



# SOMEPLACE UNIVERSITY

OER Adoption in the  
Undergraduate History Department

November 2018

**Business Case Prepared by**

Chaymaa Ijermki

# SOMEPLACE UNIVERSITY

## OER Adoption in the Undergraduate History Department

November 6, 2018

Dear Dr. Payne,

Attached is the business case for "OER Adoption in the Undergraduate History Department," which you requested to help determine the costs and benefits associated with OER adoption in Someplace University's History Department for the upcoming academic year.

The purpose was to consider how OER could be used by department faculty to help contain textbook-related expenses for their undergraduate students. Along with a brief cost analysis of the status quo, that is, continuing with traditional textbooks, we provide two distinct OER-related alternatives for your serious consideration.

We understand that you will be meeting with the Provost on November 7, 2018 to review this case. We look forward to receiving your feedback by November 15, 2018 so that we can take the next steps in exploring OER adoption at our University.

Please contact us should you or the Provost require clarification on *any* aspect of the business case.

Sincerely,

Chaymaa Ijermki

## Executive Summary

This is a business case proposing the adoption of OER in the undergraduate History Department at Someplace University. It was prepared at your request to determine the costs and benefits associated with such an adoption as compared to the status quo of textbook use for the upcoming academic year. This project benefits Someplace University by containing expenses for students associated with the cost of purchasing textbooks used in all 10 core history courses.

Several alternative choices exist. We considered ones that presented greatest savings for students, met quality OER guidelines, addressed pedagogical needs, and were accessible to students and professors alike. The alternatives consist of: OER Commons library with modifications to the resources and grant funding; a blend of OER libraries and authoring tools with no modifications to their resources unless volunteered; and the status quo—continued use of textbooks.

Alternative 1 proposes the use of the well-respected digital library, OER Commons, plus its in-house authoring tool, OER Author, presenting varying levels of modification to its resources by professors, with grant-seeking to cover the fees of doing so. Before grants, its estimated costs total \$797,586. In this case we present a scenario in which this option would mean an *actual* cost of \$53,600 with savings ranging from \$2,010 to \$13,400, with the primary issue affecting implementation being the likelihood of receiving grants that are lucrative enough to be financially beneficial for students.

Alternative 2 presents a blend of quality OER libraries and authoring tools *without* a formal modification scheme but with encouragement and staff support for professors to volunteer their efforts in doing so. Its estimated costs are \$2400, estimated savings range from \$51,680 to \$64,600, and its issues affecting implementation consist of time to search for and use new repositories as well as potential resistance to the learning curve associated with new platform adoption.

Alternative 3 presents the status quo of continuing to use textbooks. Its estimated costs are \$67,000 with a projection of fees only further increasing. Issues affecting continued implementation of this alternative include lack of affordability on behalf of students, less engagement, and less enrolment.

Our recommendation is Alternative 2 due to its greatest potential for student savings, low risk profile, and additional pedagogical benefits.

## Background of the Project

This business case presents the use of OER as an *alternative* pedagogical resource for the explicit benefit of both professors and undergraduate students within the History Department at Someplace University. According to the William and Flora Hewlett Foundation from whom we borrow the definition, OER are: "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."<sup>1</sup>

This business case was prepared upon your request, Vice-President Payne, to address the University's concerns about the increasing costs of textbooks for students. OER were suggested as a means to mitigate those costs by potentially replacing costly traditional textbooks. You have expressed a desire to understand the options available to determine, in collaboration with the Provost, if the incorporation of OER into the History Department is a viable pursuit at this time.

### Business Objective

This project benefits Someplace University by containing costs for its undergraduate history students, who, according to our numbers, are collectively spending approximately \$67,000 on history-related textbooks per cohort.

Open education practices in Canadian universities are not yet widespread. Hence, according to Amanda Coolidge, Senior Manager of Open Education at BCcampus, "...there isn't an economic model for the cost associated with adaptations and/or creations. You would find very different numbers across the board for the development of OER<sup>2</sup>." This business case therefore provides estimates only for OER use that helps reduce the cost of textbooks for students — our ultimate objective.

The use of OER, it must be noted, provides significant co-benefits to key stakeholders. For students, higher completion rates,<sup>3</sup> and an increase in both student engagement and retention<sup>4</sup>

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<sup>1</sup> OER definition according to Hewlett Foundation: <https://hewlett.org/strategy/open-educational-resources/>

<sup>2</sup> According to Amanda Coolidge in personal communication, October 31, 2018.

