

RESEARCH REPORT

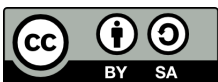


Awareness and Use of Open Educational Resources (OER) in Ontario: A Preliminary Study of Post-Secondary Educator Perspectives

Prepared by: Jenni Hayman

for eCampusOntario

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Please send inquiries to inquiry@ecampusontario.ca

About eCampusOntario

eCampusOntario, a not-for-profit corporation, is funded by the Government of Ontario to be a centre of excellence in online and technology-enabled learning for all publicly-funded colleges and universities in Ontario.

Grounded in emerging global research on the potential of open educational resources (OER) and open educational practices (OEP) to increase access to post-secondary education, open innovation is at the core of eCampusOntario's 2018-2021 Strategic Plan (eCampusOntario, 2018). Through programming, workshops, and support networks, eCampusOntario is encouraging member colleges and universities to explore and contribute to emerging open education research and use of OER across the province.

In order to learn more about Ontario post-secondary educators related to its Strategic Plan, eCampusOntario conducted survey-based research in spring 2018. The purpose of this research was to establish baseline information about the types of resources educators used for teaching, criteria used to select those resources, level of awareness of OER, and use of OER. This report provides a summary and findings from the study.

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Executive Summary

The survey, *Awareness and Use of Open Educational Resources (OER) in Ontario*, was conducted in spring 2018. A total of 383 educators provided responses to a 15-item online survey instrument designed to gather information about their teaching practice related to course resource selection. The survey was offered in English and French.

Definition of OER

The specific description and definition used to inform participants for this study was as follows:

Open educational resources (OER) take many forms including large-scale, such as open textbooks and full digital courses – and small-scale, such as images, videos, syllabi, activities, or assessments. OER are defined as "...teaching, learning or research materials that are in the public domain or released with intellectual property licenses that facilitate the free use, adaptation and distribution or resources" (UNESCO, n.d.).

Participants

Participants for this study were Ontario post-secondary educators currently teaching at publicly funded colleges or universities in Ontario. Their participation in the study was voluntary and they were recruited through a variety of eCampusOntario communication channels. Based on a potential response pool of approximately 25,000 educators, the response rate was 1.9%. While this was a low response rate, and cannot be considered generalizable to all Ontario post-secondary educators, the demographic elements answered as part of the survey instrument confirmed that there was diversity with respect to experience, discipline, mode of delivery, and those teaching at colleges or universities.

Responses were submitted anonymously through an online survey instrument over a six-week period from February 19 to March 31, 2018. Three interviews were also conducted. The English-French survey-language balance for the study was 89% English and 11% French, in line with provincial data on French-language minority in Ontario (Office of the Commissioner of Official Languages, n.d.). The university-college balance was 75% university and 25% college (aligned closely with the Ontario ratio of 65/35 university to college learners) (Statistics Canada, n.d.). There was diversity in the disciplines taught by participants, and they were experienced educators based on responses about the number of years they had been teaching (with a majority between 6 and 20 years).

Types of Resources Used in Teaching

Participants reported diverse resource types used as part of their teaching practice. Content that educators created themselves (such as handouts and presentation slides) was prevalent, as well as Internet-based resources (websites, articles, and videos). A large number of respondents indicated that they used learner-purchased resources such as coursepacks and hard-copy or digital textbooks. Journal articles and library-subscribed multi-media resources were less prevalent. However, many participants indicated that they used a mix of resource options. Over 80% of educators indicated that they were solely responsible for the selection of resources in their teaching. Just under 20% indicated that they had little or no decision-making power about resource choices.

Criteria that Educators Use to Select Resources

Educator-participants indicated a variety of criteria that were important to them when selecting course resources. The most common drivers for selection were that the resource was trusted (of good quality), that it was comprehensive (aligned with learner needs), and that it was accessible (designed for learners with possible sight, hearing, learning, or mobility challenges). Additional key drivers were that the resource was either low cost or available through the institutional library.

Awareness and Use of OER

Participants for this study were generally aware of OER and open textbooks. The majority of respondents agreed that they were familiar with the terms and concepts of open. Participants were more familiar with the definition of OER than the definition of open textbooks. College respondents who responded to this survey were more aware of copyright, licenses, and open resources than university educators.

Most educators who responded to the survey were already using some type of resource that they considered OER as part of their teaching practice. The most popular types of resources they used were website links, YouTube (or other external video sites), and open access articles. Most respondents felt they were already using OER in some way. University respondents tended to use open access articles and public domain resources more often than college respondents. College participants indicated that they incorporated videos and website links (including government websites) more often than their university peers.

