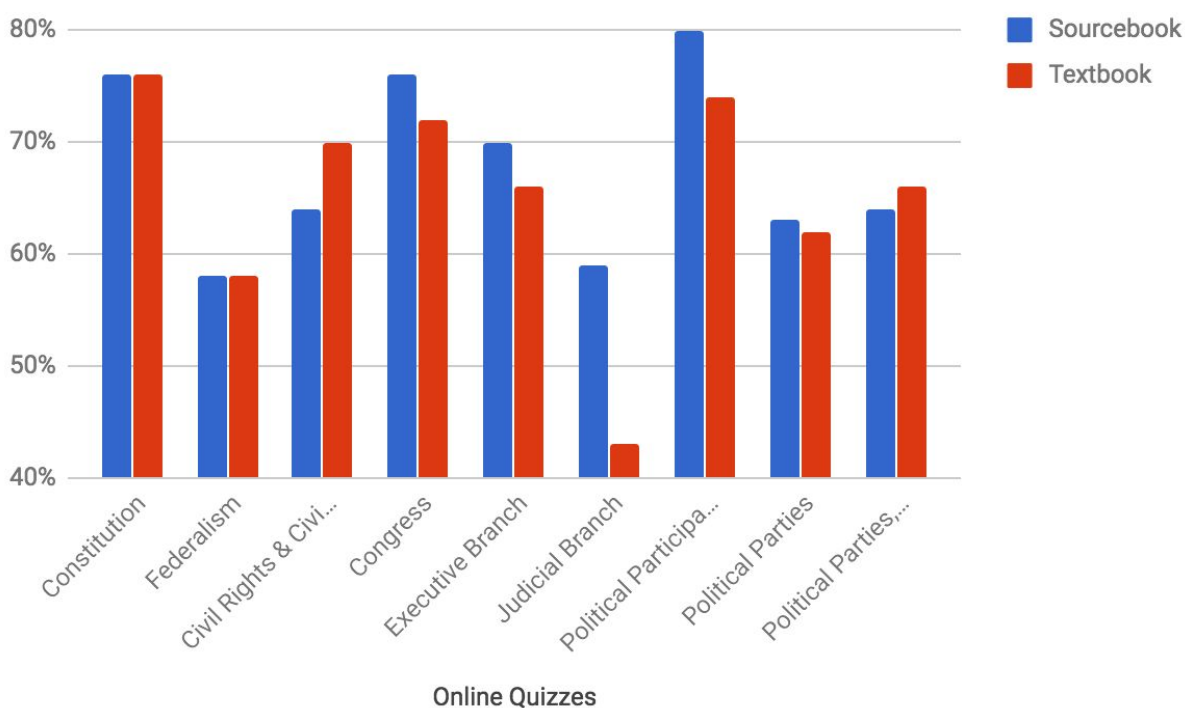
Attendance

The divergence in attendance grades highlights one of the differences in the two sections, which may help explain some of the difference in the passing rates and exam grades of the sections. To

⁶ I offer three exams, and drop the lowest one, so the number of students who take the final exam is generally lower than those taking the first two exams, and the class average is lower, as students who did well on the first two exams opt not to bother taking the third exam

incentivize attendance, it was worth 10% of the students' final grades in both sections, with each lateness counting as half of an absence, and 6 or more absences (or equivalent latenesses) resulting in the loss of all 10 points from the final grade. Twelve total students in the textbook section lost all 10 points for missing 6 or more classes, but only five of those failed the course. One withdrew, 3 scored in the C- to C+ range, and 3 in the B- to B+ range. In the sourcebook class, attendance was better, with only nine students losing all 10 points for missing 6 or more classes, but of those nine, only 1 passed with a C-, the other eight failed the course. This may indicate that the course materials in the textbook class were easier for students to follow on their own at home when they were unable to come to class. Several students in the sourcebook section suggested that more guidance was needed for the assigned readings; as one student in the sourcebook section said in their post-survey response, "I enjoyed the class itself, I felt it was way too much reading and I didn't like the online only text it was easy to get distracted and I enjoy highlighting and marking up paper textbooks. . . With a different text book this class would be perfect." Similar requests were not made by students in the textbook section, which will be further considered in the discussion section below.