<sup>3</sup> According to Dr. Tony Bates in personal communication, October 29<sup>th</sup>, 2018.

<sup>4</sup> Weller, M., de los Arcos, B., Farrow, R. Pitt, B. & McAndrew, P. (2015). The Impact of OER on Teaching and Learning Practice. *Open Praxis*, 7(4). 351–361.]

have all been noted. For educators, improved curriculum and pedagogy as well as opportunities to collaborate have been observed.<sup>5</sup> Put differently, OER are “foundational to engaging with responsible pedagogy.”<sup>6</sup> These are words from Dr. Arthur Gill Green, a Canadian scholar formerly of UBC, a pioneer in open education, whose words might inspire as you move through this business case.

## Constraints

The project must adhere to the following constraints:

### *Stated:*

- Open Education Resources (OERs) are the only viable substitute for traditional textbooks.
- Must respect the 30-credit (10-course) core requirement of the history major of the 90 credit Bachelor of Science program at Someplace University.
- Alternatives must benefit an average of 75 undergraduate students who major in history per year.
- Alternatives must present a cost savings of *at least* less than \$100 per core course (10 in all).

### *Assumed:*

- Administrators are not familiar with use of OERs in higher education so reliant on others.
- Administrators under the impression that OERs are cheap.
- Administrators unaware that the uptake of OERs is a time-consuming pursuit for faculty.
- Some faculty will express resistance to the idea of OER use in their department and classrooms.
- Funding of OER uptake will be limited.

## Criteria

The Alternatives section provides further explanations of how criteria were selected.

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<sup>5</sup> Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislevy, J., Wang, S., Desrochers, D. & Staisloff, R. (2018). Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream’s OER Degree Initiative. Menlo Park, CA: SRI International.

<sup>6</sup> Engle, W. (2016, December 10). Open UBC Snapshots: Textbook Displacements by Open Resources. [Blog post]. Retrieved from <https://open.ubc.ca/open-ubc-snapshots-textbook-displacements-by-open-resources/>

## Part 2: Alternatives

### Identifying Alternatives

Before we could identify alternatives, we sought to understand what are OER and, more broadly, open education practices. Next, we pursued questions about how and why universities (namely in North America) leverage OER, learning at the same time about the barriers to OER use. OER websites (e.g., OER Commons), professional blogs (e.g., [tonybates.ca](http://tonybates.ca)), university websites (e.g., University of British Columbia), White Papers and research articles accessed independently as well as with support from Concordia University Subject Librarian, Christopher Bober, provided invaluable information.

However, one social media site in particular, Twitter, proved to be critical in connecting us with the OER community who incidentally shared some of the resources mentioned above. Besides facilitating contact with OER-related vendors, like PressBooks, Twitter connected us to a leading Canadian figure in the OER movement, Dr. Tony Bates, who agreed to be emailed.

Dr. Bates' experience as a sponsored (i.e., The BC Open Textbook Project and Contact North) open textbook author alone was helpful in developing our understanding of the context in which OER use can be—and has been—supported, as well as the key cost considerations. But his kind introduction to Amanda Coolidge, Senior Manager of the BC Open Textbook initiative at BCcampus, enabled us to discuss costs and funding considerations in greater depth. From Ms. Coolidge, we also learned more about the communities supporting OER, and how professors and their institutions are approaching open education practices today. The OER community is indeed an *open* community.

Indeed, our rich exposure to current OER-related literature, discussions, and experts informed our alternatives.

## Selection Criteria

Ultimately, our choice of alternatives was made by evaluating OER repositories according to a set of reliable criteria as well as considering funding implications for Someplace University. To elaborate, BCcampus' *Faculty Guide for Evaluating Open Education Resources* found through our own initiative was used as a primary reference.

Specifically, the 6 quality criteria for OER selection were:

1. Relevance
2. Accuracy
3. Production quality
4. Accessibility
5. Interactivity
6. Licensing

OER repositories that met these six criteria were chosen for consideration.

Regarding funding, Dr. Bates' and Ms. Coolidge's respective funding experiences highlighted the challenges involved in securing funding for Canadian universities, especially of the size we deem necessary. But what remains clear is that momentum is building in favour of open education practices, and therefore of institutional support. Armed with this knowledge, we leveraged the very nature of OER that allow for adoption of adaptation, i.e., varying degrees of modification, to propose two distinct entry points for Someplace University to begin their own OER journey. Finally, both alternatives recognize *but* aim to minimize the impact of the necessary trade-offs between quality, cost, and time that occur over the course of a project.