Respondents agreed strongly that OER lowered resource costs for learners. They also agreed that they were already using OER (in many cases), and would consider using more OER in the future. However, many indicated that they felt OER were not particularly easy to find in their discipline.

Survey Instrument Comments

An open-ended question was included at the end of the survey instrument and 23% of participants provided responses. These responses were analyzed for themes related to course resource selection processes and OER. The three most common themes among the responses were as follows: participants felt that cost for learners was an important factor in resource decision-making, participants had concerns about the quality of OER, and several participants stated that they no longer relied on textbooks as teaching resources. Overall, participants were positive about OER and open textbooks; however, there were concerns that OER were sometimes challenging or time-consuming to find and were particularly challenging to find in Francophone contexts.

Implications for Ontario Practice

This preliminary Ontario study was designed to provide staff at public post-secondary institutions with information about current resource selection practice and levels of awareness about OER. Findings also provide indicators of how staff might expand OER use by focusing on the types of resources that educators already valued. An understanding of the criteria for course resource selection, as well as who is, and who is not empowered to make course resource decisions was explored to inform current and future open innovation with respect to educator agency. With the majority of respondents agreeing, or strongly agreeing that they would be interested in experimenting with OER as part of their practice, it was concluded that open initiatives in the 2018-2021 eCampusOntario Strategic Plan were aligned with participant perspectives. A similar, but more in-depth follow-up study may be designed for implementation in spring 2019 to gather comparison data as part of organizational planning.

Background of the Research

Canadians are making contributions to open educational practices (OEP) and use of open educational resources (OER) in post-secondary education (Jhangiani, Pitt, Hendricks, Key, & Lalonde, 2016). Many open projects across Canada have been completed, and many more are underway. However, if educators in Canada seek to mirror the positive social impact of OER and OEP that has been demonstrated by other nations, more investment is needed from provincial governments, and greater institutional awareness and support is required to increase our collective capacity (McGreal, Anderson, & Conrad, 2015).

Researchers working on the first-ever Canadian national online and distance education report (2017) included information about use of OER in their work. They stated,

Despite a strong push from government agencies and the open education movement, there is relatively limited use of open educational resources (OER) and

open textbooks at the moment, although a number of institutions are actively aiming to make more use of these resources (The National Survey of Online and Distance Education in Canadian Post-Secondary Education, p. 27).

Use of OER and OEP have the power to reduce the cost of public, post-secondary education (Fischer, Hilton, Robinson, & Wiley, 2015). Use of OER, especially related to open licensing, also equips educators and learners with tools and skills to find, adapt, and share resources that are more closely aligned with their contexts (Wiley, 2014). Aligned with global evidence about the potential cost and educator empowerment benefits of OER for post-secondary teaching and learning, eCampusOntario is exploring awareness and use of OER among educators at the 24 colleges and 21 universities in the province.

The purpose of this research was to learn more about resource elements of post-secondary teaching practice in Ontario including: the types of resources educators use, the key decision-making criteria educators use when selecting resources, educator awareness about OER, and actual use of OER – including open textbooks. Findings from this research will help inform eCampusOntario programming and partnerships with member institutions as the potential of open practice is explored.

Method

This study was primarily survey-based to establish a foundational view of the selection of course resources and awareness and use of OER among Ontario post-secondary educators. Data were collected with an online survey instrument designed and hosted with a Canadian provider to help ensure adherence to the Canadian Freedom of Information and Protection of Privacy Act (FIPPA) and the Personal Information Protection Act (PIPA). A total of 15 questions were included in the instrument (Appendix A of this report), and two questions pertained to consent. The instrument was piloted with a select group of experienced Ontario educators to confirm that the questions and language were consistent with Ontario teaching practice at both colleges and universities. Three interviews were conducted with volunteer educators, one from a university and two from colleges. Each interview was approximately 30 minutes and the interviews relied on a series of open-ended questions (Appendix B of this report).

The participants recruited for the research were a volunteer sample of Ontario post-secondary educators currently teaching at a college or university. The potential population included approximately 17,000 university educators (OCUFA, n.d.) and 12,000 college educators (OPSEU, 2017) working at post-secondary institutions in Ontario in spring 2018. Recruitment was conducted using a variety of eCampusOntario communication channels including posts to Twitter, promotion in the eCampusOntario monthly newsletter, and verbal and visual promotion during February and March 2018 workshops and in-person events. Partners at teaching and learning offices at Ontario publicly-funded post-secondary

institutions were asked to promote the study. Word-of-mouth through personal relationships with educators, and messages through other partnership channels including Contact North and OCUFA (Ontario Federation of University Faculty Associations) were also included as part of recruitment efforts.

