Calculating Cost Savings Associated with OER Implementation

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• The webcast will be 60 minutes in length with time allotted for responding to questions (please use chat feature).

• This webinar session will be recorded and archived on MHEC's YouTube channel accessible via www.mhec.org/oer. Slides will also be sent as an attachment after the webinar.
Calculating Cost Savings Associated with OER Implementation

March 26, 2019
Agenda

1. Introductions and Thanks - Jenny
2. Overview of Webinar and OER Cost Calculations - Jenny
3. OpenStax Calculations – Nicole
4. Lumen Learning Calculations – David
5. State of Oregon – Amy
6. State of North Dakota – Craig
7. Questions
Your Host

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OER State Policy Expert and Commentator

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Overview: OER Cost Calculations

• One of the most common questions asked by MHEC state OER teams (and others!)
• Used for accountability and ROI for legislators and grant funders (& other purposes)
• No recommended or preferred methodology
• Varying assumptions
• Varying units of analysis: organization, institution, system, state
Overview: Webinar Purposes

1. To provide participants with examples of high quality cost savings studies and calculations performed at different levels of analysis, employing varying strategies, and making different assumptions.

2. To provide participants an opportunity to ask presenters questions about the OER cost savings studies and calculations they have performed.
Overview: Webinar Structure

1. Nicole Finkbeiner, Openstax: a large, national level cost savings study conducted several times

2. David Wiley, Lumen Learning: a large, national study on how to calculate cost savings associated with OER (stratified, random sample)

3. Amy Hofer, Openorgeron: a statewide cost savings study developed by one institution but deployed by many

4. Craig Hashbarger, ND Auditor’s Office: a statewide cost savings study conducted by one organization using accounting methods
OpenStax Tracking of Adoptions

• Faculty and institutions self-report adoptions.
  – Faculty verification process (to receive faculty-only ancillaries)
  – Adoption form on our website
  – Institutions reporting adoptions (Institutional Partner Program)
• We enter the information in our Consumer Relationship Management (CRM) tool, which is essentially a database of all of our information and contacts with individuals.
• The CRM calculates the total number of students impacted and cost savings.
OpenStax Calculations

• Tracking average cost savings across all books allowed for scale.
  – Tracking individually when we had 100 faculty using our books would have been relatively easy, but now over 20,000 faculty use our books!
  – Use the same savings number, no matter which OpenStax book they use.

• Originally we said average savings of $98.57 based on internal calculations.
OpenStax Calculations

• We changed to $79.37 for the 2018-2019 academic year.
  – The U.S. Department of Education’s National Center for Education Statistics published a study in May 2018 stating the average undergraduate student spent $555.60 on required course materials for the academic year.
  – 2015-16 National Postsecondary Student Aid Study (NPSAS:16) Restricted-Use Data File
  – $555.60/7 undergraduate average courses per year = $79.37
A New Method for Estimating OER Savings

Mo Nyamweya and Nicole Allen, SPARC
David Wiley, PhD, Lumen Learning

https://opencontent.org/blog/archives/5820 (EDA, data, and source code)
Methodology

• We drew a stratified random sample, based on simplified Carnegie Classification, of 120 institutions from all Title IV eligible public and private for-profit degree-granting institutions in IPEDS

• Selected 20 high enrolling courses with easily adoptable OER options

• Randomly assigned five courses to each institution (600 data points)

• Using the college bookstore website, we recorded the prices of each available purchasing option—new, used, print rental, digital rental, loose leaf, etc. For courses with no materials listed, we recorded zeros.
Methodology

• We acknowledged the wide range of purchasing behavior exhibited by students.
• Rather than multiply each category of purchase by the percentage of students who purchased, we simply took the midpoint between the highest and lowest cost and used this number as our cost figure.
• We acknowledged that many students spend money on OER (e.g., some purchase printed copies). (OER Only)
• We acknowledged that some OER are adopted in conjunction with homework and other online tools. (OER Hybrid)
• Traditionally Copyrighted Materials (TCM)
Types of Institutions Represented in the Data

- Associate’s
- Baccalaureate
- Doctoral
- Master’s
- Tribal

Number of Institutions vs. Type of Institution
Rate of Adoption of Different Types of Materials

- 93.7% TCM
- 4.6% OER Hybrid
- 1.7% OER Only
Average Highest and Lowest Prices by Type of Required Materials

- OER Hybrid:
  - Highest: $40.42
  - Lowest: $28.99

- OER Only:
  - Highest: $15.4
  - Lowest: $5.99

- TCM:
  - Highest: $164.82
  - Lowest: $103.7
Keep in mind:

- Data is squishy, so be transparent and consistent when reporting savings.