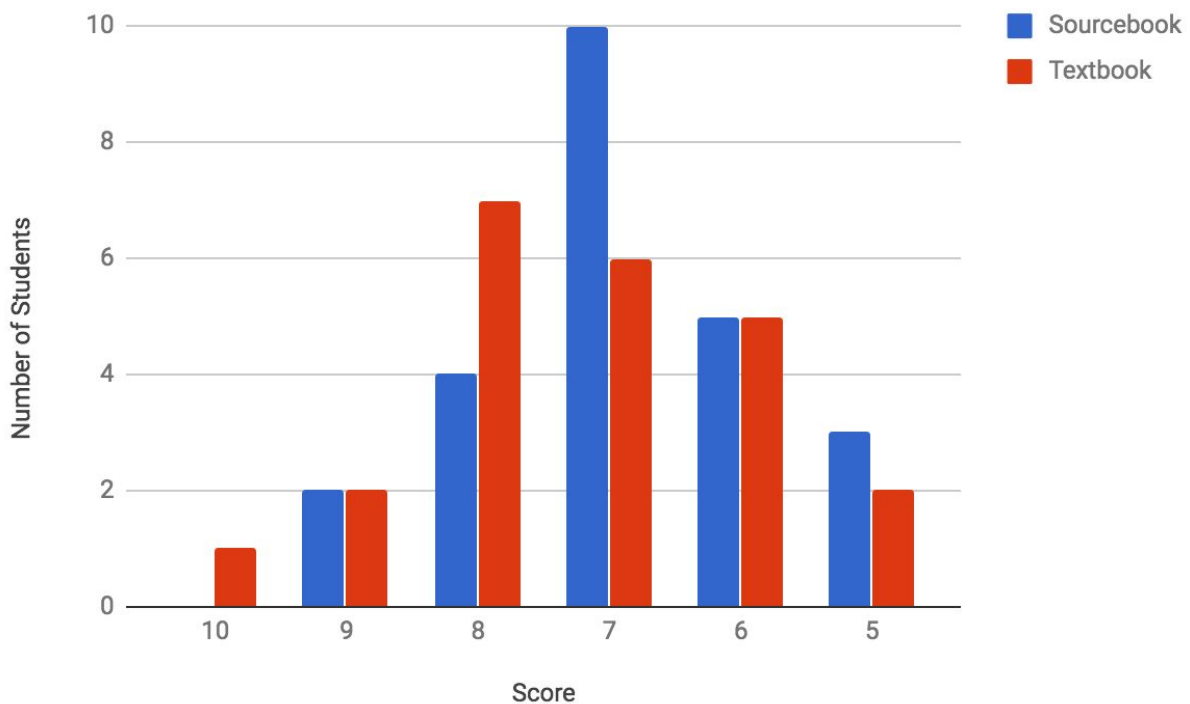
Figure 4: Online Quiz Averages



On almost all of the weekly quizzes, sourcebook students did as well or better than textbook students, as seen in Figure 4. On only two of the quizzes, Civil Rights and Civil Liberties and Political Parties Part 2, did the textbook students edge out the sourcebook section, so there seems to be no significant difference between student performance on quizzes in the textbook and sourcebook sections. I was surprised to see the sourcebook section outscore the textbook section on the Congress, Executive Branch, and Judicial Branch quizzes particularly, because I felt those chapters in the sourcebook were weak. In the absence of satisfactory open source summaries or original sources that explained the functioning of each branch of government, the sourcebook used links to websites as the required reading for the chapter. While I saw this as a weakness, it appears to have been the opposite. Informal discussions with students showed that they appreciated the break from long historical documents into their own web-based exploration. In fact, the two quiz topics on which the sections scored equally were the ones I believed to be

strongest in the sourcebook. After all, how better to teach the Constitution or Federalism than with the Constitution itself, supported by the original Supreme Court decisions (*McCulloch v Maryland* and *Gibbons v Ogden*) that shaped the way the states and the federal government related to each other? Based on the quiz data, the standard textbook approach worked equally well.

