

**USNH Open Education Initiative 2018-19  
Student and Faculty Perceptions on OER & Open Pedagogy  
at Granite State College, Keene State College  
and Plymouth State University**

**Final Dissemination Report**

**Assessments Conducted and Completed by**

**The Open Education Group**

**John Hilton III**

**David Wiley**

**Lane Fischer**

**In Collaboration With**

**Reta Chaffee, Director of Educational Technology, GSC**

**Jennifer Darrow, Director, Digital Learning, KSC**

**Jo-Ann Guilmett**

**Director, Client Services & Academic Technology, PSU**

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## **Executive Summary**

The Academic Technology Steering Committee for the University System Of New Hampshire (USNH), refocused the annual Academic Technology Institute (ATI) in 2015 to begin to develop the capacity of each institution within the system to undertake meaningful and complementary Open Education projects that will make student learning more effective, including:

- Transition to OER content in order to save money for students and for USNH;
- Exploration of Open Pedagogy to strengthen learner-directed learning at USNH; and
- Augmentation of Open Access structures and protocols across USNH.

This project was implemented in 2016 and repeated in 2017 and 2018. In 2018, twenty-three instructors from Granite State College, Keene State College and Plymouth State University developed plans to use OER, and/or Open Pedagogy, an approach often associated with OER. This study describes the student perceptions of the effectiveness of OER and open pedagogy, an analysis of the efficacy of these open approaches, as well as faculty perceptions of OER and open pedagogy. A brief summary of these results are as follows:

### *Student Perceptions on Textbook Costs*

Over 130 students responded to a survey about textbook costs. Over a third of respondents reported spending over \$200 on textbooks each semester. 52% said they have not purchased course materials for a class because of their cost. Of those students, 49% felt that not acquiring the course materials hurt their course grade and 19% said it contributed to their decision to drop a course. Another 11.1% felt that not purchasing course materials actually caused them to fail or withdraw from a course.

### *Student perceptions on the effectiveness of OER*

Among students who used OER, 30% of students rated the quality of open resources as better than traditional materials, with 5% of rating OER as lower quality. When asked about choosing between two sections of a course they would take in the future - one using OER and one using traditional course materials - 63% of students said they would prefer to enroll in the section using OER, while only 5% said they would prefer to enroll in the section using traditional course materials.

Over 95% of students who used OER said they believed OER had saved them money. When asked what they did with the money they saved, 30% of students gave answers like “[I] did not have it in the first place.”

### *Efficacy of Open Activities*

Students outcomes were compared for students across all three institutions. The treatment group (i.e., students whose faculty used OER, open pedagogy, or both) included 222 students and the control group (i.e., other students) included 204 students. We examined differences between the treatment and control groups in terms of Drop/Withdrawal rates (the proportion of students dropping a class or withdrawing from the course) and D and F grades (the proportion of remaining students receiving a D or F). There were no statistically significant differences in outcomes between the two groups.

### *Faculty perceptions on the effectiveness of both OER and Open Pedagogy*

Although faculty stated that open activities required more instructor time, they also stated they felt it was worth the effort and resulted in improved student learning. This sentiment is summarized by an instructor who wrote, “Like any other form of pedagogy, using open

pedagogy in a way that benefits students takes thought, time, and practice; however, it is an incredibly worthwhile endeavor.”

### *Summary*

Students and faculty involved with the ATI project both found value in both OER and open pedagogy. Their perceptions were that the OER materials were as good as or better than traditional learning materials at a dramatically lower cost. They also believe that deeper learning often takes place with open pedagogy. Based on traditional learning measures, there are no negative side effects of using OER or Open Pedagogy.

## Introduction

The University System of New Hampshire (USNH) is committed to innovation in public education. The USNH system is made up of 4 institutions with a shared goal of working collaboratively to improve access to higher education in New Hampshire; to increase the impact of research, teaching, and service have on the public good; and to provide an agile and connected learning environment to serve a 21st-century world. Those four institutions are as follows:

- The University of New Hampshire (UNH) is the flagship land-sea-space grant public research institution, serving 13,000 undergraduate and 2,400 graduate students. Its Center for Excellence and Innovation in Teaching and Learning led the system's earliest OER pilot in 2015 and produced two comprehensive final reports that include information on cost savings, student/faculty perceptions, and assessment of student learning outcomes.
- Granite State College (GSC), with over 3,700 active students, was founded with a mission to serve adult learners by providing access to flexible learning environments and offering degree programs that address the educational and workforce priorities of New Hampshire and the surrounding region. Students are able to complete their education online or face-to-face at one the college's six statewide physical locations, through credit awarded for prior learning, and selected competency-based programs.
- Keene State College (KSC) prepares promising students to think critically and creatively, to engage in active citizenship, and to pursue meaningful work. As the public liberal arts college of New Hampshire, KSC offers an enriching campus community and achieve academic excellence through the integration of teaching, learning, scholarship, and service. KSC's enrollment is approximately 3,700 students.
- Plymouth State University (PSU) is an innovative university with a student body of approximately 6,500. It recently embraced a renewed mission to focus on experiential education through integrated and multi-disciplinary approaches to learning, with revisions to all aspects of the curriculum, support for cross-disciplinary teaching and learning, and robust collaborations with business and other leaders from the region and the state. Plymouth has programs and faculty who have received international attention for their work with OER.

The Academic Technology Steering Committee for the University System of New Hampshire (USNH) refocused the annual Academic Technology Institute (ATI) in 2015 to begin to develop the capacity of each institution within the system to undertake meaningful and complementary Open Education projects that will make student learning more effective. One of the four institutions, UNH, focused solely on OER while the other three institutions included both OER and Open Pedagogy projects. The results of the research presented here only includes data from those three institutions: GSC, KSC, and PSU.

The USNH ATI provided definitions of several key terms to the participating faculty ambassadors (<https://at.usnh.edu/what-open-education>). “Open educational resources” (OER) were defined using the William and Flora Hewlett Foundation definition:

Open Educational Resources (OER) are high-quality, openly licensed, online educational materials that offer an extraordinary opportunity for people everywhere to share, use, and reuse knowledge. They also demonstrate great potential as a mechanism for instructional innovation as networks of teachers and learners share best practices.

“Open pedagogy” was defined as embodying four common principles:

- Focuses on access, broadly conceived;
- Emphasizes learner-driven curricula and educational structures;
- Stresses community and collaboration over content;
- Sees the university in the context of a wider public.

The research on both the 2017 and 2018 USNH ATI Open Education Initiative includes the following topics:

- Student perceptions on the effectiveness of OER
- Student perceptions on the effectiveness of Open Pedagogy
- Student efficacy when using OER and/or Open Pedagogy
- Faculty perceptions on the effectiveness of both OER and Open Pedagogy

These topics were examined by surveying students and faculty who used OER and/or Open Pedagogy, interviewing instructors, and examining course scores (see Appendix for specific instruments used). The following sections examine each of these topics in turn.

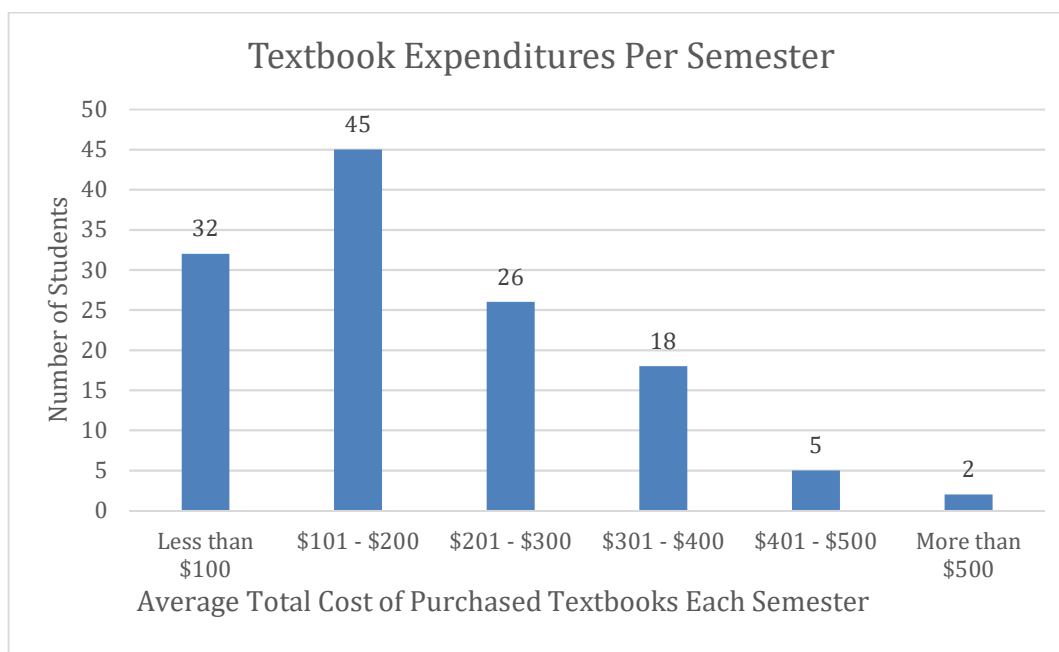
### Student Surveys: Textbook Costs

All students were asked a series of questions designed to better understand how students related to OER in terms of cost savings and perceptions.

#### *Perceived Cost Savings*

Of the 128 students who responded to a question regarding their textbook expenditures each semester, 25% spend less than \$100, 35.2% spend between \$101-\$200, 20.3% between \$201-\$300, 14.1% between \$301-\$400, and 1.6% spend more than \$400; thus approximately half of students spent fewer than \$200, with half spending more. This number is likely less than the average college student spends, since many of these students were using OER.

Chart 1. Textbook Expenditures Per Semester



Some students rented textbooks in order to save money. When asked how often they rented required course material for courses taken, 25.2% of 131 respondents said they never rented materials, 19.1% rarely rented, 30.5% rented about half the time, 18.3% rented often, and 6.9% of students always rented. When asked how often they purchased required course material



for courses taken, 6.1% of 131 respondents said they never purchased materials, 22.9% rarely purchased, 31.3% purchased about half the time, 26.7% purchased often, and 13.0% of students always purchased.

In total, 52% of 131 responders said they have not purchased course materials for a class because of the cost of course materials. Of those students, 49% felt that not purchasing the course materials influenced their course grade in a negative way, and 19% felt that not purchasing course materials contributed to their decision to drop a course. Additionally, 11.1% felt that not purchasing course materials ever caused them to fail or withdraw from a course.

Delaying purchasing course materials was even more prevalent than not purchasing them. Of the 130 students who responded to a question about delaying purchasing course materials, 66.2% said that they had delayed because of the cost of course materials. Of those students, more than half (54%) believed delaying their purchase of course materials negatively influenced their grade.

