



## Evaluating the Effectiveness of Adopting Open Educational Resources in an Introductory American Government Course

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# Evaluating the Effectiveness of Adopting Open Educational Resources in an Introductory American Government Course

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## ABSTRACT

In this article, we present findings from a grant-funded initiative to replace traditional, proprietary textbooks with an open content textbook under a Creative Commons license in the introductory American government course (POLS 1101) at Middle Georgia State University. We find that the use of an open content textbook led to somewhat negative effects on student learning outcomes and student course satisfaction, although the associated lower textbook cost increased textbook accessibility to students. We conclude with some suggestions to those adopting textbooks in this course and to the wider discipline regarding measures that may lead to more unequivocally positive outcomes than those experienced in this study.

## KEYWORDS

American government;  
general education; open  
educational resources;  
textbooks

## Background: Open content

The adoption and use of open content—that is, materials released under a permissive grant of rights to end-users to use, modify, and redistribute those materials without additional permissions or payments to the original creators—has an extensive history (Caswell et al. 2008, 2–3). Works of the United States government have been released without any claim of copyright for over a century, while most creative works, once their copyright term elapses, enter the *public domain* and are no longer subject to any copyright and licensing restrictions on their use. Starting in the 1970s a number of academic research projects in the computing field were released under permissive licensing schemes, including the Berkeley Software Distribution of UNIX and the X Window System (McKusick 1999). Around the same time, Richard Stallman, a researcher based at the Massachusetts Institute of Technology, founded the GNU Project, whose goal was to release a complete computer operating system and application software under a “copyleft” license that encouraged free redistribution, modification, and use of the software and required that those making changes contribute those changes back to the broader community for potential incorporation in others’ work (Stallman 1999).

More recently, Harvard Law professor Lawrence Lessig has popularized the concept of broadening permissive licensing beyond the software realm to cultural works, most notably by working to establish Creative Commons, a project that gives guidance to content creators on how to create and use open content and provides a number of model legal

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licenses for creators to choose from, allowing them to decide the conditions (if any) under which their content can be reused and modified by others (Geere 2011). The advent of Creative Commons has led to increased interest in the academic community in creating, using, and adapting or “remixing” content for instructional purposes, including lectures and reading materials; these materials have collectively become known as open educational resources (OERs; see Caswell et al. 2008). Since almost any open content could presumably be used as an educational resource, we use the terms largely interchangeably in this article, although the phrase “open educational resource” appears to be more commonly used in the literature of other disciplines for open content specifically developed or adapted for teaching purposes.

To date, the evidence has suggested that OERs are generally acceptable to faculty and students alike, with both groups rating the open content used in these courses as being at least of equal quality and value as traditional commercial resources, with some exceptions. For example, Bliss et al. (2013) examined student and faculty reactions of the use of OERs at seven community colleges in three states in science, technology, engineering, and mathematics (STEM) courses as part of the Association of American Colleges and Universities’ Project Kaleidoscope, using both closed-ended and open-ended surveys administered to students and faculty in various courses. They report that “most faculty and students who participated in the study recognized and appreciated the low cost of PK textbooks and perceived them as being of high quality” (“Conclusions,” para. 1), but in some cases there were instances where the materials were poorly-organized and/or poorly-maintained, and students with limited Internet access reported trouble at times accessing online OERs as part of their coursework. Another concern discussed in the study is the costs borne by faculty who, in many cases, created the OERs for their courses; this was perceived as a “hidden cost” of OERs that was not being properly accounted for in terms of faculty teaching loads or compensation.

Hilton et al. (2013) similarly examine the adoption of OERs by five mathematics courses at a community college in Arizona. They find substantial evidence that the use of OERs reduced the direct financial costs to students (by substituting free, open content for expensive proprietary texts). In four of the five courses, student success rates (in terms of completing the course with a C or better) were unaffected (within the margin of error), while in one remedial mathematics course student success rates did somewhat decline. As was the case in the Bliss et al. (2013) study, Hilton et al. report generally high levels of student and faculty satisfaction with the OERs used in their courses, although faculty—when asked to compare OERs with proprietary texts they would have otherwise used—did have somewhat mixed reactions, indicating that some faculty believed the proprietary content was superior in quality.