## Researching Costs

To determine component costs, pricing was taken through discussion with Dr. Bates and Ms. Coolidge, as well as from Dr. Bates' article, *The cost of developing an open textbook: \$80,000 – \$130,000*, outlining his first-hand experience developing an OER with a breakdown of related costs, along with presumed averages. This, in conjunction with numbers provided in discussion with Dr. Saul Carliner, professor in the Educational Technology Department at Concordia University, and his website, *The Commerce of Content*, served to inform our calculations of costs outlined below.

## Alternative 1: OER Commons with Modification + Grants

This alternative proposes the use of the free online library, OER Commons, with varying levels of modification applied to eligible resources using the library's free, in-house developing and remixing service, OER Author. OER Commons is at the forefront of the "open community". It readily meets quality criteria outlined above, offering an abundance of history-focused resources for undergraduate study, many of which are created by highly reputable sources. Our research indicates that OER Commons' resources also meet production quality standards (e.g. clear, no spelling errors) and offer interactive options, with media formats including text, video, audio, and graphics. A combination of digital textbooks, modules, assignments, and exercises—truly a wealth of resources—are available to support professors' varied pedagogical goals and students' learning goals. Conditions of use vary, with many allowing for remixing and reusing, making editing and sharing of OER easy to execute via OER Author. Also, OER Commons provides faculty new to open education practices with an in-built community made up of hubs and groups. These can serve as a supportive community to initiate newcomers who may, as research indicates<sup>7</sup>, be resistant or reluctant to use OER.

This alternative will work in conjunction with grants promising to significantly reduce the financial burden of OER modification for the university funding their faculty's open education efforts. According to Ms. Coolidge, universities are increasingly making grants available to members who set out to develop OER, such as open textbooks—to "step up to the plate<sup>8</sup>."

While the amount in grant funds (if any) is unknown, this alternative provides an *estimate* of the amount required to fully cater to the pedagogical needs of students reflected through the various levels of content modification *should* the History Department at Someplace University decide to pursue open education practices. In other words, this alternative presents the "ideal" or "platinum" scenario with its related costs, whereby grants are used to meet the business objective of containing expenses for undergraduate history students. Moreover, *one* OER library and authoring tool (versus multiple OER libraries) is presented in this option to help streamline the grant-seeking process, while still offering a comprehensive resource. Grant requirements are discussed further below the cost breakdown.

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<sup>7</sup> Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislevy, J., Wang, S., Desrochers, D. & Staisloff, R. (2018). Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream's OER Degree Initiative. Menlo Park, CA: SRI International.

<sup>8</sup> According to Amanda Coolidge through personal communication, October 31, 2018.

## Assumptions:

1. OER adaptation is recognized as scholarly activity by university administration.
2. The History Department will adopt quality standards ahead of any OER usage in classrooms.
3. Faculty are the subject matter experts who will select OER according to quality standards, with an emphasis on relevance to learning objectives.
4. Students enrolled in the undergraduate history program will need to complete 10 core courses. However, given the custom of providing a range of course from which to make their selection, students will be offered 15 courses<sup>9</sup>. The table below reflects this reality.
5. Modifying OER do not require the same degree of effort. To reflect the range of modification demands, 1/3 (or 5) courses are likely to require slight modification, 1/3 will require moderate modification, while the final 1/3 needing heavy modification<sup>10</sup>.
6. Professors who choose to modify OER will perform their own copyright clearance checks (e.g., Creative Commons licenses)
7. In order to maintain their quality in terms, for example, of accuracy and relevance, OER will need to be updated every three years<sup>11</sup>.
8. Grants exist to support OER initiatives in Canadian colleges and universities<sup>12</sup>.

Note: A breakdown of costs is displayed on the following three pages.

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<sup>9</sup> As advised by Dr. Saul Carliner through personal communication (in class), October 16, 2018.

<sup>10</sup> As advised by Dr. Saul Carliner through personal communication (in class), October 16, 2018.

<sup>11</sup> As advised by Dr. Saul Carliner through personal communication (in class), October 30, 2018.

