

Impacts of OER Adoption on a Small Rural College in B.C.

Research Project
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Submitted by:

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What is the economic impact of the adoption of open educational textbooks for students at Coast Mountain College? This was the task that microeconomics students in fall 2019 were tasked with answering.

Coast Mountain College, located in northwestern B.C., serves 34 communities, 21 of which are Indigenous. The primary campus and main operations are situated in Tsimshian Territory in Terrace, with satellite campuses on Haida Gwaii and in Prince Rupert, Terrace, and Smithers.

The 2019 fall microeconomics classes were based at the Terrace campus, with three students videoconferencing from Haida Gwaii and two from Hazelton. These students were tasked with finding the impact of open educational resources (OER) on the Coast Mountain College community. Fifty-nine students, mainly first-year students in their first semester of study, helped create a survey to reveal the economic impacts of OER at their college.

The concepts in microeconomics related to the research were identified in the syllabus and through the lessons each week. Topics covered in the course that showed clear links to the research project were opportunity costs, consumer theory, demand and supply models, and common goods. Students identified these topics as relevant to the research and used them to inform their choice of survey questions.

Students were split into groups to create the survey that would capture the economic impact of OER on the Coast Mountain College community. The groups each nominated questions, which students voted on in a series of rounds that narrowed the number of questions to 11.

The questions represented four categories of inquiry:

1. Are students purchasing required textbooks?
2. Is the cost of textbooks prohibitive to students pursuing education?
3. When cost savings are realized from an instructor building in free resources, what impact does it have on student spending choices?
4. Does OER availability contribute to students' emotional well-being?

The survey was distributed in the fall 2020 semester, the first semester that a majority of students pivoted to online learning due to the COVID-19 pandemic. Thirty-seven students responded to the survey.

Are students purchasing required textbooks?

Researchers learned that the majority of students did not purchase required textbooks. When they looked around their own classrooms, the researchers suspected this was true, and the survey confirmed it.

When students took a course with a required text, 58 percent of respondents said they did not purchase the textbook. The main reason was they found other ways to access materials to support their learning, including sharing a resource with friends, using library resources, and bypassing the required text altogether by conducting research online to understand concepts.

Is the cost of textbooks prohibitive to students pursuing education?

Although some students had deferred education due to textbook costs, this was true only for a minority of respondents. Fourteen percent of students surveyed had not registered for a course after considering the cost of required textbooks and assessing them as too high.

More commonly, students did not consider textbook costs until they were already registered in courses and sunk costs were incurred. Respondents noted that textbooks may not be purchased until a few weeks after a course start date, but they either forged ahead without the texts or purchased them despite not being prepared to do so on the first day of classes.

Only 22 percent of respondents looked at textbook costs prior to registering for courses.

Twenty-five percent of survey participants had registered for a course because they knew no textbook costs were associated with that particular course.

When cost savings are realized from an instructor building in free resources, what impact does it have on student spending choices?

Opportunity costs, when considered from a consumer point of view, are the next best choice a consumer makes within their budget constraints. Researchers wanted to better understand how the cost of textbooks and learning resources impacted student spending choices.

When a student did not have textbook costs for classes, what did they spend their money on?

