Open Praxis, vol. 13 issue 1, January–March 2021, pp. 53–67 (ISSN 2304-070X)

OPEN PRAXIS
INTERNATIONAL COUNCIL FOR OPEN AND DISTANCE EDUCATION

Exploring Student Perceptions as Co-authors of Course Material

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Abstract

Students acting as co-creators of academic material is growing in popularity as a pedagogical approach in higher education. With student engagement and persistence consistently being emphasized for student and institution well-being, educational praxis must foster engaged, high-retention student cohorts. This exploratory research uses a mixed-methods approach to examine the experience of students participating in a first-year course utilizing OER-enabled Pedagogy. Students considered how projects that were open impacted their perception of course engagement, satisfaction, and overall experience. Participants also evaluated their level of concern in sharing attributed academic work. A plurality of students preferred the project using OER-enabled Pedagogy, indicating it increased engagement and skills acquisition. The majority of students were unconcerned about sharing work publicly, even if their names were included. Themes that emerged from interviews included the motivational value of creating work potentially valuable to others, being given agency, and receiving public credit for their efforts.

Keywords: student perception, OER-enabled Pedagogy, Open Pedagogy, student engagement

Engaging students, particularly those in their first year of college, has long been a goal of faculty and staff (Dewey, 2018; Hanover Research, 2014; Roberts & Styron, 2010). Although there are many approaches being utilized to connect with students (Boulton et al., 2019), engagement, particularly within the classroom, is often lacking (Pino-James, 2018; Yacek & Jonas, 2019).

Open Pedagogy is a concept that has been evolving since at least the 1960s and possibly as early as the 1940s (Cronin & MacLaren, 2018; Lane, 2009). Often conceptualized as being a component of Open Educational Practice, Open Pedagogy engages students in the co-creation of course material with the aim of making the educational environment more transparent, meaningful, participatory, and engaging (DeRosa & Robison, 2017; Hegarty, 2015; Wiley et al., 2017). This approach, then, may be particularly beneficial in fostering student agency as agency has been shown to reduce disengagement and play an important role in motivation (Anderson et al., 2019; Baran & AlZoubi, 2020; Seifert, 2004).

"Openness" in education as a framework for research has been plagued by terms with evolving and sometimes contradictory definitions (Baker, 2017; Bozkurt et al., 2019; Cronin & MacLaren, 2018; Inamorato dos Santos et al., 2016; Wiley & Hilton, 2018). The term OER-enabled Pedagogy has been proposed to address the confusion in nomenclature. Specifically, OER-enabled Pedagogy is defined as educational practices that are only possible in the context of the five R's of Open Educational Resources (Wiley & Hilton, 2018). Thus, a practice labeled as OER-enabled Pedagogy is Open Pedagogy, but less ambiguous in terms of how the creator shared their work and what rights others have in its subsequent use.

To capitalize on the value of openness, a small, private university in the United States evaluated its own first-year experience course where a common reading plan had been utilized since 2003. This reading experience failed to engage students as intended. In order to better engage students and

Reception date: 29 October 2020 • Acceptance date: 22 December 2020
DOI: https://dx.doi.org/10.5944/openpraxis.13.1.1187

begin implementing more sustainably minded assignments, the First Year Studies program chose to implement a project that used OER-enabled Pedagogy.

Literature Review

Common intellectual experiences, those in which a student cohort focuses on a shared interdisciplinary theme, have been shown to engage students in deep, high-impact learning (Grant & MacLean, 2018; Kilgo et al., 2015; Kuh, 2008; López, 2013). However, it may not only be the experience itself but also its structure that impacts student impression of assignment value. Non-disposable assignments have been proposed as a method for increasing student engagement as the value of their work extends beyond the student-teacher relationship (Seraphin et al., 2018; Sheu, 2020; Stommel, 2015; Wiley, 2013). Sometimes referred to as "renewable", non-disposable assignments are those where students create an artifact which has value to others; the artifact is made available to the public, and it is openly licensed (Wiley & Hilton, 2018). In addition to being student-centered, the use of non-disposable assignments may increase student motivation by helping learners see a greater value to their efforts (Al Abri & Dabbagh, 2019; Allan et al., 2018; Farzan & Kraut, 2013; Hilton et al., 2019; Jhangiani, 2017; Sheu, 2020).