<sup>12</sup> Retrieved from <https://oerworldmap.org/resource/urn%3Auuid%3A3bc788ad-c962-4b8f-8c28-227c973ecd52> & ] <https://open.ubc.ca/open-ubc-snapshots-textbook-displacements-by-open-resources/>

Table 1: OER Commons with Modification + Grants			
Component Costs	Number of Units	Per Unit Costs	Total Anticipated Cost
OER Commons account	90+ People (Students, Professors, Faculty, etc.)	\$0.00/registration <sup>13</sup>	\$0.00
OER Author	15+ People (Professors, Faculty, etc.)	\$0.00/registration <sup>14</sup>	\$0.00
Professors' modifications	4500 <sup>15</sup> Hours	\$67/hour <sup>16</sup>	\$301,500
<i>Breakdown of modifications</i>			<i>Breakdown of modifications cost</i>
<u>Slight</u> modification of resources for 5/15 courses	750 Hours	\$67/hour	\$50,250
<u>Moderate</u> modification of resources for 5/15 courses	1500 Hours	\$67/hour	\$100,500

<sup>13</sup> Taken from OER Commons registration page: <https://www.oercommons.org/registration>

<sup>14</sup> Taken from OER Commons registration page: <https://www.oercommons.org/registration>

<sup>15</sup> 4500 hours: Calculated based on figures provided by Dr. Bates in "The Cost of Developing an Open Textbook: \$80,000-\$130,000" with modification factors provided in class by Dr. Carliner. [Using 1000 hours as figure of writing OER from scratch, i.e. 100% modification: Slight modification = 15% adaption of existing OER. So, slight modification =  $0.15 \times 1000$  hours = 150 hours of work per course to slightly modify. 150 hours x 5 courses = 750 hours. Moderate modification = 30% adaptation of existing OER. So, moderate modification =  $0.3 \times 1000$  hours = 300 hours of work per course to moderately modify. 300 hours x 5 courses = 1500 hours. Heavy modification = 45% (or more) of existing OER. So, heavy modification =  $0.45 \times 1000$  hours = 450 hours of work per course to heavily modify. 450 hours x 5 courses = 2,250 hours.]

<sup>16</sup> \$67/hour: Based on numbers provided by Dr. Carliner in class regarding course release costs: \$9000 per course release. Each course release reflects 135 hours of work by a replacement professor. [ $9000/135 = 67$ ] Therefore, estimated that professors are paid around \$67/hour or so.

<u>Heavy</u> modification of resources for 5/15 courses	2,250 Hours	\$67/hour	\$150,750
Course releases (CR)	30 <sup>17</sup> CR	\$9000/CR	\$270,000
<i>Breakdown of CR per level of modification</i>			<i>Breakdown of CR cost</i>
<u>Slight</u> modification of resources for 5/15 courses	5 CR	\$9000/CR	\$45,000
<u>Moderate</u> modification of resources for 5/15 courses	10 CR	\$9000/CR	\$90,000
<u>Heavy</u> modification of resources for 5/15 courses	15 CR	\$9000/CR	\$135,000
Copy Editor	1125 <sup>18</sup> Hours	\$60/hour	\$67,500
<i>Breakdown of editing per level of modification</i>			<i>Breakdown of editing cost</i>
<u>Slight</u> modification of resources for 5/15 courses	187.5 Hours	\$60/hour	\$11,250
<u>Moderate</u> modification of resources for 5/15 courses	375 Hours	\$60/hour	\$22,500
<u>Heavy</u> modification of resources for 5/15 courses	562.50 Hours	\$60/hour	\$33,750
		<b>Total Upfront Costs (Pre-Contingency Factor):</b>	<b>\$639,000</b>

<sup>17</sup> 30 CR: Based on numbers provided by Dr. Carliner in class as well as modification percentages: \$9000 per course release. [1 course release per slight modification. 1 x 5 courses = 5 course releases. 2 course releases per moderate modification. 2 x 5 courses = 10 course releases. 3 course releases per heavy modification. 3 x 5 courses = 15 course releases.] (Note: 15 – 30 – 45 % modification levels reflect the same ratio as 1 – 2 – 3 course releases required per level of modification.)

<sup>18</sup> 1125 hours: Hours based on hourly rate provided by Dr. Carliner through “Estimating the Expenses of a Project” on *The Commerce of Content* website, plus Dr. Bates’ article “The Cost of Developing an Open Textbook: \$80,000-\$130,000”. Copy editor = \$60/hour. \$15,000 is average expenditure for editor on OER from scratch/100% modified. [15,000/60 = 250 hours of editing of an OER created from scratch. Slight = 0.15 x 250 = 37.5 hours. 37.5 hours x 5 courses = 187.5 hours. Moderate = 0.30 x 250 = 75 hours. 75 hours x 5 courses = 375 hours. Heavy = 0.45 x 250 = 112.5 hours. 112.5 x 5 courses = 562.5 hours. 187.5 + 375 + 562.5 = 1125 hours.]

