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Open Education Exploration Grant: Joseph Williams

Date: 7/13/2021

To: Chris Sweet and Stephanie Davis-Kahl, Ames Library

From: Joseph Williams, Department of Psychology, Illinois Wesleyan University

Re: Ames Library Open Education Exploration Grant

Introduction:

In the past several years, I've become more interested in exploring Open Education Resources to better the student experience in the classroom and as a means to lower costs both from a university perspective in terms of having to invest in significant software applications and/or hardware and also from a student perspective. As the costs of textbooks and supplemental materials has risen, I've noticed that many of the students in my classes have not been able to afford the required materials and thus are at a disadvantage compared to their peers. The lack of easy access to key materials often has an impact on a student's grades on exams and other course assignments. Based on my observations (e.g., the students who come to my office hours when they cannot afford key materials), this issue seems to disproportionately impact students of color and first-generation college students. In addition, as I've incorporated flipped classroom elements to my classes, ensuring ready access to key materials becomes even more vital. I chose Psychology 100 for this particular grant because I think it has the potential to ultimately impact the greatest number of students taking Psychology classes (9-11 sections per year at approximately 30 students per section). Also, the students who take this class are primarily first-year students who are new to navigating issues such knowing what campus resources are available when they are having financial difficulties and who often feel more reluctant to talk to professors about these financial difficulties. I'm focusing my efforts for this grant on three keys issues: 1) Exploring open access (free) textbooks to replace the textbook I am currently using 2) Finding free hands-on demos to illustrate key class concepts and 3) Finding free supplemental materials, such as thought-provoking readings for class discussions and videos of classic Psychology experiments.

Textbooks:

The textbook I currently use is *Peter Gray's Psychology*. Though there are a large number of General psychology textbooks available, I have used this one because it is a high level textbook that is written at a level that is sophisticated enough to be a challenge for our IWU student population. Many of the commercial textbooks currently available are written at too basic a level that does not ground the material enough in scientific studies. *Peter Gray's Psychology*, being well-established, also comes with a good set of supplemental materials. My ideal result of this grant would be to find an OER textbook that is challenging enough for our IWU students and grounds the information in the textbook with significant discussion of the scientific studies that form the basis of the facts presented in the textbook. The

availability of supplemental materials would be a bonus, but not an absolute requirement because I could find supplemental materials from other sources that relate to the book, but are not directly provided by the textbook provider itself. For this grant, I specifically examined OER textbooks that had decent user ratings.

Boundless:

The first open resource textbook I examined was one Boundless (available at boundless.com). Boundless describes itself as “an innovative technology company making education more affordable and accessible for students everywhere. The company creates the world’s best open educational content in 20+ subjects that align to more than 1,000 popular college textbooks. Boundless integrates learning technology into all its premium books to help students study more efficiently at a fraction of the cost of traditional textbooks.” Although they do offer some premium (paid) content, I focused on their free textbook and accompanying slides. Unfortunately, after going through 5-6 chapters, this textbook is more of an outline of topics than a well-thought out text. They cover the main topics, but in a very superficial way. For instance, there is very little discussion of the studies that support the facts presented. The book is more of a series of definitions and does not provide any significant analysis of the findings and provides little context for the information in the text. I don’t think this textbook would help develop the critical thinking skills I aim to develop in my class. The supplemental materials (mainly PowerPoint presentations) suffer from the same problem. This would not be an acceptable option to replace my current textbook.

Introduction to Psychology: The Full Noba Collection

<https://nobaproject.com/textbooks/introduction-to-psychology-the-full-noba-collection>

Unlike the textbooks I discuss above and below, this textbook is not the traditional pdf type of textbook. Instead, it is a collection of 101 teaching modules presented in HTML-type format. One advantage to this approach that I particularly like is that the Noba collection allows instructors to remove or re-order modules to fit the needs of their individual classes. The material is factually solid, though the organization of material within chapters isn’t always the most cohesive. The text jumps from point to point without strong segues linking the material. One plus of the Noba collection is that it emphasizes more modern research studies, which many textbooks neglect. However, in doing so, the text neglects a lot of seminal research studies that are critical for Psychology 100 students to know. The text is written in an easy to understand language, but I don’t think the material is challenging enough for IWU students. The textbook describes itself as being aimed at community college students or lower tier college students. To me, the textbook gives the factual information, but most of the modules fail to develop critical thinking skills as much as I would like. Overall, not a bad option, but I am not likely to adopt this textbook as a whole in my class. There are a few individual modules that I might incorporate that contain material some of the other OER textbooks don’t cover or don’t cover with much depth (e.g., The Replication Crisis in Psychology; Biochemistry of Love; Culture). I think modules such as these would appeal to students and can help shape their critical thinking skills.

