

Open Textbook Collaborative

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Open Textbook Collaborative Review

OTC Title Under Review: *Introduction to Computer Programming: Java* by Chris Simber

OTC Title URL: <https://opennj.net/java-simber>

Review Date and Author: March 2023 by Seth Bergmann of Rowan University

OER projects are rated for each criterion on a scale of 1 to 5 (1 = very poor and 5 = excellent), generating a total score out of 55 with a brief explanation of the rating.

1. Comprehensiveness – 4.5

- a. The text covers all areas and ideas of the subject appropriately and can be easily navigated.
- b. How do you rate the book's overall comprehensiveness?

This textbook introduces more general areas of computer science such as fundamentals of hardware and software systems. In terms of Java programming it is fairly comprehensive, covering several advanced topics such as lambda expressions, inner classes, and graphical user interfaces. In the discussion of access modes in a class the author could have mentioned *default* access as opposed to *protected* access. In the discussion of interfaces, Simber could have mentioned the List interface, implemented by the LinkedList class (as well as the ArrayList class) pointing out the relative advantages of each. On the subject of recursive methods, the author could do more to motivate this aspect of methods. The students who go on to study computer science will need this. None of the programming exercises require the use of recursion. Some interesting examples are:

- At email distribution list: An alias is an email address or a list of aliases.
- A file system. An Item is a Folder or a Document. Each Folder has a list of Items.
- A GUI. Each Component is a Container or a Widget. Each Container has a list of Components.
- Use recursion to find all permutations of a List.

2. Content Accuracy - 5

- a. Content, including diagrams and other supplementary material, is accurate, error-free, and unbiased.
- b. Overall, how do you rate the accuracy of the content?

The text and diagrams are clear and accurate. I was not able to find any technical errors. In some cases the author uses terminology that differs from other texts. A class' *attribute* versus *field* for instance variables, for example. Though *attribute* is more meaningful, and also helps to distinguish between an instance variable and `java.awt.TextField`, it would not hurt to point out this profusion of different terms for the same thing.

3. Relevance/Longevity - 5

- a. Content is up-to-date, but not in a way that will quickly make the text obsolete within a short period of time. The text is written and/or arranged in such a way that necessary updates will be relatively easy and straightforward to implement.
- b. Overall, how do you rate the relevance/longevity of the book?

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Images of hardware components such as a magnetic disk are not likely to be relevant long-term. However, this kind of correction can be made easily in future versions of the textbook. Java is an evolving language, with new features appearing every few years. The only way to deal with this is to issue frequent updates of the textbook. As more users transition away from hard copy to online/pdf format, this should not be a serious problem.

4. Clarity - 5

- a. The text is written in lucid, accessible prose, and provides adequate context for any jargon/technical terminology used.
- b. Overall, how do you rate the clarity of the book?

The text is written clearly, and does not use excessively complicated or technical language. All technical terms are defined; in addition specific examples help to clarify the intent of the text.

5. Figures and Diagrams – 4.5

Figures and diagrams, such as flow charts, class diagrams are done very well and serve to amplify and clarify the intent of the text. This is an area often lacking in open textbooks, as compared with traditional textbooks from a publisher. The publisher employs professional graphic artists for the figures and diagrams, contributing to the high cost of these textbooks. In the textbook reviewed here it does not appear to be a problem, as Simber has done a fine job on the figures and diagrams. I recommend inclusion of some object diagrams, specifically to distinguish between primitive types and object types in the Java memory model. See, for example, my open source textbook, [Introduction to Computer Science with Java](#), in which there are several object diagrams.

6. Consistency - 5

- a. The text is internally consistent in terms of terminology and framework.
- b. How do you rate the overall consistency of the text?

The consistency of the text was good. It was very simple to understand. The terminology was to the point and not overly technical. It was consistent throughout the text.

7. Modularity – 4.5

- a. The text is easily and readily divisible into smaller reading sections that can be assigned at different points within the course (i.e., enormous blocks of text without subheadings should be avoided). The text should not be overly self-referential, and should be easily reorganized, and realigned with various subunits of a course without presenting much disruption to the reader.
- b. Overall, how do you rate the modularity of the text?

The modularity of the text could have been arranged to be more graphically appealing. I found the ease in reading the text to be somewhat awkward. After the objective, the subheadings were not utilized sufficiently to cue the student as to what they were supposed to be absorbing next.

In addition – in some sections some text was over exaggerated and made to be much larger than the adjacent text. This looked like the text had been cut and pasted from another source and was not re-formatted. It made the product look sloppy and unfinished.

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8. Organization/Structure/Flow -5

- a. The topics in the text are presented in a logical, clear fashion.
- b. Overall, how do you rate the organization/structure/flow of the text?

I found the text and workbook to be overly simplified. It did not have any consistent breaks between the sections of the text. For example: there was no visual transition between the learning objective to the definitions to the lesson. There were no sub-headings so, I didn't know if I was reading the definition or an example. There should be a bold line or sub heading to distinguish between the sections. Today's student is use to visual cues. There were no visual cues as to what part they were reading. A bold line or grayed border separating the sections should be considered.

In addition, the flow of the text was awkward. New topics were started at the very bottom of the last topic's page. These should always begin at the top of a page, again to cue the student as to the beginning of a new topic, visually.

Another suggestion is that the worksheet questions should have a line next to the question for the answer to be written or typed in to create another visual cue that this is where the work should be shown.

9. Interface - 5

- a. The text is free of significant interface issues, including navigation problems, distortion of images/charts, and any other display features that may distract or confuse the reader.
- b. Overall, how do you rate the textbook's interface?

As mentioned above, one issue with the interface was the beginning of a topic starting at the bottom of the last topic's page. This can be confusing to the reader and should be re-formatted to begin at the top of a page. It will also help with navigation when a student is using the table of contents and they need to find a topic quickly. Starting off with a new topic on a new page is desirable for multiple formatting schemes.

There was distortion of charts and tables on many of the pages. The tables should be formatted in a font size so that the columns of the chart don't distort the text to fit in the text boxes. In many of the charts and tables, the instructions or examples were difficult to read because they were not fit to the text box or column and were interrupted to move to the next line while reading. In addition, the graphics in many of the charts were distorted; they weren't centered, they were not to scale with the text or they were blurred.

In addition – in some sections some text was over exaggerated and made to be much larger than the adjacent text. This looked like the text had been cut and pasted from another source and was not re-formatted. It made the product look sloppy and unfinished.

Another issue is that the navigation menu page numbers and the page numbers in the document do not match. That should be corrected. The navigation pane also does not list all of the topics. The table of contents page and the graphics page are displayed in a black background and are not easily readable.

The instructors guide also had formatting problems with the tables. The text was sized too large and made it look unprofessional. There should also have been links to other sources so that the

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instructor could prepare lessons and provide other sources of material for students to reference if needed.

10. Grammatical/Spelling Errors - 5

- a. The text contains no grammatical or spelling errors.
- b. How do you rate the grammar and spelling of the text?

I did not notice grammatical nor spelling errors.

11. Diversity and Inclusion - 5

- a. The text reflects diversity and inclusion regarding culture, gender, ethnicity, national origin, age, disability, sexual orientation, education, religion. It does not include insensitive or offensive language in these areas.
- b. Overall, how do you rate the diversity and inclusion of the text?

The author carefully avoids using personal pronouns he, she, etc, which is important in computer science where female students are under-represented.

12. Recommendation

- a. Do you recommend this book?

Yes

Rating: 58.5/60

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