While much has yet to be determined regarding the use of non-disposable assignments, preliminary evidence is promising (Hilton et al., 2019; Marsh, 2018; Sheu, 2020; Wiley et al., 2017). Exploratory research by Hilton et al. (2019) found that learners generally perceive Open Pedagogy positively. Their research goes on to indicate that studies on student perception are limited. Sheu (2020) reiterates the findings of Hilton et al. (2019), indicating that when students were given the choice between a renewable and disposable assignment, a majority of students chose the former. They posit that this may be attributed to three specific areas: connections to learning management and time management, connection to learning objectives, and student preference (Sheu, 2020).

There appear to be only two studies, both at large, public universities, which have published data regarding this pedagogical approach. A gap, therefore, exists in relation to the impression of students at smaller, private institutions who constitute a quarter of those seeking an undergraduate degree in the United States alone (National Center for Education Statistics, n.d.).

Wiley and Hilton (2018) state that for an assignment to be considered OER-enabled Pedagogy, it should fulfil four criteria: students are invited to publish under Creative Commons licensing, these artifacts are made publicly available, materials have value beyond creation by the author, and students are content-creators who may remix existing OER or create their own new works. The researchers chose to use the concept of OER-enabled Pedagogy as the conceptual framework for this study as it provides more clarity regarding student efforts than the broader term Open Pedagogy.

Research Questions and Hypotheses

This study addresses gaps in current literature related to Open Pedagogy viewed through the lens of OER-enabled Pedagogy. The research questions explored are:

1. How does a project based on OER-enabled Pedagogy impact student motivation and engagement in a course?
2. Are students concerned with the "open" nature of assignments inherent in OER-enabled Pedagogy?

Researchers examined findings in relation to the following hypotheses:

1. Student responses will indicate that OER-enabled Pedagogy increases excitement, motivation, and engagement within the classroom (Hilton et al., 2019) and prepares them for future college-level work (Hilton et al., 2019; Marsh, 2018).
2. Student responses will indicate little concern about sharing their work with global audiences or having their names associated with their submissions (Fulton & Kibby, 2017; Jiang et al., 2016).

Several authors indicate that to respect privacy and safety concerns, instructors using Open Pedagogy should allow students to determine whether to include their work in published compilations and the option of using a pseudonym (DeRosa & Robison, 2017; Elder, 2019; Mays, 2017; Seraphin et al., 2019). The researchers of this study have examined available databases for empirical studies related to students' perception of privacy in public-facing materials. No data on student concern related to Open Pedagogy and thus, by extension OER-enabled Pedagogy was located. Thus, this study plays a role in connecting sound practice and evidentiary support and represents important preliminary insight into OER-enabled Pedagogy from the perspective of those to whom it is intended to benefit. In addition, no studies have yet been published regarding the impression of students at smaller and private schools to OER-enabled Pedagogy, a gap this paper also seeks to help fill.

Methods

Institutional Profile & Research Participants

In 2019, faculty and staff at a private, open enrollment university undertook the task of redesigning curriculum for a First Year Seminar (FS) class. Traditionally, this required learners to purchase a common reader selected by faculty. Taught by eighteen faculty and staff members, FS represents the first exposure most students have to a college classroom. Considering the high percentage of first-generation (37%) and low-income (57.6%) students at the university, as well as a first-year attrition rate close to 40%, course instructors were interested in developing a pedagogical approach that both reduces student cost and increases engagement.

