

High-level accessibility review – OpenStax - Library Accessibility Alliance

Primary Point of Contact

Austin Bramhall
Project Manager

Deque Systems, Inc.

Web: www.deque.com

Email: austin.bramhall@deque.com

July 29, 2025



High-level accessibility review – OpenStax - Library Accessibility Alliance

Contents

High-level accessibility review – OpenStax - Library Accessibility Alliance	2
OpenStax	3
Top 3 problems for the OpenStax	3
Accessibility findings	3
1. Landing Page	3
2. From the initial landing page, click “Find your subject” button. Then click “Accounting and Finance” under the Business subheading. Test the results page for Business.	6
3. Test individual search result landing page & test actual document.	9
4. Test additional page features such as Table of contents and Student Resources tab	12

OpenStax

Summary:

Top 3 problems for the OpenStax

This high-level assessment covers limited portions and functionality of the OpenStax. The assessment revealed issues with assistive technology compatibility, resulting in some users missing information required to understand content, states and operate functions. It is important to keep in mind that the findings represent a high-level assessment, and do not reflect the results of a Deque Comprehensive Web Assessment. Following are top 3 issues from this evaluation.

- **Descriptive Labels:** Multiple buttons have same programmatic labels
- **Lists:** Visual lists are not marked up as list.
- **Keyboard Navigation:** On view online actual document, table of content links are not keyboard accessible

Accessibility findings

1. Landing Page

Source: <https://openstax.org/>

Test case: Test initial interface/landing page to ensure menus, sub-menus, search box, images, icons, etc. are accessible.

Bookstores Our Impact Supporters Blog Help 

OpenStax® Access. The future of education. Subjects Technology What we do Give Log in

Learning resources for all!

OpenStax is the world's largest publisher of open education resources (OER) and a provider of interactive learning technologies and education research for high school and college. We are a nonprofit initiative of Rice University.

[Find your subject](#)



25 years of making a difference

Since the publication of our first textbook in 2012, we have saved 36.1 million students \$2.9 billion across 150 countries.

[See our impact](#)

Auto-graded assessments and LMS grade sync

Assign readings, interactives, and assessments directly in your LMS with OpenStax Assignable, our official teaching and learning platform.

[Try OpenStax Assignable](#)

Teach freely, learn equitably

Knowledge is a public good, not a privilege. OpenStax values inclusivity, representation, and the democratization of knowledge.

[Read our DEI commitment](#)

Educating the world requires partnership

OpenStax partners with EdTech organizations to deliver low-cost, high-value instructional tools aligned with our content.

[Search courseware](#)

Higher Education



We publish high-quality, peer-reviewed, openly licensed college textbooks that are free online and low-cost in print.

[Find your subject](#)

K12 Education



Explore our openly licensed library of resources and free instructional materials for high school teachers.

[Explore K12 Free Resources](#)

Learning Research



Get personalized learning insights and earn recognition badges. OpenStax Kinetic is a platform to help understand learning.

[Try OpenStax Kinetic](#)

What's new at OpenStax



Imagine... no limits to learning!

OpenStax is looking to the future with excitement and purpose. Our team is creating tools and technologies that can help every learner achieve their dreams. We imagine a world where education is engaging and amazing for all!

[Watch the video](#)



Full computer science collection now available!

This collection includes 5 up-to-date, relevant, and expertly authored digital textbooks, each with free aligned instructional support materials. These resources are ready to support learners and educators in one of today's most popular fields!

[Read the press release](#)



OpenStax Algebra 1 approved by Texas SBOE!

Developed in collaboration with more than 250 Texas teachers, this engaging, research-based curriculum has officially been added to the Texas Instructional Materials Allotment list!

[Read the press release](#)



OpenStax founder and director named a visionary leader!

EdTech Digest has named Professor Richard G. Baraniuk a finalist in the annual EdTech Awards. Professor Baraniuk's founding vision to expand access to knowledge through OER and affordable technology is a gift to all!

[See full results](#)

Interested in using OpenStax?

We'll show you how to take advantage of all that OpenStax has to offer.

[I'm interested!](#)

OpenStax's mission is to make an amazing education accessible for all.