In total, 383 participants either fully or partially completed surveys. At 1.9% of the population, this was a low response rate and cannot be considered generalizable to all Ontario post-secondary educators. However, the demographic elements answered as part of the survey instrument confirmed that there was diversity of representation with respect to experience, discipline, mode of delivery, and those teaching at colleges or universities. Among university respondents there were 260 fully completed surveys and 31 partially completed included in the analysis (a minimum of 80% completion was the criterion for inclusion). Among college respondents there were 88 fully completed surveys and 4 partially completed (using the same criterion of minimum 80% completion). Analysis of quantitative data included Excel and SPSS v.24 processes to derive frequency and descriptive statistics.

Three participants who had completed the survey also volunteered to participate in a 30-minute interview. Data from transcripts were analyzed using open and axial coding to derive a set of common themes related to course resource selection and awareness and use of OER.

Findings

Related to the purpose of the study, the following details of data analysis were deemed most relevant: the types of resources that Ontario educators used as part of teaching and learning, the criteria they used to select resources, their level of awareness of OER, and their actual use of OER. In addition to data related to the purpose of the study, data about full-time and part-time status, role in course selection, and whether educators were teaching face-to-face, online, or blended courses were included for descriptive context.

Employment Status at Institution

Data about full-time, part-time, limited contract, or other status for college and university participants were organized in Table 1 below. College and university educator-participants reported a strikingly similar balance of role types. Responses about roles in the “other” category included, full-time contract, professor emeritus, retired part-time, and sessional instructor.

Table 1
Employment Status at Institution

<u>Type of Role</u>	<u>College</u>	<u>University</u>
Full-time role	64%	63%
Part-time role	14%	12%
Limited term or contract	20%	20%
Other	2%	4%

Role in Course Resource Selection

Table 2 below represents data on participant agency in selecting resources for their courses. Findings indicated that college-level educators were less likely to have full control over course resource decisions than their university counterparts, and collaborative decisions about course resources were more common among college colleagues and departments.

Table 2
Role in Course Resource Selection

<u>Level of Responsibility</u>	<u>College</u>	<u>University</u>
Solely Responsible	56%	78%
Lead a group	8%	4%
Member of a group	16%	9%
Influence but no power	10%	2%
No role	8%	5%
Other	2%	2%

Mode of Delivery

College and university educators indicated a mix of modalities in their teaching as demonstrated in Table 3 below. The dominant practice was face-to-face classroom teaching, with several participants indicating that they taught in multiple modes and taught a mix of undergraduate, graduate, and continuing education learners. College educators were more likely to teach in fully online and blended modes, and neither group indicated significant teaching practice in continuing education. There was some crossover among college and university participants related to teaching both college and university learners. Data in Table 3 indicated the number of participants that selected each of the categories rather than mean or percentage.

Table 3

Mode of Delivery by Participant Type and Learner Type^a

Mode of Delivery	College Undergrad	Uni Undergrad	Graduate	Continuing Ed
C - Face-to-face	57	9	9	4
U - Face-to- face	20	219	119	14
C - Online	10	3	6	5
U - Online	4	17	16	22
C - Blended	21	2	11	5
U - Blended	1	24	9	5

^aC for college educators, U for university educators

Types of Resources

In Table 4 below, the types of resources that participants used as part of their teaching practice were listed. Participants were instructed to select all the types of resources that applied to their practice. The data below indicated the percentage of respondents that selected each of the categories.

Table 4
Types of Resources Used in Teaching

Type of Resource	College	University	Combined
Journal Articles	43%	77%	69%
Coursepack ^a	15%	21%	20%
Textbook ^a	71%	73%	73%
Digital Textbook ^a	36%	30%	31%
Supplemental Resources ^a	16%	18%	18%
Original Educator Content	85%	76%	78%
Multi-Media - Library	48%	34%	37%
Internet Resources	92%	81%	84%

^aIndicates the resource was learner-purchased

Criteria for Resource Selection

Participants were asked to agree or disagree about whether a pre-determined list of resource selection criteria were important for them. Response options for each item were as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. Table 5 below demonstrates the mean responses for college, university and combined data. The top three drivers for selection were that the resource was trusted (of good quality), that it

was comprehensive (aligned with learner needs), and that it was accessible (designed for learners with possible sight, hearing, learning, or mobility challenges). Additional key drivers were that the resource was low cost or available through the institutional library.