Figure 5: Problem Paper Scores (out of 10)



The problem paper, where students had to identify a problem at the federal level, write a letter explaining the scope and severity of the problem, and suggest a solution, was used to assess students' information literacy and civic empowerment, and on these metrics, the students were quite successful. As shown in Figure 5, a sizeable and similar number of students in both sections did not submit the problem paper, which was worth 10% of the final grade: 13 in the sourcebook section, 14 in the textbook section. Among those who did submit the problem paper,

the scores were similar, with 16 students in each section receiving passing scores of 7 out of 10 or better, meaning that the majority of those who submitted the paper were able to identify reliable sources (a measure of the information and digital literacy learning objective) and understand that they were capable of effecting change in American government by suggesting a well-researched solution to an appropriate federal government official (a measure of the civic empowerment learning objective). Both the textbook and the sourcebook students scored equally well on these assessments.

Grades can tell us about how students performed, but they cannot say anything about students' preferences. To assess how students felt about the sourcebook versus textbook approach to teaching American Government, students were surveyed at the end of the semester for their opinions on the course- specifically, what they thought about the amount and type of reading assigned. Figures 6, 7, and 8 show the results.

Figure 6: Student Opinions on the Amount of Reading Assigned⁷

⁷ The survey was administered as a Blackboard quiz for which students would receive an automatic 1 point addition to their Blackboard quiz grade if they completed the survey. Students who wished to get the extra credit on their quiz grade but did not wish to participate in the research were able to log in and answer only the last question that indicated they were not participating in the research at which time they could receive the additional point in their quiz average. Students who chose not to participate in the survey are not counted into the percentages here, leaving the textbook section with a total of 24 students surveyed, and the sourcebook section with 28 students surveyed. Also, students had the option of not answering all questions, so some percentages do not add up to 100.