OpenStax is part of Rice University, which is a 501(c)(3) nonprofit. Give today and help us reach more students.

Help
Contact Us
Support Center
FAQ

OpenStax
Press
Newsletter
Careers

Policies
Accessibility Statement
Terms of Use
Licensing
Privacy Notice
Manage cookies

© 1999-2025, Rice University. Except where otherwise noted, textbooks on this site are licensed under a Creative Commons Attribution 4.0 International License.
Advanced Placement® and AP® are trademarks registered and/or owned by the College Board, which is not affiliated with, and does not endorse, this site.



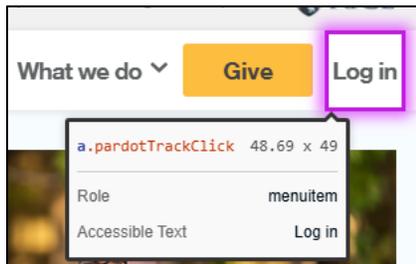
Automated findings using Axe

- SC 1.3.1 – Certain ARIA roles must be contained by Particular parents

Element Location: .main-menu > .login-menu.rightmost.nav-menu-item > .pardotTrackClick[data-local="true"][role="menuitem"]

```
<a href="https://openstax.org/accounts/login/?r=https%3A%2F%2Fopenstax.org%2F" data-local="true" role="menuitem" class="pardotTrackClick">Log in</a>
```

To solve this problem, you need to fix the following: Required ARIA parents role not present: menu, menubar, group

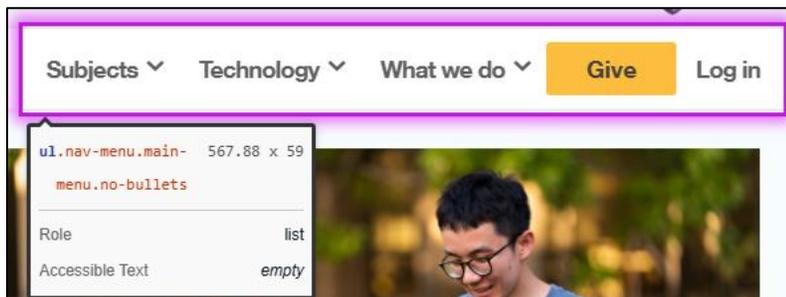


- SC 1.3.1 - and must only directly contain , <script> or <template> elements

Element Location: .main-menu

```
<ul data-analytics-nav="Main Menu" class="nav-menu main-menu no-bullets">
```

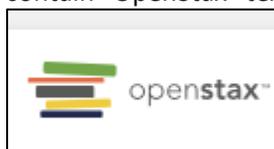
To solve this problem, you need to fix the following: List element has direct children that are not allowed: [role=presentation]



Additional manual findings

- SC 1.1.1.a Alternative Text (Active Images): Programmatic label for image does not contain visible text

When Tab focus goes to “OpenStax” logo image link, NVDA announces as “Home page”, which does not contain “OpenStax” text in image.



- SC 1.4.3.a Color Contrast (regular text) – Button text for “Give” does not have minimum contrast ratio of 4.5:1 on mouse hover and focus.

Contrast details:

Button text color code: #FFFFFF

Background color code: #D38D02

Color contrast ratio: 2.77:1

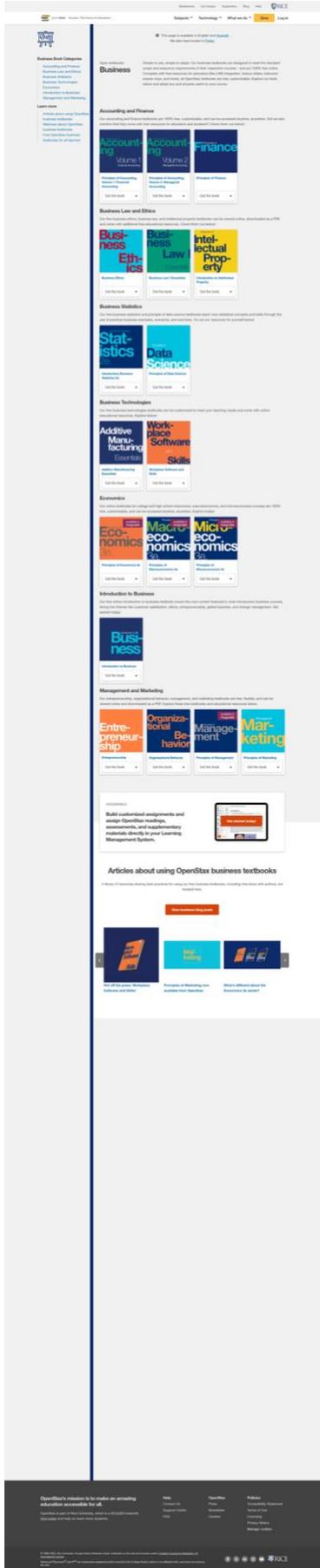


2. From the initial landing page, click “Find your subject” button. Then click “Accounting and Finance” under the Business subheading. Test the results page for Business.

Source: <https://openstax.org/subjects/business#Accounting%20and%20Finance>

Test case: From the initial landing page, click the “Find your subject” button. Then click “Accounting and Finance” under the **Business** subheading.

Test the results page for **Business**, including the side menu links (on the left-hand side) and the “Get the book” drop down menus located beneath the title of an individual book.

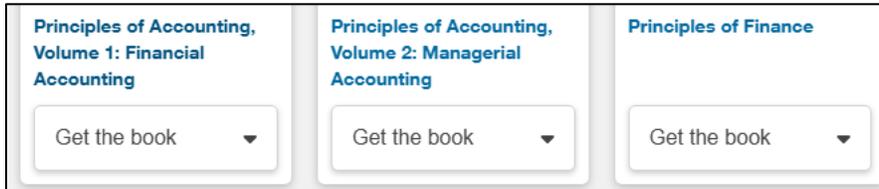


Automated findings using Axe: None

Additional manual findings

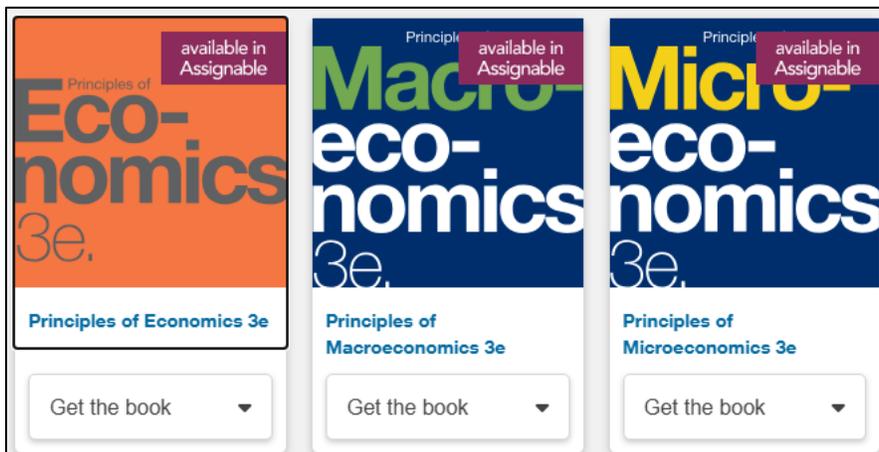
- **SC 2.4.6.b Descriptive Labels** – Multiple buttons have same programmatic names

NVDA announces each “Get the book” as “Get the book menu button collapsed submenu”. While each button should have unique programmatic name. e.g. “Get the book <book name> menu button”



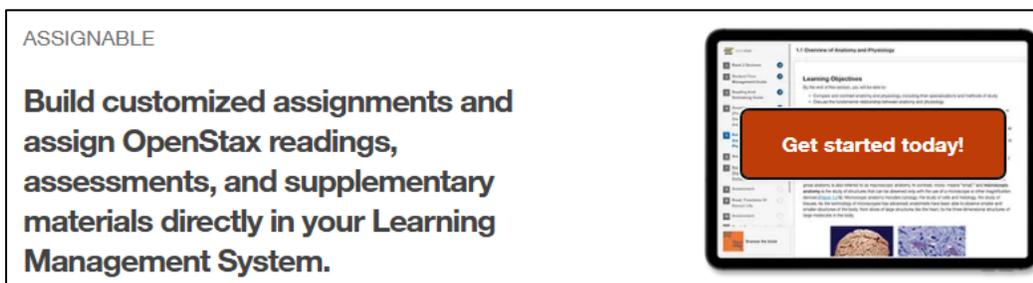
- **SC 2.4.6.b Descriptive Labels** – Programmatic label does not include “available in Assignable” text