		20% Contingency Factor:	\$127,800
		Total Upfront Costs:	\$766,800
Technical Support	1 Year	\$5000/year <sup>19</sup>	\$5,000
Marketing	1 Year	\$25,560/year <sup>20</sup>	\$25,650
		Total Ongoing Annual Costs (Pre-Contingency Factor):	\$25,655
		20% Contingency Factor:	\$5,131
		Total Ongoing Annual Costs:	\$30,786

The above alternative is the most ambitious of the three, largely because the required investment is much greater. In order for this alternative to be viable, Someplace University would therefore need (1) to receive a minimum amount of funding and, given current economic conditions, (2) seek it out through grants. Since the business objective is to contain students' expenses (related to textbook purchases) the *minimum* amount of grant funding that would yield meaningful savings for students must be calculated. In our estimation, a meaningful minimum amount of student savings is 20%. In order for students to save 20% on textbook purchases — as compared to current history textbook purchases — the *minimum* amount of funding required for Alternative 1 is \$698,358<sup>21</sup>.

<sup>19</sup> 5000\$/year: Estimate provided in Dr. Bates' article "The Cost of Developing an Open Textbook: \$80,000-\$130,000".

<sup>20</sup> \$25,560/year: Estimate calculated based on Dr. Carliner's video, *Video About Marketing Part 2*, in which it's stated that marketing (external) should reflect at least 10% of overall costs. Supported by Tony Bates' article "The Cost of Developing an Open Textbook: \$80,000-\$130,000" as well. This number reflects a breakdown of 10% of the costs over the span of a three-year cycle, further broken down into annual cost. [ $\$766,800 \times 0.10 = \$76,680$ .  $\$76,680/3 = \$25,560$ .]

<sup>21</sup> \$698,358: \$859,158 is total required for launch of OER and three years of ongoing costs (before start process anew). [Three-year period currently sees approximately 201 students purchasing textbooks: 75 students at 89% buying textbooks =  $75 \times 0.89 = 66.75$  or 67 students.  $67 \times 3$  years = 201 students. Average costs of books per course = \$100 with 10 courses in total:  $100 \times 10 = \$1000$ . 201 students  $\times$  \$1000 = \$201,000 spent over 3 years by students. 20% savings means:  $201,000 \times 0.2 = \$40,200$ .  $201,000 - 40,200 = \$160,800$  spendings at most if students are to save at least 20%.  $\$859,158 - 160,800 = \$698,359$  required in grants.]

We recognize the magnitude of this figure as well as the sheer riskiness of this proposition. Consider it a starting point from which Someplace University can imagine the ideal scenario. On the other hand, we could consider this option *without* striving to reclaim all costs within a three-year span (i.e., the suggested time frame to *review* OER products). Doing so might compromise the relevance of the given OER, but it would also disperse — thus reduce — student costs over a wider time span (i.e., years). As well, it must be noted that as more time passes, a significant knowledge base is built. After three years, then, one can presume that faculty are performing less intensive—therefore less expensive—modifications to their OER. (Please advise if you wish to explore this matter further.)

Marketing costs are included as an ongoing expense in Alternative 1 because the right set of strategies can improve not only the likelihood that faculty embrace OER but that Someplace University becomes an active participant in the OER movement alongside Canada’s open education pioneer, BCcampus. Specifically, marketing can help: (1) promote awareness and use of OER within and beyond the History Department; (2) increase visibility of funders — their contribution — thus serving their own marketing needs and, in turn, increasing the likelihood of further grants; and (3) spread the word that Someplace University is an innovative educational institution active in the ever-expanding OER movement. Needless to say, a higher profile would make Someplace University an attractive choice of university for prospective (tuition-paying) students.

## Alternative 2: Bundle of OER libraries and authoring tools with *no* modification unless volunteered

This alternative looks at the adoption of a number of quality OER libraries (OER Commons, BC Open Ed, and EdX) as well as cost-free OER authoring tools, OER Author and MERLOT *without* the application for or receipt of grants. Hence, without funds to support the business objective of containing student expenses, this alternative proposes no modifications to OER, *unless* professors volunteer to adapt the resources themselves. Under this alternative, costs will be significantly reduced while still providing access to high-quality resources to both professors and students.