Perhaps the largest study to date on the effectiveness of OERs was conducted by Fischer et al. (2015); the authors use a quasi-experimental design to compare approximately 4,900 students in courses that used OERs to nearly 12,000 students in courses that used traditional, proprietary materials at 2-year and 4-year colleges in several states, predominantly enrolled in STEM fields (although some courses represented were in other areas, such as education, English, history, psychology, and business). In their study, the authors found mixed effects of OERs on student completion and grades, although the most common outcome was that student grades in sections using OERs were comparable with those in sections utilizing proprietary educational resources. The authors also found that

students in courses with OERs were more likely to enroll in more credit hours in the subsequent term, suggesting that the lower cost of OERs may have allowed part-time students to progress more quickly in their degree programs due to lower out-of-pocket costs. This study did not examine student perceptions directly.

One of the few studies to date that concluded that OERs are less effective than traditional, commercial textbooks was that of Thomas Jared Robinson (2015), who studied the initial implementation of Project Kaleidoscope, which initially involved seven courses at seven different higher education institutions in its pilot year. Robinson finds that the effectiveness of OERs appears to have differed somewhat across the disciplines represented in the study, but generally finds a negative effect on student grades and their probability of earning a passing grade of at least a C—once OERs are adopted in their courses; this was most notably the case in courses in the areas of business and psychology. However, Robinson does state that “the effect size ... was relatively small compared to other predictors in the model” of OER effectiveness (p. 59), suggesting that any negative effects are modest at best, and perhaps might be outweighed by the lower financial costs to students.

More recently, Hilton (2016) reviewed the state of extant research on the use of OERs in higher education, examining 16 published studies on their use and effectiveness in various disciplines and settings. Summarizing the findings on the effectiveness of OERs, Hilton writes:

Only one of the nine studies on OER efficacy showed that the use of OER was connected with lower learning outcomes in more instances than it was with positive outcomes, and even this study showed that the majority of the classes were non-significant differences. Three had results that significantly favored OER, three showed no significant difference and two did not discuss the statistical significance of their results. In synthesizing these nine OER efficacy studies, an emerging finding is that utilizing OER does not appear to decrease student learning. (Hilton 2016, 586)

However, extant research on the effectiveness of OERs has focused largely on the natural sciences and mathematics, with relatively little research published to date on open educational resources in the humanities and social sciences. Thus one purpose of this study is to validate whether the effectiveness of OERs identified in other disciplines is also borne out in political science in particular.

### **The textbook transformation grant**

Our project, which was part of a statewide competitive grant program encouraging the creation and adoption of open educational resources, investigated whether the adoption of an open content textbook would lead to improved rates of students obtaining and using the textbook and better student performance in the introductory American government course at our institution, a public 4-year college in the southeastern United States. The institution was designated at the time as an access institution that admitted students with a wide variety of levels of preparation for success in college, and Introduction to American Government is a course that is frequently taken by first-semester students and has been regularly identified as one of the courses that has relatively-high rates of student withdrawals or otherwise-unsatisfactory outcomes, denoted by the common DWF metric measuring the rate of students earning failing grades, dropping the course, or withdrawing from the course after the drop/add deadline.

Given the constraints of the grant application process and the lack of lead time between receiving the grant and teaching the course with the open content text, we selected *American Government* by Lenz and Holman (2013), as it was already in use in American government courses at other institutions in our university system and was the only “turnkey” solution available at the time that fulfilled the constraints of availability to students in both paper and electronic formats, openness, and completeness. Our examination of the text suggested it fulfilled the expected student learning outcomes for the American government course at our institution, which are designed quite broadly to give faculty some degree of flexibility in terms of which topics they wish to focus on or deemphasize in the semester-long course.

