

Investigating the perceptions, use, and impact of open textbooks: A survey of post-secondary students in British Columbia revisited

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ABSTRACT

As the cost of living rises, higher education becomes increasingly unaffordable and even a luxury for some—a significant component of educational cost being textbooks. To combat this, open textbooks have been introduced as a free, openly licensed alternative, with an aim of providing equitable access to education. In 2017, Jhangiani and Jhangiani researched the attitudes of post-secondary students towards open educational resources (OER) in Canada, revealing unique insights. Despite these efforts, cost-related educational barriers persist. This paper presents the results of a follow-up study that mirrors the original research that was based on surveys examining student perspectives on open textbooks. The current study surveyed post-secondary students enrolled in the Spring 2022, Summer 2022, Fall 2022, and Winter 2023 semesters in British Columbia, offering updated insights into the ongoing struggle for educational equity. Continued work developing and promoting OER is essential to address this challenge in higher education.

Keywords: open educational resources, open textbooks, textbooks, perceptions, higher education, educational equity, Canada

Investigación de las percepciones, el uso y el impacto de los libros de texto abiertos: una encuesta revisada a estudiantes de educación postsecundaria en Columbia Británica

RESUMEN

A medida que aumenta el costo de la vida, la educación superior se vuelve cada vez más inasequible e incluso un lujo para algunos, ya que los libros de texto constituyen un componente significativo

del costo educativo. Para combatir esto, se han introducido los libros de texto abiertos como una alternativa gratuita y con licencia abierta, con el objetivo de brindar un acceso equitativo a la educación. En 2017, Jhangiani y Jhangiani investigaron las actitudes de los estudiantes de educación superior hacia los recursos educativos abiertos (REA) en Canadá, revelando perspectivas únicas. A pesar de estos esfuerzos, persisten las barreras educativas relacionadas con el costo. Este artículo presenta los resultados de un estudio de seguimiento que refleja la investigación original, basada en encuestas que examinan las perspectivas de los estudiantes sobre los libros de texto abiertos. El estudio actual encuestó a estudiantes de educación superior matriculados en los semestres de primavera de 2022, verano de 2022, otoño de 2022 e invierno de 2023 en Columbia Británica, ofreciendo información actualizada sobre la lucha continua por la equidad educativa. El trabajo continuo en el desarrollo y la promoción de los REA es esencial para abordar este desafío en la educación superior.

Palabras clave: Recursos educativos abiertos, libros de texto abiertos, libros de texto, percepciones, educación superior, equidad educativa, Canadá

调查对开放教科书的认知、使用和影响：对不列颠哥伦比亚省高等教育学生的调查回顾

摘要

随着生活成本的上升，高等教育变得越来越难以负担，对某些人来说甚至是一种奢侈——教科书是教育成本的重要组成部分。为了应对这一挑战，开放教科书作为一种免费、开放许可的替代方案应运而生，旨在提供公平的教育机会。2017年，Jhangiani和Jhangiani研究了加拿大高等院校学生对开放教育资源(OER)的态度，并得出了独到的见解。尽管作出了这些努力，但与成本相关的教育障碍依然存在。本文介绍了一项后续研究的结果，该研究与最初的研究类似，基于一系列调查，分析学生对开放教科书的看法。本研究调查了不列颠哥伦比亚省2022年春季、夏季、秋季和2023年冬季学期入学的高等院校学生，为持续的教育公平努力提供了最新的见解。持续开发和推广OER对于应对高等教育中的这一挑战至关重要。

关键词：开放教育资源，开放教科书，教科书，观念，高等教育，教育公平，加拿大

Introduction

Education becomes increasingly unaffordable as the cost of living rises, and even a luxury for some, especially with the increasing prices of textbooks. Open textbooks have been introduced as a free, openly licensed alternative, aiming to provide equitable access to education (BCcampus, n.d.). In 2017, Jhangiani and Jhangiani researched students' attitudes towards open educational resources (OER) in Canada, revealing unique insights. However, despite these efforts, significant educational barriers persist. This paper presents the results of a follow-up study that mirrors the original research, examining student perspectives on open textbooks.

Both studies used a survey call to invite students across the province of British Columbia to provide their viewpoint regarding open textbooks. The study surveyed students enrolled in the Spring 2022, Summer 2022, Fall 2022, and Winter 2023, semesters throughout the province of British Columbia, offering updated insights into the ongoing struggle for educational equity.

Despite the significant financial burden of textbook costs on students' academic performance and well-being, including food insecurities (Broton and Goldrick-Rab, 2018; Correa & Bozarth, 2023), textbook costs continue to rise. A survey by MacLean's Education, which included 23,384 students across Canada, found that on average student spend approximately four percent of their budget on course-related materi-

als such as textbooks and other resources, which on average amounted to 773 CAD, with costlier programs, such as Business, Criminology and Psychology, accounting for costs varying between 874 to 827 CAD (Brown, 2022). Institutions like the University of Toronto (2019) recommend that students budget at least 1000 CAD for textbooks; the University of British Columbia recommends setting aside up 700 CAD per term for Science students (UBC Bookstore, n.d.). At the University of Waterloo, Skidmore (2019) noted the first-year students can expect to pay up to 4,100 CAD for books and supplies. In the US it is estimated that students on average spend on between 1,200 – 1,300 USD on textbooks (Jenkins, 2020). The U.S. Bureau of Labor Statistics reports that from 2020 to 2023, the cost of college textbooks increased by seven percent, a rate exceeding tuition inflation (Welding, 2025, para 1.)