Introduction to Psychology (Stangor & Walinga):

Another textbook that I examined is significantly stronger than the Boundless and Noba textbooks described above and is one that I would consider adopting. *Introduction to Psychology (First Edition)* is written by Charles Stangor and Jennifer Walinga and is available at <https://opentextbc.ca/introductiontopsychology/>. As described in the introduction on the website of the book, this book purposely is more streamlined than the typical Psychology 100 textbook and covers less material. However, in looking through the topics covered, I think this textbook covers the key material I would want in an introductory textbook, so I'm not too concerned with some omitted topics as there is typically more information in a Psychology 100 textbook than can be covered in a one-semester class. The book has chapters covering the material I currently cover in class. The information in the textbook is factually sound and bases its content on scientific studies, providing a significant bibliography for each chapter and generous use of in-text citations. The text has sufficient diagrams/pictures to enhance the material in the text. From their list of updates, it appears an issue in the past was use of copyrighted images, but their list of updates indicates that such material has been removed and replaced by similar, but un-copyrighted images. Being a first edition, I suspect that other images might have to be removed (for instance, I recognized some pictures from my current textbook), but it seems they are diligent in replacing flagged material with OER resources. On the downside, the book contains links to YouTube videos that take you to the YouTube home page but not to the actual video itself. Copying and pasting does take students to the actual video though as does using the QR code embedded in the textbook, so this is not a huge problem. The textbook also has breakout boxes to highlight key take-away issues and to highlight applications of material to real-life examples. The book is intended for use by Canadian college students, so some examples more specifically pertain to things that would be better known by Canadian students and the book uses the metric system throughout the text, so some things might be a little confusing for US students, but I didn't find this to be too problematic. Overall, it is a very solid textbook and one that I would seriously consider adopting. However, I would more likely use the OpenStax textbook discussed below due to the fact that the OpenStax textbook seems to be more established and is from a more stable platform (i.e., more likely has the resources behind it to be updated on a more regular basis).

OpenStax:

The text book, *Psychology*, available at <https://openstax.org/details/psychology> is a very promising candidate as an OER textbook that I would seriously consider as a replacement to my current text. The textbook (from senior contributing author Rosie M. Spielman, formerly of Quinnipiac University) is made available for free by OpenStax. One advantage of OpenStax is that it is associated with Rice University and has major philanthropic support (e.g., the Bill and Melinda Gates foundation). One worry I have with adopting an open source textbook is that without a stable platform around it, the textbook might not be updated on a regular basis and might eventually become obsolete. I think this textbook appears to have been updated recently, with numerous modern examples to flesh out the classical studies in Psychology. Though not as strong as my current textbook, this online free textbook covers the topics enough both in breadth and in depth, which are essential for any textbook that I would adopt. The textbook covers most of the material I currently cover in my Psychology 100 section, so would not require a wholesale change

to my lectures and class demonstrations/activities. Unlike the Boundless textbook, the Openstax text does go into the scientific studies behind the facts that are presented and includes numerous citations and examples. The text also has sections that “Dig Deeper” into specific topics allowing for the development of critical thinking skills. On the downside, I did notice a few slight factual errors (nothing too major, more on the side of oversimplification or ignoring some important contextual elements), so I would have to more thoroughly go through each chapter and make sure that students are aware of these elements. Also, this OER textbook refers to some key elements that I go over in class, but refers to the concepts by a different name, so I would need time to carefully go through the textbook and update my PowerPoint slides to avoid confusion for the students. The textbook does provide numerous links to free supplemental materials. Of the links that I examined, the materials are thought-provoking (e.g., a link to a short NPR segment on research by African-American Psychology scholars that influenced the Brown vs. Board of education Supreme Court Decision) and have strong relevance to the textbook material. I had hoped to incorporate materials made available by a 3rd party site called Lumen Learning (<https://lumenlearning.com/courses/introduction-to-psychology/>) that were specifically developed to accompany this textbook. Some online sources indicated these resources were free, but in a follow-up email with the company, it appears they are now charging \$25 per student which moves away from what I am hoping to achieve with this grant (i.e., moving to completely free materials for the class). In all, my plan is to replace my current textbook (which costs slightly over \$200 for a new hardcover copy of the most recent edition) with this free OER version. I won't be able to implement the change by Fall 2021, but my hope is to be able to adopt this free OER version by Fall 2022 (or perhaps by this coming Spring 2021).

Hand-on demos/supplemental materials:

In my classes, I try to get students to go beyond rote definition. I want students to actively experience the material they are leaning about. As such, I try to incorporate hands-on demonstrations as much as I can. Although a number of these are done in class so we can discuss the demos afterwards, the demos do take up significant class time. Also, typically one student will volunteer to do the demo while the other students watch. I would like to find some free options where students can do the demos themselves online before class so that we can devote more time to discussing the demos in class without falling too far behind in the syllabus. In addition, I also try to develop activities to develop students' critical thinking skills (e.g., in-depth discussions on research methodology or ethical issues in Psychology) that revolve around articles that I assign students to read or videos I ask them to watch prior to class. As such, I would like to accumulate a set of OER resources such as these that would complement the new textbook that I plan to adopt.