While we are also investigating other solutions that may help improve student success in this course, including intensive tutoring by student peers beginning in the Fall 2015 semester, the immediate project focuses on the textbook used in the course. Textbook costs are of particular concern at our institution because we have very low in-state tuition rates for a bachelor’s-granting institution by contemporary standards, which makes textbook costs account for a substantial incremental student cost over tuition and fees—and often, given financial aid, one of the few visible out-of-pocket costs for students, as most students are less conscious of the portion of their financial aid that covers tuition, fees, and on-campus housing since those monies are deducted automatically from their award.

To this end, our project design included both a brief survey examining student experiences with the textbook in the course, including if/how they obtained the textbook, their out-of-pocket cost for it, and their impressions of the book on various dimensions, as well as aggregate-level measures of student progression and success, such as final course grades and DFW rates. A copy of the survey instrument is presented in the Appendix.

We compare the Fall 2014 semester, during which we taught the course using the two distinct commercial textbooks we had used in the past in our classes,<sup>1</sup> with the Spring 2015 semester, when we used the Lenz and Holman (2013) *American Government* textbook, which is available either as a no-cost PDF file from the Florida digital repository for instructional resources, “The Orange Grove,” or as a printed edition published by the University Press of Florida.

The survey was administered via the institutional course management system (Brightspace by Desire2Learn, Kitchener, ON, Canada) at the conclusion of the Fall 2014 and Spring 2015 semesters. Although the survey was optional, students were given a small extra credit incentive to participate in the survey, resulting in relatively high response rates per section. Aggregate course performance information was compiled by the authors based on data reported to the institution’s student record management system.

The course sections examined in this research were delivered in three formats: fully-online, hybrid (partially online, typically with one 75-minute meeting per week), and a flipped classroom format with fully face-to-face scheduling (two 75-minute meetings per week). The studied hybrid and face-to-face sections were delivered on the Macon and Warner Robins campuses of Middle Georgia State University. Most students enrolled in these sections were traditionally-aged college students, between 17 and 21 years of age, although some students were substantially older. Each course section had an enrollment cap of 35 students, regardless of delivery format; most were completely full as of the end of the add/drop period, although there was some subsequent attrition due to student

withdrawals. The variety of delivery mechanisms, students, and faculty involved should facilitate generalizable findings from this project.

## Findings

In [Table 1](#), we present the aggregate results for question 1 of the survey, which asked students whether and how they obtained the textbook that semester.

Examining the student survey data indicates—somewhat surprisingly—that students were no more likely to obtain the open content textbook (which was available free) in Spring 2015 than they were to obtain commercial texts in Fall 2014. One possible explanation is that while the retail prices of the commercial texts in use in Fall 2014 were somewhat expensive (around \$80–90), particularly relative to the course’s tuition,<sup>2</sup> there were substantial quantities of used books available from prior semesters leading to significantly lower actual costs to students than the new textbook pricing would suggest. Our bookstore’s aggressive promotion of rental options in recent years, along with online retailers and rental services and a commercial textbook store located near the Macon campus that offers used and rented books, may have also led to students obtaining the commercial texts at lower costs than those in other courses. While the price of textbooks may be a major obstacle to student progression in some courses or disciplines, that does not appear to have been the case in this course in this study.

We do see some variation in the choice of textbook format, however; not surprisingly, the free e-book option in Spring 2015 was substantially more popular than using a paid-for textbook via purchase or rental in Fall 2014. The e-book seems to largely have substituted for rental or used book purchases; in other words, it appears that students who normally would have purchased a new book appear to have bought a new print copy regardless, while students seeking value-for-money took advantage of the free e-book. However, this finding may have been skewed by the relative lack of availability of used and rental print copies; the Lenz and Holman text was not used previously by [our university’s] faculty, and used and rental availability from online and other off-campus retailers in particular was substantially lower than for the established, large-print-run commercial texts.