NVDA announces “link, Principles of Economics 3e book”, but does not announce “available in Assignable” text



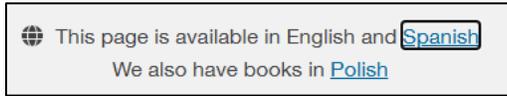
- **SC 2.4.6.b Descriptive Labels** – Programmatic label for “Get started today!” does not describe purpose.

NVDA announces as “Get started today, link”, which does not describe purpose. It should announce as “Get started today with Assignable”, or similar.



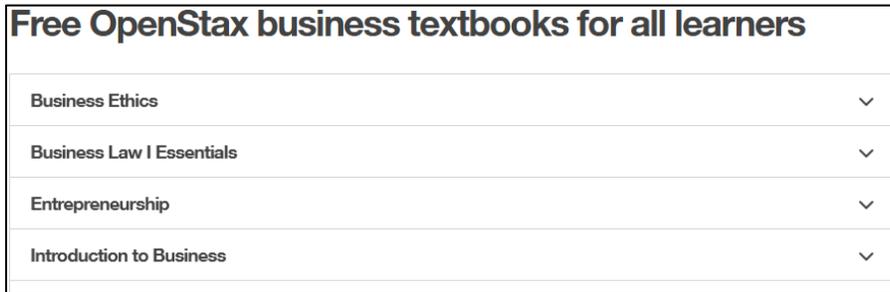
- **2.4.4.a Link Purpose (In Context)** – Programmatic label for links text does not describe purpose.

NVDA announces as “Spanish link” and “Polish link”, which does not describe purpose. NVDA should announce as “Translate to Spanish/Polish”, or similar.



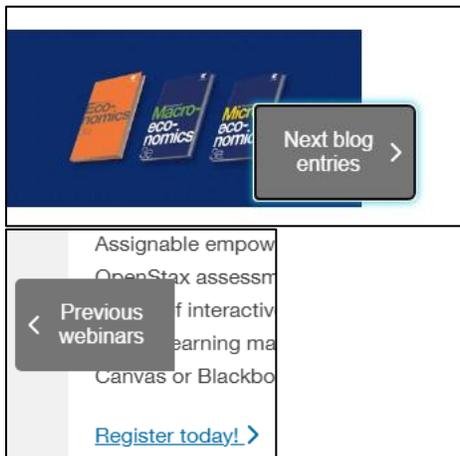
- **SC 1.3.1.f Lists** – Visual list of buttons not defined as list.

NVDA announces as “Business ethics heading level 2 button collapsed”. It should announce as “list 1 of 14, business ethics”, or similar.



- **SC 2.4.6.b Descriptive Labels** – Programmatic label of buttons does not describe purpose.

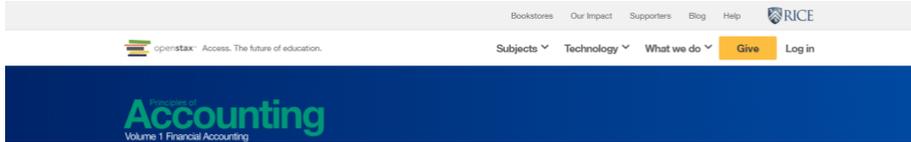
NVDA announces as “next page button”, but does not announce visible label as “Next/Previous blog entries” and “Next/Previous webinars”



3. Test individual search result landing page & test actual document.

Source: <https://openstax.org/details/books/principles-financial-accounting>

Test case: Test individual search result landing page ([Principles of Accounting, Volume 1: Financial Accounting](#)) & test actual document (PDF, “View Online”, etc.).



Book details Instructor resources Student resources

Get the book

- Table of contents
- View online
- Download a PDF
- + 1 more option...

