Exploring Return-on-Investment of Open Educational Resources

探索开放教育资源的回报率问题

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Offers BSIS, MLS, PhD
One of the largest masters and PhD program in the U. S.
MLS Accredited by the American Library Association

Ranked #20 by US News & World Report
Medical Librarianship ranked #6
School Librarianship ranked #8
New MS in Data Science Program
Cost of College Keeps Rising

Average Full-Time 4 Year Undergrad Tuition, Fees, Room, and Board

Private
- 1975: $17K
- 1980: $16K
- 1985: $19K
- 1990: $24K
- 1995: $27K
- 2000: $31K
- 2005: $35K
- 2010: $39K
- 2015: $43K

Public
- 1975: $8K
- 1980: $8K
- 1985: $8K
- 1990: $9K
- 1995: $11K
- 2000: $12K
- 2005: $14K
- 2010: $17K
- 2015: $19K

Source: College Board
The BIG BUSINESS of TEXTBOOKS

800%  
Rise in textbook costs over the past 30 years

65%  
Students who have opted not to buy a required textbook due to cost

$1,200  
What the average college student spends per year on books and supplies

$4.3 billion  
Total earnings on higher education course materials from 1,200 publishers surveyed

SOURCES: College Board, U.S. PIRG Education Fund, Student PIRGs, Association of American Publishers
Definition of Open Educational Resources

开放教育资源定义

• UNESCO: “any type of educational materials that are in the public domain or introduced with an open license”

• Working definition:
  • Open textbooks
  • Open learning content
  • Open courseware
OER Examples

• Examples of open textbook portals are Community College Open Textbook Project (CCOTP) (Petrides, Jimes, Middleton-Detzner, Walling, and Weiss, 2011),
• University of Minnesota’s Open Textbook Library (http://open.umn.edu/opentextbooks/)
• Rice University’s Openstax (Openstax, 2016)
• Khan Academy
• Youtube educational videos/Self-generated digital content
Disciplinary Imbalance on Open Textbooks

• Accounting & Finance: 8
• Business, Management & Marketing: 50
• Computer Science & Information Systems: 39
• Economics: 17
• Education: 34 (including 2 books on information literacy)
• Engineering: 6
• Humanities & Languages: 75
• Journalism, Media Studies & Communications: 12
• Law: 49
• Mathematics & Statistics: 67
• Medicine: 6
• Natural & Physical Sciences: 40
• Social Sciences: 35
• Student Success (Literacies): 10

Source: http://open.umn.edu/opentextbooks/
Flat World Knowledge Portal

- Business & Economics: 80
- Humanities & Social Science: 33
- Chemistry & Geography: 5
- Health & wellness: 3
- Math and statistics: 3
University of North Texas OER
北得克萨斯大学的OER 管理模式

• Headed by Center for Learning Enhancement and Redesign and University Libraries
• Focus on open textbooks/open classroom materials
• Organized pilot projects
Assessment Criteria of Open Textbook from Open Textbook Library 开放教科书的评价指标体系

- Comprehensiveness / 全面性
- Accuracy / 精确性
- Relevancy/Longevity / 相关性
- Clarity / 简介度
- Consistency / 连续性
- Modularity / 模块化
- Organization/Structure/Flow / 结构
- Interface / 界面
- Grammatical Errors / 句法
- Cultural Relevance / 文化相关性
Cost-comparison of Open Textbooks 直接费用比较

• The WAC Clearinghouse (Univ. Press of Colorado)
• Amazon for $40
• Flat World Knowledge books: $29.95
Institutional Incentives / 制度化激励机制

• Increase student affordability and accessibility*
• Increase faculty reputation and impact by disseminate widely their scholarly work
• Potential on student retention
• Foster open access culture

Source: Allen (2010)
Cost-saving and knowledge transfer

- Petrides et al (2011) interviewed 4 faculty out of 11 instructors and 680 students using a *Collaborative Statistics* open textbook
  - Cost reduction
  - Perceived quality of the content
  - Ease of use
  - Portability
  - Varied by discipline (math and computer science used more)
- Class interactivity and student behavior
- Integration to existing instructional material
Social Values

• Before adopting open textbooks, instructors need to consider the relationship between instructional materials and teaching and learning.

• Ball and Cohen (1996) stated that some instructors believe good teachers do not use textbooks, but instead create their own.

• It is best to consider students’ specific needs – maybe co-design with students – as Robin Derosa from Plymouth State University blogged in May 20, 2016.
A Return-On-Investment Model

- Social values on critical thinking
- Social values on competency gain
- Individual return on critical thinking
- Individual return on competency gain
ROI and Sustainability
可持续性
• Faculty recognition of open texts related to promotion and tenure
• Support among campus administrators
• Recognition of faculty/student joint publication
• OER and tenure and promotion guideline
• More research data on the impact to retention and learning effectiveness
Concerns
其它应考虑的问题

• Unrevokable copyright
• Faculty royalties
• Name recognition and publisher reputation
• Quality Concern (peer-review, Plag-report)
• Time commitment
  • Adjunct faculty
  • Non-permanent faculty
Thank you

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