Table 5
Criteria for Resource Selection

<u>Criteria</u>	<u>College Mean</u>	<u>University Mean</u>	<u>Combined Mean</u>
Resource is low cost	2.96	3.00	2.99
Resource available in library	2.69	3.09	3.00
Resource is comprehensive	3.22	3.15	3.16
Compatible with LMS ^a	2.91	2.64	2.71
Recommended by colleagues	2.90	2.86	2.87
Resources is media-rich	2.94	2.76	2.80
Resource is trusted	3.35	3.42	3.40
Includes supplemental content	2.91	2.62	2.69
Resource is accessible	3.26	3.11	3.15

^aLMS = learning management system

Level of Familiarity with OER and Copyright

To determine participant familiarity with OER and open textbooks, and participant level of awareness of copyright, and open licensing, two sets of items were included in the survey instrument. Definitions of OER and open textbooks were provided to assist educators to more effectively answer the items. Tables 7 and 8 described participant familiarity with OER and open textbooks, and Table 9 described the level of awareness among participants about copyright and licensing of resources. The mean for Table 8 was calculated from responses as follows: 1 = Unaware, 2 = Somewhat Aware, 3 = Aware, and 4 = Very Aware. Educators were more aware of OER than open textbooks. College-level educators were generally more aware of copyright, licenses, and open resources.

Table 7
Familiarity with OER

<u>Statement</u>	<u>College</u>	<u>University</u>	<u>Combined</u>
I am not familiar with OER	22%	27%	25%
I have heard of OER	12%	18%	18%
I am somewhat familiar with OER	16%	15%	15%
I am familiar with OER and some of their uses	33%	27%	28%
I am very familiar with OER and use them in my courses	17%	13%	14%

Table 8
Familiarity with Open Textbooks (OT)

<u>Statement</u>	<u>College</u>	<u>University</u>	<u>Combined</u>
I am not familiar with OT	28%	29%	31%
I have heard of OT	15%	18%	19%
I am somewhat familiar with OT	17%	15%	17%
I am familiar with OT and some of their uses	26%	18%	21%
I am very familiar with OT and use them in my courses	14%	9%	11%

Table 9
Awareness of Copyright, and Licensing

<u>Element</u>	<u>College Mean</u>	<u>University Mean</u>	<u>Combined Mean</u>
Public Domain license	2.87	2.92	2.91
Canadian Copyright	2.90	2.72	2.76
Creative Commons licenses	2.58	2.61	2.60

Types of OER Used

Participants were asked to identify the types of resources they used including common Internet-based resources and some OER. The pre-determined list represented types of resources likely to be familiar to post-secondary educators based on pilot feedback from experienced open educators. Findings were organized in Table 10 below. Top responses included website links, YouTube (or other external video sites), and open access articles.

Table 10
Types of OER Used

<u>Types of OER</u>	<u>College</u>	<u>University</u>	<u>Combined</u>
Open access articles	37%	60%	55%
YouTube (and other videos)	88%	76%	79%
Website links	88%	82%	83%
Public domain resources	40%	55%	52%
Open textbooks	19%	15%	16%
Government websites	64%	51%	54%
Creative Commons licensed	34%	32%	33%
Do not use OER	4%	8%	7%

Attitude about OER and Intention to Use

Table 11 below represents the *Attitudes About OER and the Intentions to Use them*. Participants answered a series of questions related to OER and their interest in using them as part of their course resources. Attitudes were expressed as agreement or disagreement with a series of statements using the following scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree. Participants agreed strongly that OER lowers resource costs for learners. They also agreed that they would consider using OER. However, many indicated that they felt OER, related to their discipline, were not particularly easy to find.

Table 11
Attitude About OER and Intention to Use

<u>Statement</u>	<u>College Mean</u>	<u>University Mean</u>	<u>Combined Mean</u>
Use of OER lowers costs	3.48	3.44	3.45
Adaptation is important to me	3.21	3.01	3.06
I would consider using OER	3.43	3.26	3.30
OER are easy to find	2.08	1.99	2.01
I would join an OER community	2.93	2.59	2.68

Qualitative Analysis of Survey Comments

There was an open-ended question included in the survey questionnaire as follows, “Do you have any other comments or concerns regarding textbooks, course content, open textbooks, or OER in your practice?” Approximately 23% of participants (89 total) provided responses to this question. An open and axial coding process was used to analyze comments and Table 12 below represents the dominant themes by frequency.