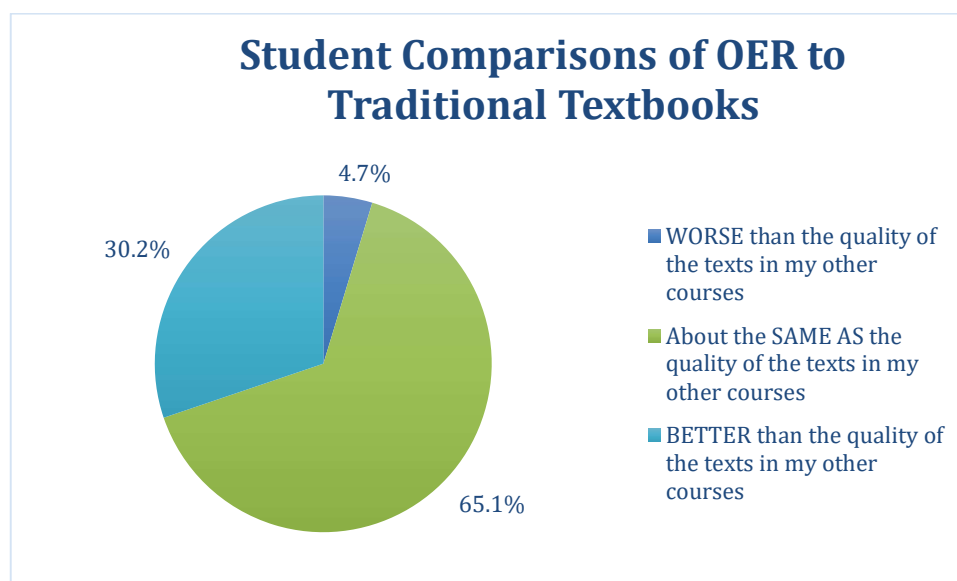
### *Summary*

Students perceive that they spend a significant amount of money on textbooks, a fact that causes many students to either rent, not purchase, or delay purchasing textbooks. A substantial number of students believe that lack of access to textbooks has hurt them academically.

## Student Surveys: Perceptions of OER

Students who used OER were asked to compare the quality of the OER they used versus other textbooks they had used; of the 43 respondents, 65% rated the quality of both resources as the same quality, 30% of students rated the quality of open resources as better with 5% of responders rating OER as worse.

Chart 2. Student Comparisons of OER to Traditional Textbooks



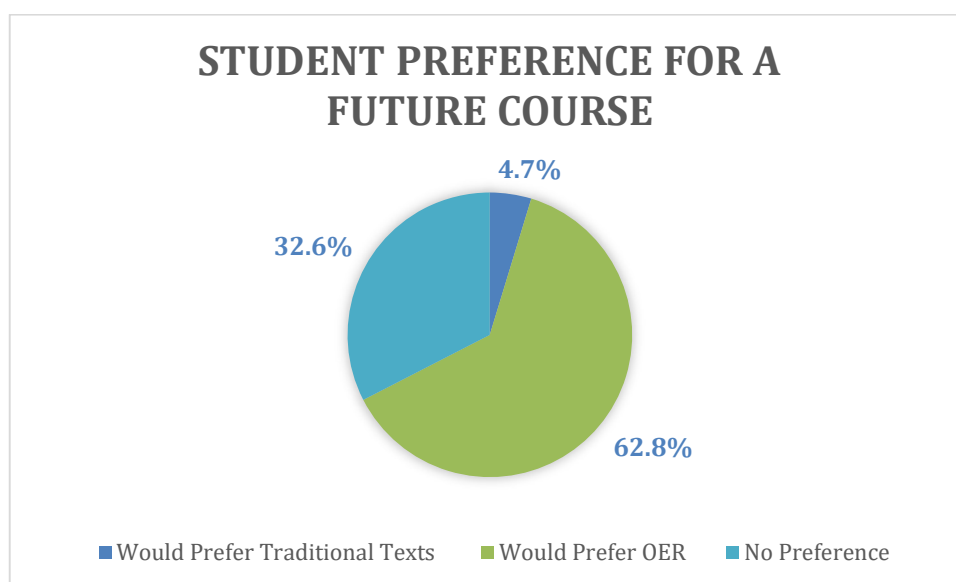
Ten people provided responses as to why they stated OER were better. They highlighted two advantages of OER: access and relevancy. For example, one student wrote, “They are all online so I don’t have to carry books around.” Another said, “They were concise. Each topic that we were supposed to respond on was easy to locate within the text rather than being buried within 500 pages of a traditional textbook.” Another representative comment was that the OER were “Contemporary, not boring, concise, no redundancy!”

Out of 47 students who utilized OER that responded to a question about cost-savings, 95.7% believed they saved money in their course due to the lower cost of materials. Of the 34 students who specified what they did with the money they saved, 5 (14.7%) said that they spent

the money on rent, food, and other bills. Another 13 students (38.2%) said they spent the money on tuition or textbooks for other classes. Seven students (20.6%) said that they saved the money and fourteen gave miscellaneous responses such as “did not have in the first place.”

Forty-three students responded to this question: “Imagine a future course you are required to take. If two different sections of this course were offered by the same instructor during equally desirable time slots, but one section used open resources similar to those used in this course and the other used traditionally published texts, which section would you prefer to enroll in?” In total, 63% students stated that they would enroll in the section with open resources like those offered in their course, 32% said they would have no preference, and 5% of students said they would enroll in the course with traditional published texts.

Chart 3. Student Preference for a Future Course



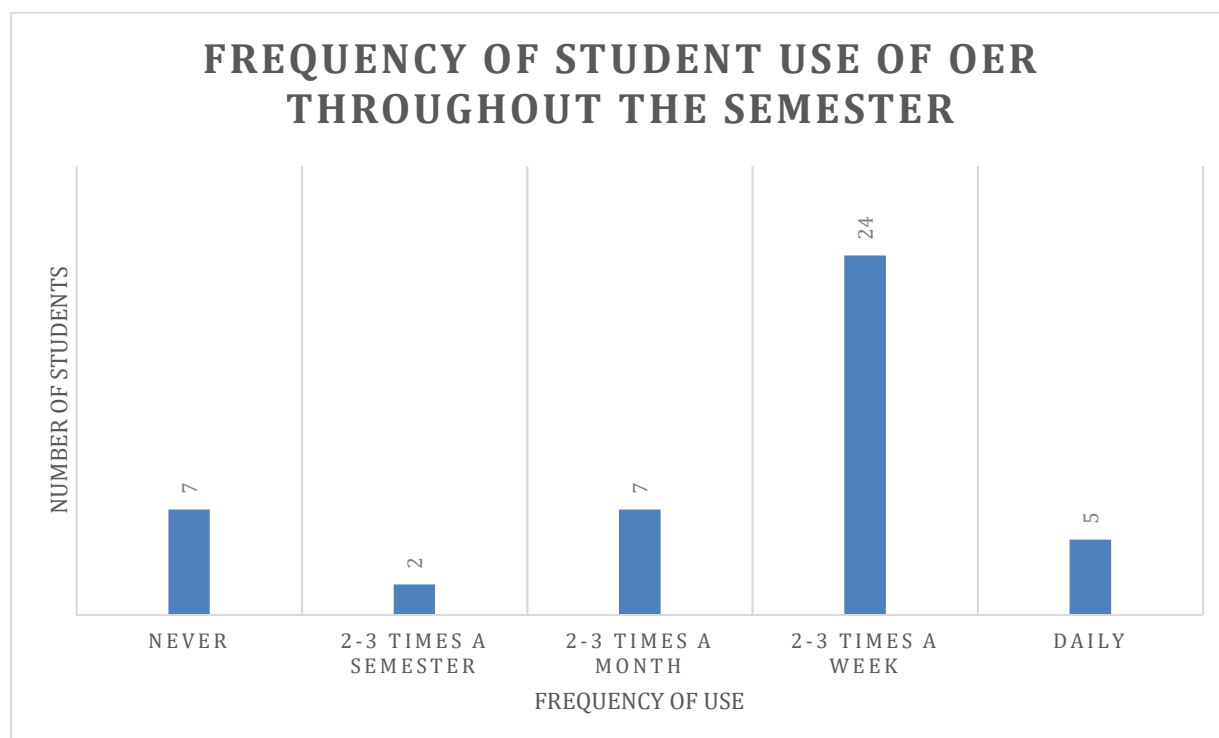
Of the 43 students who were asked if their opinion of their instructor changed when they learned they would be using OER, 14.0% said their opinion of their instructor changed. Only one of these students said that they change was negative; this student said, “my learning style would be accommodated on my own.”

The remaining students were positive about how their perceptions of their instructors changed when they learned that the instructors used OER. Two representative comments are as follows: “I thought that she likely had my best interest in mind—she felt I could learn what I needed without buying a textbook, and I appreciate that.” “Proved she cared about students and making sure they were not going to have obstacles in the way of learning”

### *Use of OER*

About two-thirds of students exclusively used digital versions of the OER. Out of the 48 student respondents, seventeen students (35%) reported printing any part of their open resources for their courses. Of those students, most printed fewer than 50 pages. Students appeared to utilize the OER they received, as illustrated by Chart 4.

Chart 4. Frequency of student use of OER throughout the semester



*Summary*

In total, 65% of students felt that OER were comparable in quality to traditional textbooks with 30% ranking them as better and only 5% saying they were worse. A majority of students (63%) stated they would prefer to enroll in sections with OER; only 5% preferred to enroll in sections with traditional published texts. While a small minority (14.0%) of students reported changing their perceptions of the professor when they learned the professor was using OER, for this group the change in impression was very positive.

## **Student Surveys: Perceptions of Open Pedagogy**

### *The Educational Value of Open Pedagogy*

Most students who had instructors that used open pedagogy believed that it was as good as or better than traditional teaching techniques. When asked to compare the overall educational value of open pedagogy versus traditional classroom activities, a majority of the 79 students who responded favored open pedagogy. In total 62.0% said open pedagogy had greater educational value than traditional learning activities. An additional 32.9% viewed both activities as having equal educational value and a minority (5.1%) felt that the educational value of open pedagogy was lower than that of traditional activities.

In free response questions, those who felt that open pedagogy had greater educational value often wrote that they felt the pedagogy led them to greater knowledge of the material. For example, one student reported, “Tests and quizzes are stressful and I forget the material after, in this class I learned the material and showed my learning and DID not forget the material.” Another student wrote, “The varied learning tools that applied new knowledge to practical uses was really helpful. For example, blogging [and] the technology integration plan.”

Students also believed that the open pedagogy was more engaging and relevant. One student wrote that his/her instructor “challenges us to engage in a fairly new/different media format than we are typically used to. The process allows us to create work in class that seems to hold more weight beyond the walls of the classroom.” Another student said, “More interactive; opportunities to communicate our work, research, and writing with a wider (and more authentic) audience.”

Students also valued the increased agency they received because of open pedagogy. One student said, “I was able to decide which forms of work were best for me. This made me more

confident in my ability to do my work well, and I feel like I learned more from the course because of this.” Another wrote, “The project allowed for more creative freedom, and to write about what we are passionate about. It was more interactive and you are more in charge of your education.”

Other themes included better accessibility and more interactive with others. For instance, one student noted, “We had more access to information through the website and it was organized in such a way that enabled quick learning.” Another student remarked, “It was a conversational approach and I really enjoyed how everyone was allowed to come into this space and have the ability to share their opinions.”

Those students who felt the educational value of open pedagogy was less than traditional learning activities reported a desire for greater structure. One student wrote, “Lack of structure and requirements lead to lack of participation and engagement throughout the class.” Another stated, “We need structure to a class. I cannot structure a class that I do not know the course material for. Having the first four weeks planned out was good, but the rest of it needs to be structured as well. Student input is important, but structure is equally as important.”

In total, between 70 to 75 students responded to questions like the following: “How did [insert open pedagogy assignment used in specific class, e.g., writing blog posts] help you [insert key learning outcome], compared to the way engaging in traditional learning activities (like writing essays or taking quizzes) would have?” Student responses to these questions are summarized in Table 1. Overall, these data corroborate the finding that most students found greater educational value in open pedagogy than traditional teaching techniques.