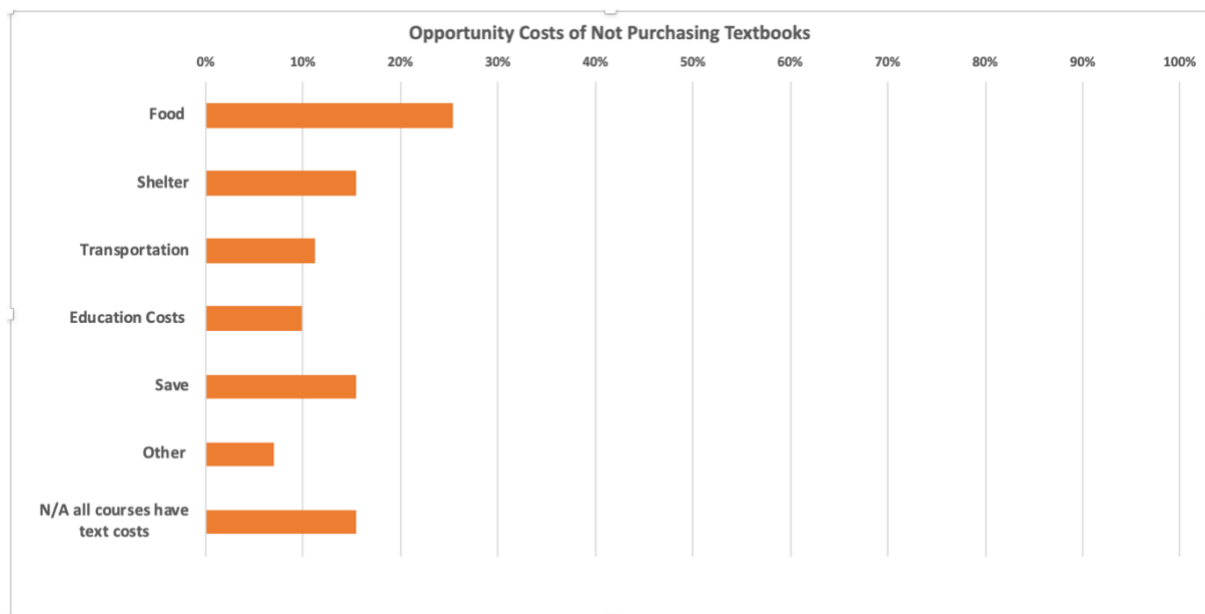


Figure 1: Opportunity costs of textbooks.

Figure 1 shows that basic needs such as food, shelter, and transportation costs accounted for the most diverted spending. When students did not have course costs above tuition, they spent it on food first, then shelter and transportation, then savings.

Would students spend the saved money on campus in other ways? Almost 53 percent of

students said they were likely to spend money on campus if they did not have to spend it on textbooks.

Does OER availability contribute to students' emotional well-being?

Researchers wanted to find the correlation between student engagement, well-being, and feelings of trust generated by OER adoption. What is the social impact to the community of OER adoption? They looked at four questions to assess the social dimension and build understanding of student engagement with materials, feelings of trust, and general positivity.

Researchers wanted to understand if there was a correlation between completing assigned readings and the cost of textbooks. Forty percent of students reported they were more likely to read a textbook if it was made freely available for their studies; less than 12 percent of respondents stated they were more likely to read materials if they had to pay for them.

Twenty-five percent of students said it made no difference whether the readings were free or not; they engaged with assigned readings. Less than 10 percent of students said it made no difference if the resources were free; they did not engage with any assigned reading.

Researchers found little difference in students' level of trust in information from free vs. paid sources.

When students were asked how likely they were to trust information from free textbooks, the responses fell into a range from moderately likely to very likely (Figure 2).

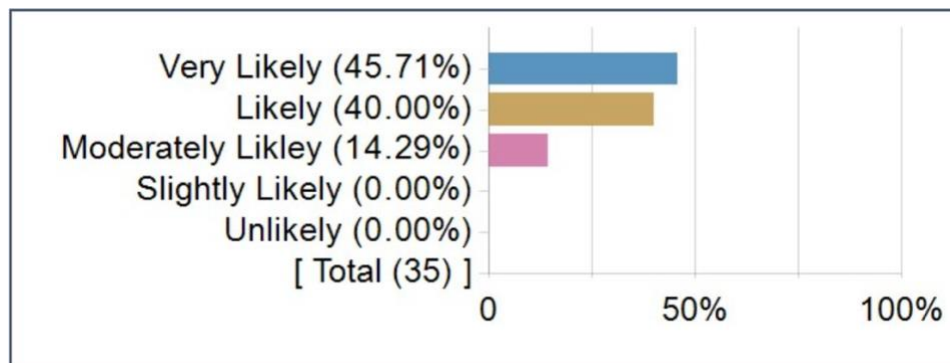


Figure 2: Students' likeliness to trust free textbooks.

In comparison, students were asked how likely they were to trust information from a paid source. This question resulted in a slightly broader range of answers but no significant differences (Figure 3).

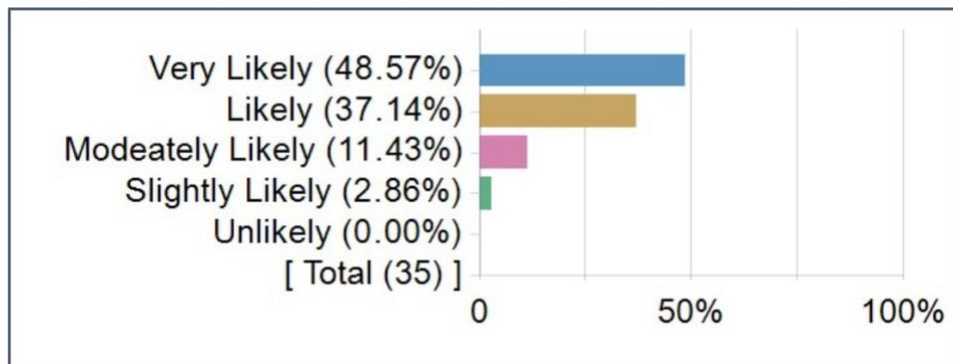


Figure 3: Students' likeliness to trust paid textbooks.