The financial burden posed by textbooks results in students seeking bargains, leading to searches lasting upwards of two hours for more affordable options (Katz, 2019). Students also seek out alternative options such as sharing textbooks with other classmates, renting textbooks, and photocopying relevant pages (Everard & St Pierre, 2014; Graydon et al., 2011; Jhangiani & Jhangiani, 2017). Those who opt to purchase the required textbooks typically purchase them from either the campus bookstore or Amazon (Katz, 2019). Although students may find a cheaper textbook online, their purchasing choices are often limited by courses requiring students to purchase a specialized code to access

additional resources, such as online quizzes. Frequently, used or library reserve editions do not include these essential codes (Carrns, 2016; Katz, 2019; Nagle & Vitez, 2020; Skidmore, 2019).

Many of the findings mentioned above mirror those of the Florida Virtual Campus Study (2016; 2022). Jenkins' more recent 2020 study replicated findings related to the distress experienced by students due to textbook costs. These findings included students not purchasing required textbooks, experiencing poor academic outcomes from the decision not to purchase necessary course materials, and avoiding or dropping classes due to textbook costs (Douglas Students' Union, n.d.; Florida Campus Study, 2022; Jenkins, 2020; Jhangiani & Jhangiani, 2017; Katz, 2019; Skidmore, 2019; Wittkower & Low, 2020).

These escalating financial challenges underscore the need for alternative options, as the financial cost related to textbooks can inhibit a person's educational opportunities. Thus, the deeper issue in textbook costs surrounds questions of privilege, social justice, and epistemic justice (see Bali et al., 2020; Fraser, 2005; Lambert, S., 2018; and Wallis & Rocha, 2022 for a more nuanced discussion). It should be noted that while textbooks can be seen as a form of redistributive justice—where resources are meted out to those with less (Lambert, S., 2018). Social justice also embodies recognitive and representational justice, which includes recognizing and respecting varied perspectives and the inclusion of diverse identities and voices (Fraser, 1995; Lambert, S., 2018).

Affordability is one aspect of social justice that involves dismantling barriers to education. However, offering resources that perpetuate the status quo and reinforces the hidden agenda of education, does not promote equity for learners who are marginalized (Close, Egan, & Thompson, 2020). It is crucial to discern between issues of redistributive justice, and recognitive and representational justice. When delving deeper into the impact of OER on students, it's also essential to consider cultural factors. We understand that learners are more likely to engage when they feel a sense of belonging in their learning environments (Seifert, 2020; Lallas et al., 2019; Masika & Jones, 2016; Parkes, 2014). This includes learning material that contains diverse voices and perspectives that better reflect their experiences and epistemologies (Clement, 2020). Thus, a pertinent question arises: How do pedagogical practices influence the implementation of OER? OER aims not only to reduce educational barriers, but also to enhance learning outcomes for students from historically, persistently, or systemically marginalized (HPSM) groups.

Returning to the issue of affordability, consideration should be given to identify who is left behind when textbook prices continue to rise at exponential levels. As neoliberal practices continue to encroach upon tertiary education, the disparities and impact of inequitable practices continue to cause harm to those who the educational system marginalizes. A study by Colvard et.al (2018) found that students from HPSM groups, who were assigned an

OER improved grades at greater rates, while also decreasing the number of failures, and withdrawals. The values of democratized learning seem to be at odds with an industry in which inflation has increased by 129% from 2000–2015 and continues to rise (U.S. Bureau of Labor Statistics, 2016).

OER presents one viable option to combat the rising costs of textbooks while ensuring access to quality educational materials. 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” (UNESCO, n.d.). Since the publication of the 2017 article, many more institutions have adopted or are growing Zero Textbook Cost (ZTC) programs including the following institutions in British Columbia: Douglas College, Kwantlen Polytechnic University, Langara College, and Thompson Rivers University to identify a few. These institutions are also embracing freely available educational resources, such as journal articles and online materials, thereby alleviating some of the financial strain experienced by students (BCcampus, 2022). When students are assigned affordable course materials, there appears to be greater engagement with said materials (Jensen, 2018). OER also has the potential to address social justice issues including the ability to adapt materials to include representation (Lambert, S., 2018) leading to more equitable educational outcomes for HPSM groups.

It has been uncertain how significantly the student perceptions of Open Educational Resources (OER) have evolved since the initial study by Jhangiani & Jhangiani (2017). This follow-up survey aims to investigate any changes in the educational landscape in British Columbia, Canada. Specifically, it will assess shifts in response to the 2017 findings by Jhangiani and Jhangiani, focusing on aspects such as affordability, and educational engagement.

This study was approved by the Harmonized Research Ethics Board for British Columbia.

The Present Study

The aim of this study is to explore if and how perceptions related to OER compare with those reported in the study published by Jhangiani and Jhangiani in 2017. The present study was based on similar questions of the original study and were explored in the context of the post-secondary system in British Columbia. These objectives include:

1. To investigate whether, and in what format(s) post-secondary students purchase and access their required textbooks
2. To explore students’ use of open textbooks, and their textbook study habits
3. To explore students’ perceptions of open textbooks, including what features they like and dislike and the monetary value they place on them

Method

Participants

Participants were recruited by emailing faculty adopters of open textbooks since 2019. These faculty were emailed during the Spring 2022, Summer 2022, Fall 2022, and Winter 2023 semesters asking them to forward an email invitation to their students. The recruitment emails were distributed by BCcampus, the provincial organization responsible for managing the BC Open Textbook Program and to whom each of these faculty adopters has chosen to self-report their adoption(s). Based on the self-reported numbers of adoptions, 280 instructors were contacted to send invitations to their students at 12 institutions.

Email invitations were only sent directly to faculty who were part of the twelve institutions listed with the Harmonized Research Ethics Board at the time of this survey. Other faculty may have shared with their students or peers through a snowball opportunity, which the researchers had no control over. As the initial response was limited, the survey was left open for four semesters until the threshold target exceeded the number of responses of the previous survey of 320 (Jhangiani & Jhangiani, 2017). The email invitation included a link to an online consent form. Upon providing their consent, respondents were automatically redirected to the online anonymous and voluntary survey. Both the informed consent form and the survey were hosted on Qualtrics online survey platform. At the end of the survey, respondents were given

the opportunity to enter their email address to enter a draw to receive 1 of 10 \$25 gift certificates.