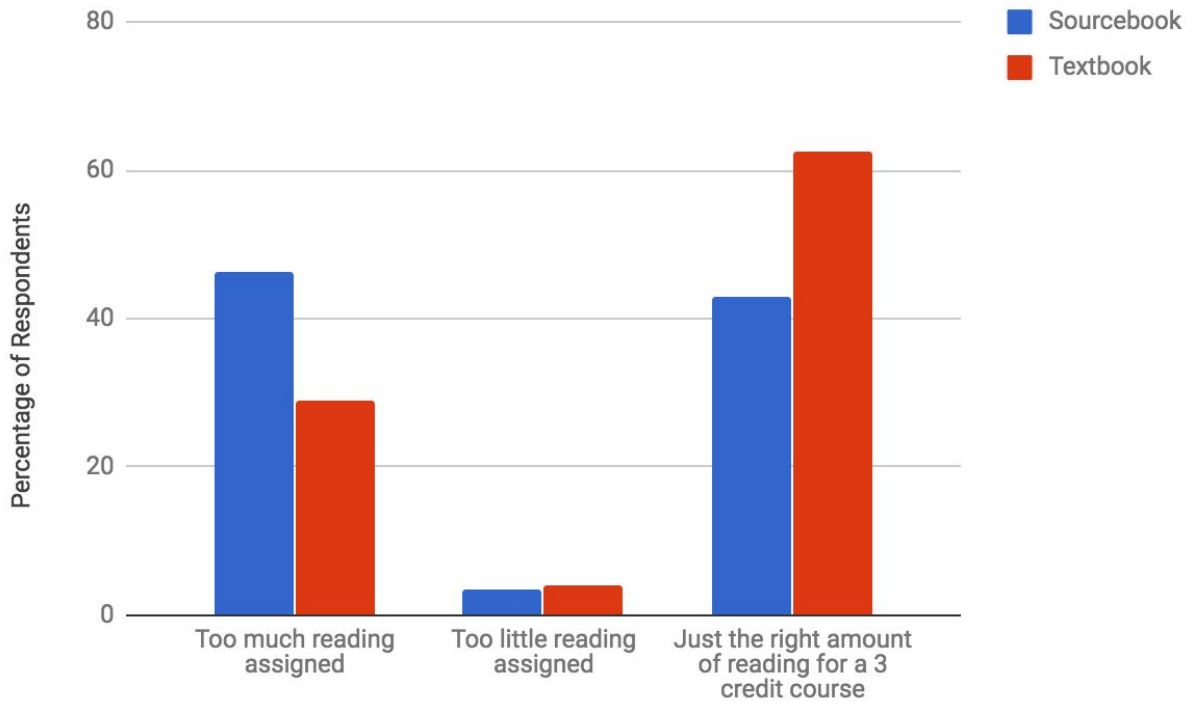


Figure 7: Difficulty of Reading Assigned

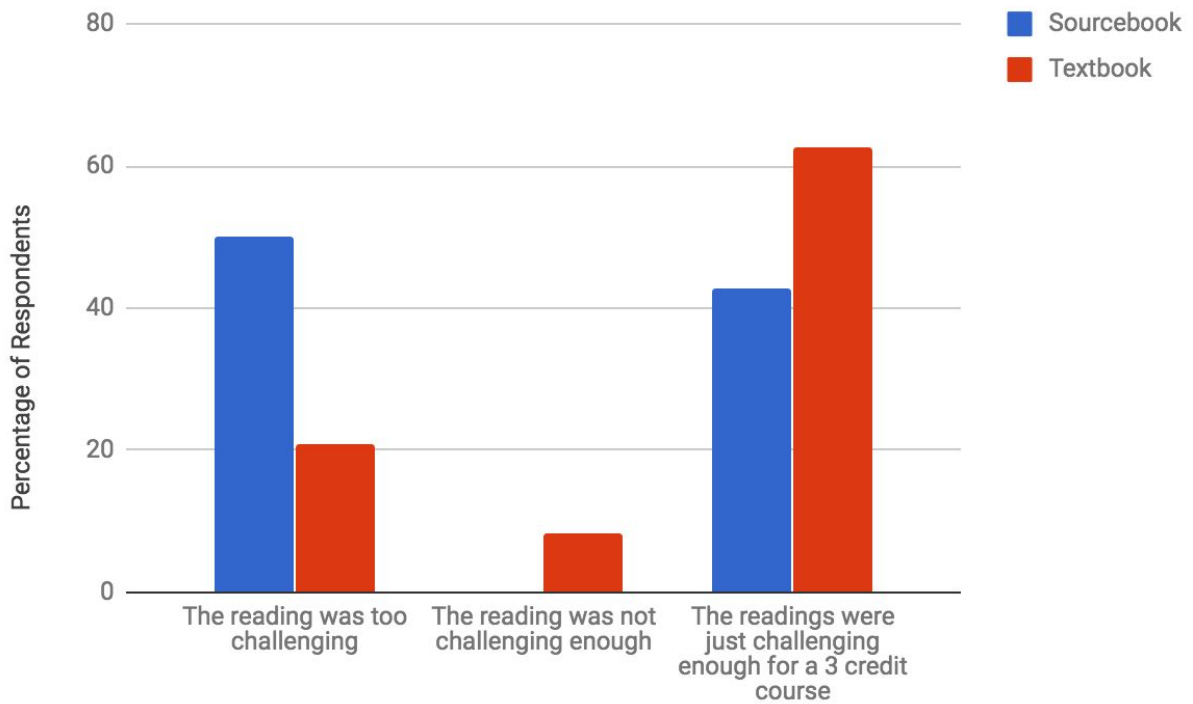
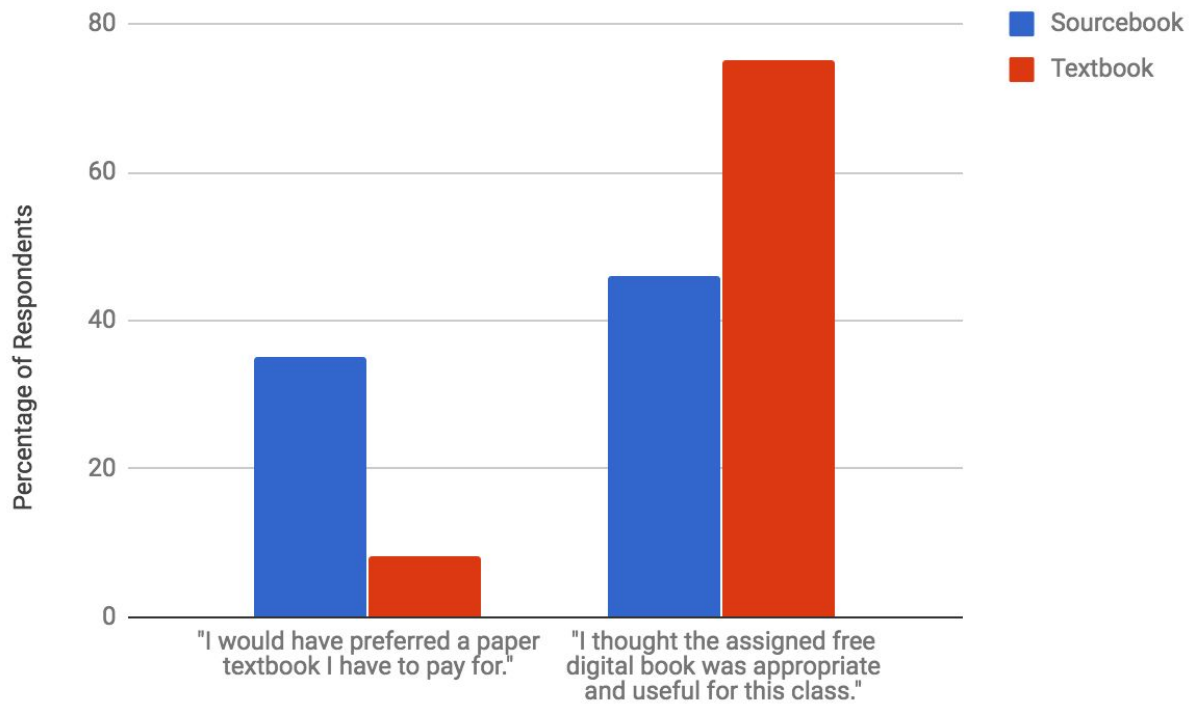