According to Senior Manager of Open Education at BCcampus, Amanda Coolidge, professors typically volunteer their time “work[ing] off the side of their desk<sup>22</sup>” to develop or modify OERs. In fact, open education scholar Tony Bates confirms that open textbooks are still largely created through volunteer efforts.<sup>23</sup> Nevertheless, the OER tools and communities often embedded within the very library or repository site a professor may be using provide ample technical and/or pedagogical support. It must be emphasized that professors who pursue open education practices are joining a dynamic and supportive community — this is perhaps one of the exciting features of the OER movement in Canada and beyond.

Furthermore, administrators’ emphasis on OER products as—to use Ms. Coolidge’s description—“legitimate, scholarly publications<sup>24</sup>” and, of course, the costs savings to their students, ought to sufficiently motivate History Department faculty to take up OER.

### Assumptions:

1. Some professors will volunteer their time to modify OER for their courses and be inclined to explore the wide-ranging OER community<sup>25</sup>.
2. Technical support may still be needed by professors volunteering their time to modify OER; however, Technical Support staff may not be able or willing to volunteer their own time. As such, some funding (e.g., internal) will be needed to compensate them accordingly.
3. Someplace University’s Communication Department serves to promote the institution. As such, within the Department’s current budget, the University’s adoption of OER will be marketed and a small-scale campaign (“small scale” not determined here) developed.

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<sup>22</sup> According to Amanda Coolidge through personal communication, October 31, 2018.

<sup>23</sup> According to Dr. Tony Bates through personal communication, October 29, 2018.

<sup>24</sup> According to Amanda Coolidge through personal communication, November 2, 2018.

<sup>25</sup> According to Amanda Coolidge through personal communication, October 31, 2018.

4. Professors engaged with digital scholarship may be motivated to promote OER use through their own social media platforms. They will be encouraged to do so to highlight the open education practices of their Department.

Table 2: Bundle of OER libraries and authoring tools with no modifications unless volunteered			
Component Costs	Number of Units	Per Unit Costs	Total Anticipated Cost
OER Commons account	90+ People (Students, Professors, Faculty, etc.)	\$0.00/registration	\$0.00
OER Author	N/A	\$0.00/registration	\$0.00
BC Open Ed account	90+ People (Students, Professors, Faculty, etc.)	\$0.00/registration <sup>26</sup>	\$0.00
EdX account	90+ People (Students, Professors, Faculty, etc.)	\$0.00/registration <sup>27</sup>	\$0.00
MERLOT account	N/A	\$0.00/registration <sup>28</sup>	\$0.00
Professors' modifications	N/A	Volunteer-basis	\$0.00
		<b>Total Upfront Costs:</b>	\$0.00

<sup>26</sup> Taken from <https://open.bccampus.ca/find-open-textbooks/>

<sup>27</sup> Taken from <https://courses.edx.org/login>

<sup>28</sup> Taken from <https://www.merlot.org/merlot/join.htm>

Technical Support	1 Year	\$2000/year <sup>29</sup>	\$2000
		<b>Total Ongoing Annual Costs (Pre-Contingency Factor):</b>	\$2000
		<b>20% Contingency Factor<sup>30</sup>:</b>	\$400
		<b>Total Ongoing Annual Costs:</b>	\$2400

As indicated above, the only specified expense includes technical support. In addition to the modification-related costs being dropped from this alternative, so are additional marketing costs. Because grants are not being provided in this alternative, a smaller-scale approach to OER use will be launched, meaning that no representation of such funders is required and there is less of a case to make formal efforts to promote the shift to OER. Instead, marketing can be promoted through informal channels, such as professor's own media channels, as conveyed in the assumptions.

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<sup>29</sup> \$2000/year: Based on estimate provided by Tony Bates' article "The Cost of Developing an Open Textbook: \$80,000-\$130,000". Average is \$5000 per year for OER support, minimum is \$1000. Since unknown and based on volunteer-basis, \$2000 seems a fair estimate.

<sup>30</sup> As advised by Dr. Saul Carliner, to compensate for unknown factor not yet considered in costs, via personal communication, October 30, 2018.

### Alternative 3: Status Quo – Continued Use of Textbooks

This alternative maintains the status quo, i.e., continued use of traditional textbooks for all undergraduate history courses. Currently, an average of 75 students per year enrol in the history major program. Our records show that approximately 89% or approximately 67 students purchase the required textbooks for their core courses. However, the financial burden of carrying increasingly high costs of a university education, due in part to textbook costs, is very real. Moreover, the heavy risks to students (and even their families) carrying this burden go beyond “financial hardship ... [and] academic challenges to [include] ... social and mental health consequences<sup>31</sup>” Maintaining the status quo is not inconsequential.