Table 12
Qualitative Comments from the Survey Instrument with Frequencies

<u>Code</u>	<u>Frequency</u>
Cost of Resources for Learners is Important	29
I’m Concerned About Quality of OER	28
I Do Not Use Textbooks	16
I Like OER and Open Textbooks	13
The Pedagogic Design of Resources is Important	10
There are Limited OER in My Discipline	9
I Prefer Publisher Textbooks	8
I Blend Textbooks and other Resources	7
I’m Concerned About Compensation for Creation	7
I’m Concerned About Quality of Publisher Textbooks	7
Print Options are Important	7
Finding OER Takes Time	6
OER Policy is Needed	6
There are Limited OER in French	5

Some representative comments were as follows:

"[OER] would foster and [sic] environment focused primarily on the student learning experience. It would also encourage our own collaboration and respect for each others' research and areas of academic knowledge and specialty."

"Adapting OER texts is time consuming and we are not provided with the time by employers."

"The open textbook would need to have equivalent quality for me to choose it over a paid one. Quality is of much higher importance to me over cost."

"Textbooks are often written poorly, without a point of view, and without a sense of why something would matter. They are more collections of information than sources of culture and knowledge."

"At least when it comes to teaching core principles and mainstay concepts or techniques, this material should be FREE and OPEN to all."

Translated from French "They [OER] exist but it takes a long time to sort them out to find the ones that are suitable for our students."

"Primarily I choose textbooks and course content based on relevance to the subject matter, then evaluate other components."

"Do we feel that our institution (or our discipline) acknowledges this kind of work [work in OER] in some way?"

Qualitative Interviews

Three interviews were conducted with volunteer participants. Each interview lasted 30 minutes. The purpose of these interviews was to explore the survey questions in more detail with a few educators. In the following section pseudonym initials were used to describe the educators that were interviewed. JR was a professor teaching an engineering capstone course and an upper-year software usability course at an Ontario university. MW was a Communications instructor teaching General Education Communications at an Ontario college in addition to a departmental leadership role. BG was a Nursing instructor teaching Anatomy and Physiology at an Ontario college.

Common themes based on open and axial coding of participant transcripts included: heavy use of Internet-based resources as a core part of teaching, learner empathy related to the cost of textbooks, the importance of finding and using high quality resources appropriate to learner needs, and open educational practices (OEP). Each participant had unique teaching and course resource selection needs as demonstrated in the following narratives.

JR did not use textbooks in his courses. Although he stated he had written a well-used and respected textbook in his field, he believed more in open philosophy now. He designed and managed his own open source software (openly licensed) in partnership with learners. His courses were very experiential and learner- and design-centred. Learners were required to find their own open source software and provide presentations on their explorations. Learners used open repositories such as GitHub to upload and share their work with others and also used an industry-standard documentation website called Stack Overflow to engage in peer-to-peer sharing and collaboration. Related to quality of his open source software, JR stated, "I try to keep the software of commercial quality and it's developed 99% by students from undergrads up to Ph.D students." He also stated, "100% open is my philosophy" (JR, 2018).

MW summed up his practice of using Internet-based resources and stated, "The more we can do to help ease that financial burden of them [students] getting a post-secondary education, then I think the more inclined they will be to stay in school" (MW, 2018). In his personal teaching he did not use a textbook, but acknowledged that course resource decision-making rested with the instructor that had designed the course. If he was teaching a course created by someone else, he would use a learner-purchased textbook if indicated. He encouraged colleagues to use open whenever possible. He also had an ongoing practice of keeping notes and selecting resources regularly to manage his workload and ensure current, relevant, and credible information.

BG was teaching an Anatomy and Physiology course for nurses at the college level. She did not have agency to select the course resource and was relying on a pre-designed course outline to teach. She was concerned that the textbook was expensive (over \$300). BG supplemented the textbook with her active teaching practice, her own notes, and Internet-based resources that she felt were relevant and high quality. She described her experience related to learner empathy, and stated, "The college gives me a textbook but I've been sharing it with the students because the cost is so prohibitive. I've lent it out a lot of times, most of the time I'm lending it out, but what can you do, right?" (BG, 2018). She articulated the idea that the particular textbook chosen was not important for this course, and stated that anatomy and physiology had not really changed very much over time. She was not aware that there was an open anatomy and physiology textbook (available through a provider called OpenStax) and she was interested in reviewing it.

