A qualitative analysis of open textbook reviews authored by higher education faculty and instructors

Insights for open textbook authors, adopters, and publishers
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  - Open Education Group
  - William & Flora Hewlett Foundation
The research question

What do faculty consider to be the strengths and weaknesses of open textbooks, and how can these perceptions inform the work of open textbook authors and publishers?
The reviews & books

- 954 reviews
  - 235 open textbooks
- Authored by faculty & instructors
- 2014-2017
- Publicly accessible in the Open Textbook Library of the Open Textbook Network
Open Textbook Library criteria

- Openly licensed
- Complete textbook & portable file
- Original (not a derivative)
- Use/affiliation (higher education, scholarly, professional)
- 2016 onwards: license can’t stipulate ND
Collection of the reviews

- Accompanies participation in an Open Textbook Network workshop
- Published as written, with CC license, in the Open Textbook Library
- Gather faculty perceptions
- Engage faculty with open textbooks
The reviews

- Standardized format
- 10 areas of concern + comments
- Open-ended responses + rating
- Overall rating
The reviews: 10 areas + comments

- Comprehensiveness
- Content Accuracy
- Relevance, Longevity
- Clarity
- Consistency
- Modularity
- Organization, Structure, Flow
- Interface
- Grammatical Errors
- Cultural Relevance
- Comments
The reviews: question prompts

Please comment on the book's comprehensiveness. The text covers all areas and ideas of the subject appropriately and provides an effective index and/or glossary.

How do you rate the book's overall comprehensiveness?

5 = high  1 = low
Analysis

- Created, applied, discussed, and revised a thematic coding template
- Independently coded in-common & separate subsets of the reviews
- Compared our coding consistency
- Revised our coding
Analysis

Please comment on the book's cultural relevance. The text is not culturally insensitive or offensive in any way. It should make use of examples that are inclusive of a variety of races, ethnicities, and backgrounds.
Primary codes

- (+) Relevant
- (-) Somewhat relevant
- (-) Not relevant
- Relevance N/A to textbook
- Relevance not addressed
Secondary codes

- Approach is neutral
- (+) Specific characteristics
- (-) Specific characteristics
- Compares to other textbooks
- Suggestions
- (+) Pros of open textbooks
- (-) Cons of open textbooks
Findings

Patterns and voices
Findings: Comprehensiveness

(+) Comprehensive: 73.0% (703)

(-) Somewhat Comprehensive: 22.1 % (213)

(-) Not Comprehensive: 2.1% (21)
It is hard to find topics that should be included in an introductory text such as this one that have been left out. All the standard topics are there as well as additional material not found in most introductory physics books.

“Comprehensive

Excerpt: Kriton Papavasiliou, review of College Physics
The text is fairly comprehensive for an introductory level course, but it often lacks detail--even for an Intro text. For example, the text excludes discussion on feminist perspectives and it fails to attribute theoretical paradigms to the corresponding theorists.

“Somewhat Comprehensive

Excerpt: Angela Addae, review of Introduction to Sociology 2e
Findings: Content Accuracy

(+) Accurate: 80.8% (778)

(-) Somewhat Accurate: 15.2% (146)

(-) Not Accurate: 1.0% (10)
The book is accurate and unbiased. The book is up to date and very well researched. There are virtually no errors. Figure 9.3 is a diagram of a DNA molecule. The DNA molecule should contain the sugar Deoxyribose, not Ribose.

"Accurate"

Excerpt: Trevor Johnson, review of Concepts of Biology
There are many overstated generalities, inaccuracies and incomplete descriptions of function through the text.

Excerpt: Patrick Wilson, review of *Anatomy and Physiology of Animals*
Findings: Relevance & Longevity

(+) Relevant: 81.2% (782)

(-) Somewhat Relevant: 14.0% (135)

(-) Not Relevant: 2.5% (24)
The issue of human to human ethics goes back to Plato, and our logic goes back to Aristotle, so the topic has a long history of relevance. By drawing on an analogy of our ethical and logical relationships with animals, the author establishes the relevance for a contemporary reader.

"Relevant"

Excerpt: Lutz Kramer, review of *Animals & Ethics 101: Thinking Critically About Animal Rights*
The content mostly references experts and other texts from the 1990s and 2000s with most major references ending by 2007. It seems the text could use some updating on recent developments in cultural intelligence.

“Barry Carroll, review of *Leading with Cultural Intelligence*
Findings: Clarity

(+ ) Clear: 80.4% (774)

(-) Somewhat Clear: 16.6% (160)

(-) Not Clear: 3.6% (25)
The book is well-written and concise. Bearing in mind the author’s stated target audience of graduate and doctoral students, it is entirely reasonable that this would require additional work and instructor support (extra time and explanations for definitions and examples, for instance) when used in an undergraduate classroom.
I like the way the text is written to be approachable for a wide variety of students. I think balancing chemical reactions could be done in a clearer way, as it is hard to tell which numbers are the co-efficients.