OER-Enabled Pedagogy Project Overview

A project based on the concept of OER-enabled Pedagogy was selected as a central part of the new curricula. To successfully complete the project, students identified a current knowledge gap they had regarding the university experience. Next, in small groups or individually, they developed an artifact of their choosing (e.g. video presentation, infographic) to be included in an eBook for use as the reader in future classes. Students conducted research on their topics (e.g. interviews, surveys, document analysis) and submitted a project proposal, draft with peer review, and final project. Instructors were asked to maintain the structure of the assignment including the three assignment stages. The intent was that projects would be improved by instructor feedback at the proposal and draft stages, as well as through peer review. Thus, the experience was designed to enhance student agency while providing mentorship between instructor and student.

Within the field of Open Pedagogy and thus OER-enabled Pedagogy, questions have been raised as to the ethics of requiring students to openly license their work, or mandating that learners post

their artifact with or without their names (Elder, 2019; Mays, 2017). To address these concerns, instructors were given a video explaining copyright and Creative Commons licensing. Instructors played this toward the end of class and facilitated a discussion about the value of licensing options. Students then selected a license. Similarly, students determined individually whether they would be given attribution for their project. Any project missing a licensing form was copyrighted while any student not indicating otherwise was "anonymous".

Research Process

To address instructor-related differences, training sessions were held before the term and throughout the semester related to OER-enabled Pedagogy and the project. Instructors were given three assignments (project proposal, draft/peer review, and final submission) to incorporate into their own class. These assignments included student directions, examples, and scoring rubrics.

A mixed-method approach was used to assess the research questions. During the last week of class, an anonymous survey (see Appendix A) was sent to all FS students. Demographically, the class was 52% female and 48% male, with an average of 18. Ninety-eight percent of the students enrolled within a year of completing high school and 16% identified as an ethic minority. The survey consisted of 15 questions: four demographic, six to assess student impression of the project openness, three to determine student impression of skill development, one regarding willingness to take another class with an open project, and one open-ended. Questions on the survey were answered on a 5-point, Likert-type scale. To increase participation students were offered an opportunity to enter a drawing for one of five $10 gift cards. Considering the study's exploratory nature, descriptive statistics were generated for each question and evaluated in relation to the research hypotheses. Inferential statistics were not utilized for two reasons. First, since all freshmen participated and it was the first time the project was utilized, researchers lacked an effective comparison group. Second, a pre/post design was not practical as the study sought information on student experience with OER-enabled Pedagogy which they could not assess prior to completion of the project. While the results provide insight into important aspects of this pedagogical movement, attempts were not made to generalize findings.

Following the term semi-structured interviews were conducted with 12 students, four male and eight female (average age of 18.8). Three students were recruited as they indicated earlier their willingness to volunteer for research. Nine students were randomly selected from course rosters and contacted directly. Students were offered a $10 gift card to be a research participant. Researchers planned a minimum of 12 interviews, then to assess whether additional participants were necessary to achieve data saturation. After 12 interviews, no new themes emerged so recruitment ceased. Verbatim transcripts were created from audio recordings and analyzed using the program Dedoose. Researchers reviewed transcripts collaboratively taking an inductive and line-by-line approach (Charmaz, 2012; Skjott Linneberg & Korsgaard, 2019). Open coding was followed by axial coding to develop categories/themes (Khandkar, n.d.).

Reflexivity is important in transparent scientific exploration as researchers impact and are in turn impacted by their research. In this study, the authors played a collaborative but vital role in redesigning the FS curricula to include OER-enabled Pedagogy as agency and empowerment were viewed as critical to student development. The authors developed and facilitated all training on OER-enabled Pedagogy for FS instructors. In addition, one of the researchers facilitated a section of the first-year course and as such, did not play a role in recruiting participants or interviewing a student who was a member their class.

Results

Although the intent was for students to have a great amount of agency, it was discovered that instructors teaching a cohort of science majors made significant changes to the project. While still OER-enabled Pedagogy, students did not have an opportunity to select their own topic, direct their experience, or determine the format of the final project. These students also did not participate in peer review, an important element of open pedagogical approaches (Hegarty, 2015). These 74 students were removed from the participant pool to reduce variance in results that could be attributed to different assignment approaches.