By continuing to rely on traditional textbooks as the sole option for its students, the History Department—or the University in general—may incline students to:

1. Enrol in fewer classes per semester
2. Opt out of purchasing required textbooks
3. Delay university enrolment altogether<sup>32</sup>

#### Assumptions<sup>333435</sup>:

1. Cost of textbooks continues to rise.
2. Cost increases burden students financially.
3. Financial burdens can prevent students from completing, let alone entering university.
4. Hardships are multi-faceted.

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<sup>31</sup> Pg. 12: Ontario Council of University Libraries. (2017). Open Educational Resources. [White Paper]. Retrieved from <https://ocul.on.ca/node/6820>

<sup>32</sup> Lashley, J., Cummings-Sauls, R., Bennett, A.B., & Lindshield, B.L. (2017). Cultivating Textbook Alternatives From the Ground Up: One Public University’s Sustainable Model for Open and Alternative Educational Resource Proliferation. *International Review of Research in Open and Distributed Learning*, 18(4), 212-230.

<sup>33</sup> Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislevy, J., Wang, S., Desrochers, D. & Staisloff, R. (2018). Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream’s OER Degree Initiative. Menlo Park, CA: SRI International.

<sup>34</sup> Davison, J. (2015, September 4). Back to school 2015: How post-secondary students can fight 'grim reality' of rising textbook costs. *CBC*. Retrieved from <https://www.cbc.ca/news/canada/back-to-school-2015-how-post-secondary-students-can-fight-grim-reality-of-rising-textbook-costs-1.3215013>

<sup>35</sup> Engle, W. (2016, December 10). Open UBC Snapshots: Textbook Displacements by Open Resources. [Blog post]. Retrieved from <https://open.ubc.ca/open-ubc-snapshots-textbook-displacements-by-open-resources/>

Table 3: Status Quo – Continued Use of Textbooks			
Component Costs	Number of Units	Per Unit Costs	Total Anticipated Cost
Textbooks	10 Courses	\$100/Course in textbook fees	\$1000
		Total Cost with 67 Student Average Factor Applied (89% of 75):	\$67,000 <sup>36</sup>

<sup>36</sup> \$67,000: [75 students x 0.89 purchasing = 66.75 = 67 people. 67 x 1000 = \$67,000.]

## Part 3: Project Savings

This project is intended to benefit the university by containing expenses for its undergraduate history students. The following table displays the possibilities in project savings based on the selected alternative, along with its associated risk factor.

Alternative	Estimated Cost	Estimated Savings <sup>37</sup>	Risk Issue(s)	Risk Factor	Moderated Savings <sup>38</sup>
1: 1 OER library with modifications + grants	\$53,600 <sup>39</sup>	\$13,400	Primarily, extent of grant coverage remains uncertain	0.15 Likely	\$2,010
2: Blend of OER libraries with no modifications unless volunteered	\$2,400	\$64,600	- Resistance to change - Time to search for and use new resources	0.80 Likely	\$51,680
3: Status Quo Textbooks in History Courses	\$67,000	\$0	Known	N/A	\$0

<sup>37</sup> Estimated savings: These calculations are the result of a comparison of the alternatives with the status quo.

<sup>38</sup> Moderated savings: Estimated savings x risk factor.

<sup>39</sup> \$53,600: This number is based on the assumption of having received desired minimum funding through grants of \$698,359 stated under Alternative 1, leading to the possibility of a 20% savings on current student expenditures. Currently, students are spending \$1000/course:  $1000 \times 0.2 = 200$ .  $1000 - 200 = 800$ . An average of 67 students are currently purchasing textbooks, so for the sake of comparing numbers, 67 students at 800 =  $67 \times 800 = \$53,600$ , or 20% less than \$67,000. (Though, in reality, if the stated funding above was received, per student fees would be even less than \$800/student if costs were automatically rolled into school fees vs. left up to the decision of those purchasing resources, as the cost would be shared by all those enrolled and not only on the 89% choosing to purchase resources. Still, the same cost would apply but would be less per student.)

The projected savings for Alternative 1 shows undergraduate students saving anywhere from \$2,010 to \$13,400. These figures are based on calculations of the *minimum* amount of funding required in order to save students *at least* 20% on current textbook expenditures. This working-back approach is to provide an informed estimate of what a 20% savings would look like, as *well* as what is required on the funding front in order to make this alternative possible. However, the concern with this alternative is that it is extremely high risk (15% likely to occur) because of the reliance on grants. Despite becoming increasingly available, grants amounting to the hundreds of thousands of dollars required to initiate OER use are not likely. As a result, the business objective under Alternative 1 is not likely to be met.