The final sample consisted of 362 students enrolled at 17 post-secondary institutions in the province of British Columbia; only 276 of the responding students completed the entire survey. Most of the respondents (55%) were from research-intensive universities, followed by 35% and 8% from teaching-intensive universities and colleges, with the remaining 1% from both technical institutes and private universities; this represents a significant shift from the previous study where the teaching-intensive universities were the highest source of respondents at 46% (Jhangiani & Jhangiani, 2017). The increase from 12 institutions in the distribution to 17 institutions among respondents could stem from students enrolled at more than 1 institution, as the survey question was broadened to account for all current courses the participants were enrolled in. It was noted that few respondents were attending the more rural institutions distributed through the province.

Demographic information regarding survey participants included age, gender, and members of ethnic minorities. Fifty-seven percent of the respondents identified as woman, 37% identified as man, 2% chose to not respond, 2% identified as non-binary and 1% identified as transgender. This is a reduction in respondents identifying as woman from the original study results collected in 2015 (Jhangiani & Jhangiani, 2017). Across the age spectrum,

28% were under 20, 35% identified between ages 21 to 25, 10% between 26-30 and 25% reported over the age of 30 while 5% preferred not to say. This broad range would reflect learners attending post-secondary are in all age

categories. Like the previous study, 32% identified as a member of an ethnic minority.

Looking at Figure 1, the sample of this study represents a broad range of disciplines.

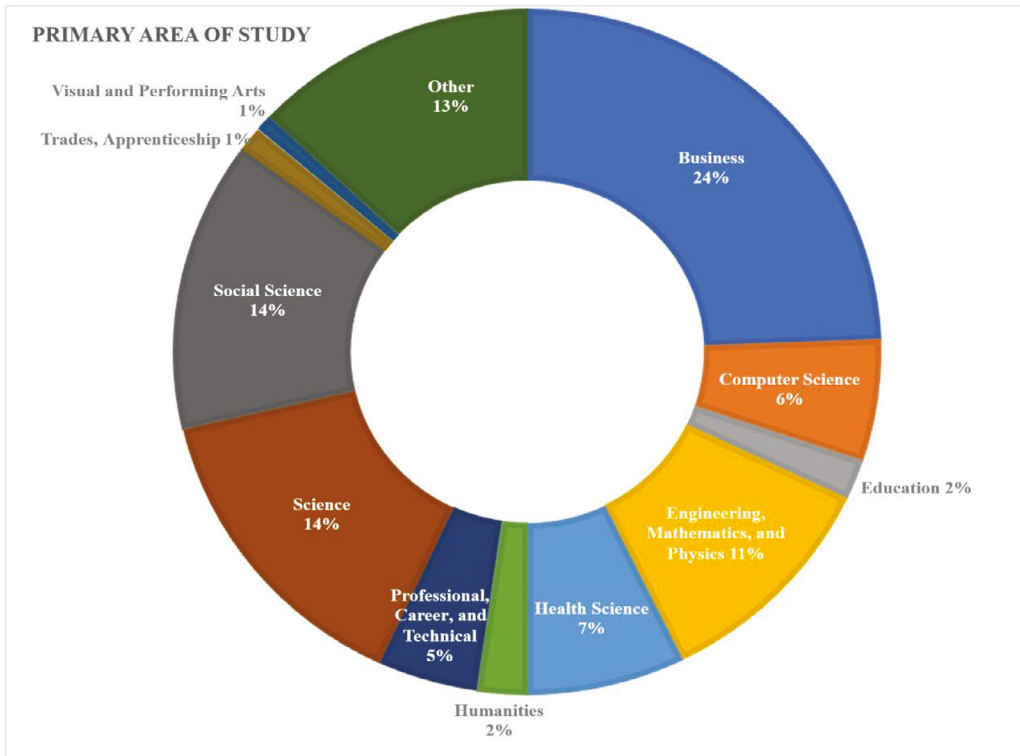


Figure 1. Respondents' primary area of study

Materials and Procedure

The online survey included 31 questions, and six open ended questions.

Demographic information. As in the previous study (Jhangiani & Jhangiani, 2017), six questions about respondents' age, gender, ethnic minority status, student loan status, level of employment, and weekly income.

Educational background. Seven questions regarding the respondents current and previous coursework,

number of courses currently enrolled in, number of courses enrolled in the previous 12 months, total credits of coursework completed, average grade across all courses, primary area of study, enrollment in a zero textbook cost program and institutional affiliation.

Impact of textbook costs. Four questions about respondents' spending on textbooks during the previous 12 months, which included, average amount spent, and in what format did you acquire the textbook, and what

actions you took as a result of the textbook cost (remain in course, withdrew or drop the course).

Current Courses. Two questions about which courses use open textbooks and the estimated overlap between textbook and lecture content.

Open Textbooks. Ten questions about the format(s) in which they access their open textbooks, whether they print it, the value of features, preference for commercial textbooks, optimal textbook format and if print the question expanded to ask why not digital, and three open ended questions regarding what specific features they like or dislike about their open textbook, and what would be a fair price for textbooks. There was one question rating the overall quality but the data collection on this question was deemed erroneous due to a technical error, hence this data was disregarded.

Study Habits. Two questions regarding how much time is spent study-

ing and how much time is spent completing the assigned readings.

At the end of the survey, respondents were redirected if they wished to a separate form (not linked to their survey responses) where they were invited to enter the draw.