Table 1. *Student perceptions of differences in learning outcomes with open pedagogy as compared to traditional activities*

Outcome	Greater with Open Pedagogy compared with traditional activities	Same with Open Pedagogy compared with traditional activities	Less with Open Pedagogy compared with traditional activities
Mastery of core academic content	52 (69.3%)	19 (25.3%)	4 (5.3%)
Skills in collaborative learning	42 (59.2%)	24 (34.0%)	5 (7.0%)
Critical thinking and problem solving	53 (59.7%)	27 (37.5%)	2 (2.8%)
Effective communication	50 (71.4%)	18 (25.7%)	2 (2.9%)
Learning how to learn	34 (47.2%)	34 (47.2%)	4 (5.6%)
Aggregate Learning Outcomes	61.4%	33.9%	4.7%

*Student Perceptions of Open Pedagogy and Learning Outcomes*

Students were asked, “Suppose that certain types of learning activities lead to certain learning outcomes. For example, reviewing flash cards might lead to memorizing facts. What types of learning outcomes do you think are the result of \_[insert specific open pedagogy used in



the class]\_?” A total of 62 students described their perception of the learning outcomes of open pedagogy.

In analyzing student responses, we found that the largest cluster related to deeper learning. One student wrote that open pedagogy required “reading... intelligently, writing descriptively and objectively, [and] working collaboratively on writing with others”; another stated that open pedagogy provided “a deeper understanding of the material by applying it to real life situations.” In total, 36 responses (58% of total student responses to this question) had similar descriptions of the learning outcomes. Other representative responses include the following: “I was able to gather information from articles and use it to my advantage to make a chapter for a book. I was able to retain information from reading and help others learn about it as well,” and “I think about how other people perceive and analyze what they are reading and how our generation reacts to the world around us.”

Students also discussed how they were able to become more involved in their education (mentioned by 18% of respondents) and better apply what they were learning (also mentioned by 18%). With respect to greater involvement in his or her education, one student wrote that their experience led to “becoming more involved/immersed in what I am learning, taking more away from the course, and feeling more comfortable when asking questions.” Another responded, “I think that through being able to create our own group/individual assignments in class gave each student the opportunity to learn more about topics that interested them. This caused for students to be more engaged in the learning process and I think it allowed for more class participation.” With respect to applying what they were learning, one student wrote that open pedagogy provided “real world experience.” Another said, “gaining skills needed outside of a college setting, articulating yourself in a meaningful way, being able to collaborate in groups.”

### *Changing Opinions of Instructors*

Only 12% (9/78) of students stated their opinions of their instructors changed when open pedagogy was introduced. Of the five students who provided a description of how their perception of the instructor changed when open pedagogy was introduced, one wrote about feeling that the faculty member was more aware of their needs, stating, s/he “Realized [the instructor] was more flexible to fit the learning needs of each student.” Other students responded that they felt their instructors were embracing positive change. For example, one noted that his/her instructor’s “decision to incorporate these Project components into his course made me see him as an instructor willing to follow new directions in the field of education.” Likewise, another student stated, “I felt that the course was founded in a more professional direction.”

Two students viewed the instructor as being more open-minded and relaxed about the education process. One wrote, “I appreciated [the instructor’s] willingness to incorporate these more innovating learning activities into the course.” It is interesting to note that no students reported a negative change in opinion about the professor regarding open pedagogy.

### *Future Courses and Open Pedagogy*

A total of 75 students answered this question: “Imagine a future course you are required to take. If two different sections of this course were offered by the same instructor during equally desirable time slots, but one section had traditional learning activities (such as writing papers and taking tests), and the other used open pedagogy activities like you used in your class, in which section would you prefer to enroll?” Nearly two-thirds (61%) preferred open pedagogy, 27% expressed no preference and 12.0% stated a preference for traditional learning activities.

Students who preferred traditional activities felt they were better equipped (either mentally or intellectually) for those types of learning opportunities. One student wrote, “It’s what

I'm comfortable with." Another student said, "I am better at taking notes and studying for tests." One wrote that traditional activities would help him/her "learn about the things that I don't know," implying that s/he would *not* learn these things from open pedagogy. Simply stated, some students seem to prefer the structure of traditional learning activities. One student wrote, "I personally enjoy the structure of a typical class. I did not like having to choose my own projects, grading scale, etc, as it made me feel very overwhelmed." Another noted, "The [traditional] style suits me better and gives me clear instructions." Although these students were by no means a majority, their words suggest that open pedagogy will not be a panacea and that additional support for some students may be needed when using open pedagogy.

Forty-four students shared reasons why they preferred open pedagogy. Several students enjoyed the creative opportunities afforded by open pedagogy. One student wrote, "I found the activities in this class to be generally more engaging, open to creativity, and allowed me to explore and express my own personal interests better than a course with traditional activities." Another responded, "I like projects better. I like being able focus on what interests me, at my own learning rate."

Other students reported that they found open pedagogy to be less stressful. Representative comments included, "I really liked this style of learning and I found it less stressful than standard classes," "More interesting," and "I get less stressed out in this class than other classes I am currently in, and I actually take knowledge away from it (instead of just memorizing facts or a test or writing a paper and then forgetting everything)."

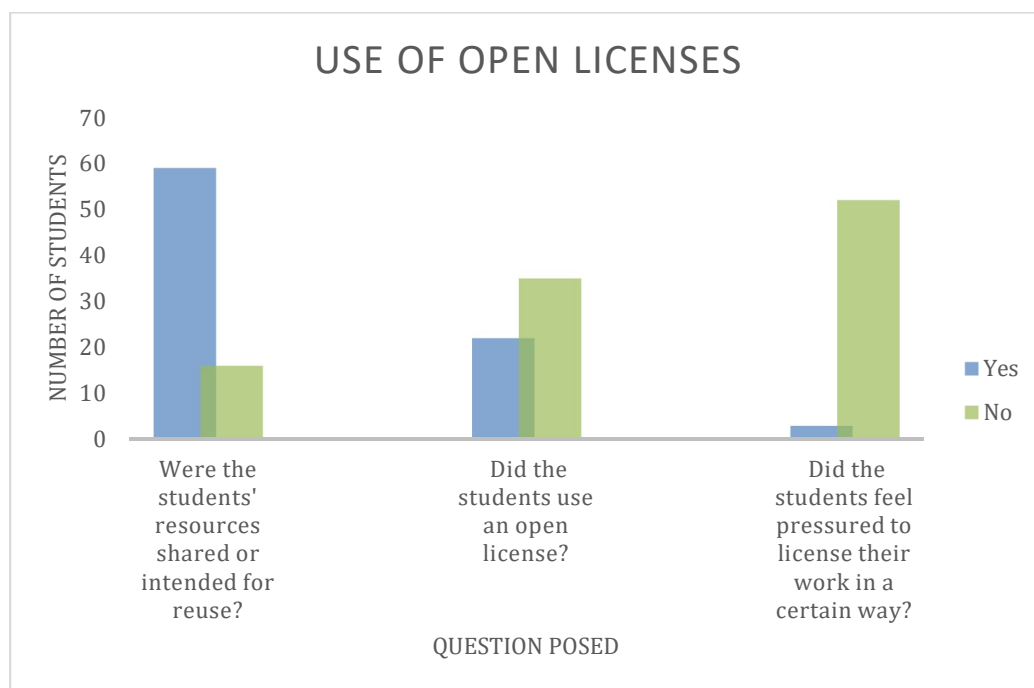
Some students also perceived that they learned more from open pedagogy. One student wrote, "I gained a lot of knowledge and awareness through the project and to me, that's the point

of going to college.” Using similar words, another student wrote, “I feel like I learn a lot better when I can apply what I’m learning to every day, real life situations.”

### *Use of Open Licenses*

One challenge with open pedagogy is the possibility that some students will feel obligated to license any of their creations openly. Out of the 75 students who responded to a question about whether they created resources that were shared online or intended for reuse by others in the future, 59 (79%) said yes. Of these content-creators, 39% reported using an open license to license any of the work they created in the course. Across all students who created resources for class, only 6% of students said that they felt pressured to license their work in a specific way. These data are summarized in Chart 5.

Chart 5. Use of Open Licenses



Not everyone felt pressured in a negative way. One student wrote, “I’m not sure if this question means pressured in a negative way, but really we were just encouraged to license our work with creative commons so that none of it could be plagiarized.” However, a different

student expressed concern about being encouraged to openly publish his or her work, writing, “I wanted to protect my work, so that it didn't get plagiarized.” While this appears to be a minor issue, it is nevertheless important to note that instructors may want to be sensitive to student feelings about being coerced (or strongly encouraged) to openly license their work.

### *Summary*

Most students (62%) said open pedagogy had greater educational value than traditional learning activities. An additional 33% viewed both activities as having equal educational value and only 5% felt that the educational value of open pedagogy was lower than that of traditional activities. Students felt that open pedagogy led to greater learning and had more personal relevance.

Nevertheless, there was a minority (12%) who stated that they would prefer to be in classes that used traditional pedagogy and 5% of students felt the educational value of open pedagogy was lower than traditional pedagogy. These students appear to desire more structure in their course. In addition, a minority of students (6%) felt pressured to license their work in a specific way. While the overall number of students with negative perceptions of open pedagogy were small, it is important to keep their perspectives in mind when developing courses utilizing open pedagogy.

## Student Outcomes

This section examines differences in student outcomes according to whether faculty engaged in open activities in their courses. “Open activities,” means adopting OER for the class, assigning students to engage in open pedagogy activities, or both adopting OER and assigning students to engage in open pedagogy activities. As referred to below, the treatment group is comprised of those students whose faculty engaged in open activities. The control group is comprised of those students whose faculty did not engage in open activities.

### Keene State College

Keene State College provided data for 223 students - 87 students in the treatment group and 136 students in the control group. We examined differences between the treatment and control groups in terms of Drop/Withdrawal rates (the proportion of students dropping a class or withdrawing from the course) and D and F grades (the proportion of remaining students receiving a D or F). Neither of these differences were statistically significant.

#### Difference in Drop/Withdrawal Rate

- Treatment Group: 11.5% dropped or withdrew.
- Control Group: 11% dropped or withdrew.
- $Z = 0.115$ ,  $p = 0.904$ , NS.

#### Difference in D and F Grades

- Treatment group: 2.6% received D or F grades.
- Control Group: 0.8% received D or F grades.
- $Z = 1.015$ ,  $p = 0.307$ , NS.

## **Granite State College**

Granite State College provided data for 69 students - 41 students in the treatment group and 28 students in the control group. We examined differences between the treatment and control groups in terms of Drop/Withdrawal rates (the proportion of students dropping a class or withdrawing from the course) and D and F grades (the proportion of remaining students receiving a D or F). Neither of these differences were statistically significant.

### **Difference in Drop/Withdrawal Rate**

- Treatment Group: 4.8% dropped or withdrew.
- Control Group: 10.7% dropped or withdrew.
- $Z = -0.931, p = 0.352, \text{NS.}$

### **Difference in D and F Grades**

- Treatment group: 7.7% received D or F grades.
- Control Group: 4.0% received D or F grades.
- $Z = 0.596, p = 0.5485, \text{NS.}$

## **Plymouth State University**

Plymouth State University provided data for 134 students - 94 students in the treatment group and 30 students in the control group. As with the other institutions, we examined differences between the treatment and control groups in terms of Drop/Withdrawal rates (the proportion of students dropping a class or withdrawing from the course) and D and F grades (the proportion of remaining students receiving a D or F). Neither of these differences were statistically significant.

#### Difference in Drop/Withdrawal Rate

- Treatment Group: 2.1% dropped or withdrew.
- Control Group: 5.0% dropped or withdrew.
- $Z = -0.947, p = 0.342, \text{NS}$ .

#### Difference in D and F Grades

- Treatment group: 2.1% received D or F grades.
- Control Group: 2.6% received D or F grades.
- $Z = -0.175, p = 0.865, \text{NS}$ .