Surveys were sent to the remaining 329 students. Following several reminders, ninety-two completed responses were received, a response rate of 28%. Of those, 51% identified as female and 49% male, nearly identical to the overall composition of the freshman class. In addition, 58.9% of respondents indicated they had prior experience with OER (defined for students as, "class materials that one may freely use, reuse, and share") and 19.6% were familiar or very familiar with student-created content. Students were asked how frequently they post to social media as it was believed this information may provide insight into attitude toward sharing in general. Fifty-two percent indicated they post to social media at least once a day, 36% once a week or every few days, and 12% never.

Student Motivation and Concern in an Open Assignment

Table 1 depicts the results of questions about aspects the students found motivating or concerning. To aid in comparison to results from Hilton et al. (2019) which is one of only two empirical studies exploring student perception of OER-enabled Pedagogy and the one most similar to this research, data was condensed to three categories; less than a neutral perception, neutral, and greater than a neutral perception.

Two questions asked about student excitement or motivation to participate in the project. In relation to creating an artifact that would be available to future students, 30.7% of respondents indicated they were excited, 44% were neutral, and just over one-quarter indicated they were not excited. Results were slightly more positive in relation to whether they found the project being available to future students and a global community motivating, with 41.3% indicating it was, 35.9% neutral, and 22.8% not motivating.

Table 1: Student Responses to Attitudinal Questions

Attitudinal Questions	1 or 2	3 (neutral)	4 or 5
Excitement participating in a project open to future students	25.3% (not excited)	44.0%	30.7% (excited)
Motivation that the final project was open to students locally and globally	22.8% (not motivating)	35.9%	41.3% (motivating)
Concern with project being available to students locally and globally	43.5% (not concerned)	41.3%	15.2% (concerned)
Concern with project being available to others with name included	52.7% (not concerned)	35.2%	12.1% (concerned)
Positive or negative feelings about the project having utility following class	15.2% (negative)	41.3%	43.5% (positive)
Positive or negative impact of the open project on overall engagement in the course	15.4% (less engaging)	39.6%	45.1% (more engaging)

Note: 5-point scale reduced for concision

The next two questions asked about concerns related to attribution and sharing their work. As evident in Table 1, only 15.2% of responses indicated concern of their projects being available to others and 12.1% reticence of public attribution. Forty percent to 50% of students indicated no concern in either regard, 43.5% stated no concern with their project being made available to future students and a global audience, and 52.7% no concern about being given attribution. When asked if they viewed the project more positively or negatively knowing it would be useful in the future (non-disposable), only 15.4% of those who responded indicated a more negative outlook. Closely mirroring these results were responses to a final attitudinal question about whether the course seemed more engaging than other classes without a project of this nature.

Development of Academically Important Skills

Three questions measured student belief in the project building tangible skills: confidence in completing a multi-week project, confidence in one's ability to collaborate in groups, and confidence conducting research and drawing conclusions. Only a small percentage of students felt that the OER-enabled Pedagogy-based project had a negative effect on their confidence related to cross-disciplinary skills (see Table 2). While a large portion of students marked "neutral", over 56% indicated an increased confidence in completing multi-week projects, 44% felt more confident collaborating in group settings, and more than 45% stated their confidence in engaging in research and drawing conclusions was enhanced.

Table 2: Student Responses to Skills Gained through OER-Enabled Pedagogy

Skills Questions	1 or 2	3 (neutral)	4 or 5
Impact of project on confidence completing a multi-week project	6.8% (less confident)	33.7%	56.5% (more confident)
Impact of project on confidence collaborating in groups for major assignments[1]	11.0% (less confident)	27.5%	44.0% (more confident)
Impact of project on conducting research and drawing conclusions	5.5% (less confident)	49.5%	45.5% (more confident)

Note: 5-point scale reduced for concision

[1]13.2% worked individually.