Results

The number of courses taken in the current semester ranged equitably with 27% taking either a load of one or two courses or a load of 5 to 6 courses. Twenty percent of respondents reported taking over 6 courses, while only 16% reported taking 3 to 4 courses. It was noted 9% of the respondents are in programs that are predetermined course loads. When reviewing the results for number of courses in the past twelve months, 69% of the respondents have taken 12 or less courses 11% were enrolled in programs with predetermined course loads, and the remaining 20% have taken more than 12 courses in the past year.

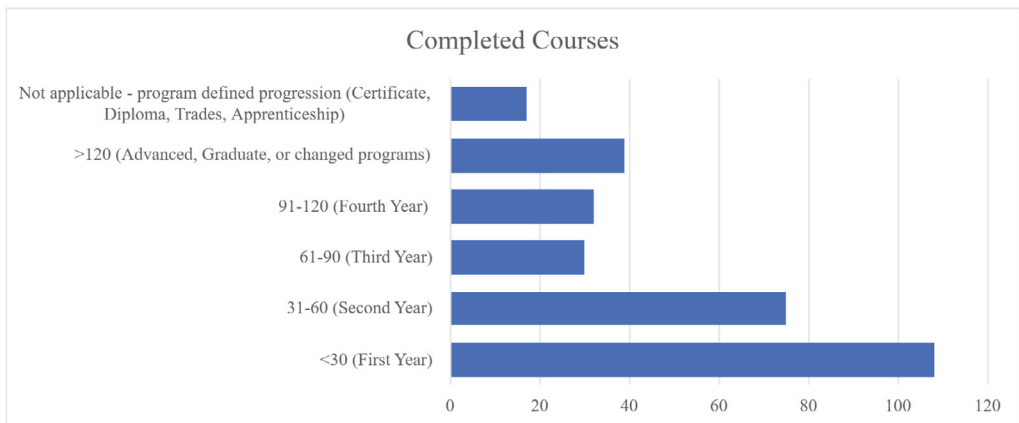


Figure 2. Completed Credit Count

When looking at the number of completed courses illustrated in Figure 2, the majority of the respondents were in the first year of their studies. This could possibly be representative

of limited familiarity with the ideals of OER. When asked about grades, the self-reported average placed 40% of the respondents between 80 and 89%.

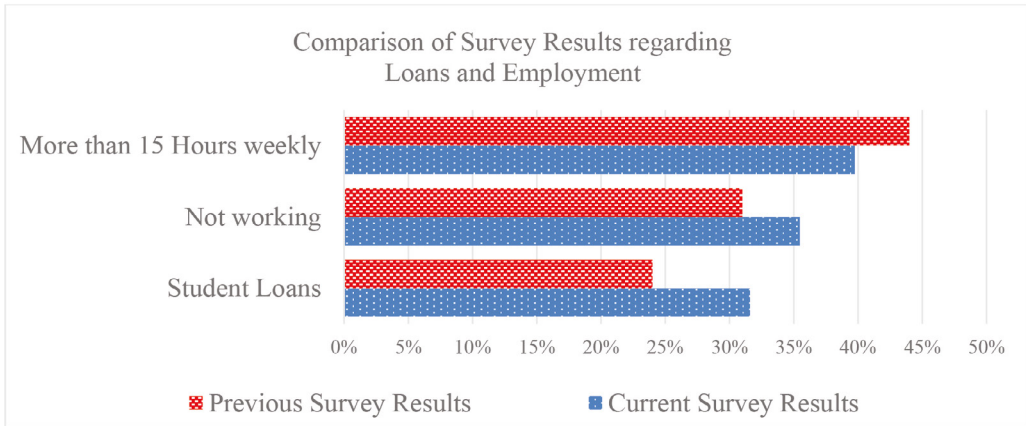


Figure 3. Comparison of Survey Results regarding Student Loans and Employment

Comparing the data between the two surveys in Figure 3, there is a greater debt load being entered into by students in the most recent study. In this current study, 32% of students reported carrying student loans compared the previous study results of 24% of participants reporting holding a student loan (Jhangiani & Jhangiani, 2017). In the previous study, it was found that students holding loans were more likely not to purchase a required textbook. However, the current survey reveals that students, both with and without loans, are deciding not to purchase required textbooks at similar rates, with 64% of loan holders and 61% of non-loan holders making this decision. Similarly, there appear to be little difference with regards to numbers of hours worked per week and the decision not to purchase a required textbook. That

is, 56% of students who work more than 15 hours a week and 69% of students who worked less than 15 hours a week opted not to purchase a required textbook. This result illustrates a slightly stronger preference by those who do not hold loans to refrain from purchasing required textbooks. It may be that those who are managing without loans are doing so by judiciously overseeing their budget.

Further, more students are not working while studying, in this current study, with 35% reporting not currently employed, up slightly from the previous study results of 31% (Jhangiani & Jhangiani, 2017). There is a slight decrease with 40% of students working more than 15 hours a week versus 44% of students in the previous study (Jhangiani & Jhangiani, 2017).

One area new to this study was asking participants about the zero textbook cost (ZTC) programs. ZTC programs are defined as “a set of courses in a specific program area that allows a student to earn a credential such as an associate degree or a certificate program, with zero textbook costs by way of us-

ing OER and/or free library materials” (BCcampus, n.d., para.6). Two hundred and fifteen respondents responded they were not enrolled in a ZTC, while 52 respondents indicated they were in a ZTC program. Thirty-two of the respondents responded with a maybe. This number will be reflected upon later in this paper.