### Overall

When aggregated across all three institutions, the treatment group included 222 students and the control group included 204 students. We examined differences between the treatment and control groups in terms of Drop/Withdrawal rates (the proportion of students dropping a class or withdrawing from the course) and D and F grades (the proportion of remaining students receiving a D or F). Neither of these differences were statistically significant.

#### Difference in Drop/Withdrawal Rate

- Treatment Group: 6.3% dropped or withdrew.
- Control Group: 9.8% dropped or withdrew.
- $Z = -1.332, p = 0.183, \text{NS}$ .

#### Difference in D and F Grades

- Treatment group: 3.3% received D or F grades.
- Control Group: 1.6% received D or F grades.
- $Z = 1.075, p = 0.280, \text{NS}$ .

Thus, there were no significant differences between the two groups.



### **Faculty Surveys: Perceptions of OER and Open Pedagogy**

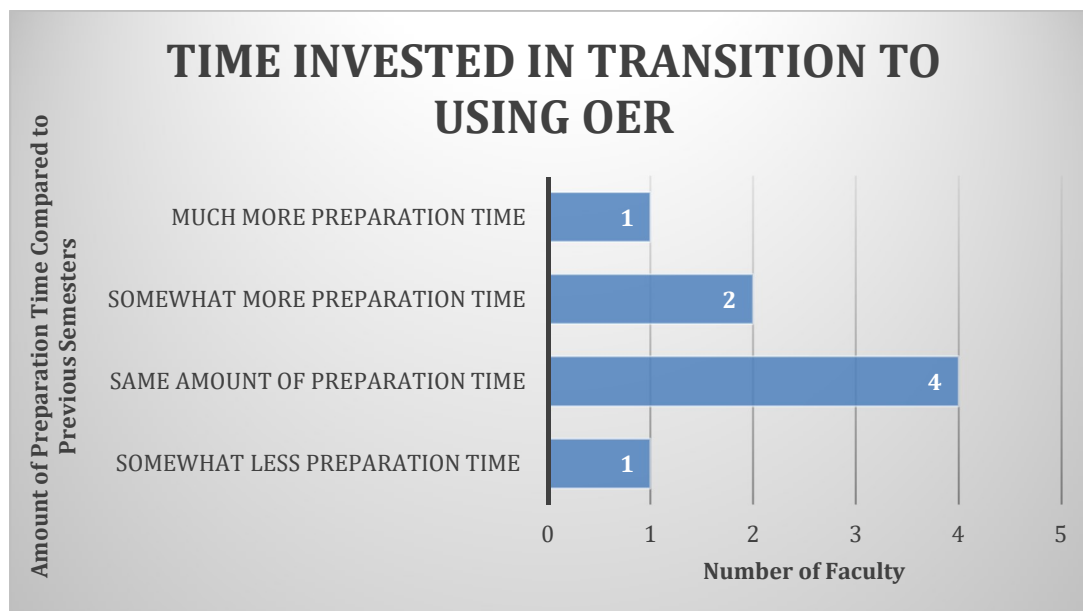
Twenty-one faculty used OER or Open Pedagogy as part of this initiative; all of them were invited via email to participate in the faculty survey regarding their perceptions of OER and/or Open Pedagogy, depending on which they had utilized in their classes over the previous year. Of these faculty members, eighteen completed the survey for a response rate of 85.7%. Faculty respondents were distributed across the three institutions as follows: GSC,  $n=3$ , KSC,  $n=5$ , PSU,  $n=9$ . All respondents had taught for at least three years, and all faculty had taught their class at least one time previously. Nearly one third the respondents ( $n=5$ ) had taught their course 7 or more times. Seven of the faculty had Masters Degrees; the remainder held PhDs.

#### *Faculty Responses on OER*

Eight faculty members reported replacing commercial materials with OER. According to those instructors' estimates of the cost of textbooks for their course prior to adopting OER, students saved on average \$63.33 per student in textbook costs as a result of OER adoption.

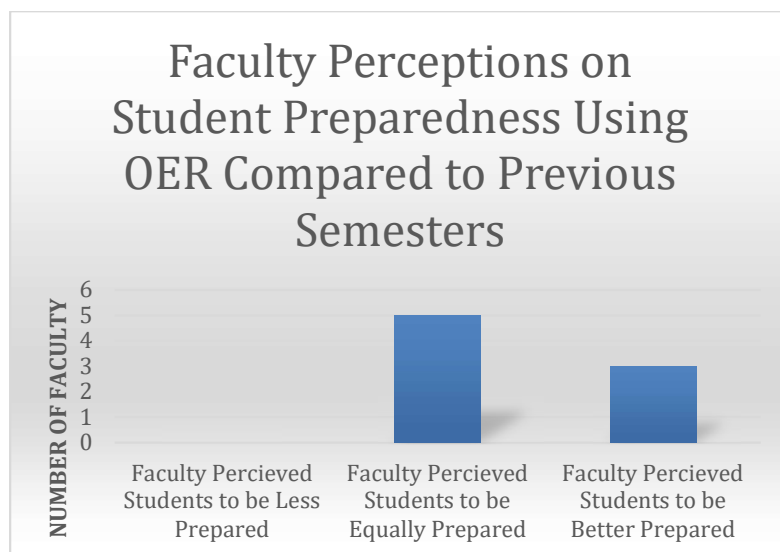
While transitioning to OER saved money, in some cases it cost time. As illustrated in Chart 6, of the eight faculty members who began using OER during the semester in which they were surveyed, one (12.5%) said they spent somewhat less time, four (50%) said they spent about the same amount of time as they had previously in preparing to teach the course. Two faculty members (25%) said that it took somewhat more preparation time, with one (12.5%) stating that it took much more time.

Chart 6. Time invested in transition to using OER



These same eight faculty members were asked, “How did your students' preparedness in the course compare to previous semesters?” in order to gauge the impact of the OER materials on student preparation. In response, five faculty members (62.5%) said students were equally prepared, and three (37.5%) better prepared than they had been in previous semesters.

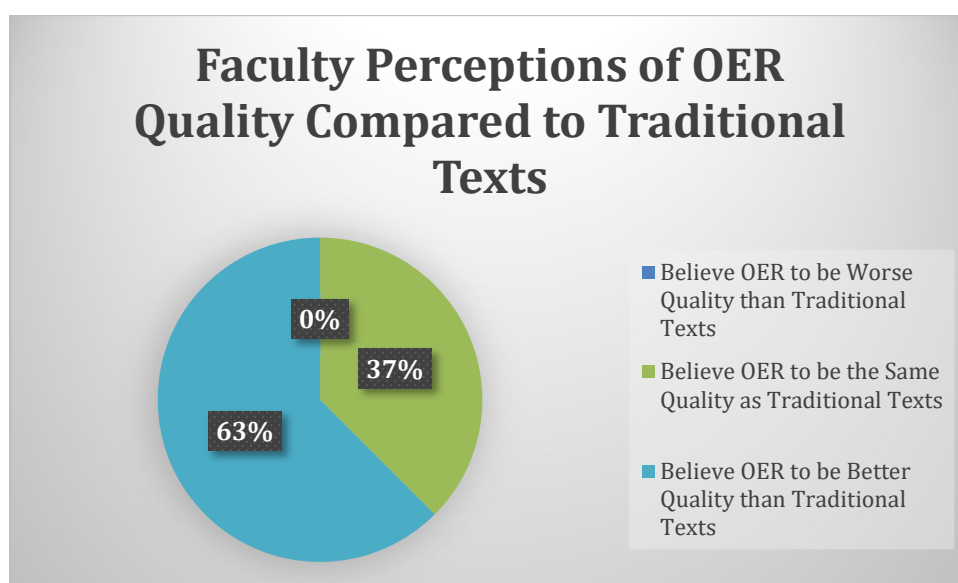
Chart 7. Faculty Perceptions on Student Preparedness



Although instructors were positive overall, there were some concerns. One faculty member wrote, “Using OER was not the primary focus of my ATI Fellowship (developing a new student-authored OER was) so I paid less attention to copyright than I should have. I’m not sure I could have found the same high-quality materials if I was using ‘true’ OERs.” Thus the overall quality of OER may have been inflated as this faculty members apparently was not using “true OER.”

Nevertheless, most comments were positive. Representative statements include the following: “The ability for me to customize the content, and to change the content in response to student learning in the course, makes a difference.” Overall, no faculty members said the OER was worse than the quality of texts in other courses they taught, with three (37.5%) stating they were the same and five (62.5%) believing they were better.

Chart 8. Faculty Perceptions of OER Quality



All faculty members said they were either somewhat likely (25%) or very likely (75%) to continue using OER in the future.

*Faculty Responses on Open Pedagogy*

Thirteen faculty members who completed the survey reported using open pedagogy. As with adopting OER, a substantial investment of time was required. Two faculty (16.7%) said they spent the same amount of time as in previous semester in their course preparations, whereas eight faculty (66.7%) said they spent somewhat more time and two (16.7%) spent much more time integrating open pedagogy into their courses. Despite this increase in time required, 82% of instructors said they were very likely to continue using Open Pedagogy based on their experiences, with the remaining faculty members stating that they would be somewhat likely to do so.

Although the overall perspective towards open pedagogy was positive, there were some concerns. One faculty member wrote, “there is a lack of incentives for faculty to develop and/or integrate OER in our courses.” Another noted, “I couldn't find an OER Sports Nutrition textbook, therefore it was extremely time consuming to find Open Access Materials that covered the course content. I had to combine chapters from OER books, Open Access study articles. Hopefully, now that I have a good portion of the materials, it will be updating rather than creating everything from scratch.”

Notwithstanding the challenges associated with Open Pedagogy, it is clear that most faculty believed that key learning outcomes increased with the use of open pedagogy, as summarized in Table 2.

Table 2. *Faculty perceptions of differences in student outcomes when teaching with open pedagogy as compared to traditional activities*

Outcome	Greater with Open Pedagogy compared with traditional activities	Same with Open Pedagogy compared with traditional activities	Less with Open Pedagogy compared with traditional activities
Mastery of core academic content	10 (83.3%)	2 (16.7%)	0 (0%)
Skills in collaborative learning	7 (58.3%)	5 (41.7%)	0 (0%)
Critical thinking and problem solving	11 (100%)	0 (0%)	0 (0%)
Effective communication	7 (58.3%)	5 (41.7%)	0 (0%)
Learning how to learn	9 (75.0%)	3 (25.0%)	0 (0%)

In free response statements, faculty provided several learning outcomes that improved with open pedagogy. One faculty member wrote, “Blogging or creating an OER textbook made them feel like they were PRODUCING knowledge rather than ABSORBING it.” Another faculty member stated that open pedagogy led to a classroom environment in which “students were more self-directed, so they were authentically engaged in problem solving issues that interested them” with another stating that students’ “basic understanding was enhanced.” Open pedagogy provided opportunities for “out of the box thinking” according to one faculty member; another stated that it helped students become “more rhetorically aware and sophisticated.”

Another aspect of open pedagogy that was positive was helping students engage with new audiences. One instructor, whose students posted their learning online reported, “students had to consider audience in new ways- this enabled them to consider their own learning styles.” Having to write to a different audience helped students demonstrate “critical thinking and problem-solving skills” according to one faculty member and, as another faculty member observed, “students were more engaged and more motivated” when writing to those outside their own college classroom.

### *Summary*

Although it did require more instructor time to utilize open pedagogy, faculty members felt it was worth the effort and resulted in improved student learning. This sentiment is summarized by an instructor who wrote, “Like any other form of pedagogy, using open pedagogy in a way that benefits students takes thought, time, and practice; however, it is an incredibly worthwhile endeavor. I definitely plan to continue experimenting with different ways of 1) making students' work public, and 2) incorporating student-led aspects into the course.”