The final question of the survey prior to a free response section asked students if they would be willing to take another course including similar projects. While a plurality of students (42.4%) indicated yes, 38% of respondents were indifferent and 19.6% unwilling. These results parallel those found by Hilton et al. (2019) were 52.7% of students preferred Open Pedagogy, 27.8% indicated no preference, and 19.5% of respondents preferred more conventional learning activities.

Few individuals provided anonymous feedback on the survey. Two students wrote they did not like the project, but indicated that it was because they did not believe it would be used in future classes. Three individuals stated they enjoyed the project. Three students contributed advice for future iterations, including providing additional examples and more time to work on the project. Two individuals stated they did not like the project without further explanation.

Attribution Decision of Students

Figure 1 depicts the attribution option selected by students.

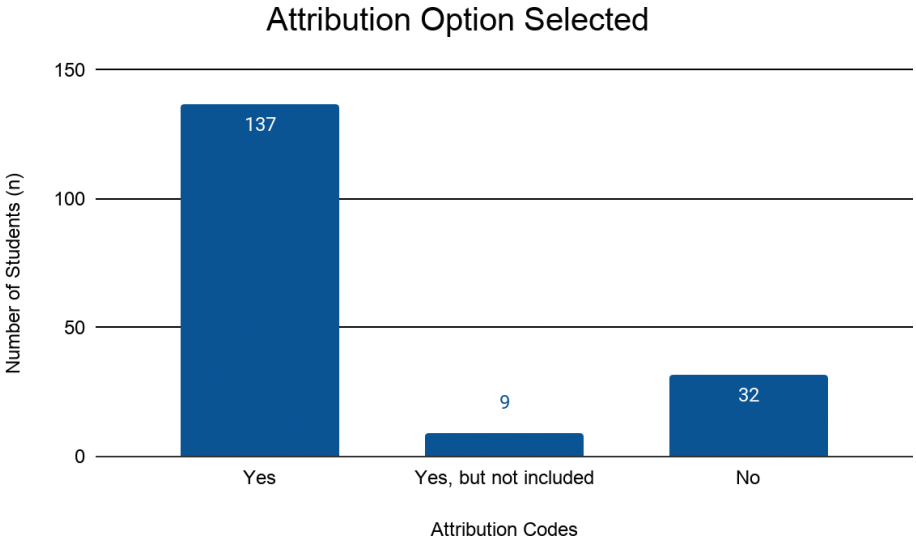

Figure 1: Attribution Permissions for Students

Of the 178 individuals who returned forms, 77% indicated they would like to be given attribution while 18% opted for anonymity. Nine individuals (5%) wished to have their names on their project but their artifact was not included in the eBook due to quality concerns. Fourteen students were listed as part of a group but did not submit an attribution form so had their names removed by default. The difference between the total number of students on course rosters and the forms received may be attributed to students who stopped attending class with the intent to drop or those who did not submit a final project.

Motivation to Help Others

Results of interviews provided greater insight into the elements of OER-enabled Pedagogy that students found motivating. One key theme that emerged was the high value students placed on work that could benefit others. Student 2 indicated, "Just the thought of giving advice to someone who is just coming in. That's the most interesting thing because they might feel lost or like they don't know what to do." Similarly, Student 8 stated, "…you know we could be the reason why, we can change somebody's life or change their, their concept on the whole thing…". When reflecting on whether an assignment is of greater value if it benefits oneself or others, Student 9 noted, "I think the most motivating would be valuable to others, because they can also learn something from the whole experience." This recognition on the part of students is important as the development of a non-disposable assignment is a key element of Open Pedagogy and OER-enabled Pedagogy (Seraphin et al., 2019).