The impact of OER adoption on students is for the most part positive for both their emotional well-being and level of happiness. Eighty-nine percent of respondents said they had increased feelings of positivity about a course when it relied on free resources for learning.

Students were asked about they felt when they found out a course used OER (Figure 4).

How did you feel when you found out your class was using OER for course materials?

Comments
I would be happy since affording for aboard studies is not that easy. I'm using my parents money to pay my first year tuition so I would rather save up my money if my course provide OER so that i can spend it on my next year tuition fees
I will feel so glad because it saves my money and I will spend this money for other things.
I felt very happy.
im not sure
Very good.
I was ok with it, however I have spent more money on ink and paper to print sections of my online books
I'm not sure what OER stands for but I can tell you that the free online textbooks were really nice to use. It was nice to save some some money.
i will be so happy
It was great to know that OER is best way to do studies online.
good
I was ecstatic. As I am an international student and our tuition fee is anyway exorbitant. So I was really glad that my father doesn't have to pay for my textbooks which would have burdened him more financially and affected his savings, which is really crucial in this time of the pandemic.
Very relieved. I have found that I usually use the web to search for research materials. My textbook would often sit in the corner and not even be used.
I felt it very helpful as i shouldn't carry books while travelling to Canada from Indi and it is different than studying using textbooks.
It is fine with me.
I was relieved as I won't need to purchase or buy textbook
It is very fortunate to be part of this education system. But, at same time, it is quite not right to pay same fees for online study. My fees is 13000\$. My teachers are very hard working and have always been very helpful throughout this journey. But, face to face exposure is something which I really appreciate and is beneficial. I hope you understand.
good
OK
Felt ok
It was good because it save money
I was relieved. I fell behind in several classes this year because I couldn't buy textbooks until I could financially do so and had to order online to save money. I went weeks without being able to read text and be prepared for lectures.
good

Figure 4: Student reaction to learning a class used OER materials.

Another question addressed the element of surprise for students when they learned on the first day of a class that the instructor used OER materials. This was seen as important to highlight for student researchers.

This question revealed a slight variation in results. As shown in Figure 5, two negative experiences were revealed, one where printing costs exceeded the cost of purchasing the text and the other regarding the loss of reading printed materials.

You come to class on the first day and find out the class has a free textbook. How would you characterize your reaction to this?

Comments
I will be really really happy.
atleast I have a lighten load with purchasing another textbook
happy, relieved
Happy,
relieved and a little anxious I really like being able to page through my textbooks
it is blessing for me
I really liked the free textbooks. It is a nice surprise.
Happy saving
I would like to thank college who provide such kind of facility to students because international student already have lots of expenses when they comes to Canada so helping someone shows our ethics.
Awesome
I will certainly be on cloud nine. As I am an international student, therefore, every penny saved is a penny earned for me.
Relieved. Incredibly relieved. This means there is an extra \$100-\$250 left for me to put towards heating for the winter or winter tires that I have been putting off.
Surprised, excited, thankful
I would be happy.
Happy
It will be good. I like things, which are given for free of cost.
very happy
Wow
It's a great situation for me because I save my money and I like to spend money on different things like, with that money, I like to pay for my next semester fee
Very pleased
I'd be happy
relieved
Good . Think always save money
Relief. It would ease my anxiety caused by financial stress.
I feel it good that I can spend that money on my other monthly costs.

Figure 4: Student reactions to learning on the first day of class about OER.

Coast Mountain College experienced an increase in OER adoption after a faculty incentive program began in winter 2019. From this research, we learned that the majority of students have positive experiences when it comes to OER adoption in their classes, and the majority of money saved was then spent on students' tuition and basic needs. OER are trusted as much as paid textbooks, and OER adoption contributes to a sense of happiness and relief for students.

Next Steps

Students in first-year business communications in winter 2020 will share these research findings with the Coast Mountain College administrative team, faculty, student union, and board of governors as part of their class work.

A recommendation from this research is that increased transparency about textbook costs would improve student experiences. The lack of information about textbooks prior to the start of classes is seen as institution-specific. Secondary research showed that some institutions in B.C. are more transparent on their websites about textbook costs before registration or even application to a program. Textbook requirements at Coast Mountain College are buried and most often understood only on the first day of classes. Although the information may be available, it is not clear how, particularly to first-year students.

Having a lack of information prevents students from knowing expected costs and increases anxiety about what expenses they will incur. Creating transparency is one way to reduce the extremes that come with navigating unexpected costs or unexpected savings. This transparency can be adopted by the registrar, bookstore, and faculty. The impact will help students understand and plan for any costs they will or will not incur as part of their education journey.

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