## **Instructor Perspectives on Open Pedagogy: Interviews**

Instructor experiences with open pedagogy were generally positive, with some instructors voicing questions that they still have or directions they would like to see open pedagogy take at their institutions. The main areas of interest for the eight instructors who participated in interviews were their general perceptions of open pedagogy and its implementation, the ways that students seem to react to open pedagogy, how open pedagogy impacted the instructors' own beliefs or approaches to teaching, and whether they plan to continue using open pedagogy in the future. We detail these ideas in the following subsections. Quotations from instructors have been lightly edited to remove references to names, courses, or majors unless doing so would conceal or complicate the meaning of the instructor's response.

### **Overall Instructor Response**

Due to the various approaches that instructors took to open pedagogy, it is not surprising that many of them describe open pedagogy in different ways. Some instructors focused on the use of OER as an essential part of open pedagogy, while others focused on making students' learning more visible to the world outside the confines of the course or connecting students' learning to the world at large. Other instructors focused on the creation of assignments that are non-disposable such as creating OER texts, blogs, or portfolios. The following responses are in regards to how faculty that implemented open pedagogy would explain or describe it to other colleagues.

- I would try to give colleagues some materials if they wanted to find the details like the 5Rs that kind of thing. I don't have them memorized myself. I would tell them the way I do it is making source materials as much as possible free or very low cost to students, preferably free, and working with a Creative Commons license. When I create the

materials for the students, that's something that could also be shared with other faculty if they want to use it or other students. And it's about asking students to at least consider and try to practice contributing knowledge to the class. So they're not just relying on information that I feed to them, but really taking ownership of their learning.

- I would explain to colleagues that it opens up the classroom so that students get the awareness of other students across the world. And that's for open pedagogy. I really think that's the whole benefit of it. You can get the ideas and the knowledge from others that you may never run into in your daily life.
- The two words of it are "open" and "pedagogy." So it's taking your pedagogy and opening it up. So that can take a number of different forms. It can be opening your classroom up to the world so students are touching the world in some way, and are creating a product that transcends the walls of the classroom that other people can read or that other people can go see. Or the prisoner project, that wasn't just touching the walls outside the classroom, it was reaching in to these walls that normally people can't reach or don't look into, inside of the prison. So it's making the work that your students are doing feel more relevant to them and creating recyclable or reasonable projects that are non-disposable that can be used again in future courses. And letting the students have a voice in their own education.
- I want to call it "open andragogy," and think about adults as learners. Andragogy is all about adults directing their own learning and taking their past experience and bringing that to the table. So, I would define it as that. As adults being more in charge of their own learning and taking more responsibility for parts of teaching the class that were



traditionally the instructor's role to do, "here's the readings, and here's the tools, and here's the discussion," and now the students, the candidates in the program, have a little more independence in that area.

- I would probably say something like the narrow definition of open pedagogy is about students taking their work outside of the classroom and putting it out in the world through like social media networks, or like blogging, or some online platform. Kind of more broadly, it's related to other critical pedagogies that I'm sure the faculty member will be familiar with. It's about empowering students, and about student agency where they're really making decisions and directing their own learning, and shaping their own learning experiences rather than just being told what they're supposed to learn and given information and told to make that information absorb into their brain through one way or another, whether through a paper or an exam or something like that.
- The way that I'm using open education is sort of this sense of students creating open resources for teachers to see good ideas from and for them to present themselves kind of openly as professionals, both in the sense of open education, and in a more colloquial sense of open, to really open up their learning to the world. In some ways, I would pitch it as that piece of it. As that sort of not letting the things that students are learning in your class die, well not die, but stay in your class. I think that is something that I really want to focus on. ... if I'm talking to a colleague about it, I would almost be at pains to say, "There's this other part of it and it's really cool." I want to diffuse the idea that if you're into open education that means you can't put a textbook at the store. Like, "Oh you're doing *Their Eyes Were Watching God*, well you don't do that anymore!" So I think that

would be something that is a little bit of a pervasive ideology, that is just something that people think about open that I haven't found to be the case. So, I would sort of note that as well.

### *Different Open Pedagogy Activities*

One of the reasons instructors describe open pedagogy in different ways is likely due to the fact that they each included different activities as part of their open pedagogy. The table below lists some of the activities that various instructors used as part of their open pedagogy.

Table 3. *Faculty descriptions of open pedagogy activities*

Name or Type of Activity	Number of Instructors Who Mentioned Using the Activity	General Description of Activity
Using OER	3	Students would use an openly licensed (or free) textbook or data in order to complete class activities. Examples included previously created Pressbooks, instructor created Pressbooks, and Twitter or social media research.
Creating OER Textbooks	3	Students worked together and/or with their instructor to create a Pressbook or WordPress book that they could share with the community at large.
Creating other OER	3	Students created OER that would not be considered a textbook, such as quiz question banks, study guides, lists of technology tools to use in the classroom, or portfolios.
Making Learning Visible	4	Students created artifacts that allowed them to display their learning such as blog posts, tweets, websites, or videos.
Syllabus Control	3	Students were allowed to have input over course policies such as technology, attendance, and homework policies, as well as choice over the assignments they would complete in the course or topics they would study in the course.

As can be seen from the table, all instructors used activities that were similar to other instructors' activities. Many instructors also used multiple open pedagogy activities.

### *Implementation Experiences*

Instructor's experiences with implementing open pedagogy differed from instructor to instructor. Some instructors felt as if a lot of work was involved in planning for open pedagogy,

while others felt there was less planning needed than teaching in a more traditional way. But most instructors felt as if the extra planning was worthwhile because of students' reactions.

These differences are likely due to the various open pedagogy activities mentioned above.

- I only taught the course once before and it was set up ahead of time by a previous instructor, and I went into it and was like, "This needs some pizzazz. This needs some work." So it was a lot more work for me I think. But I think the excitement and the engagement that I got from the students, and trial and error and other things, I think it was well worth the extra time put into the course.
- When I added open pedagogy it kind of opened the world. Not only for the students, but for me as well. Because now I'll have my students write in the discussion forum, "Hey! Did you see this?" and they'll put a link, and I had never seen it.
- I think it definitely made both the instructor and I feel uncomfortable at first. It feels scary to give that control away to the students. There's that idea of, "what if they do somehow pick the wrong tools?" Even though we're assuring them there's no wrong answer.
- It was very interesting. I feel like I learned a lot. I think the students found it really challenging and interesting ... I supported them by giving them some suggestions on how to revise some course policies or assignments that they had come up with ... There was one student who was straight up like, "This is not my job, to come up with my assignment. That's your job." So it was kind of funny.

- Generally, I think by the end of the semester, in a class of about 20 students, I think most of them kind of got the point that I've been sharing this space with them, that they shouldn't just see me as an authority figure, and I would ask them about their challenges and that. The thing is that it is really hard to get them to just speak about it. Even though I could see that they were catching on. They didn't really enjoy talking as a group, so I would do smaller activities sometimes just to get them to interact with each other, and then just not call it anything and just ask them what they thought about that, that they were sharing information with each other. So that kind of took the terms away, kind of backed off from calling it "open pedagogy," and sometimes that seemed to be more effective. The part about saving them money and not getting a textbook, several people told me they were grateful for that.
- Again I didn't do much with open pedagogy, it was the open access, but I guess the idea of them creating something is technically pedagogy. I think it was cool. Like I've already said, it was very satisfying to them to already be published authors.

### **Perceptions of Students' Experiences**

Instructors felt that students' reactions to open pedagogy were mixed, but tended to lean positive. The greatest difficulties that instructors faced with students were some students' emotions concerning sharing their learning, or thoughts about learning, in an open format and students' abilities to successfully use technology tools.

#### *Positive Reactions*

Most instructors were excited to share the successes that they had with students through using open pedagogy. Students seemed to be excited about creating their own educational

products, saving money, and even opened up more to their instructors concerning their personal lives and academic struggles.

- I think they were excited about it and like “Wow! Hey we collaboratively built a pretty useful list of resources” that they wanted to then share with teachers at their schools.
- So, in a movement discussed in class, it’s an extreme comparison, but during the movement, a lot of artists felt that, and people in general felt that, the doctors weren’t doing their jobs so they had to do it on their own, and they had to care for one another on their own. So in some ways they drew an analogy between that and the textbooks. Like, “if the textbooks aren’t going to serve us, we need to create our own textbooks that are reflecting our needs.” That was kind of cool to see that happen.
- The students really dug the idea that at 18 years old they were published authors. They loved that idea that just like that, this semester long journey of doing weird stuff as freshman culminated in them being able to tell friends and family that they are now published. They really loved that.
- They seem to be really happy with it. The students in one class have told me overall that they are very pleased ... At another institution, they were extremely happy about it because I have taken over hundreds of dollars of books out of their course, so they are very happy not to have to spend that money ... Since I’ve been doing the blog, I’m finding that the students know how to write better than they’ve shown me in the past.

- One student who was really struggling was very vocal about how much he was struggling financially. That's usually not the case I think. In my classes, I haven't had students express their difficulties as much in front of other people. But things like working a part time job on top of going to classes, and anytime there were extra hours, he would just take them, and sometimes that would interfere with getting his work done for class, but he had to find a way to pay his bills. So, he would tell me he really appreciated the flexibility. The way that this all kind of translated to him was that I was really flexible with him, and found ways to work with him. And he still had to get a lot of work done, but the different types of work he could do to contribute seemed to really pay off for him.
  - I had one student who sent me a draft of his portfolio about a third of the way through student teaching. So turning it in like WAY early, months earlier than necessary to ask for feedback both on the content of it, the lessons, the video, whatever they were putting in there, but also just "how does this look, do you think the text is right, am I arranging things well?" And we did two or three rounds of feedback on the portfolio. He came after school to my office once just to sort of talk it through as well. And that is, in the past, and again I've only had one year of doing it another way, I had people just dump their portfolios on me in the end. There was almost no discussion about how it would be presented, how it might serve the audience, like any of those rhetorical elements. It was just something they did for school, and that they were never going to think about again.

### *Mixed Reactions*

Some instructors noted mixed reactions from their students. These mixed reactions came from students within the same classes, and students from two different classes in which open pedagogy was used. Some explanations for the mixed reactions were different approaches to open pedagogy or using different open pedagogy activities.

- I had one who was very excited and decided to try something new they had never done before, and I think that was a WordPress site if I remember correctly. And they were very very excited about that. I had one who decided to learn Canvas, but didn't document it in an open way, they just wrote a paper. So I've had both ends of it. Some that were really really good and some that were not so much.
- I think that the project based class, 100% super super positive, and they were saying that to me too. I think that a couple of the students in the other class—I think it might be mixed. I haven't asked them yet, but I think it might be mixed for that class. I mean, it's a learning experience so I don't feel bad about that. I still think they were getting everything they needed to out of it. The positive feedback that I've gotten, was for example, the girl who wrote on a specific topic was like, "I never had to write a paper before. And so now I'm writing about something that I really like, and my friends what to see what I wrote, and I'm showing this to my friends. It's online so I can show it to my friends, and I can show it to my family." And she was going through multiple drafts and she was getting really proud of it because it was something that she really cared about. So I thought that was really successful there.



