

Graduate student experiences with a commercial versus open educational resource textbook

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ABSTRACT

This study compared graduate student experiences with commercial textbooks and an open educational resource (OER) textbook in an adult gerontology primary care course. Eighteen graduate students participated in the study; half were in a spring cohort class that required a commercial textbook, and the other half in a fall cohort received an OER textbook.

Overall, 22% of graduate students expressed anxiety or stress regarding textbook costs. When comparing commercial textbooks to an OER textbook, 66% preferred the OER. Graduate students that utilized an OER textbook reported the textbook was essential to their learning process and future.

Keywords: Teaching materials textbooks, course content, nursing education research

Experiencias de estudiantes de posgrado con un libro de texto de recursos educativos comerciales en comparación con uno abierto

RESUMEN

Este estudio comparó las experiencias de estudiantes de posgrado con libros de texto comerciales y un libro de texto de recursos educativos abiertos (REA) en un curso de atención primaria en

gerontología para adultos. Dieciocho estudiantes de posgrado participaron en el estudio; la mitad pertenecía a una cohorte de primavera que requería un libro de texto comercial, mientras que la otra mitad, a una cohorte de otoño, recibió un libro de texto de REA.

En general, el 22 % de los estudiantes de posgrado expresó ansiedad o estrés por el costo de los libros de texto. Al comparar los libros de texto comerciales con un libro de texto de REA, el 66 % prefirió este último. Los estudiantes de posgrado que utilizaron un libro de texto de REA informaron que este fue esencial para su proceso de aprendizaje y su futuro.

Palabras clave: Libros de texto de materiales didácticos, Contenidos de cursos, Investigación en educación en enfermería

研究生在使用商业教材与开放教育资源教材方面的体验

摘要

本研究比较了研究生在一项成人老年初级保健课程中使用商业教材和开放教育资源(OER)教材的体验。共有18名研究生参与了这项研究,其中一半是春季班的学生,他们使用商业教材;另一半是秋季班的学生,他们使用OER教材。

总体而言,22%的研究生表示对教材费用感到焦虑或压力。在比较商业教材和OER教材时,66%的学生更倾向于选择OER教材。使用OER教材的研究生表示,该教材对他们的学习过程 and 未来发展至关重要。

关键词: 教学材料课本, 课程内容, 护理教育研究

Introduction

The basic cost of graduate nursing education can range from \$18,000 to more than \$90,000, but this does not include additional student costs like textbooks (St. John, 2024). Commercial textbooks are widely used throughout higher education and over the years textbook costs have

increased about three times the rate of inflation (Nagle & Vitez, 2020). Jenkins et al. (2020) completed a survey of 700 students at a four-year university and found that textbook costs create significant stress, especially for underserved populations. Among racial and ethnic minorities, low-income, and first-generation college students, 89% reported experiencing stress due to textbook

expenses. Additionally, 44% of these students chose not to purchase a textbook, even though they knew it would negatively impact their performance in the course. In a nationwide survey of over 4,000 students, 25 percent reported working extra or even skipping meals to support course material costs (Nagel & Vitez, 2020). With the high cost of graduate school and rising textbook costs, educators need innovative methods to decrease student costs. One modality to decrease textbook costs is the implementation of open educational resources (OERs) within coursework.

Review of Literature

Open educational resources are defined as “learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others” (UNESCO, 2019, p. 5). Commercial textbooks are copyrighted and users are not able to revise, remix and redistribute. Furthermore, commercial textbooks cost money for students while OERs are free to students.

Educational research assessing OERs in nursing is in its infancy. Many completed studies only examine one variable among many possible variables. Optimal research design should address variability across student and educator characteristics to compare OERs and commercial textbooks (Connolly & Svoboda, 2022). Early completed

research seems to suggest that implementing OERs in nursing education is beneficial for student learning. A recent study that examined graduate nursing education, surveyed 21 graduate nursing students who were in a course with OERs and found the implementation of OERs enhanced engagement in learning. Through open access materials, graduate students engaged with relevant content and had access to variety of resources compared to just one singular textbook (Gazarian, 2020). However, the study did not have a comparison group, so it is hard to determine the true effect of OERs compared to commercial textbooks.

The purpose of this research is to compare graduate student experiences with commercial textbooks and OER textbooks in two cohorts of a graduate course.

Methods

Participants and OER Textbook

This study was reviewed by the institutional review board and was approved for exemption. Participants were students in a primary care adult gerontological nurse practitioners program taking a Health Promotion and Prevention course at a large university in Colorado. The spring cohort was assigned a commercial textbook (*Health Promotion Throughout the Lifespan* 9th edition by Edelman, Kudzma, and Mandle) for the course and the fall cohort was assigned an OER textbook, created by the course faculty (Paxton, 2024), which is located on the MERLOT website.

The development of this book grew out of a prior assessment of available commercial textbooks that found they lacked up to date information, contained irrelevant information for the course, and lacked information specific to primary care delivery. The faculty noticed that students were often paying for a commercial textbook but only utilizing approximately 40% of the text for the course, which required the course faculty to supplement with other material that was relevant to current practice.

Data Collection

Each cohort was presented with an anonymous survey regarding their textbook experiences. The spring cohort was given a survey at the beginning of their summer course while the fall cohort was given their survey at the end of their course. The survey was placed on their learning management system platform and was administered through Qualtrics. Student participation in the survey was voluntary and not related to their course grade.