Individual
Buy a print copy

Bookstore
Order options

- Sign up to learn more
- Using this book? Let us know.

Summary

Principles of Accounting is designed to meet the scope and sequence requirements of a two-semester accounting course that covers the fundamentals of financial and managerial accounting. Due to the comprehensive nature of the material, we are offering the book in two volumes. This book is specifically designed to appeal to both accounting and non-accounting majors, exposing students to the core concepts of accounting in familiar ways to build a strong foundation that can be applied across business fields. Each chapter opens with a relatable real-life scenario for today's college student. Thoughtfully designed examples are presented throughout each chapter, allowing students to build on emerging accounting knowledge. Concepts are further reinforced through applicable connections to more detailed business processes. Students are immersed in the "why" as well as the "how" aspects of accounting in order to reinforce concepts and promote comprehension over rote memorization.

Senior Contributing Authors

Mitchell Franklin, LeMoyn College (Financial Accounting)
Patty Graybeal, University of Michigan-Dearborn (Managerial Accounting)
Dixon Cooper, Ouachita Baptist University

Contributing Authors

LuAnn Bean, Florida Institute of Technology
Ian Burt, Niagara University
Shana Carr, San Diego City College
David T. Collins, Bellarmine University
Shawna Coram, Florida State College at Jacksonville
Kenneth Creech, Briar Cliff University
Alan Czynewski, Indiana State University
Michael Gaucci, Florida Atlantic University
Cindy Greenman, Embry-Riddle Aeronautical University
Michael Hasselhorn, Bentley University
Christine Inigo, Westfield State University
Cynthia Johnson, University of Arkansas at Little Rock
Cynthia Khanlarian, North Carolina Agricultural and Technical State University
Terri Lukashatis, Ferris State University
Debra Luna, Southwest University
Bill Nantz, Houston Community College
Tatyana Pashnyak, Bainbridge State College
Brian Pusateri, University of Scranton
Ellen Rackas, Muhlenberg College
Marianne Rexer, Wilkes University
Roslyn Roberts, California State University, Sacramento
Rebecca Rosner, Long Island University
Jeffrey J. Sabolish, University of Michigan-Flint
Jason E. Swartzlander, Bluffton University
Diane Tanner, University of North Florida
Mark M. Ulrich, Queensborough Community College
Janis Weber, University of Louisiana Monroe
Linda Williams, Tidewater Community College
Darryl Woolley, University of Idaho

Errata

All OpenStax textbooks undergo a rigorous review process. However, like any professional-grade textbook, errors sometimes occur. The good part is, since our books are web-based, we can make updates periodically. If you have a correction to suggest, submit it here. We review your suggestion and make necessary changes.

[Suggest a correction](#) [Errata list](#)

Publish Date:
Apr 11, 2019

Web Version Last Updated:
Jul 16, 2024

Color:
ISBN-13: 978-1-947172-68-5

Black and White:
ISBN-13: 978-1-59399-594-2

Digital PDF:
ISBN-13: 978-1-947172-67-8



Principles of Accounting, Volume 1: Financial Accounting is licensed under an Attribution-NonCommercial-ShareAlike 4.0 International License (CC BY-NC-SA), which means you can share, remix, transform, and build upon the content, as long as you credit OpenStax and license your new creations under the same terms.

With philanthropic support, this book is used in 216 classrooms, saving students 4,064,609 dollars this school year. [Learn more about our impact](#) and how you can help.

OpenStax's mission is to make an amazing education accessible for all.

OpenStax is part of Rice University, which is a 501(c)(3) nonprofit. [Give today](#) and help us reach more students.

Help
Contact Us
Support Center
FAQ

OpenStax
Press
Newsletter
Careers

Policies
Accessibility Statement
Terms of Use
Licensing
Privacy Notice
Manage cookies

© 1999-2025, Rice University. Except where otherwise noted, textbooks on this site are licensed under a [Creative Commons Attribution 4.0 International License](#).
Advanced Placement® and AP® are trademarks registered and/or owned by the College Board, which is not affiliated with, and does not endorse, this site.