- I think it was mixed, and I think it was different student to student. I think that some students just didn't really care one way or the other. I had a couple of seniors in my class who openly admitted to me that they had checked out. They did the work and they were fine. I think they appreciated aspects of it. I think students always like, so despite the fact that it can be stressful because I've done sort of similar things before, I think students always like having a choice about what they get to do. I've gotten the most positive feedback about that from students. So I think students really appreciated being able to decide whether they can do a paper. And I know that's not like, depending on how broadly you define open pedagogy, I know that that's not like necessarily unique to open pedagogy, it's more just like a self-directed [practice]. So that aspect of it I think they really liked. The Wikipedia piece, which more traditionally fits under that umbrella of open pedagogy, there was a mixture ... I think, and I'm not sure because it's just me sort of guessing, but I think the ones who didn't get much out of it, it might have had something to do with there being too many students working on one article. I had never done it before, so I may not have been strategic in helping them select articles and maybe I should have just let them pick what they wanted. Other students really liked the project. They particularly liked what they were supposed to like about it, which was "Wow, I've never really done anything like this before in a class, and this is something that's out in the world, and it's not just a paper that I'm handing in." So there were definitely students who voiced that opinion about the experience with the Wikipedia piece.

- I think there's resistance to it, resistance from some students, or maybe it's uncomfortable because most of my students I've seen aren't used to taking time to reflect. And I was pushing that. So in my form of it, I guess you could say, my form of open pedagogy, really pushes students to reflect on their own work and the value of their work.

### *Difficulties with Dispositions*

Some of the student difficulties with open pedagogy, as perceived by instructors, had to do with students' beliefs and feelings toward sharing their learning in an openly available way.

- Some of them though are very hesitant because they've never been on a blog. So they are very scared to put their opinions out there into the world. So, we have to go over how to set permissions so they can feel safer. But overall they seem to do well. And their work is tremendously better because they know that I am not the only one that's going to look at it ... There's been one student that refused. Said that she would not do the blogging. That she did not want her name anywhere on the internet. Which I don't really understand if you're in an online course and in basic online college. But she refused. So I adapted it and told her she could do it in another way.
- I did have the person writing on a sparse subject in the last class. I was like, "Are you okay," and they were like, "No." And they got kind of upset. So I think that what actually happened was the opposite of what I wanted to have happen. The whole point of an OER is to give students agency and to make them feel like they can write the textbook, and they can be the expert, but a lot of my students, they

felt like “Well I’ve never written a textbook entry before. What qualifies me to do this?” And they were just really daunted by that, so I need to find a better way to empower them at the beginning and let them know that they’re empowered.

- They were definitely very intimidated during the first week ... I think it was the third week where they stopped questioning themselves and they saw how their toolkit was starting to build. They built it in Google Docs, so a sort of hyperdoc open toolkit. We also told them we were gonna take that toolkit and share it out with the world so others could see it. It wasn’t just for them. So I think that made them take extra care in doing things like writing descriptions of what the tool is and thinking about it a little differently.
- For the most part, this semester, the self assessments I’ve seen, people have been really honest. They’ll say “I know. I totally own it. I wasn’t in class as often as I should have been, I think I get a C for that.” But they would just say it. And maybe a couple still were, at the midterm at least, the final one is still coming in, at the midterm, I had some that tried to push it a little bit where it was clear that they may not have been doing the work as much, and they may have been interpreting “open pedagogy” for “free ride.” So, I had to like, “No. Not that open. We’re not that free.” So I actually just addressed that and said, “Well I’m not really seeing your work to show that you have this grade. So, if you could explain to me what your plan is to catch up there, or something like that you may still end up with this grade, but at the moment, I would disagree.”

Some of the difficulties that instructors noticed with students were centered around uses of technology. For example, one instructor had her students read and annotate online sources using Hypothesis, but students became very frustrated with the tool. Some even stopped doing the assignments because they could not get the tool to work the way the instructor wanted. Other examples are highlighted below.

- There was one student that couldn't figure out how to go in and manipulate the environment to make things work. So, I met with him and we sat down to make things work. Just to disclose everything, he's 63 years old. So he's used to a whole different element himself.
- Our Pressbooks migrated to a different iteration around Spring break, and that actually was when the deadline was for the first entry, so they couldn't upload it. And I think that impacted their momentum a little bit. So just little things like that, that you can't anticipate when you're a professor, it just inhibited their ability to envision the book as a book, and we lost the momentum for a little while.
- I think the comfortableness with mess is something that varies from professor to professor, and how much they are doing this for the tech skills versus the content and disciplinary skills varies too. And then I think ... the tech felt like a hurdle at the beginning for some students, but then they were like, "Oh my gosh, H5P is actually so easy." So I think part of that realization. And tech is going to change, but the ability to learn new tech is really the skill that you're teaching them.

- I helped them quite a bit. Pressbooks isn't a good editing oriented software—it's better to edit outside and bring it in. So, I let them do all their editing in Word, and then I brought it into Pressbooks. So they didn't have to deal with the publishing side as much. I kind of did that for them.

### *Difficulties with Time*

The final difficulty that some of the instructors voiced was time. While some teachers felt as though using open pedagogy “was a lot less preparation,” others felt they needed more time for preparing and completing activities. As mentioned in a quote from the *Implementation Experiences* section above, one instructor felt preparing for open pedagogy took much more time than planning the course the way it was traditionally taught, though this could be true of any course redesign. At least one other instructor felt that there was not enough time for students to complete the project that they really needed to have in order to find careers.

- There's nothing that I would qualify as a negative. I guess the one thing that I think is, you know sort of real thing is that because some of them were doing it during student teaching and they brought varying levels of knowledge and expertise about sort of web platforms, so we have done some work in an earlier course to work together “this is how you create the page, this how you do tabs” those sorts of things, but I think it felt sort of distant. And the realities of the portfolios are such that, they might be able to put some initial stuff on them in before student teaching, but they're finalizing it and revising it during student teaching. And I just don't see them that frequently, it's just the nature of the way our program is designed. The only part that got touchy sometimes is that I wasn't

always able to provide them with some of the support in terms of building it that they needed and may have liked.

### **Instructor Experiences with Open Pedagogy**

As for how using open pedagogy impacted the instructors who were using it, most of them really enjoyed the experience. Others were more neutral toward the experience, and several still had questions that they were pondering for future uses of open pedagogy.

#### *Enjoyment from Open Pedagogy*

Many instructors felt as though using open pedagogy was refreshing and helped to make them better instructors, either through connecting them more with their students, or allowing them to model and teach important professional skills and behaviors.

- I had a blast. I love grading all that stuff.
- When I added open pedagogy it kind of opened the world. Not only for the students, but for me as well. Because now I'll have my students write in the discussion forum, "Hey! Did you see this?" and they'll put a link, and I had never seen it.
- Actually it was very relieving. Especially in the class where it was a bit more successful that I mentioned. It was nice to know that I could just come to class. I would guide them and facilitate them, but ultimately the ball was in their court. So it was a lot less preparation, which was good. So it actually made my life a lot easier. It was a lot easier to grade because the grades were good because people care. So I think that was helpful.

- I do think that it's something that I have been trying to push them toward, making their own decisions and to being more responsible for their own learning. And I think seeing that at different times during the class, I felt happy. I felt satisfied. And so that definitely changed my relationship with, all of these people are my advisees in my program, and so it made me think like, "Oh good for you! I'm glad!" This whole little cohort has just gone through and changed their thought process about at least some of that. I hope they take more responsibility for their own learning as they continue through the program.
- It made me get concrete in the ways that I was approaching some of the other platforms that were maybe a bit more closed. So that was one way that I think it affected me as an instructor is that it is easy to complain, but harder to find concrete solutions, and this was sort of a foray into finding a concrete solution. I think the other way that it impacted me as an instructor is really just thinking about, how ... a core part of my job is helping them become professionals, and that's in the sense of getting a job, but also thinking about how they want to present themselves and their work to their future colleagues and things like that.
- So one of the basic reasons I wanted to get in was that they, my first cohort of graduates here, it's just my second year, so I had one group of seniors that graduated, they took nothing with them. You know they gave us all this stuff, all this work product, and they could certainly repurpose it if they wanted to, but basically they uploaded it to our program accreditation systems and then almost immediately lost access to it once they graduated. So our learning managements

systems like Canvas. So, I was just concerned that I was using portfolio work that was totally closed within the university and that they lost access to. And it just seemed like an equity issue too. They paid for it and then they got nothing for it.

- I think you can hear that I'm very passionate about open pedagogy. I love it. I really think this is the way we need to move. The only thing that holds me back is once I learn something I know it well, but I get discouraged that every time I know it well, something changes, and I have to relearn and learn more. So it's a never ending process.

Part of the reason for the positive responses toward open pedagogy came from the instructors feeling as though any perceived additional costs that were needed for implementation were worth the perceived benefits for themselves and students.

#### *Cost / Benefit Analysis*

Though faculty members did not complete any kind of formal evaluation of their costs in implementing open pedagogy and the benefits that come with it, they did perceive that the costs were worth the benefits. Some of the costs were finding OER to use as part of their courses, being unable to see their projects come to an end, and misconceptions about using open pedagogy. The benefits that instructors focused on included saving time, thinking beyond the confines of their own semester long courses, courses going well, and increased student interaction.

- I think open resources, once I get it together, saves time ... The only negative, and I don't know if I would call it negative, is that I have to critically think even more. Because I have to go through and teach my students how to go through, what's



real? What's not real? I was always told in the beginning you never ever use Wikipedia as a source. And now it's on that teeter where, you need to use Wikipedia because you're getting these new open ideas, but you have to critically evaluate it because I could go on there and put something on there that I know nothing about. So that's the tough spot.

- I knew I wasn't going to [finish the project], so I just meant that I perceived this as an ongoing project, and I think a lot of OERs are like that. It wasn't that we didn't accomplish what I wanted to accomplish in the semester, it's that these aren't semester long projects. And that was a new thing for me too. That idea in both of these classes in thinking beyond the semester. And I think if you were going to ask about challenges or something, my biggest challenge was that this was the first group that I had done it with, so they didn't really know what they were looking to do.
- I think pre-class starting open pedagogy gave me some, made me a little bit delusional, like "Oh the students are going to do everything," so a little less prepared going into the course. By the time I started looking at, "How am I actually going to do all these things, " I was like, "Oh my God, I should have done this a month ago!" ... So it sort of negatively affected me by mistakenly putting too much onus on students and almost expecting that they were going to teach the class. That didn't happen ... That being said, I think it went really well. I think students really appreciated it. There were some bumps in the road, but I think it went really well. I think it was okay.

- It impacted me positively for sure. I feel a lot more freedom myself as an instructor ... This semester, my relationship with students, just across the board, is so much better. I think that, I can't really do that much to remove authority, it's just part of the structure of education. I don't think I can completely dismantle that. As much as I would like to have us as peers and just sharing knowledge, in the end, I still had people asking about their grade. And if they got concerned about their grade they still wanted to meet with me. But, in the classroom space, I felt like there was a lot more of a willingness to interact, even if they felt shy about certain activities.

### *Questions and Concerns that Remain*

Although instructors felt like implementing open pedagogy went well, several also felt like they had some unanswered questions or concerns about continuing to use open pedagogy in their classes. Some of these concerns were related to pedagogical practices, while others focused more on the costs of having open access to learning materials and student assignments.

- I took an existing class and I tried to put the OER onto it, and I think the OER needs to be central. That's a big difference too actually. My less successful class was an existing class that I worked OER into, and I feel like maybe the class was even more successful last year. But then this other class was a non-existent class, I created the class, so it happened around the OER, or the open pedagogy. So that was a big difference. I think the latter gave me a lot more flexibility.
- My students are doing these things at night and on weekends, late at night. So having them do an extra amount of work in the class than the previous, you know

I've taught this class for five years, and the previous class of people didn't have to do that step. It was time consuming for them. So, I noticed that the final projects themselves weren't as detailed and thoughtful and maybe relevant to what they're doing. They're spending less time on that final product and more time on evaluating the tools and resources. I'm still thinking about [whether the payoff is worth it in the end] because it just finished so we're still processing that. Me and the instructor have been talking about it.