Motivation Through Agency

Another theme that emerged was the importance of agency in the development of motivation. Apparently, motivation is largely dependent on the student being able to align personal interest with their classwork as opposed to having this determined by the instructor. Student 1 stated:

> I always think being able to choose your own topic on any assignment no matter what makes the person who is doing it 10x more motivated to do it. It just, even just my case because in the past when they have given me a topic and I like, I don't want to do this, I don't want to write a whole project about this, but when I get to choose myself, I know what I'm looking for. I know what I'm writing. It's really exciting to me.

Student 12 echoed this sentiment stating, "Yea because if they give us our own then I don't want to do it.", while Student 7 viewed agency as providing an opportunity to create something of lasting value, ". . . that's why I picked the topic I picked because people were going to be able to use it from here and maybe like, 20 years later." Student 9 expanded on choice connecting this to the concept of freedom:

> …you know like, normally when you get a project for science or something somebody tells you what to do it's like, I'm doing this for them but seeing that I had the option to pick the topic that I wanted to do, it made me have like free will in the situation so I got to be myself...

Every student interviewed mentioned the motivational value of being given agency. Student 3 indicated that it was somewhat overwhelming to have complete choice and would have liked to have had a list to select from, but this was not mentioned by others. Agency is not limited to projects conforming to OER-enabled Pedagogy. It does, however, serve to disrupt the hierarchical power dynamic within a classroom and provides voice to those who are traditionally oppressed, foundational elements within the decolonizing and critical pedagogy pillars of open pedagogical approaches (DeRosa & Robison, 2017; Ehlers, 2011; Hegarty, 2015; Lambert, 2018).

Motivation Through Public Recognition

A third major theme from student interviews related to the perceived value of receiving public credit. Several students saw attribution as an issue of pride. Student 9 indicated, "I love that because that's like me getting credit for my work…", while Student 4 stated "…if I help people learn how to study, then it's nice to get a little bit of credit I guess." Student 2 wanted her name on the project for a more specific reason noting, "... people could reach out to me if they're coming into band and, be like, 'Hey I'm coming into band. I'm going to be a marching band student. Can you give me more advice, or how did you do this'?" Student 10, on the other hand, showed indifference saying, "I really didn't mind one way or another." Only one student interviewed indicated a desire to remain anonymous. She stated, ". . . I'm very shy and I wrote kind of stuff like, how to deal with things that I did and stuff and I didn't really want people to know that, so try to hide it . . ."

Discussion

Research Question 1

The first research question explored how a project based on OER-enabled Pedagogy impacts student motivation and engagement. Researchers compared their findings to Hilton's et al.'s (2019) study on the use of Open Pedagogy in the undergraduate classroom. Survey results reported here suggest that the criteria inherent in framing works as OER-enabled Pedagogy also improve students'

attitudes toward the assignment. Although approximately 35% to 45% of students were neutral about the impact of sharing their work on their own excitement and motivation, nearly 31% of those who responded found sharing with future learners exciting and 41% sharing with future students and a global community motivating (see Table 1).

Researchers hypothesized that the open nature of the project would positively impact student perception. Survey results generally affirmed this, both regarding motivation and excitement. Interviews were even more definitive regarding the perceived value of sharing work publicly, with all participants indicating they appreciated this part of the project. The reason this was motivational varied among three main ideas: 1) sharing helps others which is a good thing to do, 2) sharing makes you try harder so that others see your best work, and 3) sharing is a way of receiving credit for your efforts.

Future iterations of the project may show continued positive trends in student attitude towards becoming content creators, as each new class will be able to see the fruits of the labor of previous cohorts. The published eBook may address the concerns of two students who provided free responses on the survey indicating an overall negative impression of the project based on the belief that it would not be used by future classes. Three of the 12 students interviewed also indicated doubt that students in subsequent courses would reference their work. It is unknown how widespread this impression was or how it affected student responses regarding excitement and motivation.