[Table 2](#) includes responses to the Likert scale items regarding students’ experiences with the textbook in the course. Student satisfaction with the Lenz and Holman (2013) textbook seems to have been substantially lower than the commercial texts used in Fall 2014. Students in Spring 2015 were much less likely to agree that the textbook represented “high quality” or that it was “well-organized” or helpful in their coursework than those in the Fall 2014 semester. Although, as expected, students reported that the open context textbook

**Table 1.** Students’ self-reported textbook purchase and rental behavior.

Means of obtaining textbook	Fall 2014 (Control)	Spring 2015 (Treatment)	Difference (Spring–Fall)
Bought new print copy	17.9% (29)	20.5% (24)	+2.6%
Bought used print copy	51.2% (83)	5.1% (6)	<b>–46.1%</b>
Rented print copy	24.1% (39)	1.7% (2)	<b>–22.3%</b>
Used library reserve copy	0.6% (1)	7.7% (9)	+7.1%
Shared printed copy with a classmate	0% (0)	7.7% (9)	+7.7%
Used an electronic copy	3.6% (6)	47.0% (55)	<b>+43.3%</b>
Did not obtain the book	2.5% (4)	10.3% (12)	+7.8%
Sample size ( <i>n</i> )	162	117	

Note. Differences in bold are significantly different ( $p < .05$ , two-tailed) in an independent-samples difference-of-proportions test (rows with  $n < 5$  excluded).

**Table 2.** Student “agree” and “strongly agree” responses to Likert items regarding experiences with their textbook.

Item	Fall 2014 (Control)	Spring 2015 (Treatment)	Difference (Spring–Fall)
Book was affordable	58.1%	68.4%	+10.3%
Book was well-written	80.6%	55.6%	–25.0%
Book was difficult to understand	16.6%	10.4%	–6.2%
Book represented good value	55.6%	52.2%	–3.4%
Easy to find information in book	70.6%	49.6%	–21.0%
Book helped me do better	72.5%	48.7%	–23.8%
Book was of high quality	63.1%	35.0%	–28.1%
Book was well-organized	80.5%	57.8%	–22.7%
Sources clear for information	70.4%	64.7%	–5.7%
Contained numerous errors	5.1%	12.2%	+7.1%
Book was visually appealing	43.7%	21.4%	–22.3%
Book was up-to-date with current scholarship	71.9%	51.3%	–20.6%
Book was outdated in coverage of current events	5.7%	6.0%	0.3%
Key terms poorly defined	9.4%	20.7%	+11.3%
Enjoyed reading book	32.1%	19.3%	–12.8%
Overall was satisfied with book	74.2%	56.9%	–17.3%
Would recommend using book in future terms	69.4%	53.0%	–16.4%

Note. Differences in bold are significantly different ( $p < .05$ , two-tailed) in an independent-samples difference-of-proportions test.

was more affordable, this did not translate into a belief that the text “represented good value” to students.

One serious pedagogical concern is that students reported that it was substantially more difficult to find the information they were looking for in the open content text, even though the e-book is delivered as a full-text searchable PDF file; this finding suggests that traditional means of organizing textbooks (including the compilation of an index and a glossary, along with a comprehensive table of contents) remain helpful even for the emerging “digital native” student population. To this end, one of the authors compiled a glossary covering each textbook chapter that was used in the course.

We disaggregate the student responses by textbook in Table 3 to investigate whether the differences observed were driven, at least in part, by textbook choice. In general we find that the differences in student satisfaction are similar when comparing both proprietary texts (Coleman et al. 2011; Ginsberg et al. 2012), although we can observe that students were generally happier in the “commercial text” condition with the Ginsberg et al. text, which despite being a low-cost “essentials” edition retains most of the features of its more expensive counterparts. In particular, students noted that the Ginsberg et al. text was easier to find information in, was more visually appealing, and seemed more up-to-date.