- We're getting ready to teach it again in the summer. So, there's this consideration of "do we start over with a blank template," "do we share the tools that were already developed?" I don't know. So that is a little confusing about what the next step is, and what we're going to do next.
- So I wouldn't say that itself is a negative thing, but the part about, I guess not enough people know about it yet. I'd say in the hallway where I work, I'm the only one practicing this. So a misunderstanding about it could be pressure on, especially contingent faculty or people who are tenured track but not yet tenured. There could be some fear of retaliation in some way, or some kind of punishment that you didn't do it the right way. Those things were in my mind, kind of in the back of my head, and they would go into how I planned things. Like, "I really want this to go well, so I'm going to try the best I can." And each time I would try to have an argument for the activity. So, "how does this kind of fit a traditional style classroom. If I didn't have to worry about that, I might have been even more experimental though. I'm a tinkerer. So I like to tweak things a lot, and I find that

fun. But other people who don't start out in that nature may find that really overwhelming.

- Something that has been on my mind about it is funding ... I'm now working with someone in Pressbooks, and to really give the benefit to the students so they can have the ebook and the pdf version if they want to print it, that's \$99 for that one book. And it's a one time fee which is fair. But if I do that for four classes, now at the moment I would have to pay \$400. And I'm glad for students to not have to pay that, but it would be nice if the institutions, part of our whole system, could invest for things like that. Or at least if there was some kind of pocket that was a direct thing, like we spent this much money using this to help our students. Could the institution, or the system, pay for, for mine for instance that would be \$400 or just under \$400, for forever. I mean there's not a limit on how often we could use that book, and it's a one time fee for each individual book.
- Again, definitely not negative impact. I mean there's certainly questions I'm still left pondering, some sort of tensions that I still see. I guess one of those is a deep uncertainty that I have with—you know I want them to be open in their work and their learning processes and their development as professionals because I think it is important that you don't look at a beginning teacher as a finished product but as somebody that is continuing to develop. That said, I mean, I'm very aware that I only want them to put their best work out there. I want them to be open, but it's a reality that they need to put their best foot forward with applications with jobs. So I mean in some sense it's the question of what sort of work and reflection are best

done in the sort of safer more closed off environment of our classroom, where they can experiment, and what sorts of work is best done in a more open in a sort of—I guess if you think about these portfolios as open, I want that to be experimental, but I don't want it to be so experimental that any negative consequences kind of come with that.

### **Future Plans for Using Open Pedagogy**

All but one of the faculty members interviewed (7 of 8) said that they plan to continue using open pedagogy in their current courses. Several instructors had already begun using open pedagogy in other courses, and those who had not said they would at least consider using open pedagogy in other courses. For the courses that already had open pedagogy, instructors admitted that they would likely need to make some adjustments to their practices before continuing.

#### *Continued Uses of Open Pedagogy*

Instructors felt that their uses of open pedagogy were successful, but could be better with some revisions. The following quotes are in reaction to being asked if they would be willing to use open pedagogy again in the classes that had already implemented it.

- I see more Pressbook. I haven't got there yet. I'm working on that. I see more of a blogging approach. They have a lot of really good ideas, but, and I hate to generalize, but they're really scared. They're scared to believe in themselves. So I'd really like to show them that that's possible and to get out there with that.
- One of the interesting remarks that came out of that is that one student said they wished there was more ... that they wished there was an audio component so they could listen to it while reading or instead of reading. And that made me think back too about OER and issues and accessibility because a commuter could listen to

the textbook on the road. Or someone with a family could listen to it when they were washing dishes or something. So that seemed really powerful to me. We didn't get to that iteration, but what I like about both of my classes that have open pedagogy is that you can say, "Okay well you came up with this idea, we'll pass it along to the next group and they'll make it happen." So I think the students said that they really liked passing ideas on to the next group, and that their ideas were going to keep living.

- Yes. I think there is so much potential. I learned a lot this year about how to use technology in my classes. I've been blogging. I've been assigning blogs, which has been going pretty well in other classes. But I really like the idea of having a deliverable product. Now the classes where I'm making them turn in a paper feels kind of silly. It just feels like they're jumping through hoops ... It was like they had this whole list of stuff that they've done, and there's so many ways to work it on to a CV too. Like the young woman whose artwork we used for the cover of the book, that's a resume line. People have things they can actually link to on a LinkedIn profile, or point to that they've done. That's really invaluable. Especially at a rural university like ours, where they don't have as much internship opportunity and everything is happening on campus or in classes.
- I think we're going to try it again this summer and see how that goes, and what happens, and if we notice any differences. I think we're going to change the wording a little bit on the first couple of versions of it, the first weeks where we have them choose their own products.

- I might do it again. I'll have to think about it and definitely rethink how I do it. But I would definitely consider doing it again. In all the courses I ever teach again, I'm going to give my students a choice over what to do because again, I like it better. They like it better. It really helps me deal with students who are at different skill levels because then students who need to do a lot of small assignments for lower stakes can do that and those who don't need that don't have to be forced to do that. So from a pedagogical standpoint I just really like doing that. Writing course policies, that kind of thing, I would definitely do that again. I might have more of a say in it though, because the students this semester said they could have up to four absences. And I was like, "four absences? That's a lot!" I let it go, but in retrospect I might say three. Three is enough. I might need more negotiation.
- Yes. Definitely. I'll definitely do it. Some of the things now are things I can recycle, I can bring it back through. I'll probably do some tweaking to the lesson planning as I go, but now that I've tried it, some of the activities and materials I can just reuse. But definitely in all of the classes with seniors and then with first year students, like the whole range, it seems to benefit, it pays off for everybody I think.
- So, I mean, at this point, I will probably tweak the assignment, but if anything I plan to expand that sort of open education portfolio as we keep going.

- No doubt about that. I teach primarily grad because my major is a grad major. So my other course will be kind of a every few years kind of thing I would expect, maybe even more sparse. But my hope is to take that book and to continue building on it with new cohorts, new groups. So that it becomes a really nice comprehensive perspective from first year students on this idea of equity and education. I think more so, I'd like to expand its application to other classes. That's really my long term goal here for me, is going beyond that one class and trying to find ways to put it into other classes.

### *Implementation into Other Courses*

Many of the instructors that we interviewed have already begun implementing open pedagogy into other courses that they teach.

- That's the one I formally used it in, but since I used it in there, I'm splattering it throughout different courses that I teach.
- It's an upper level class, so it's a lot of juniors and seniors and a lot of students that I've actually had before. But I'm not sure if this interests you, but I might also make reference to this in evaluating the success of that class, I was using open pedagogy but not necessarily open educational resources, in another class of mine, which is also mostly seniors, it was a small group, and that was a pilot of a new type of class that we have here that is entirely project based.
- I used it in three courses. I had Elementary German I, Elementary German II, we have different numbers for them, if you needed the real specifics I could get you that, and an ITW course, which is a writing course for first year students.



Other instructors have planned to use open pedagogy in other courses or would at least consider adding open pedagogy to other courses, noting “I wouldn’t discount it”.

- I’m looking to expand people’s knowledge on it. I think open education is a valuable tool, and I think they should use more of it. I think it should be used more in K-12 as well. Especially with the kids we have nowadays, and their computer experience and stuff. So that’s my goal. I’ll be doing research on that
- I think that I definitely would. I am intrigued by the Wikipedia thing. I mean it didn’t totally work in the way that I wanted it to, but I think it’s a really neat assignment. I also teach a first-year research and writing assignment, and I think I might actually end up using the Wikipedia assignment in that course next time.
- Yes. For sure. In fact, I proposed some for the Fall. I have an honors course that I’ll be teaching and I had to go to a meeting with the students to tell them about it and the coordinator was there, and I noticed they included that the course will use OER materials and free materials.
- I might introduce open pedagogy or use more open elements that are targeted at that course specifically rather than that course as a means to building an overall portfolio. Because that would mean reaching the students in that class perhaps who aren’t in Secondary English Ed. and it would be really appropriate because one of the focuses in Descriptive Grammar is sort of grammar and language ideologies and debates in the world. So like when controversies break out about

language, I am constantly, I want them to bring it in when they see stuff on Instagram or whatever, I want that stuff in the class.

- Absolutely! ... If they would give me the courses I want to teach, right now somebody else teaches it, I would definitely do that. But right now I'm only teaching a capstone in addition, and that capstone is kind of, it is the way it is.

## **Summary**

According to the perceptions of the instructors who were interviewed, the implementation of open pedagogy had a lot of benefits for both themselves and their students; however, as with most new practices, implementation was not perfect. There are changes that instructors would like to make and questions or concerns that remain for some of them. Despite these and other challenges, almost all instructors plan to continue using open pedagogy in their current courses, and most of them plan to integrate it into other courses, if they have not done so already, because they feel that it increases student agency, engagement, and ownership of learning in a positive manner.

## **Conclusion**

Students believed that using OER benefitted them financially, and 95% of students felt that the OER used were as good or better than other textbooks they had used. Likewise, 95% of students felt that open pedagogy was as good as or better than traditional teaching techniques, with a slight majority stating that it had greater educational value than traditional educational activities. Students expressed a strong preference for taking future courses that utilized open pedagogy. When students were asked if they would prefer to take a course with open pedagogy or traditional pedagogy, 61% preferred open pedagogy, 27% expressed no preference and 12% chose traditional learning activities. Faculty were also positive about open pedagogy. They reported that using open pedagogy took more time, but that it was worth the effort. Faculty members believed that they saved their students significant amounts of money and that students responded positively to open pedagogy.

When aggregated across all three institutions, the treatment group that used open activities included 222 students and the control group of students of 204 students. We examined differences between the treatment and control groups in terms of Drop/Withdrawal rates (the proportion of students dropping a class or withdrawing from the course) and D and F grades (the proportion of remaining students receiving a D or F). Neither of these differences were statistically significant.

This study indicates similar results to the 2017 cohort of ATI participants, again providing a baseline result that open activities provide several benefits without causing any academic harm to students.

## **Appendix**

Q1 – Consent Form

### **New Hampshire Open Education Survey Consent to be a Research Subject**

#### **Introduction**

This survey is being conducted by John Hilton III and the Open Education Group (<http://openedgroup.org>) on behalf of the University System of NH Open Ed Initiative. The survey is about open education.

#### **Procedures**

If you agree to participate in this research study, you will take a ten-minute survey about open education.

#### **Risks/Discomforts**

There are minimal risks for participation in this study. If you feel uncomfortable answering a particular question, you may choose to not answer that question, or discontinue the study altogether.

#### **Benefits**

There are no direct benefits to you for participating in this study. It is hoped that through your participation researchers will learn more about the benefits and drawbacks about open education and assist others in their decision on whether they should use these approaches.

#### **Confidentiality**

You will be completely anonymous. You do not need to put your name on the survey, and no effort will be made to track whether or not you completed it. Anonymous responses will be aggregated.

#### **Compensation**

You will receive no compensation for participating in this study.

#### **Participation**

Your participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy to any relationship you have with your college.

Your professor will not know if you participated in the survey. Your choice in participating will not affect your grade in any way.

#### **Questions about the Research**

If you have questions regarding this study, you may contact John Hilton, Ph.D. at [johnhiltoniii@byu.edu](mailto:johnhiltoniii@byu.edu), or (801) 422-7394.

Clicking the button below indicates that you have read and understood the above consent and desire of your own free will to participate in this study.

[Continue survey]

The following are general questions related to you and your courses at the college.

Q2 How many terms/semesters have you completed in college?