PsyToolKit:

A free site that I am particularly interested in incorporating into my class is PsyToolKit (available at <https://www.psytoolkit.org/experiment-library/#exps>). This site has a number of demos of cognitive psychology tests that are often used in Psychological research. Tests that I often discuss in my Psychology 100 class that are available on the site include a: Stroop test, Negative Priming test, Iowa Gambling Test, Implicit Association Test and Mental Rotation Test (among many others). The tasks are all available for free on the website. I tested all the ones I would likely use in my Psychology 100 class and all the demos run smoothly and provide easy-to-understand instructions that students could easily

do at home by themselves. At the end of the tasks, the screen provides a read-out on how the student scored overall on the tasks. Students can also download a more detailed look at their performance on each individual trial. I'll almost certainly use this resource in live demonstrations in class and will also develop assignments around the longer tasks for students to do at home by themselves.

Practical Psychology: https://www.youtube.com/channel/UCir93b_ftqInEaDpsWYbo_g

This is a YouTube channel (recommended by the Merlot OER site) which compiles a number of Psychology related videos. Although the information in the videos is good, the decision to do most of the videos in lower level animation detracts from the scientific rigor and seriousness of the findings that I like to emphasize in my classes. I prefer video resources that show actual clips of classic psychology experiments, rather than animated "re-creations". I think this site is aimed more at a general population without any prior Psychology knowledge rather than a college-level audience enrolled in a Psychology 100 course. I would not be likely to use this resource in my classes. Overall, I searched for other OER Psychology-related videos, but didn't find many suitable options.

OERCommons.org: <https://www.oercommons.org/curated-collections/414>

This OER site for Psychology has a large variety of material listed. What made me interested in this site was that they break the resources down into specific categories, like Activity/Labs, Assignments, Data Sets, Interactive, Readings and Simulations (among others). Unfortunately, this breakdown wasn't very useful. Almost every link brought up essentially the same exact list of textbooks. The links didn't take the user to specific data sets, activities etc. You had to open the textbook and go through the entire textbook to find activities/readings etc. I think requiring students to go through this many steps makes it a less desirable option, so I would be unlikely to use this site as a resource for students.

Digital Anatomist Interactive Atlases: <http://da.si.washington.edu/da.html>

This is an excellent site administered by the University of Washington Structural Informatics Group and Department of Biological Structure. The site was initially a grant-funded CD-ROM that has since migrated to a web-based application that is available for free to the public. Though the grant no longer appears to be active and the site isn't updated with major changes anymore, it still provides an excellent resource on neuroanatomy for undergraduates. The site contains both schematic drawings and actual photographs of a number of structures talked about in General Psychology (including the hippocampus, amygdala, brainstem etc.) The site allows students to click on individual structures to reveal the name of the structure, allows students to quiz themselves and allows students to have outlines and/or labels to appear on the images if the student gets stuck and can't identify a structure. The interface is extremely easy to use and I haven't found many glitches other than the animations that were a part of the CD-ROM no longer working (which the website makes a note of when you try to click on the animations, so students shouldn't be too confused with the lack of functionality). That said, I'm not too certain I would use this site for my Psychology 100 class. I don't go heavily into neuroanatomy in Psychology 100 (I focus

more on the function of brain structures than the absolute location), but I definitely plan to incorporate this free resource into my Neuroscience-focused classes.

Final summary:

This grant to explore OER resources for my Psychology 100 (Introduction to Psychology) class has been very educational. The findings have led me to some high quality, free resources that I plan to incorporate into my Psychology 100 sections in the near future. More specially, I plan to replace my current textbook with the textbook *Psychology* (from senior contributing author Rosie M. Spielman, formerly of Quinnipiac University) which is available for free at <https://openstax.org/details/psychology>. I also plan to incorporate cognitive tests available from PsyToolKit (<https://www.psytoolkit.org/experiment-library/#exps>) into my classroom lessons. On a lesser note, I have found some smaller OER articles and videos that can lend themselves inclusion in my Psychology 100 class, but since these resources are less developed, I will have to continue to monitor advancements in these areas in the future. Overall, I think these changes will continue to allow me to maintain the current quality of the Psychology 100 course (in terms of providing students with the essential background information expected in a Psychology 100 course while developing their critical thinking skills as it relates to the subject matter) while significantly reducing the cost of materials required for the class. I believe this will have a significant financial benefit for students, especially for students who have historically struggled to afford class material. My hope is that by moving to more OER materials, more students will have access to the class materials and subsequently will improve their performance in the class.