- Build relationships with the people that manage existing data sources.

- Saving money has a big impact on students, regardless of the method used to calculate the amount.
Collecting Data

[# of students] x [$ saved] = [savings estimate]
Additional Resources

Templates

- Basic savings estimate for $0 courses: https://tinyurl.com/basic-0
- Maximum potential savings estimate for $0 courses: https://tinyurl.com/max-potential-0
- Basic savings estimate for $0 and low-cost courses: https://tinyurl.com/basic-no-low
- Maximum potential savings estimate for $0 and low-cost courses: https://tinyurl.com/max-potential-no-low
- Basic savings estimate, separate from schedule designation: https://tinyurl.com/basic-savings-all
- Maximum savings estimate, separate from schedule designation: https://tinyurl.com/max-savings-all

Further reading/listening

- Estimating student savings from no-cost/low-cost course materials
- Archived Webinar: Estimating student savings from no-cost/low-cost course materials
- Estimated 2017-18 Student Savings in No-Cost/Low-Cost Courses
Calculating Cost Savings
Associated with OER Implementation

Craig Hashbarger, Audit Manager
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/NDStateAuditor
“We produce informative audits to improve government.”
OER from an Auditor’s Perspective

• Professional auditing standards
• Purpose of our work
  • Identify opportunities for improvement
  • Evaluate use of taxpayer and institutional resources
  • Make recommendations
• Broad audience
• Objective, transparent
• Rely on OER experts (because we aren’t!)
Calculating Textbook Costs

- Sample of 10 courses
- New, used, rental, hard copy, digital
- Median high cost and median low cost:
  - $682 (lowest)
  - $1,115
  - $1,161
  - $663
  - $590
  - $734
  - $900
  - $559
  - $707
  - $286
  - $1,703

Chart 4: Lowest versus Highest Bookstore Cost by Institution

<table>
<thead>
<tr>
<th>Institution</th>
<th>Bookstore Lowest Cost</th>
<th>Bookstore New Textbook Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC</td>
<td>$682</td>
<td>$1,489</td>
</tr>
<tr>
<td>DCB</td>
<td>$1,113</td>
<td>$1,722</td>
</tr>
<tr>
<td>DSU</td>
<td>$1,161</td>
<td>$2,084</td>
</tr>
<tr>
<td>LRSC</td>
<td>$663</td>
<td>$1,253</td>
</tr>
<tr>
<td>MaSU</td>
<td>$590</td>
<td>$1,711</td>
</tr>
<tr>
<td>MiSU</td>
<td>$734</td>
<td>$1,356</td>
</tr>
<tr>
<td>NDSCS</td>
<td>$900</td>
<td>$1,802</td>
</tr>
<tr>
<td>NDSU</td>
<td>$559</td>
<td>$1,660</td>
</tr>
<tr>
<td>UND</td>
<td>$707</td>
<td>$1,309</td>
</tr>
<tr>
<td>VCSU</td>
<td>$286</td>
<td>$630</td>
</tr>
<tr>
<td>WSC</td>
<td>$1,660</td>
<td>$734</td>
</tr>
</tbody>
</table>

- BSC: Business and Science College
- DCB: Design and Creative Arts
- DSU: Digital, Social, and Urban
- LRSC: Liberal, Renewable, Social, and Community
- MaSU: Mathematics, Statistics, and Urban
- MiSU: Music, Interdisciplinary, and Social
- NDSCS: Natural and Science, Community, and Social
- NDSU: Natural, Design, Science, and Urban
- UND: University of North Dakota
- VCSU: Visual, Creative, Science, and Urban
- WSC: Westhampton State College
Calculating # of Students Impacted

- Listing of OER courses provided by Provost, VPAA, or designee
- Audited the list
- Obtained student enrollments from university system software

Chart 2: NDUS Students Impacted by OER Courses

- Number of Students
- Number of Courses
Beyond the cost savings...

Interviews and surveys with numerous stakeholders, both sides of OER issue

Acknowledge the “good” and the “bad.”

Identify the incentives and encourage those

Identify the barriers and how they may be overcome
Questions for the Presenters

Please use the chat feature to submit questions.
Webinar Follow-up

Please complete the assessment upon conclusion of the webinar.

The webcast and slides will be posted to the MHEC website:

www.MHEC.org/OER
OER Contact

For more information on MHEC’s work with Open Educational Resources, please contact:

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