Figure 8: Student Opinion on Cost of Assigned Reading



In general, students in the sourcebook section were more dissatisfied with the assigned reading, being much more likely than their textbook counterparts to think both that too much reading was assigned and that the assigned reading was too challenging. 75% of textbook section students thought their free digital textbook was appropriate and useful, while only 46% of sourcebook students felt that way about the free digital sourcebook I compiled. Moreover, only 8% of textbook section students would have preferred a paper textbook if they had to pay for it, but 35% of sourcebook students would have been willing to pay for a traditional paper textbook.

Discussion

While the grades for the sourcebook and textbook class were quite close, they were both lower than I would like to see, and as it turns out, rather lower than the the institutional average for the Introduction to American Government course. This leads to the first benefit of taking an

experimental approach to adopting OERs: had I never tried to adopt OERs, I would not have sought out institutional data on the overall grade distribution for the course across Kingsborough and seen how much lower my sections' grades, both sourcebook and textbook are than the average at the college. Thus, adopting OERs has led me to consider my grading policy more deeply: the numerical approach provides more transparency but leads to lower grades and more failures in my courses, which has real negative impacts on students, in terms of slowing their progress and using up their financial aid and resources. I will be conducting further research on grading approaches both at Kingsborough and beyond, and adjust my grading to be in line with best practices.

Low overall grades in both sections also points to the need for a critical analysis of both the sourcebook and textbook. Every textbook reflects the editorial choices of its authors and publisher, and even in a standardized introductory course such as American Government, scholars and instructors can disagree on the relative importance or necessity of inclusion of some topics. As I came to discover in the course of the semester, while the Lenz and Hollman textbook was free, it did not line up well with my course learning objectives. For example, civil rights and civil liberties were collapsed into one chapter, which was at the end of the book; the chapter is also fairly short, while in my courses I spend a considerable amount of time on these topics. The Lenz and Hollman textbook also made nine references to the doctrine of Interposition in three different chapters in a book of 443 pages, while the Openstax textbook discussed below references it only once in passing, despite being 300 pages longer. The Lenz and Hollman textbook's chief virtue was its zero cost, but learning material quality must not be