Data Analysis

All descriptive and inferential statistics were calculated in SAS Version 9.4 (SAS Institute Inc., 2023). Differences in demographic characteristics such as age, gender, race, 1st generation college student, financial aid, work status, and more between fall and spring cohort were assessed using t-test, Wilcoxon tests or Fisher's exact tests. Mean (95% CI) or median (IQR) is presented for each continuous variable, depending on the distribution, and frequency (percent) is presented for categorical variables.

Results

There was a total of 18 graduate students in this study, 9 students in each cohort. All survey data was completed by each participant. Participants were, in average 33-years (95% CI: 30.7, 37.0), 94% females, 72% Non-Hispanic White, 33% first generation, and 89% working on average of 23.6 hours per week.

The average semester material cost between both cohorts for students was \$158 (95% CI: 71.6, 243.9). 94% of students had reported that textbook costs have caused them stress and 39% have opted out of buying a required text in the past. When taking the Health Promotion and Prevention course, 22% expressed feeling anxiety or stress regarding textbook costs. Out of 78% of students who rented textbooks, 93% of them only kept the text for the duration of the class.

A variety of educational resources were preferred by both cohorts, such as a paper copy of textbooks (72%), free online simulations (72%), websites and/or online videos (67%), and journal articles (89%). If cost was not an issue the preferred learning material was a traditional paper copy textbook (62%) followed by digital or online textbooks (13%). Even though OERs are considered digital resources, students can print out an OER resource as a PDF.

There was no statistical difference in all demographic characteristics between cohort groups. However, 66% of graduate students preferred an OER textbook compared to a commer-

cial textbook. Graduate students from the fall cohort that utilized an OER textbook reported that use of the OER textbook was essential to their learning process and their future career, whereas those who utilized commercial textbooks did not rate their textbook as essential.

Discussion

This was a small study that included 18 graduate students. The anxiety for current textbook costs for these graduate students was lower than other studies but likely reflects how demographic differences such as race and level of education can alter student stress level (Jenkins et al., 2020). Many of the students in this study saw benefits to the implementation of an OER textbook for their learning and future career. There are minimal studies on OERs for graduate nursing students, but one study regarding master's students in an engineering and management course found that prior student loans can alter student's perceptions with OERs; students with loans are better prepared and more engaged with the material when OERs are utilized in the classroom (Nipa & Kermanshachi, 2018). This current study of graduate nursing students did not assess student loans due to the small class size and further studies should determine if loan status can affect graduate student engagement with textbooks.

OERs offer a unique opportunity for educators to provide current information without waiting years for a commercial textbook to create a new

edition. In the healthcare field where information is constantly changing, OER textbooks are adaptable to meet the changing healthcare environment. As highlighted by Luo et al. (2020), OERs are able to adapt, engage and encourage course participation through a variety of learning environments. There are several platforms to host OER textbooks like OpenStax, Libretext, Merlot, or Pressbooks. Each platform offers different interactive textbook capabilities such as answering questions in the textbook to inputting videos creating a more immersive learning experience with a textbook. As noted in this study, websites or online videos were a popular form of receiving information. Furthermore, having courses with an OER textbook streamlines information to current practices and guidelines without sending students to multiple links or articles.

This study did not utilize grades as a measurement due to the small class sizes and minimal grade variations within master's courses. However, another study of graduate level teaching education courses found that students preferred the implementation of OERs and did not find any grade differences when OERs were implemented (Kritzer & Vu, 2019). These results suggest that OERs are able to maintain course competencies and rigor of the course material.

Implications

This study provides further insight into the value of OER textbooks for graduate nursing stu-

dents. Graduate nursing students often experience stress with textbook costs. When compared with courses with a commercial textbook to a course with an OER textbook, our results indicate that students value the OER textbook more than the commercial textbook. Furthermore, OER textbooks allow for immediate content updates, so that graduate nursing students are learning the most recent evidence-based content. Despite the sample size being small, this study was able to control for some learner and educational variables by having the same faculty teaching the same course and only altering the type of textbook offered: a commercial textbook or an OER textbook. Since grad-

uate nursing classes tend to be smaller, future research needs to include multiple sites to effectively assess the benefits of graduate nursing OER textbooks and the effect on student engagement and relevance to their future career.

Conclusion

Graduate nursing students can experience stress related to textbook costs. Creating or adopting OERs within graduate courses are received as a positive learning experience. Courses with OER textbooks offer the ability to quickly offer relevant resources at no cost to students.

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Author Bios

Teresa Connolly, PhD, RN, ACNS-BC, CNRN is a professor at the University of Colorado Anschutz Medical Campus College of Nursing. She earned her Bachelor of Science in Nursing at Villanova University and both her master's degree and PhD in Nursing from Boston College. She has over 13 years of experience as a nurse educator and received multiple awards for excellence in teaching. Her continued contributions to open educational resources in nursing earned her the CU System OER Champion Award in 2024 and the 2025 Governor's Award for Outstanding Workforce Zero Textbook Degree.

Kim Paxton DNP, APRN, ANP-BC, LHIT-C, IHM-C is an assistant professor at the University of Colorado College of Nursing and the past adult geriatric nurse practitioner program specialty director. She earned her Doctorate of Nursing Practice along with a Leadership in Health Informational Technology Certificate from the University of Minnesota Twin Cities in 2012. In 2021, post-graduate education in Integrative Health and Medicine at the Skaggs School of Pharmacy University of Colorado and 2024 post graduate Genetics and Genomics program at Vanderbilt University. She has over 22 years of experience as an educator, presented at regional and national conferences on varied APRN topics and most recently received the OER University of Colorado Anschutz Medical Campus Champion award for 2025.

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