Survey data indicating that OER-enabled Pedagogy positively affects student engagement aligns with the limited research data on the topic. Hilton et al. (2019) indicate that students who participate in Open Pedagogy respond positively, with 52% stating that they preferred Open Pedagogy. Sheu (2020) echoes this sentiment, with renewable assignments being preferred by 70.6% of class participants. Students surveyed here were not asked whether they preferred OER-enabled Pedagogy but if their feelings were more positive or negative due to the open nature of the project and if the course was more engaging because of the project structure. Only 15.2% of students indicated negative feelings regarding the non-disposable nature of the project. Similarly, 15.4% of students said this course was less engaging than courses without a similar project (see Table 1).

The first research hypothesis also speculated that students would find OER-enabled Pedagogy helpful in building skills needed for college-level work. Many students who worked in groups and participated in the survey indicated that their collaboration skills increased as a result of the project. While given the opportunity to work individually, 80 of 92 projects were completed by groups. When asked about their development of collaborative skills, 44% indicated an increase. This aligns with the experience of students at other institutions regarding the impact of Open Pedagogy on their ability to collaborate with others (Marsh, 2018). It also parallels findings by Hilton et al. (2019) who write that 48% of students indicated collaborative learning skills were higher with Open Pedagogy. As students in this study could choose to work alone or with others, results may be different if group work was mandated.

As Table 2 indicates, a significant number of students perceived an enhancement in their confidence completing a multi-week project (56.5%), and conducting research and drawing conclusions (45.5%). While these skills are not inherent in all “open” assignments, they are important for students to thrive at the college level. These findings are complementary to those of Hilton et al. (2019) who indicate that students felt Open Pedagogy improved critical thinking and problem solving (45%) and learning how to learn (37%) to a greater extent than more traditional approaches.

Research Question 2

The second research question explored whether students were concerned with the "open" nature of assignments inherent in OER-enabled Pedagogy. Researchers hypothesized that students in this age group would not have the same concern for privacy their instructors may expect due to frequent use of social media. Research assessing the perceived risk of providing personal information online indicates that adolescents (ages 12-19) may feel more comfortable sharing than older individuals (Steijn & Vedder, 2015). A study by Pereira et al. (2017) comparing Baby Boomers, Generation X, and Millennials indicated younger Millennials (ages 18-27) were less concerned about both privacy and security than other generational groups.

As predicted, students showed little hesitation including their names on projects. Of the 173 attribution forms received, 137 students requested to be given credit for their project. Of the students surveyed, 52.7% indicated they did not have concerns about the project including their name.

These findings were supported through student interviews. Ten of the 12 students interviewed indicated a positive view of attribution for their work, with one student indifferent and only one reticent to having their name on their project. One reason for this may be the nature of the assignment. Being a college survival guide and providing students agency to choose the topic, students may have been less concerned about others knowing their identity compared to work viewed as more personal. The definition of OER-enabled Pedagogy encompasses activities as diverse as writing test question banks, editing Wikipedia articles, creating study guides, and co-authoring books. While many of these activities would likely not be seen as private, some students do not wish to have their name associated with work available to others and this should be respected.

A high number of students in this sample post frequently to social media (88% weekly or more) and also demonstrate little concern about online privacy, although causation between these was not established. Further research may assess the willingness of current college-aged students toward sharing their classwork publicly and their social media habits. Such an endeavor may demonstrate that a causal relationship exists between social media behavior and one's willingness to share academic artifacts.

Additional research is needed regarding the various ways OER-enabled Pedagogy is implemented and how this impacts student perception. Here, freedom was given to students to work alone or in groups. Although this increased student agency and all students interacted with others in the classroom, future studies may determine how student experience is similar or different if they are in a group or work alone. Additionally, this project was the creation of a college survival guide. Data collected from both the survey and interviews was thus contextualized. While students indicated during interviews that they saw the activity as beneficial both to themselves and others, motivation likely depends on the values held by each student. Thus, findings may differ in other academic subjects, by a student's academic standing, or using other open assignments.