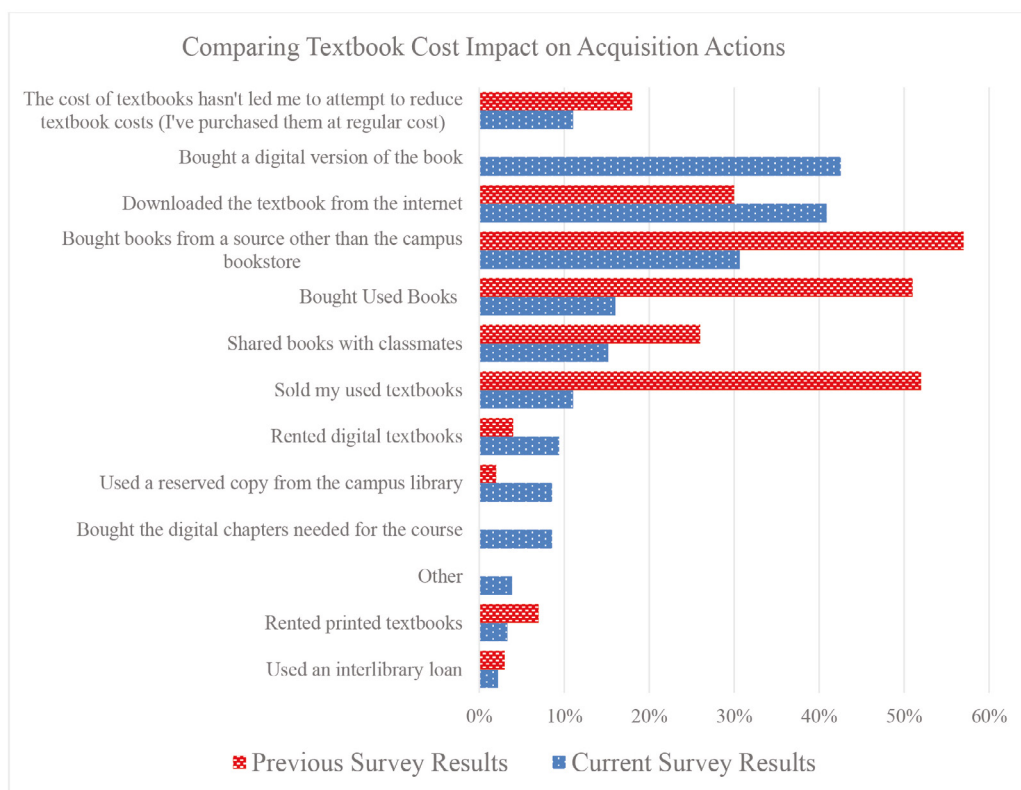


Figure 4. Impact of Textbook Costs on Acquisition Actions
Compared with the Previous Study

Completing a comparison of the two surveys in Figure 4 reflects some shifts in the student perceptions. More students are downloading from the internet and in the comments section of the survey, some identified using pirated versions of the textbook. There is a significant shift in the use from print to digital, which is likely resulting in the

decreased resale of used textbooks noted in this comparison as a significant difference.

While some learners still prefer print, the broad variety of textbook format preferences underscores the principle of multiple means of representation, one of the three core tenets of