Alternative 2 suggests a more desirable approach, with student savings ranging from \$51,680 to \$64,600. Per student, costs could be as low as \$32 (for 75 students) per year or \$96 over three years instead of \$1000 (in books) for 10 core courses (presumably taken over 3 years) — a significant savings indeed. Additionally, this alternative presents as low-risk with an estimated likelihood of 80% in spite of some constraints such as faculty resistance to a new approach and lack of time for faculty members to develop OER (i.e., search, explore, and locate resources found in OER libraries/repositories). Nonetheless, we believe that professors, since they would be volunteering in the first place, will perceive OER as a worthwhile endeavour.

Something to consider for both Alternative 1 and 2 that we do not discuss here are the co-benefits of using OER in terms of attracting students to the university. Needless to say, increased enrolment can, all things being equal, lead to increased revenue. While this may not be the primary business objective, it is a critical part of the big OER picture: the university could see *even lower* per student resource rates and/or further funding to support OER creation.

## Part 4: Recommendation

Our recommendation reflects the complex nature of addressing change—especially disruptive change—in the higher education sector. The adoption of OER by university faculty will be challenging but the rewards unmistakable.

Alternative 1 is the most ambitious and risky of the alternatives. Pursuing this route assumes that while it may be a research-intensive institution capable of engaging with the grant-making process, Someplace University is also (1) *willing* to apply for grants and (2) *able* to achieve a minimum of \$698,350 in funding. And, furthermore, that Someplace University can justify the large capital investment required to help reduce the overall costs of education, in this instance by addressing textbook costs, for its students.

This makes Alternative 2 the preferred option. First, there are significant financial savings for students, namely anywhere from \$51,680 to \$64,600 per cohort. Second, quality of education is maintained if not surpassed. Research strongly indicates that OER—whether modified or not—are a *step up* from traditional textbooks. In terms of student engagement, which lends to learning, and in turn to a professor meeting their learning objectives, OER hold much promise. In *Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream’s OER Degree Initiative* (2018), students overwhelmingly reported “higher engagement, higher quality of instructional materials, and better teaching than in a typical course [using traditional textbooks]<sup>40</sup>.”

As it is, professors select course materials, including textbooks, that best align with their learning objectives. Put differently, they curate the resources that they will use in the classroom. From what we know, humanities professors are disinclined to use the *entirety* of any textbook; they will instead peruse texts and assign readings relevant to their course, learning objectives, and audience. (While it could be the case that textbooks are specifically created for use in, say, introductory-level courses, we assume this is not the case in Someplace University’s history department.) Hence, when it comes to OER use, professors will find themselves in a similar situation requiring that they: search vast database, locate relevant content, and evaluate that content to ensure quality (in the broad sense). As OER users, however, they will have at their disposal user-friendly tools to modify—if that is what they decide is best—content, and the technical support (should they need it) to help them perform modifications. Of course, the same

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<sup>40</sup> Pg 16: Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislevy, J., Wang, S., Desrochers, D. & Staisloff, R. (2018). *Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream’s OER Degree Initiative*. Menlo Park, CA: SRI International.

cannot be said for traditional textbooks, which are inherently unchangeable—they simply cannot be modified to better suit a professor's purpose, i.e., learning objectives.

The interactive component of OER—from embedded videos, assignments, audio, and online modules—are yet another stand-out feature that distinguish them from traditional textbooks. When quality is met, OER can indeed, as noted above, enrich the teaching experience and, equally if not more important, the student's learning experience.

Certainly, this route is lower risk (80% likely). However, it also leaves the door open for pursuing OER-related grants down the line that could support faculty interested in pursuing more intensive projects requiring heavier modification. In other words, from a strategic standpoint, Alternative 2 does not have to be an all-or-nothing approach, but rather a starting point: Someplace University can *begin* to use OER according to the Alternative 2 model following a "no formal modification" scheme to limit student costs and *then* graduate, if you will, to "formal modification" based on the size of funding received. According to Ms. Coolidge of BCcampus, the size of grants available in Canada vary but higher education institutions are increasingly open to providing grants to faculty who want to develop (adopt and/or adapt) OER<sup>41</sup>.

We view this alternative as a sensible—even a wise—step into the open education world where risk is mitigated, savings are occurring, and the possibility of becoming a leader in the not-yet crowded field of OER players very real.

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<sup>41</sup> According to Amanda Coolidge through personal communication, October 31, 2018.

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