Finally, on the survey some students indicated negative views of the project. The most common reason stated was the belief that the artifacts would not be used by future students. While this concern may be ameliorated in future classes, it is clear that some individuals did not find the project motivating or engaging. Research specifically on those with this belief would be beneficial in improving the experience for all students.

Conclusion

This study begins filling gaps in current empirical research related to the impact of OER-enabled Pedagogy on students. Two research questions were examined: 1- How does a project based on OER-enabled Pedagogy impact student motivation and engagement in a course?, and, 2- Are

students concerned with the "open" nature of assignments inherent in OER-enabled Pedagogy? While both Hilton et al. (2019) and Sheu (2020) report on student perception, neither specifically address students' impressions of the motivation experienced by a project being "open" nor the concerns students may view in sharing their work with larger audiences. The authors of this report have not been able to identify any empirical studies reporting on student perceptions of these elements.

Findings indicate that students are generally motivated and engaged by the prospect of their work having meaning outside the limitations of the disposable assignment. Results indicate that a plurality of students are willing to participate in another course that uses OER-enabled Pedagogy, findings which are further strengthened by interview data. This mirrors comparative data from Hilton et al. (2019).

Several limitations of this study should be noted. First, this research was conducted with first-year students at one institution. It is unknown how results would differ if conducted with those who are not freshmen or at institutions with different student demographics. Second, because of changes made by instructors teaching a cohort containing declared science majors, these students were not included in analyses. Third, due to a withdrawal policy that goes until the last day of class, it is possible that some students had decided to drop the course prior to data collection but remained on the class roster. Finally, considering the survey response rate, generalizability to the entire freshman class cannot be guaranteed. Although interviews generally aligned with survey findings, additional research to confirm these results is merited.

The general takeaway from this study at a small, private university is similar to that of Hilton et al. (2019) and Sheu (2020), namely that students found value in a class incorporating OER-enabled Pedagogy. Thus, while more research is warranted and not all students perceive a value to this approach, existing data with students at private and public institutions is promising and may serve as a stepping-off point for future analyses.

Acknowledgements

The authors wish to thank Dr. Hannah Freeman and Dr. Mathys Meyer for their work in reviewing the article and Dr. Meg Sidle for her assistance in providing institutional data. We would also like to thank anonymous peer reviewers for their insight, which made the final manuscript stronger.

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Appendix A

Student Survey Instrument

Q1 Do you identify as
- Male
- Female
- Prefer not to say

Q2 Have you had prior experience using open educational resources (OERs) in the classroom? OERs are class materials that one may freely use, reuse, and share.
- Yes
- No

Q3 How frequently do you post to social media (Snapchat, Instagram, Twitter, Facebook, etc.)?
- Multiple times a day
- About once a day
- Once every few days
- About once a week
- Never

Q4 How familiar were you with student-created course content as a part of education prior to taking this course?
- Very Unfamiliar
- Unfamiliar
- Neutral
- Familiar
- Very Familiar

Questions 5-14 were answered on a 5-point scale where one represented the lowest score, three was neutral, and five the highest score.

Q5 How excited were you to participate in a project that would be openly available to future University students?

Q6 How motivating was it that the final product of your course was going to be made openly available to future students both at the University and globally?

Q7 How concerned were you about your project being made available to future students, both at the University and globally?

Q8 How concerned were you about your project being made available to others with your name being included as a creator of the project?

Q9 Were your feelings about the final project more positive or more negative since you knew the assignment was going to be useful after the class ended?

Q10 Did this course seem more engaging or less engaging than courses that do not have a project like this as a major part of the course?

Q11 How confident are you in your ability to complete a multi-week project after completing your final project?

Q12 Did this project help you feel more confident collaborating in groups for major assignments or less confident?

Q13 Did this project make you more confident or less confident doing research and drawing conclusions?

Q14 How willing are you to take another course that has a student-created public project?

Q15 Do you have any comments that you would like to leave regarding your experience with the final project?