By contrast, the Coleman et al. (2011) text, which no longer is in print, was a somewhat more radical departure from traditional texts as part of Pearson’s “Penguin Academics” imprint, which aimed toward a less formal approach and eschewed some features of traditional textbooks. Somewhat surprisingly, despite the avowed effort to make the text more appealing for students to read and use, the students surveyed had the opposite reaction, finding it less appealing on average than the more traditional Ginsberg et al. (2012) text.

Turning to the aggregate student performance data, we generally find no substantial differences between student performance in Fall 2014 (using the traditional textbook) and Spring 2015 (using the open content textbook). The final student grade distributions

**Table 3.** Student “agree” and “strongly agree” responses to Likert items regarding experiences with their textbook, disaggregated by Fall 2014 text.

Item	Coleman et al.	Difference (LH-Coleman)	Ginsberg et al.	Difference (LH-Ginsberg)
Book was affordable	60.0%	+8.4%	56.7%	+11.7%
Book was well-written	77.1%	-21.6%	83.3%	-27.8%
Book was difficult to understand	20.6%	-10.2%	13.5%	-3.0%
Book represented good value	55.7%	-3.5%	55.6%	-3.4%
Easy to find information in book	65.7%	-16.1%	74.4%	-24.9%
Book helped me do better	74.3%	-25.6%	71.1%	-22.4%
Book was of high quality	54.3%	-19.2%	70.0%	-35.0%
Book was well-organized	80.0%	-22.2%	80.9%	-23.1%
Sources clear for information	56.5%	+8.1%	81.1%	-16.5%
Contained numerous errors	7.2%	+4.9%	3.4%	+8.8%
Book was visually appealing	27.5%	-6.2%	56.2%	-34.8%
Book was up-to-date with current scholarship	65.2%	-13.9%	78.7%	-27.3%
Book was outdated in coverage of current events	7.1%	-1.1%	4.5%	+1.5%
Key terms poorly defined	13.0%	7.6%	6.7%	+14.0%
Enjoyed reading book	21.7%	-2.4%	40.0%	-20.7%
Overall was satisfied with book	69.6%	-12.7%	77.8%	-20.9%
Would recommend using book in future terms	60.9%	-7.9%	76.1%	-23.1%
Sample size ( <i>n</i> )	70		90	

Note. Differences in bold are significantly different ( $p < .05$ , two-tailed) in an independent-samples difference-of-proportions test.

were broadly similar: down 0.1 on a 4-point GPA scale in Lester’s classes, while virtually unchanged in Lawrence’s sections; neither difference was statistically significant in a two-tailed independent-samples *t* test. Student progression and completion does not appear to have been substantially affected either; a 1% decrease in the DWF rate (defined here as students earning a grade of “D,” “F,” or withdrawing from the course, as [our institution] does not retain records of students who dropped during the 4-day drop/add period) was observed in Lawrence’s sections, while Lester’s courses saw a 2% increase in the DWF rate. Again, neither of these differences were statistically significant in a two-tailed difference-of-proportions test at a 95% confidence level.

Although we lack data from student surveys for the Spring 2014 semester, we also compared student performance in Spring 2014 (using the traditional textbook) to Spring 2015 (using the open content text) to see whether the term the course was offered appeared to make a difference in students’ outcomes. This comparison saw a fairly dramatic difference for one of the authors’ sections, with student grades down 0.1 on the 4-point GPA scale in Lawrence’s sections but up 0.45 in Lester’s sections when comparing Spring 2015 to Spring 2014; the difference in GPAs was statistically significant in a two-tailed independent-samples *t* test at the 95% confidence level for Lester’s sections, but not for Lawrence’s. More strikingly, the DWF rate was unchanged in Lawrence’s classes and 18 percentage points lower in Lester’s sections; the change in DWF rate was not statistically significant in the former case, but it was significant at the 95% confidence level in a two-tailed difference-of-proportions test in the latter case. However, the extent to which this difference can be attributed to the textbook change is limited as there was a similar change in grade distributions and DWF rates from Spring 2014 to Fall 2014 for Lester’s sections, despite no change in materials over that period, and Lawrence’s sections saw no substantial changes. As Lester’s sections were taught in online and hybrid formats, it is more likely that changes in institutional policies restricting students with learning

support (remediation) requirements from enrolling in online courses was responsible for this difference in student performance.