In the following section findings will be explored with a brief discussion of their context related to the work of eCampusOntario and the purpose of the study from the participants' perspectives.

Discussion and Implications for eCampusOntario Practice

Respondents to this survey seemed to be familiar with concepts and practices of use of OER as part of their course resource selection routines. While participants indicated a 70% or greater reliance on learner-purchased textbooks, they also indicated that they were using the Internet to provide supplemental, and sometimes core resources for their teaching. These were positive indicators for the programming path that eCampusOntario has designed as part of its 2018-2021 strategic planning.

Both college and university instructors that responded to this study were predominantly face-to-face instructors. There were some that taught online and blended courses, but for the most part their work was in-person, in the classroom. This served as a an important reminder that fully online teaching and learning may only be a small part of overall provincial teaching and learning. Technology-enabled conversations about digital resources should be contextualized to multiple modes of teaching.

Among participants in this study, there was a notable difference in the level of agency around course resource decision-making. University educators indicated they had sole responsibility, or led a group tasked with decision-making 82% of the time, where college educators were decision makers 64% of the time.

One of the interview respondents indicated that her resources and assessments were pre-determined and embodied in a course outline. She had opportunities to provide supplemental resources, and that was the path she chose. This was an indication that there may be other stakeholders (college program coordinators, course leads, or departmental administrators) making course resource decisions, and not just course instructors. eCampusOntario professional development workshops and resources are typically designed for educators and the audience may need to be expanded to encompass additional decision-makers.

College and university respondents for this study indicated wide use of learner-purchased resources for teaching and learning. These included coursepacks, hard-copy textbooks, and digital textbooks. Over 70% of participants indicated that they assigned these types of resources. This focus on textbooks as an essential teaching tool was an indication that eCampusOntario's current focus on open textbooks, direct no-cost substitutes for learner-purchased resources, might be an effective path to increase use of OER and reduce post-secondary learner costs.

Drivers of resource selection (the criteria that participant-educators used) also provided useful information related to eCampusOntario programming. Respondents indicated that their most important criteria for choosing resources were trust (was the resource high quality, from a trusted provider), accessibility (was the resource designed for learners with cognitive and physical learning differences), and comprehensiveness (was the resource

designed for a spectrum of topics). eCampusOntario should ensure that it highlights and funds open textbooks and other OER that demonstrate these educator-identified qualities.

Participants in this study were more familiar and aware of OER and open licensing than expected based on the recent findings from the Ontario sub-report of the *National Survey of Online and Distance Education in Canadian Post-secondary Education (2017)*. In the National study findings, 5% of Ontario institutions indicated that they used OER extensively, and a little over a third reported moderate use. Fifty percent of respondents indicated that they were familiar or very familiar with OER. This number was lower for open textbooks at 40% and 27% respectively (college and university). Given how new the concept and use of OER and open textbooks is, participants in this study seemed well-informed. This may be related to the volunteer sample for the study where interest in participation may have been driven by existing awareness of OER. Overall awareness of copyright and licensing was lower than awareness of OER and open textbooks, this indicated an area of support focus and programming emphasis that eCampusOntario might pursue.

When asked what types of open resources they already use for teaching, participants in the study indicated that videos (YouTube and other external providers), and Internet-based resources such as web pages were used very frequently. While these types of resources were not always OER in the technical sense (e.g., they were not always openly licensed, downloadable, or adaptable), they were almost always no cost for the learners. The practice of using these resources was perceived as an indicator of the value educators place on current, relevant, diverse, and no-cost options for practice.

There was strong agreement among respondents that use of OER has the potential to lower the cost of post-secondary resources and that they were willing to experiment with using OER. The predominant barrier discovered in the survey items related to OER was that participants felt OER were not easy to find in their discipline. This finding is an indicator for eCampusOntario that professional development aimed at increasing awareness of open resource repositories and discipline-specific practice with educators finding high quality OER may be a potential key for OER success. Several implications for eCampusOntario practice were determined as follows:

- Support adaptation and creation of open textbooks through funding and professional development opportunities in partnership with Ontario institutions
- Ensure programming and support activities include all modes of teaching (face-to-face, blended, and fully online)
- Consult about differences in decision-making power about the resources used in courses when determining how to design professional development sessions
- Ensure that conversations about OER with interested stakeholders include how to use them as supplemental resources,

