OPEN TEXTBOOKS IN THEORY AND PRACTICE: LESSONS FROM CALIFORNIA

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WHO I AM

• Background: Anthropology of Technology, Comparative Education, ICT4D
• Also a trained optometrist (but that’s a whole other story)
• Instructor in Information Studies, Germanics, Media Studies and Music History
• Long-standing interest in the potential of OER to increase access for underserved and nontraditional students
• Personal experience in using OER for continuing education/ re-training as student, and as an instructor in my courses
• Involved since Summer 2017 in the redesign of the German Language curriculum at UCLA using OER
Objective
1) To analyze the technical and social challenges involved in the creation and implementation of OTs, and how these are shaping the physical form, interactive possibilities and pedagogical function of these tools.
2) To examine what openness is in practice, and how we can better research and understand it.

Methods
• 50 semi-structured interviews with key stakeholders (incl. instructors, publishers, OER/OT coordinators & administrators) (45 so far)
• Observations (3 classrooms, 8 OER training workshops and summits across the state over 1.5 years)
• System analysis of 2 OT platforms (case studies)
<table>
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<th>Theoretical Framework</th>
<th>Relevant insights</th>
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| **Social Construction of Technology (SCOT)** (Pinch & Bijker) | • Technology is open to *more than one interpretations*; it can mean different things to different stakeholders (designers, administrators, users etc.)  
• These stakeholders direct technological development through their interpretation/meanings - perhaps to fruition, perhaps to defeat  
• SCOT exposes how technologies come to take one particular form from a range of possible alternatives |
| **Theories of materiality** – material agency; **Infrastructural approaches to the study of technological tools/artifacts** (e.g., Blanchette, Bolldén, Sørensen) | • There is an integral connection between the content of open textbooks, the technical systems within which they reside and the material formats in which they are delivered, a connection that fundamentally shapes interaction and, thus, teaching and learning.  
• In order to understand what technology *does and means* in various social contexts, we need to better understand its production processes, i.e. how technology “comes to be” |
MOTIVATIONS FOR IMPLEMENTATION OF OTS/OER IN THE US

• Reduce costs for students
• Increase access for underrepresented students
• Improve overall completion rate
• Bring us one step closer to the “digital future”
TEXTBOOK COST IN THE US

• Students spend around $600 a year on textbooks
  • But: many buy used, rent, pirate or don’t get some textbooks at all
• The average price of a textbook is $100
  • But textbooks in fields like Economics, Physics and Business can cost up to $400
• New college textbook prices have risen by roughly 6% per year since 2001 - approximately 3 times the rate of inflation

Impact on students
• 48% take fewer classes or different classes
• 65% choose to not buy textbook
• 94% report concern that grades affected

Sources:
http://openoregon.org/is-the-average-cost-of-a-textbook-100/
https://www.learntechlib.org/f/180463/
OPEN TEXTBOOKS IN CALIFORNIA

- California Textbook Affordability Act 2015: incentive grants to adopt OER awarded to 23 community and 19 state colleges
- In 2016, the California legislature allocated funding to create Zero Textbook Cost degrees (Associate & Career Technical Education degrees) in California Community Colleges
- 23 colleges are currently developing full degree and certificate pathways that have eliminate textbook costs
- Research universities are mostly absent from the OE movement
- Open innovation is driven largely by community colleges (e.g., College of the Canyons, Lake Tahoe Community College)
1. SHADES OF OPEN

• Multiple visions of “open”, as well as a spectrum in terms of objects and practices

• Different interpretations and instantiations of open (textbooks) dependent on institutional context, technical skills of creators, disciplinary needs (and values), funding mandates etc.

• Informants often used the term “open” to refer to objects that are freely available but not open – esp. on campuses with Affordable Textbook Initiatives

• OTs (and OER more broadly) are seen as part of the solution but not as the only solution; some instructors and librarians even insisted that fixation on “open” can be a barrier to access/affordability; “(truly) open is nice but not always possible”
2. “OPEN ARTIFACTS” VS “OPEN PRACTICES”

• Being open = making open resources (e.g., textbooks)
• Interest in the pedagogical potential of OTs or in open values such as participation in the “gift economy” and co-creation/sharing of knowledge are not strong motivators among instructors for using/creating OTs; most say they did it to reduce costs for their students
• Untapped potential in terms of pedagogical innovation/emergence of new learning models supported by the use of open technology
  • Most instructors reported that adopting OTs did not affect their teaching/teaching style or students’ learning
  • Instructors who have created or remixed OTs are a lot more interested in the pedagogical potential of “open” than those who have only adopted and are using resources “as is”
• **Provocation:** A focus on content/artifacts has allowed for-profit publishers and ed-tech companies to dominate the discussion of what the future of learning should look like (e.g., digital, adaptive, personalized) as well as to potentially co-opt the OE movement by utilizing OER/OTs as a resource and wrapping “paid for”/“value-added” services around them
3. FROM MODULAR BITS TO PACKAGED GOODS

• Modularity is often championed for enabling instructors to meet their and their students’ needs, and it is considered an important dimension of OER

• However, we are seeing a strong desire for - and an investment in - the creation of “readymade”/”packaged” OTs that resemble traditional textbooks

• Open advocates & technologists often suggest that this is due to instructors being “conservative”, or even lazy

• There is even judgement from some OT publishers (who engage in different models) that the providers who focus on traditional-looking textbooks (e.g. OpenStax) are holding the movement back

• However, interviews with instructors actually suggest that the preference for packaged artifacts is due to:
  • overburdened schedules/ time constraints (esp. in the case of adjuncts)
  • institutional constraints (e.g. issues with transferability)
  • technical constraints (see next slide)
  • and concerns over meeting students where they are (esp. in GE/ intro level courses)
4. THE CHALLENGES OF “DEEP REMIXABILITY”

• Remix (and redistribution) is considered one of the pillars of open education, yet it is perceived as extremely cumbersome by many instructors.

• The majority of instructors who had engaged in remix, reported not redistributing their version because they didn’t think it was good (i.e., too choppy) or because they had added content to it that was not open.

Why?

• Different OTs/ OER structure and narrate content differently; creating unity, flow and smooth transitions can be extremely time-consuming.

• Existing editing/ customization tools are not perceived favorably.

• Lack of widely adopted standards makes it difficult and often impossible for individual textbook components to interface with each other at the technical (e.g., encoding) and social (e.g., copyright) levels.
5. THE MYTH OF THE “PAPERLESS CLASSROOM”

- Most technologists (e.g. engineers, publishers) interviewed argued that paper is only desired by “conservative” instructors; yet in all classrooms there was a small but significant number of students consciously choosing paper.

- Findings suggest that paper and paper practices are not dead, esp. in fields like math where solving problems by hand is the only option.

- Some instructors struggle with resources that are "too interactive" or “too modular" (e.g. CK-12, Saylor, SmartHistory) and can’t be printed out easily.

- Students value the flexibility of open textbooks and the ability to choose between formats, but many prefer print for “deeper” reading and preparation for exams.

- Important to think about what that means for “openness”, which is often equated with the digital and the immaterial.
THANK YOU FOR YOUR ATTENTION!

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LIST OF ABBREVIATIONS

- OTs = open textbooks
- OER = open educational resources
- OE = open education