“Somewhat clear

Excerpt: Lisa Smith, review of *Chemistry: Atoms First*
Findings: Consistency

(+) Consistent: 83.2 (801)

(-) Somewhat Consistent: 12.7% (122)

(-) Not Consistent: 3.0% (29)
The book's organization (introduction with vivid example, major concepts, ...) is consistent throughout the book and for each chapter. I found this format made it easy to prep for class and assists in a deeper understanding of each of the important frameworks.

“Excerpt: Aida Ramos, review of *Introduction to Sociology 2e*
Somewhat consistent

The content in each chapter does match the content in other chapters, but the poor placement of the chapters only makes that consistency accessible if one were to really dig. It should be easy for students to match concepts from one chapter to the other.

Excerpt: Dana Harker, review of *Writing Spaces: Readings on Writing Vol. II*
Findings: Organization, Structure, Flow

(+) Organized: 78.0% (751)
(-) Somewhat Organized: 15.0% (174)
(-) Not Organized: 3.0% (29)
I noted no issues with organization or structure, and the ordering of topics appears reasonable. The author's sequence is not identical to what I am used to teaching, but it appears logical, workable and perhaps superior. This also speaks to the book’s modularity, as it is possible to present these topics in a different order if needed.

Excerpt: Craig Moore, review of *Managerial Accounting*
The organization of the text is very unusual. Air resistance is discussed in the chapter on forces. It should instead be in the chapter on fluids where density is introduced. This organization is detrimental to student learning. This is a single example of a much deeper problem of the organization of this text.

Excerpt: Ulrich Zurcher, review of *Light and Matter*
Findings: Modularity

(+) Modular: 83.7% (806)

(-) Somewhat Modular: 10.8% (104)

(-) Not Modular: 2.2% (21)
The text materials can easily be divided into subunits suited to the instructor's purposes, who may easily pick and choose which materials to use or not to use. The book is not overly self-referential and easily divisible into specific exercises, projects, or emphases.

"Modular"

Excerpt: Peter Eubanks, review of Liberté
The sections and exercises have some modularity for utilization as stand-alone elements. However as a whole the text builds from a foundation in theory and proceeds through increasingly complex methodological approaches making a reorganization challenging.

Excerpt: Amber Raley, review of *Applied Developmental Systems Science*...
Findings: Interface

(+): No Interface Issues: 62.5% (602)
(-): Some Interface Issues: 26.4% (254)
(-): Insufficient interface: 1.5% (14)
All navigation links to chapters and sections work well. . . . The text uses appropriate organization of graphics and text highlighting important concepts in a non-distracting manner. Colors for text, fonts, headings are all appropriate and help to focus the reader's attention to what is truly important.

Excerpt: Benjamin Gort, review of College Algebra
The book had a great deal of white space and frequent blank pages (making me wonder if my PDF file had downloaded fully). A bit of work to improve the design and make the book more visually interesting (colors, less wasted space, etc), certainly wouldn't hurt.

Excerpt: Kate Maurer, review of *About Writing: A Guide*
Findings: Grammatical Errors

(+): No grammar issues: 81.6% (786)

(-): Limited/minor grammar issues: 13.4% (129)

(-): Significant grammar issues: 1.5% (14)
I have not noticed any grammatical errors. In terms of style, I would say that it is colloquial, friendly English. The material is certainly technical but there is a consultative, inviting tone behind the technical discussion.

Excerpt: James Fowler, review of *A First Course in Linear Algebra*
At times, sentences run on, with the sentence looking more like a paragraph and having multiple commas. Otherwise, the writing looks clean, although at quite a high level.

"Limited or minor grammar issues"

Excerpt: Mike Weimerskirch, review of *Precalculus*
Findings: Cultural Relevance

(+) Culturally Relevant: 66.6% (641)

(-) Somewhat Culturally Relevant: 24.5% (236)

(-) Not Culturally Relevant: 3.2% (31)
The book is free of race, class, gender or other bias and provides broad and varied examples of strategies appropriate for teaching students with diverse generational backgrounds as well as emotional and learning diversities.

Excerpt: Connie Miller, review of *Creative Clinical Teaching In The Health Professions*
The book is not inclusive of diversity. The majority, if not all, of the pictures within the text are of Caucasians. No special considerations are offered related to race, ethnicity, or background. Very little consideration of age.

"Excerpt: Kristina Blyer, review of Clinical Procedures for Safer Patient Care"
How are/might reviews of open textbooks/OER be of value to you and your higher education communities?

✓ Advocacy
✓ Guiding adopters, creators, publishers, and adapters
✓ Informing use and pedagogy
Attributions

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