- Determine steps needed to increase awareness among post-secondary administrators (in addition to individual educators) about the benefits and the challenges of using OER
- Emphasize the key criteria for course resource selection: quality (trust), accessibility, and comprehensiveness (alignment with a spectrum of learner needs) when discussing OER
- Include definitions of OER and explanations of licensing types in presentations and conversations
- Address the need for professional development around OER repositories (where to find OER), and discipline specific lists of curated resources to increase overall use of OER

Limitations and Future Research

This study was conducted using a volunteer sample of the population Ontario post-secondary educators. The response rate, based on recruitment through eCampusOntario communication channels was very low at 1.9%. Findings from this study may be used to inform eCampusOntario practice; however, they are not generalizable. The constructs of the survey instrument were reliable, in the range of .743 to .793 based on reliability testing (Cronbach's Alpha). Refining the instrument to more accurately measure the constructs and increase reliability to the .900 testing range would be undertaken prior to a possible spring 2019 research project.

eCampusOntario is considering a follow-up study in spring 2019 to determine what effect OER programming and support may be having on use of OER. A revised recruitment plan will be implemented to help ensure that a more representative sample of the full population of Ontario post-secondary educators participates.

Contact:

If you have any questions about this research please direct them to the eCampusOntario general email inquiries@ecampusontario.ca

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Appendix A – Survey Instrument

Ontario Post-Secondary Course Resources Survey

[A standard informed consent protocol was used to ensure ethics]

1. Please choose **only one** of the following:

- Yes, I consent to allow eCampusOntario to collect my responses to this survey
- No, I do not consent

Welcome! Some information about you

In this section we're asking some general questions about you and your teaching experience. We will not ask for any personally identifying information.

2. What is the name of the college or university where you teach?

Please choose **only one** of the following:

[List of eCampusOntario Member Institutions was supplied, 24 colleges, 21 universities]

Please select only one institution, the one where you do the majority of your teaching.

3. What level of employment describes your role?

Please choose **only one** of the following:

- Full-time role
- Part-time role
- Limited term or contract
- Other

4. Select the category that best indicates your main teaching subject area:

Please choose **only one** of the following:

- Agriculture, Forestry, and Veterinary Science
- Biology, Math, Chemistry, and Physics
- Business Studies (e.g., business communication and human resources)
- Community Services (e.g., social work)
- Design, Creative, and Performing Arts (applied arts, e.g., publishing, architecture)
- Education
- Engineering
- Healthcare (e.g., medicine, nursing, dentistry, and pharmacology)

- Humanities (e.g., history, languages, and literature)
- Social Sciences (e.g., psychology, sociology, geography, and economics)
- Technology (e.g., computer science)
- Other

5. How many years of teaching experience do you have?

Please choose **only one** of the following:

- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- Over 20 years

6. Using the descriptions of different learning modes below, please indicate the mode and type of learner you teach most often. (Multiple learner types permitted.)

List of delivery modes:

- Face-to-face: A course that meets face-to-face, may use a learning management system (LMS) or website for administration.
- Blended/Hybrid: A course where content is delivered online and the number of face-to-face classes is reduced.
- Fully Online or Mostly Online: A course in which all or most of the content is delivered online, e.g., distance or open learning.

Please choose the appropriate response for each item:

College Learners	Face-to-face	Online	Blended
University Undergraduate Learners	Face-to-face	Online	Blended
College or University Graduate Learners	Face-to-face	Online	Blended
Continuing Education Learners	Face-to-face	Online	Blended

Course resources

In this section we're asking questions about the types of course resources you use in your regular teaching.

7. What types of resources do you use as part of your teaching? (You may select more than one option.)

Please choose **all** that apply:

- Journal articles that are digital library resources
- Learner-purchased printed course pack
- Learner-purchased textbook (print - softcover or hardcover)
- Learner-purchased digital textbook
- Supplemental resources (quiz questions, exams, simulations) that are purchased by learners
- Original content that I create (no learner purchase required)
- Multi-media resources from the library (videos, audio, illustrations, artwork)
- Internet-based resources (websites, articles, videos) that are no cost for the learners
- Other:

8. What is your role in selecting course resources for your learners?

Please choose **only one** of the following:

- I am solely responsible for the selection
- I lead a group that makes the selection
- I am a member of a group that makes the selection
- I influence the selection, but do not have decision-making power
- I have no role in course resource selection
- Other

Course resource selection criteria

In this section we're asking about your method of course resource selection.