These findings are at somewhat odds with the extant published research on open educational resources in other disciplines, which—as noted earlier—generally indicate more positive outcomes when OERs are used in lieu of traditional texts (although, as noted above, there are exceptions such as Robinson 2015). One possibility is that negative and null results are not represented in the literature due to the “file drawer problem” associated with publication bias (see, e.g., Franco, Malhotra, and Simonovits 2014); a related form of publication bias may result from the preponderance of advocates of the expanded use of OERs among those researching their use. Another possible explanation, explored in more detail below, is that OERs in political science in particular are relatively immature and there are few alternatives available; in other words, OERs in the natural sciences and mathematics may be of inherently greater quality due to the greater maturity of OER production and use in those fields.

## Lessons learned

One specific concern in the open content space for political science is the lack of available textbook options, at least for the introductory American government course. In addition to the *American Government* used in this study, there appear to be only two other, complete open content textbooks available as of this writing; at the time of the project, the only other open content textbook was entitled *American Government and Politics in the Internet Age* (Saylor), which appears to have been adapted from a textbook from a commercial publisher, Flat World Education, with all of the attribution information removed and a license permitting redistribution only by noncommercial means; given the unclear provenance of the text, it is not obvious whether this modified textbook is being legally distributed or not. The limited number of OER options means that it may be difficult for faculty to find an open content textbook that meshes well with their preferred pedagogical approaches.

A more general concern is the lack of ancillary materials beyond the textbook. As experienced professors, we both had years of lectures, test and quiz items, instructor manuals, and other resources that we could draw upon in teaching using *American Government*. However, a new or less experienced instructor might well not have the supporting materials they need to teach a complete course. Part-time faculty with limited preparation time or full-time faculty who have substantial nonteaching responsibilities (not to mention other courses) are likely to need supporting materials to use as a foundation for building their own approach to the course and to ensure alignment of class activities and assessments with the textbook that students are reading. Students have also come to expect ancillary study materials, such as sample quizzes and tests, flashcards for studying glossary terms, chapter outlines, visual aids, and simulations to help them to understand class materials. In the case of proprietary texts, the development of these resources is subsidized by the sales to students of the textbook (and, in some cases, access codes for on-line companion websites). This is an area where some degree of commercial or nonprofit support for OERs is necessary for more widespread adoption.

Another concern is the *sustainability* of open content resources, which can be compounded by their licensing by their copyright holders. *American Government*, for

example, is licensed under a Creative Commons license—but the specific license used (CC-NC-ND) precludes both commercial redistribution and the distribution of modified versions of the text. The limitation on derivative works means that users must rely on, or hope that, the authors and publisher are willing and able to update the text in the event that mistakes are discovered or material becomes eclipsed by new events. Particularly in political science, both the political figures in specific positions—such as the presidency and the partisan control of legislative bodies—change on a regular basis, while new laws and court decisions can, at times, radically change the state of political affairs in a particular area. Some degree of ongoing, coordinated support for necessary textbook revisions is essential to keep OERs from becoming stale or, alternatively, requiring duplicative efforts by faculty to individually “fill in the gaps” of an outdated text.

## Conclusions and future directions

As discussed, the outcome of this study is something of a mixed bag for the effectiveness of, and satisfaction with, OERs in political science. While the findings do not support the notion that OERs represent a dramatic improvement over commercial texts, nor do they indicate that students perform substantially *worse* when using open content texts either. This finding is generally consistent with research on OERs outside of mathematics and the natural sciences (see, e.g., Robinson 2015; Hilton 2016), which have shown null-to-slightly negative effects in disciplines such as business and psychology. Particularly at open-access, low-cost institutions such as ours, the cost benefits to students of eschewing the cost of a new textbook for a course that has an in-state tuition rate of under \$400 may very well outweigh the drawbacks in content and presentation that may be present, particularly if it results in more of our students being able to obtain the text and use it in the first place.