sacrificed for cost, lest a two-tiered system develop: expensive, high quality materials for those who can afford them, and cheap or free but lower quality materials for lower income students. Luckily, the New Openstax textbook is an excellent alternative. Its approach aligns very closely with the learning objectives to my course. It is also free, peer-reviewed, and thorough (at over 700 pages, it is almost too long), and already includes many original sources in its appendix for student convenience. The Openstax American Government textbook is also distributed as a pdf for device neutrality and home printing, as well as available in web, print, iBook, and Kindle formats. One further advantage of the Openstax textbook is its more permissive Creative Commons license- not only are faculty and students free to retain and reuse the book, they are also free to edit and remix it; the Lenz and Hollman book is free to retain and reuse, but cannot be modified, as its license forbids derivative works.

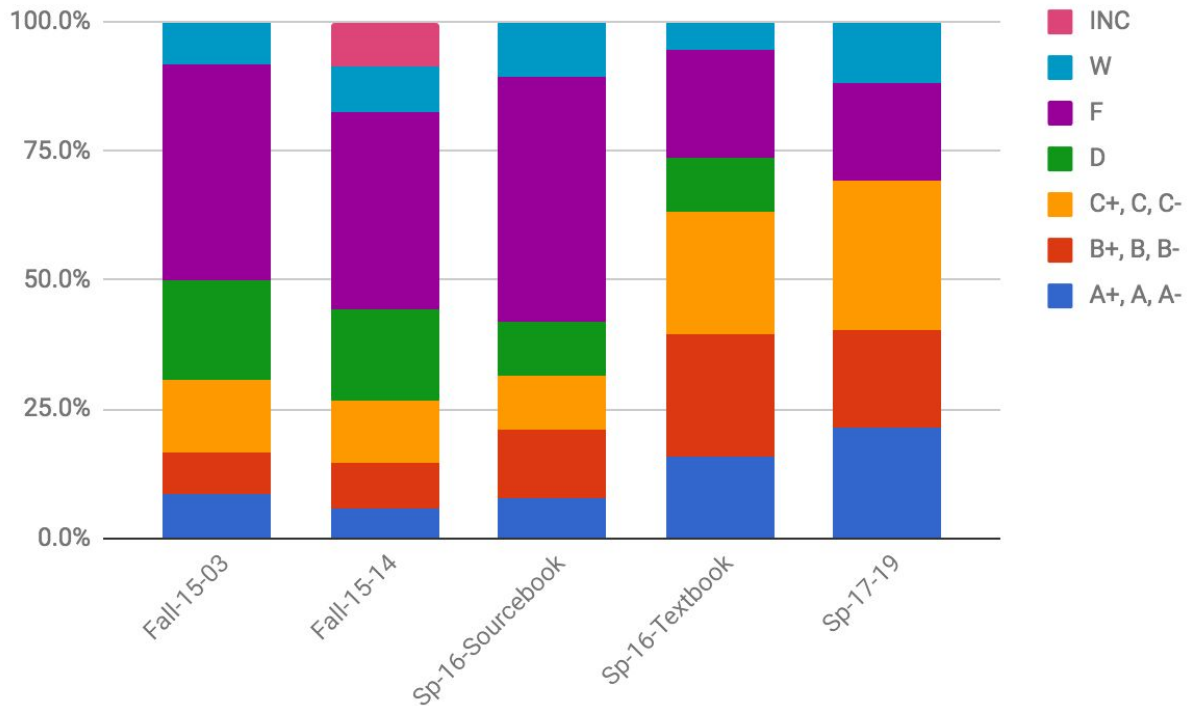
Looking critically at the sourcebook, it was far too big and too deep in its entirety. It was hard for students to find or focus on the takeaways. Several students from the sourcebook section requested introductory essays, additional reading guides, or other assistance. No similar requests were made by the textbook section students, indicating a serious need for revision to the sourcebook. First, and for this I take full responsibility, the sourcebook needs to be shortened significantly, with the original sources edited down. While original sources are free to include in their entirety, and digital books are not subject to page constraints from publishers or the department copy machine, there is a point at which too much is a bad thing, and that was clearly passed in this draft of the sourcebook. The next revision of the sourcebook will include significantly edited down excerpts from original sources, with links to the full documents online.