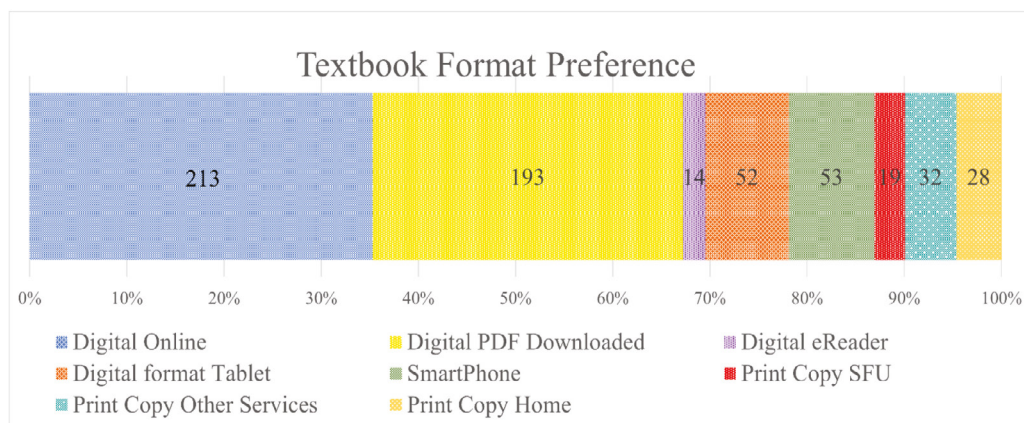


Figure 5. Format Preference

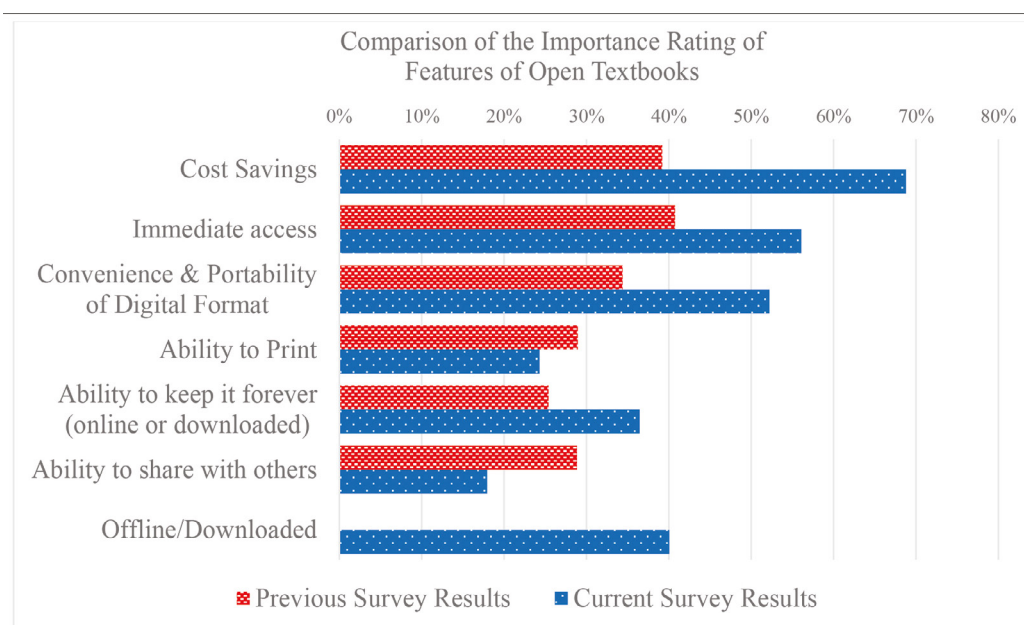


Figure 6. Comparison of the Importance Rating of Features of Open Textbooks

Universal Design for Learning (UDL) (CAST, 2018; Meyers, Rose, & Gordon, 2014). Figure 5 illustrates the breadth of preference. This variety highlights OER's role in accommodating learning variability and supports UDL research in emphasizing the importance of proactively preparing for the diverse needs of learners (Posey, 2019; CAST,

2018; Meyers, Rose, & Gordon, 2014). OER's inherent flexibility aligns well with UDL principles to ensure adaptability of materials to meet a wide range of learner requirements. Additionally, Posey (2019) notes within the UDL principle of engagement the detrimental effect of stress on learners and their capacity when under great stress. OER

helps to address the stress caused by financial concerns by reducing financial burdens and offering various formats that cater to individual learning preferences, thereby mitigating some causes of stress. OER also supports the issue of adapting materials to represent the local audience. This flexibility enables opportunities to develop further relevancy to the local community and deepen the engagement for students when they can see themselves represented in the materials (CAST, 2018; Close, Egan, & Thompson, 2020).

In Figure 6, respondents expressed the features they valued most. Cost savings was the highest valued feature, with immediate access along with convenience and portability of digital format coming in next. Sharing with others and printing were the lowest ranked features, yet still over 50 participants selected each of these options.

When posed with the question, “assuming cost is not a factor,” the choices of “digital, print, downloadable or all of the above” resulted in a balanced split

of approximately 20% per option and more than 40% wanting the choice of “all of the above.” Again, this supports the idea of learner variability. When the print option was chosen, an additional prompt asked about why not digital. This resulted in three key responses: digital is inconvenient to read; preference for a printed copy to write in and highlight; and perceptions of difficulty moving between pages or sections.

Regarding study habits, 64% of the respondents’ report spending between three to six hours per week studying and 68% completed more than 60% of the assigned readings.

The cost of textbooks has influenced the actions of buying books from other sources or buying a digital version or downloading from the internet along with sharing with classmates. Figure 7 illustrates resulting impact of textbook costs. When the following question was asked “What do you think would be a fair price for your course textbook(s) considering all the material included?” the average calculated to be \$50 from

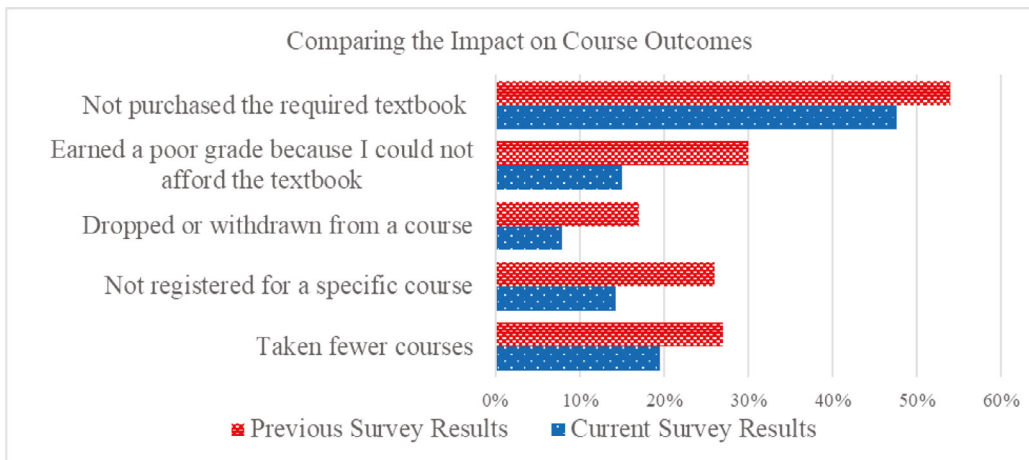


Figure 7. Comparing the Impact on Course Outcomes

the responses with 75% of the respondents believing \$50 or less would be a fair price for a textbook.

One hundred twenty-seven respondents indicated they did not purchase the required textbook. Forty indicated they received a lower grade because they could not afford the textbook, of which 17 identified as being a member of minority ethnic group. The impact of lower grades due to an inability to afford the textbook aligns with findings from a similar study at Gettysburg College by Appedu, Elmquist, and Birch (2021). Fifty-two respondents indicated they took fewer courses because of textbook costs. Thirty-eight did not register for a course and 10 dropped or withdrew because of textbook cost. Among these 10 students who dropped a course, 6% were working over 15

hours a week, and 3% were a member of an ethnic minority group.

In an open-ended question regarding required textbooks for courses, participants reported a diverse range of responses, with some indicating that 90% of the textbooks were not used, while others noted only 30% went unused. In response to an open-ended question regarding the appropriate amount spent on purchasing textbooks in the last 12 months, the overall average expenditure was calculated to be \$345 compared to the previous study of \$698 (Jhangiani & Jhangiani, 2017). This calculation for the current study, however, included responses from 23 participants who reported spending nothing (entered a value of zero) and 118 participants who left the field blank.