Obviously the major caveat is that our study is limited to a single OER text, a limitation that could be addressed in future research with the emerging availability of additional open content textbooks, such as *OpenStax American Government* (Krutz 2016).

More broadly, however, the use of open content in instruction holds great promise. Evaluations of this promise should be tempered by a realistic assessment of who will bear the costs of using these materials; at present, much of the rhetoric supporting instruction using open content has focused almost exclusively on the idea of saving students money, leading to the conclusion that it may be easier to leave this task to individual instructors, asking them to do the additional work that textbook publishers historically did in return for charging high prices for access to their texts and associated student support materials, without commensurate compensation.

The lack of instructor-focused resources like complete test banks remains a serious drawback to open content books that remains to be addressed, particularly for faculty with high teaching loads, those who are working on a contingent or part-time basis who can only be expected to devote a limited amount of time to class preparation, or those who need a large number of test items to reduce the likelihood of student academic misconduct.

In sum, we are cautiously optimistic that the hurdles we have identified can be overcome with the direction of appropriate and necessary resources by institutions of higher education and foundations to improve the quality, timeliness, and utility of open content

texts so they can be of use to as many faculty as possible. Hopefully experiences with first generation OER texts such as Lenz and Holman (2013) can help our discipline identify where weaknesses remain in these resources and allow us to concentrate on improving them.

## Notes

1. In the Fall 2014 semester, Lawrence used *Cause and Consequence in American Politics* (Coleman, Goldstein, and Howell 2011), while Lester used *We The People* (Ginsberg et al., 2012). While *Cause and Consequence* is not generally considered to be a standard American government text (it was designed to be a “readable” textbook with a less formal style, in line with the broader Penguin Academics imprint, which has since been phased out by Pearson), *We The People* is a mainstream text widely used in American government courses across the United States. Both books were available in traditional and electronic formats from their publishers, and both new and used editions were available from campus bookstore locations.
2. During the 2014–2015 academic year, the gross tuition for a three semester-hour course at our institution, exclusive of mandatory fees, was approximately \$300 for in-state students and around \$900 for out-of-state students. However, a large number of our students are Pell eligible, receive free tuition as dual-enrolled high school students, and/or qualify for the statewide non-need-based scholarship program, and thus average out-of-pocket tuition for students was likely to be substantially lower than the headline figure.