- ☐ Less than 1 (1)
- ☐ 1-2 (2)
- ☐ 3-4 (3)
- ☐ 5-6 (4)
- ☐ 7-8 (5)
- ☐ 9-10 (6)
- ☐ More than 10 (7)

Q3 What is your cumulative college Grade Point Average (GPA) on a 4.0 scale?

- ☐ 0.0 - 1.4 (1)
- ☐ 1.5 - 2.0 (2)
- ☐ 2.1 - 2.5 (3)
- ☐ 2.6 - 3.0 (4)
- ☐ 3.1 - 3.5 (5)
- ☐ 3.6 - 4.0 (6)
- ☐ This is my first term (7)
- ☐ I don't know

Q4 In general, how often do you *rent* the required course materials for the courses you take?

- ☐ Never (1)
- ☐ Rarely (2)
- ☐ About Half the Time (3)
- ☐ Often (4)
- ☐ Always (5)

Q5 In general, how often do you *purchase* the required course materials for the courses you take?

- ☐ Never (1)
- ☐ Rarely (2)
- ☐ About Half the Time (3)
- ☐ Often (4)
- ☐ Always (5)

Q6 Have you ever not purchased course materials for a class because of the cost of the course materials?

- a. No
- b. Yes

Q6.1 (If yes to 6) Do you think that not purchasing the course materials influenced your grade in the course in a negative way?

- a. No
- b. Yes

Q6.2 (If yes to 6) Has not purchasing course materials contributed to your decision to drop a course?

- a. No
- b. Yes

Q6.3 (If yes to 6) Has not purchasing course materials ever caused you to fail or withdraw from a course?

- a. No
- b. Yes

Q7 Have you ever delayed purchasing course materials for a class because the cost of the course materials?

- a. No
- b. Yes

Q7.1 (if yes to 7) Do you think that delaying purchasing the course materials influenced your grade in a negative way?

- a. No
- b. Yes

Q8 Have you ever registered for fewer courses because of course materials costs?

- a. No
- b. Yes

Q9 Have you ever not registered for a specific section of a course because of course materials costs?

- a. No
- b. Yes

Q10 How much do you typically spend on texts each semester/term?

- ☐ Less than \$100 (1)
- ☐ \$101 - \$200 (2)
- ☐ \$201 - \$300 (3)
- ☐ \$301 - \$400 (4)
- ☐ \$401 - \$500 (5)
- ☐ More than \$500 (6)

Q11 On average, how many courses do you take each semester/term?

- ☐ 1 (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6 (6)
- ☐ 7 (7)
- ☐ 8 (8)
- ☐ More than 8 (9)

Q12 For a typical course, how often do you use the required course materials?

- ☐ Never (1)
- ☐ 2-3 Times a Semester (2)
- ☐ 2-3 Times a Month (3)
- ☐ 2-3 Times a Week (4)
- ☐ Daily (5)

**\*\*For Students in Classes with OER\*\***

The remaining questions are related specifically to the open resources that your instructor used in this course for your class readings.

Q13 Did you print any part of your open resources for this course?

- ☐ Yes (1)
- ☐ No (2)

Answer If Did you print course materials for this course? Yes Is Selected for Q13

Q13.1 How many pages of the open resources did you print for this course?

- ☐ Less than 10 (1)
- ☐ 10-50 (2)
- ☐ 51-100 (3)
- ☐ 100-150 (4)
- ☐ 151-200 (5)
- ☐ 200-300 (6)
- ☐ More than 300 (7)

Q14 Do you believe you saved money on this course due to using these open resources?

- ☐ Yes
- ☐ No

Answer If Do you believe you saved money? Yes Is Selected for Q14

Q14.1 What did you do with the money you saved?

Answer If Do you believe you saved money? No Is Selected Q 14

Q14.2 What would you have done with the money you saved?

Q15 How often did you use the open resources for this course during the semester?

- ☐ Never (1)
- ☐ 2-3 Times a Semester (2)
- ☐ 2-3 Times a Month (3)
- ☐ 2-3 Times a Week (4)
- ☐ Daily (5)



Q16 How would you rate the quality of the open resources used for this course?

- ☐ WORSE than the quality of the texts in my other courses (1)
- ☐ About the SAME AS the quality of the texts in my other courses (2)
- ☐ BETTER than the quality of the texts in my other courses (3)

Answer If How would you rate the quality of the texts used for this... WORSE than the quality of the texts in my other courses Is Selected

Q16.1 Please briefly describe what made the quality of this course's open resources WORSE than those in other courses.

Answer If How would you rate the quality of the texts used for this... BETTER than the quality of the texts in my other courses Is Selected

Q16.2 Please briefly describe what made the quality of this course's open resources BETTER than those in other courses.

Q17 Were the open resources used in this course available to you primarily online?

- ☐ Yes (1)
- ☐ No (2)

Answer If Were the texts used in this course available to you... Yes Is Selected

Q17.1 How do you feel about the online format of the open resources used for this course?

- ☐ I like the online format MORE than traditional printed texts (10)
- ☐ I like the online format LESS than traditional printed texts (11)
- ☐ I have no preference (12)

Q18 Overall, what do you think of the open resources used in this course?

Q19 How likely are you to register for a future course with open resources like those used in this course?

- ☐ Very Unlikely (1)
- ☐ Somewhat Unlikely (2)
- ☐ Somewhat Likely (3)
- ☐ Very Likely (4)

Q20 Imagine a future course you are required to take. If two different sections of this course were offered by the same instructor during equally desirable time slots, but one

section used open resources similar to those used in this course and the other used traditionally published texts, which section would you prefer to enroll in?

- ☐ I would enroll in the section with TRADITIONAL PUBLISHED TEXTS
- ☐ I would enroll in the section with open resources LIKE THOSE OFFERED IN THIS COURSE
- ☐ I would have no preference

Q21. What additional thoughts would you like to share regarding course materials costs?

Q22 When you learned you would use free open resources instead of a traditional textbook, did this change your opinion of your instructor?

- a. yes
- b. no

22.1 [if yes to 28] how did your perception of your instructor change?

**\*\*For Students in Classes with Open Pedagogy\*\***

Your instructor included the following open pedagogy activity in your course: [\[insert open pedagogy phrase\]](#). The following questions relate to your participation in the course's [\[insert open pedagogy phrase\]](#) in which **[insert description of open pedagogy used]**. In the questions below this is referred to as “the course’s [\[insert open pedagogy phrase\]](#).”

28.2. Have you ever completed an assignment similar to participating in the course’s [\[insert open pedagogy phrase\]](#) in another class?

Q23. Was the educational value of participating in the course’s [\[insert open pedagogy phrase\]](#) BETTER, WORSE, or the SAME AS that of traditional learning activities (e.g., writing papers, taking quizzes, etc.).

- A. Better
- B. Same
- C. Worse

Q23.1 [if Better in 23] in what ways was it better?

Q23.2 [if Same in 23] in what ways was it the same?

Q23.3 [if Worse in 23] in what ways was it worse?

Q24 When your instructor asked you to participate in the course’s [\[insert open pedagogy phrase\]](#), did this change your opinion of your instructor?

- a. yes
- b. No

24.1 [if yes to 24] How did your perception of your instructor change?

Q25 Suppose that certain types of learning activities lead to certain learning outcomes. For example, reviewing flash cards might lead to memorizing facts. What types of learning outcomes do you think are the result of participating in the course's [insert open pedagogy phrase]?

Q26 Imagine a future course you are required to take. If two different sections of this course were offered by the same instructor during equally desirable time slots, but one section had traditional learning activities (such as writing papers and taking tests), and the other used learning activities like participating in the course's [insert open pedagogy phrase], in which section would you prefer to enroll?

- I would enroll in the section with TRADITIONAL LEARNING ACTIVITIES
- I would enroll in the section with ACTIVITIES LIKE PARTICIPATING IN AN [insert open pedagogy phrase]
- I would have no preference

Q26.1 [if TRADITIONAL] Why would you choose a class with traditional learning activities?

Q26.2 [if ACTIVITIES LIKE PARTICIPATING IN AN [insert open pedagogy phrase]] Why would you choose a class with activities like participating in [insert open pedagogy phrase]?

Q27 In this course, did you create any resources that were shared online or intended for reuse by others in the future?

<if yes to 27, then 27.1 and 27.2 should appear>

Q27.1 Did you use an open license, like a Creative Commons license, to license any of the resources you created for this course?

Yes  
No

Q27.2 Did you feel pressured to license your work in a certain way?

Yes  
No

27.3 [If yes to 27.2] Please share how you felt pressured to license your work and how this impacted you.

Q28. How did participating in the course's [insert open pedagogy phrase] help you master core academic content, compared to the way engaging in traditional learning activities (like writing essays or taking quizzes) would have?

- Participating in the course's [insert open pedagogy phrase] helped me master MORE core academic content than traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me master THE SAME AMOUNT of core academic content as traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me master LESS core academic content than traditional learning activities would have

Q28.1 [If more] – Why did participating in the course's [insert open pedagogy phrase] help you master MORE core academic content than traditional learning activities would have?

Q28.2 [if less] – Why did participating in the course's [insert open pedagogy phrase] help you master LESS core academic content than traditional learning activities would have?

Q29. Reflect on the collaborative nature of the [insert open pedagogy phrase]. Select one of the following:

- Participating in the course's [insert open pedagogy phrase] helped me become a MORE collaborative learner than traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me collaborate with other learners THE SAME AMOUNT that traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me become a LESS collaborative learner than traditional learning activities would have

Q29.1 [If more] – Why did participating in the course's [insert open pedagogy phrase] help you become a MORE collaborative learner than traditional learning activities would have?

Q29.2 [If less] – Why did participating in the course's [insert open pedagogy phrase] help you become a LESS collaborative learner than traditional learning activities would have?

Q30. Reflect on how the [insert open pedagogy phrase] helped you learn to think critically or solve complex problems. Select one of the following:

- Participating in the course's [insert open pedagogy phrase] helped me become a MORE critical thinker and better problem solver than traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped my critical thinking or problem solving skills THE SAME AMOUNT that traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me become a LESS critical thinker and worse problem solver than traditional learning activities would have

Q30.1 [If more] – Why did participating in the course's [insert open pedagogy phrase] help you learn to think critically or solve complex problems MORE than traditional learning activities would have?

Q30.2 [If less] – Why did participating in the course's [insert open pedagogy phrase] help you learn to think critically or solve complex problems LESS than traditional learning activities would have?

Q31. Reflect on how the [insert open pedagogy phrase] helped you learn to communicate effectively. Select one of the following:

- Participating in the course's [insert open pedagogy phrase] helped me become a MORE effective communicator than traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped my critical thinking or problem solving skills THE SAME AMOUNT that traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me become a LESS critical thinker and worse problem solver than traditional learning activities would have

Q31.1 [If more] – Why did participating in the course's [insert open pedagogy phrase] help you become a MORE effective communicator than traditional learning activities would have?

Q31.2 [If less] – Why did participating in the course's [insert open pedagogy phrase] help you become a LESS effective communicator than traditional learning activities would have?

Q32. Reflect on how the [insert open pedagogy phrase] helped you learn more effectively. Select one of the following:

- Participating in the course's [insert open pedagogy phrase] helped me learn MORE effectively than traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me learn THE SAME AMOUNT that traditional learning activities would have
- Participating in the course's [insert open pedagogy phrase] helped me learn LESS effectively than traditional learning activities would have

Q32.1 [If more] – Why did participating in the course's [\[insert open pedagogy phrase\]](#) help you learn MORE effectively than traditional learning activities would have?

Q32.2 [If less] – Why did participating in the course's [\[insert open pedagogy phrase\]](#) help you learn LESS effectively than traditional learning activities would have?