9. The following list is related to potential drivers for course resource selection in your practice. Please indicate the level to which you agree or disagree that the item is a driver for you. (Please select one choice from Strongly Disagree to Strongly Agree.)

Please choose the appropriate response for each item:

- The course resource is no-cost or low-cost for the learners
- The course resource is available in the library for the learner to borrow
- The course resource contains comprehensive content and learning activities

- The course resource works well in my institution's LMS (learning management system)
- The course resource is recommended by teaching colleagues
- The course resource is media rich (illustrations, videos, simulations)
- I trust the quality of the course resource author(s) and publishers
- The course resource includes supplemental materials (e.g., PowerPoint slides, question banks)
- The course resource is available in accessible formats

Awareness of open resources

In this section we're asking about your level of awareness about open textbooks, open educational resources, and copyright.

10. Open educational resources (OER) take many forms including large-scale, such as open textbooks and full digital courses – and small-scale, such as images, videos, syllabi, activities, or assessments. OER are defined as "...teaching, learning or research materials that are in the public domain or released with intellectual property licenses that facilitate the free use, adaptation and distribution of resources" (UNESCO, n.d.).

Please indicate your level of familiarity with Open Educational Resources (OER).

Please choose **only one** of the following:

- I am not familiar with OER
- I have heard of OER, but don't know much about them
- I am somewhat familiar with OER, but I am not sure how they can be used
- I am familiar with OER and some of their use cases
- I am very familiar with OER and know how they can be used for teaching and learning

11. As defined by Allen and Seaman 2016 (Opening the Textbook report), "Open textbooks are textbooks that are freely available with nonrestrictive 'open' licenses. Covering a wide range of disciplines, open textbooks are available to download and print in various file formats from several web sites and repositories."

Please indicate your level of familiarity with Open Textbooks.

Please choose **only one** of the following:

- I am not familiar with Open Textbooks
- I have heard of Open Textbooks, but don't know much about them
- I am somewhat familiar with Open Textbooks, but I am not sure if they are appropriate for my needs
- I am familiar with Open Textbooks and some of their use cases

- I am very familiar with Open Textbooks and know how they can be used for teaching and learning

12. Please indicate your level of awareness of the following licensing frameworks:

Please choose the appropriate response for each item:

(Unaware, Somewhat Aware, Aware, or Very Aware)

- Public Domain
- Canadian Copyright
- Creative Commons (or other open licensing paradigm)

13. Which of the following types of OER do you currently use in your teaching?

Please choose **all** that apply:

- Open Access journal articles
- YouTube (or other Internet-Banded streaming videos)
- Links to Internet-based web pages
- Public Domain materials (primary resources in archives for example)
- Open Textbooks
- Government websites
- Creative Commons licensed resources
- I do not use OER in my teaching
- Other:

14. Thinking about open textbooks and other OER, please indicate your level of agreement with the following statements:

(please use the choices Strongly Disagree to Strongly Agree)

Please choose the appropriate response for each item:

- The use of open textbooks/OER is a benefit for learners in terms of cost
- A textbook/OER that is adaptable/editable would be important to my teaching
- I would consider using open textbooks/OER in the future
- Open textbooks/OER are easy to find for my discipline
- I would like to be part of a subject community producing open textbooks/OER
- I would use open textbooks/OER if I had support at my institution
- I would not be interested in using open textbooks/OER in the future

15. Do you have any other comments or concerns regarding textbooks, course content, open textbooks, or OER in your practice?

Please write your answer here:

End of survey confirmation

16. This final question will confirm your consent for eCampusOntario to collect your responses for this survey.

By selecting the 'Yes' option below, you indicate that you consent to sharing your responses with eCampusOntario for the purposes described at the beginning of the survey.

*

Please choose **only one** of the following:

- Yes
- No

You have reached the end of the survey - thank you for participating.

Note: This survey instrument is provided as an OER with the following attribution:

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Appendix B – Open-ended Survey Questions

1. What institution do you work at and what is your title?
2. What courses do you teach?
3. What types of resources do you use in your teaching?
4. Based on the definition of open educational resources in the survey, do you use and open resources as part of your teaching?
5. How do you research and find resources for your teaching?
6. Do you have concerns about textbook costs?
7. How do you feel about OER?
8. What type of feedback do your learners give you on your resources?
9. How do you ensure quality when you find resources?
10. What are some of the barriers to learner use of resources?
11. Do you experience barriers when finding and selecting resources?