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## References

- Bliss, T. J., John Hilton III, David A. Wiley, and Kim Thanos. 2013. "The Cost and Quality of Online Open Textbooks: Perceptions of Community College Faculty and Students." *First Monday* 18 (1). doi:10.5210/fm.v18i1.3972.
- Caswell, Tom, Shelley Henson, Marion Jensen, and David Wiley. 2008. "Open Educational Resources: Enabling Universal Education." *The International Review of Research in Open and Distributed Learning* 9 (1):1–11.
- Coleman, John J., Kenneth M. Goldstein, and William G. Howell. 2011. *Cause and Consequence in American Politics*. 1<sup>st</sup> ed. Hoboken, NJ: Pearson's Penguin Academics.
- Fischer, Lane, John Hilton III, T. Jared Robinson, and David A. Wiley. 2015. "A Multi-Institutional Study of the Impact of Open Textbook Adoption on the Learning Outcomes of Post-Secondary Students." *Journal of Computing in Higher Education* 27 (3):159–72. doi:10.1007/s12528-015-9101-x.
- Franco, Annie, Neil Malhotra, and Gabor Simonovits. 2014. "Publication Bias in the Social Sciences: Unlocking the File Drawer." *Science* 345 (6203):1502–1505. doi:10.1126/science.1255484.
- Geere, Duncan. 2011. "The History of Creative Commons." *Wired UK*. December 13. <http://www.wired.co.uk/news/archive/2011-12/13/history-of-creative-commons> (December 28, 2015).
- Ginsberg, Benjamin, Theodore J. Lowi, Margaret Weir, Caroline J. Tolbert, and Robert J. Spitzer. 2012. *We The People*. 9<sup>th</sup> essentials ed. New York: W.W. Norton.
- Hilton, John III. 2016. "Open Educational Resources and College Textbook Choices: A Review of Research on Efficacy and Perceptions." *Educational Technology Research and Development* 64 (4):573–590.
- Hilton, John III, Donna Gaudet, Phil Clark, Jared Robinson, and David Wiley. 2013. "The Adoption of Open Educational Resources by One Community College Math Department." *The International Review of Research in Open and Distributed Learning* 14 (4). <http://www.irrodl.org/index.php/irrodl/article/view/1523>
- Krutz, Glen. 2016. *OpenStax American Government*. Houston: OpenStax.
- Lenz, Timothy O., and Mirya Holman. 2013. *American Government*. Gainesville: University Press of Florida.
- McKusick, Marshall Kirk. 1999. "Twenty Years of Berkeley Unix: From AT&T-Owned to Freely Redistributable." In *Open Sources: Voices from the Open Source Revolution*, eds. Chris DiBona, Sam Ockman, and Mark Stone. Sebastopol, CA: O'Reilly Press, 31–46.
- Robinson, Thomas Jared. 2015. "The Effects of Open Educational Resource Adoption on Measures of Post-Secondary Student Success." PhD diss. Brigham Young University.
- Stallman, Richard. 1999. "The GNU Operating System and the Free Software Movement." In *Open Sources: Voices from the Open Source Revolution*, eds. Chris DiBona, Sam Ockman, and Mark Stone. Sebastopol, CA: O'Reilly Press, 53–70

## Appendix

### Survey instrument

(Note that the order of some question responses is deliberately inverted to allow us to identify responses from those who aren't reading the questions.)

1. How did you obtain the textbook for this course?
  - a) Bought my own new printed copy.
  - b) Bought my own used printed copy.
  - c) Rented my own printed copy.
  - d) Used a printed copy on library reserve.
  - e) Shared a printed copy with classmate(s).
  - f) Used an electronic copy (purchased or rented).
  - g) I did not obtain the textbook.

2. If you obtained a personal copy of the book for this course, how much did you pay to borrow, use, or purchase it for this term? (\$ figure, open ended from \$0 +)
3. [Lester only, Fall 2014] Are you using the **current edition** of this book (*We The People*, 9th essentials edition)? a = Yes, b = No, c = Not sure.

For the following statements regarding the required textbook for this course, please indicate your level of agreement on the scale: a = Strongly agree, b = Somewhat agree, c = Neither agree nor disagree, d = Somewhat disagree, e = Strongly disagree.

4. The textbook for this course was **affordable**.
5. The textbook for this course was **well-written**.
6. I found the textbook for this course **difficult to understand**.
7. I believe the textbook for this course represented **good value for money**.
8. It was **easy to find** information I was looking for in this textbook.
9. Reading the textbook **helped me perform better on quizzes and tests** in this class.
10. The textbook for this course was of **high quality**.
11. The textbook for this course was **well-organized**.
12. The **sources** for the information in the textbook were **clearly indicated**.
13. The textbook for this course **contained numerous errors**.
14. The textbook for this course was **visually appealing**.
15. The textbook was up-to-date with **current scholarship in political science**.
16. The textbook was **outdated in its coverage of current issues**.
17. **Key terms** in the textbook were poorly defined or explained.
18. I **enjoyed reading** the textbook.
19. Overall, I was **satisfied** with the textbook for this class.
20. Based on using it this semester, I would **recommend** that this textbook be used to teach this course in the future.
21. Do you have any other comments or observations regarding the textbook?  
(Open-ended response question.)