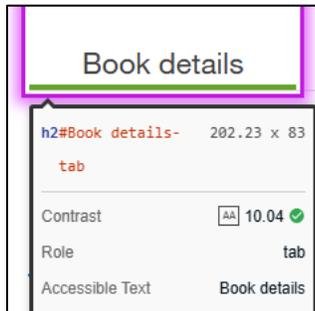
Automated findings using Axe

SC 4.1.2 – Ensure all ARIA attributes have valid values

Element Location: #Book\ details-tab

```
<h2 role="tab" id="Book details-tab" aria-controls="Book details-panel" tabindex="0" aria-selected="true">Book details</h2>
```

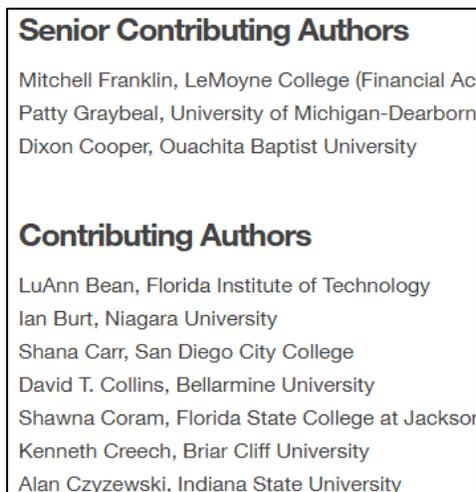
To solve this problem, you need to fix the following: Invalid ARIA attribute value: aria-controls="Book details-panel"



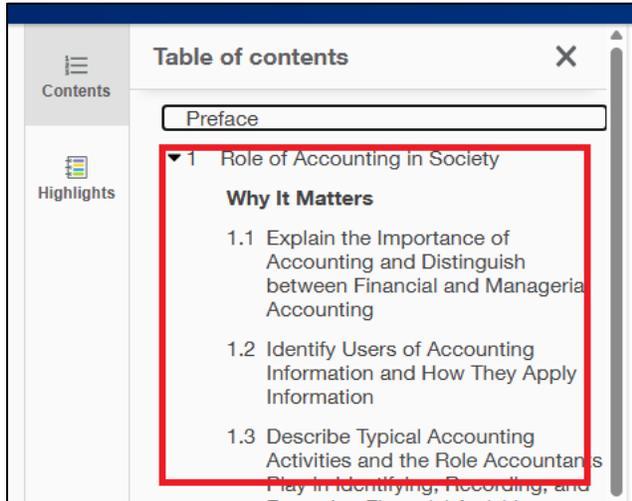
Additional manual findings

- **SC 1.3.1.f Lists** – Visual list is not marked up as list.

Visual lists under “Senior Contributing Authors” and “Contributing Authors” are not marked as list.



- **SC 2.1.1 Keyboard Navigation** – Under “View online” actual document, links under “Table of contents” not keyboard accessible. Tab focus does not go to them.



4. Test additional page features such as Table of contents and Student Resources tab

Source: <https://openstax.org/details/books/principles-financial-accounting?Student%20resources>

Test case: Test additional page features such as Table of Contents and the Student Resources tab.



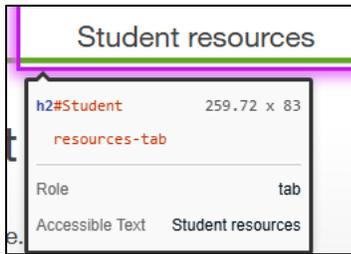
Automated findings using Axe

SC 4.1.2 – Ensure all ARIA attributes have valid values

Element Location: #Student\ resources-tab

```
<h2 role="tab" id="Student resources-tab" aria-controls="Student resources-panel" tabindex="0" aria-selected="true">Student resources</h2>
```

To solve this problem, you need to fix the following: Invalid ARIA attribute value: aria-controls "Student resources-panel"



Additional manual findings

- **SC 1.3.1.e Headings** – Visual headings not marked as heading.

Under “Table of contents”, visual headings on “Chapter 1 . Role of Accounting in Society” and similar others are not marked as headings.



- **SC 4.1.2 Name, Role, Value** – “X” button on table of contents panel does not have name defined.

```
<span role="button" tabindex="0" aria-controls="toc-drawer" aria-expanded="true" class="close-toc">x</span>
```