Figure 8. Word cloud generated from desirable features of Open Textbooks

The word cloud in Figure 8 is indicative of the themes that emerged from responses to a question about the features participants liked about OER. On the other hand, the question about disliked features revealed that 77% of participants either did not respond or found the question not applicable. However, for those who did provide feedback, several concerns were raised. Common dislikes included aversion to reading online, the expense associat-

ed with printing, difficulty navigating between sections, grammatical and typographical errors, lack of downloadability, digital glitches, incomplete image displays, the desire for more smartphone-friendly layouts, the need for internet connectivity for reading, and discrepancies in page numbering between digital and printed versions. It is important to note that many of these issues are not unique to OER but are common to online books in general.

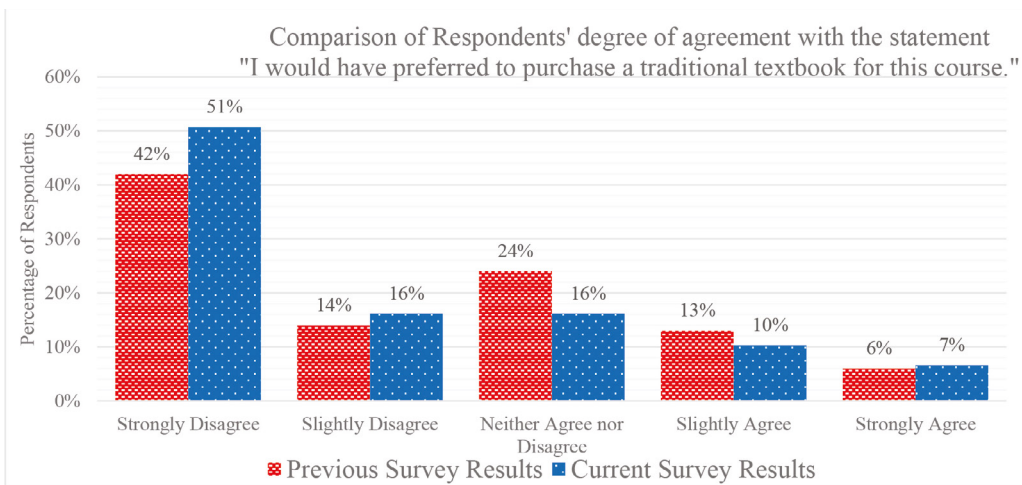


Figure 9. Comparing the previous survey results with the current survey results of the agreement to the statement "I would have preferred to purchase a traditional textbook for this course."

Contrasting the results of the previous survey of 2015 (Jhangiani & Jhangiani, 2017) with this survey of 2022, as to participants' preference for a traditional textbook, Figure 9 shows similar outcomes. It is noteworthy, though, that in 2022, more respondents disagreed in 2022, and fewer were neutral.

Limitations and Strengths

In this iteration of the survey, there are some limitations regarding our outreach. Most notably is the increased complexity of institutional ethics process. Since the initial survey, there has been an expanded focus on ethics. Some of the institutions have joined together to form a harmonized

process versus attempting to submit through each institution for a broader survey such as this one (*About Us – Health Research BC*, n.d.). Given the challenge of time, this work only went directly to the institutions involved with this provincial group. At the time of this current work, the post-COVID reality was also impacting engagement to survey and the survey fatigue seemed to be a common phrase (Field, 2020). Our responses may indicate that engagement to complete all questions was a challenge due to the duration required to obtain the required number of responses and the number of incomplete responses upon viewing the time elements in the data.

Discussion

This survey, compared to the previous one by Jhangiani & Jhangiani (2017) highlights a shift towards digital delivery. Although some respondents indicate a preference for print, their percentage has decreased from the previous survey (see Figure 5). This trend also reflects a diminished opportunity for students to recoup some of their costs by selling their used textbooks or the ability to save money when purchasing used textbooks. One respondent aptly noted that:

Most textbooks I've bought have been required to be new due to online access codes for homework assignments. I often found the textbooks themselves useless when restricted to the poorly implemented online readers used by services such as Cengage and

McGraw-Hill online. I resent not having used books as an option due to this format. To save costs on the new texts I always bought the digital version for the access code, so even if the books were useful I lost access to the digital copy after my course ended.

This quote may exemplify some of the reasons why students are opting for digital over print. That is, how they are navigating a tenuous landscape where they must balance escalating costs associated with tertiary education and attaining a meaningful educational experience?

Along with the stronger opposition to purchasing traditional textbooks, with increased student agency, these issues are becoming a focal point for students to assert their opinions. Students familiar with the advantages of OER will be and are able to advocate to faculty for choice in their materials, in particular those that are required by faculty. As this current study indicates, students have adapted to digital materials or are finding alternatives to prescribed resources as fewer students reported receiving poor grades due to not purchasing their textbook.

Reflecting on respondents' changing behaviour and adaptability in response to traditional textbook costs, a broader pattern is emerging in relation to learners' financial decisions. The survey results underscore this trend by revealing a notable increase in the number of students who are choosing not to purchase textbooks regardless of whether they have loans. This decision could be influenced by numerous

factors. For instance, students may be exerting more agency over their expenses and resisting the high costs of textbooks. This resistance is particularly noteworthy in light of increasing concerns about affordability and food insecurity (UBC Today, 2022). Additionally, the financial burden faced by students is highlighted by the high cost of living in Vancouver, where renting a studio apartment is estimated to cost an average \$1,509 CAD (Canadian Housing and Mortgage Corporation, 2025).

Throughout the open-ended responses, additional considerations emerged. One significant aspect is the hidden costs associated with resources, such as fees for online access. Many instructors require students to purchase online access codes to gain access to online publisher systems where they are required to complete mandatory quizzes or assignments which count towards their final grade (Hanson, 2024). Online access codes can cost anywhere between \$100-200 dollars (Lambert, K., 2018; Treasure, 2023). One respondent, in the current survey, mentioned foregoing a week's groceries to afford online codes necessary for coursework. This significant impact on living costs has also been documented by other authors (Correa & Bozarth, 2023; Skidmore, 2019). Another respondent indicated the need to purchase a new textbook solely to obtain the online access code, further burdening students financially. This issue is exacerbated when instructors incorporate online quizzes, which can only be accessed through a publisher's system, into course assessments, leaving students no choice but to incur

these extra expenses. When asked what a fair price for a textbook with all materials would be resulted in an average value of \$50. The question arises: should students be required to spend this additional money to complete their courses?