This should help students focus without being overwhelmed, while taking advantage of the digital medium to allow students who are interested to easily find further reading.

Sourcebook section students also requested introductory essays. These were not included in the original sourcebook for several reasons. First, and least importantly, there were none readily available that were licensed for reuse. More importantly, introductory essays seemed contrary to the learning objective of having students develop the skill to read and interpret the original sources themselves. As these data have shown, however, students in the sourcebook section did not respond as well to this approach. There is too much American government content with which students are initially unfamiliar for the content and skills learning objectives to be achieved with only original sources. A mixing of methods may be the best approach for most students, and that is how I have begun to teach my subsequent classes. I assign challenging original sources as required readings, but use time in class to work together as a class and in small groups to develop the skills necessary to understand such readings. I supplement these original sources with more accessible summary readings from an excellent OER textbook from OpenStax and engaging open multimedia, including but not limited to the US Government and Politics Crash Course series. Results from this mixing of methods have been very promising. Figure 9 shows the grade distributions for the comparable sections of Introduction to American Government I have taught recently. All five sections are large, face-to-face sections that meet three times per week for one hour per meeting, without a hybrid, online, or writing intensive enhancement: two sections in Fall 2015 before the OER experiment, the textbook and sourcebook sections during the OER experiment, and one section of the mixed methods approach

using primary source documents and other open source materials (including OpenStax textbook and videos) in Spring 2017.

Figure 9: Grade Improvement Post-Experiment



The grades for the Spring 2017 section continue the trend towards a significantly reduced number of students earning failing grades, with a corresponding increase in students receiving a grade of C or above. These results have been shared with colleagues in my department, to allow for sharing and further development of OER adoption in political science courses. Further OER adoption and experimentation will also increase across disciplines in the coming semesters at Kingsborough as we have received a substantial grant from New York state to enable the conversion of 25 courses to zero-textbook cost courses.

Adopting OERs encourages a reconsideration of the whole course, from learning objectives through reading assignments to assessments. Once you decide to break free from textbook publishers, there is no telling where the journey will take you. And while adopting OERs can seem daunting at first, it does not need to be. There is no need to reinvent the wheel, as there is already so much that has been created and shared openly that adopting OERs does not have to be about creating wholly new resources, although that was what was in part attempted in this project. Every day, new materials are developed and shared openly for others to adopt. Even as this research project has been conducted, new OERs, from individual textbooks to pre-curated courses built on existing OERs⁸ have been released. Just as previously, instructors of political science were required to consider new editions of textbooks for adoption, now instructors have the option of considering the new additions to the open realm.

Adopting OERs can be about developing a better course than you taught before, by allowing yourself to look beyond traditional publishers' textbook offerings to find the best mix of resources to teach your specific students exactly what you want them to learn in your specific course. Instructors can adopt whatever approach works best:- use only truly open or free-to-use materials; or combine text-based, multimedia, interactive websites, games or anything else. The

⁸ Two examples of fully formed OER courses available for adoption or adaptation are Saylor Academy and Lumen Learning. Saylor offers freely accessible courses, some of which can be taken for credit through Saylor; faculty at other institutions are free to link to, reuse, adapt, and remix the materials of Saylor courses for their own purposes. The Saylor American Government course is available at <https://learn.saylor.org/course/view.php?id=343>. Another example is Lumen Learning, which as of Summer 2017 had two fully useable American Government courses openly accessible on its platform: <https://courses.lumenlearning.com/catalog/lumen>. Anyone is able to view the courses without a login, which are built out of freely available materials, and to link to, copy, reuse, and remix them as they see fit. Lumen also offers a paid service, which provides technical support, learning management system integration, instructor resources, and assessments for those courses.

options are no longer limited by publishers' offerings, or by the costs imposed on students, but only by instructors' own creativity.

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