These costs collectively act as barriers to education. While Zero Textbook Cost (ZTC) programs (BCcampus, 2017) aim to reduce these barriers, there is a need for broader awareness and promotion of the concept. As more institutions advertise their ZTC programs, clearer understanding among prospective students could make it an effective recruitment tool. The fact that 35 respondents indicated "maybe" when asked if they were in a ZTC program suggests a lack of widespread understanding. In 2019, the Provincial Government in British Columbia sponsored several opportunities for institutions to develop ZTC programs (BCcampus, 2020). At present, there are 11 programs listed on the directory for zero or near-zero costs in BC (BCcampus, n.d.). The lack of participants' awareness, of these programs, despite the push to adopt ZTC programs, may be a reflection of only a few faculty members or administrators having thoroughly explored or understood the concept to commit to this goal. However, as discussions around equity are at the forefront, a serious commitment from institutions to understand and implement ZTC programs and initiatives could help make education more accessible.

The lack of awareness among students about ZTC and OER may also

stem from faculty members who frequently adopt or work with ZTC programs, assuming these concepts are well-known. However, as Abramovich and McBride (2018) highlighted, students often remain unaware of OER until they encounter them in their courses. It is important to note that when students do become aware and gain some understanding or knowledge of OER, they find it to be a valuable resource. This preference is evident in the word cloud presented in Figure 8, which emphasizes terms such as “cost-savings, free, searchability, accessible, access, portability, and hyperlinks,” highlighting the appreciated features of OER.

In the current survey, questions were included to determine if connectivity issues impact the use of OER. However, these questions did not receive enough responses to draw any conclusive statements. Nonetheless, a recurring theme in the comments related to preferred features and format preferences was the desire for downloadable and offline access to resources. It noted that the response rate from institutions with more rural and remote campuses was very low or nonexistent. Further research will help to understand the challenges facing those students to access online based resources, in particular OER. For example, is this also reflective of reduced adoption of OER in these institutions?

While faculty have the discretion to choose teaching materials, greater institutional recognition and incentives for selecting OER, such as considerations during the tenure and promotion

processes, could lead to wider adoption and valuation of OER (Banyas & Cloutier, 2021; Jung & Lee, 2020). Currently, only a few institutions post-secondary institutions in Canada formally acknowledging the use of OER in its collective agreement related to tenure and promotion, these include the University of British Columbia, Brock University, and Southern Alberta Institute of Technology (BCcampus, 2021; Brock University & BUFA, 2023; McKinney & Coolidge, 2021). If more value, time, and resources are dedicated to OER, a rise in interest and adoption may be more likely. Numerous student unions have advocated for increased OER usage, recognizing the significant cost savings and positive impact on student well-being and debt reduction (Qi, n.d.; University of Victoria, n.d.). Some student unions have even allocated funds to support faculty in creating and/or adopting OER (Douglas Students Unions, n.d.; Brock University, n.d.).

Overall, this survey indicates student support for the use and adoption of OER. Participants expressed discontent primarily around issues related to connectivity and security, rather than issues specific to OER. While the data on textbook costs was not as comprehensive as desired, there seems to be a decline in the average cost of textbooks when compared to previously reported costs. This may also be a result that reporting of the online publisher resources required by courses do not appear to be included in many textbook cost calculations. The findings underscore the ongoing need to enhance awareness and understanding of OER (Ad-

ams & Sillito, 2023). Many are unaware of what OER is and its potential benefits for both students and instructors/faculty. A notable theme is that those familiar with OER might have become complacent, assuming widespread understanding when, in reality, familiarity and in-depth understanding are limited. Further efforts are necessary to elaborate on what OER involves and its intrinsic value.

In 2015, world leaders gathered at the UN summit on sustainable development and adopted the 2030 agenda for sustainable development, which included 17 sustainable development goals (SDGs) (United Nations, 2023). Education is one of the 17 sustainable SDGs recognized by the UN, which states that by “by 2030, ensure equal access for all [individuals] to affordable and quality technical, vocational and tertiary education, including university” (UNDP, 2023). However, with the growing challenges facing current and perspective tertiary learners, this particular SDG seems to be out of reach, as education slowly becomes a tool for those positioned at the upper echelons of our societies.

OER encompasses more than offering free resources; they can also foster critical pedagogy to advance social and epistemic justice (Lambert & Czerniewicz, 2020). This approach can help to democratize education and dismantle longstanding colonial and patriarchal narratives in our education system. A recurring theme in research on

textbook affordability and OER is the effect of OER on groups that are HPSM. Although, our numbers were not as fullsome as hoped for, there does seem to be some indication that groups that are marginalized are being negatively impacted, such as receiving lower grades when textbooks are too costly. Further research is necessary in this area to understand how OER can enhance a sense of belonging among learners and enable marginalized groups to thrive in educational contexts. As mentioned previously research by Colvard and colleagues (2018) highlighted how HPSM groups are less likely to receive D, Fails, or withdrawals. However, to fully comprehend the benefits, especially of OER designed to decolonize educational narratives, more extensive research is needed on their impact on these marginalized groups.

To conclude, although student perceptions of OER are generally favorable, a significant gap remains in understanding and action as to how OER can be strategically used to enhance education for everyone, reduce educational barriers, and create more equitable educational resources. With an increased number of students carrying student loans identified in this recent survey, how this is affecting affordability is cause for concern. Therefore, ongoing efforts are essential in promoting OER, developing and communicating its value, articulating options to address equity issues, and amplifying student voice in this discourse.

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