

CSCI1300 P4: Responsive Redesign

"Brown Bookstore Website" by Zachary Espiritu (zespirit)

■ Introduction

Believe it or not, it's going to be the start of the spring semester in about two months! And part of the semester-start experience includes buying textbooks for your classes. But between deciding whether to take four or five classes and last-minute shopping period anxiety, the beginning of the semester can be an overwhelming time—as such, it would be great if the textbook buying process could be as streamlined as possible.

In this project, I redesign the textbook buying workflow on the Brown Bookstore website (<https://www.brown.edu/campus-life/support/bookstore/>), the main online portal through which Brown University students purchase their textbooks every semester, in five wireframes, one high-fidelity mockup, and a responsive website prototype.

✓ Handin Organization Overview

This handin PDF contains the wireframes for each of the five screens I developed in addition to the analysis of each of the actual website pages with screenshots. It also contains the high-fidelity mockup (and a version of that mockup with annotations). The following pages contain notes about each of the mockups and actual website designs.

Outside of this PDF, the **workflow.png** file in the handin directory shows the connections between each of the wireframe screens, with arrows showing where each wireframe can be clicked to get to the next wireframe.

Additionally, the **/website** sub-directory contains the HTML/CSS version of my high-fidelity mockup, which can be viewed by opening the **mockup.html** file in your favorite browser.

Finally, the **/high-fidelity** and **/wireframes** directories contain large-scale images of the mockups displayed for your viewing convenience.

Figure 1: Current Homepage

Intuitive Design

The navigation bar at the top of the page is a standard and understandable UI element, though some of the links on it are irrelevant for most users ("Business Office" is just a copy of information from the Student Card Office website and "About the Store" should not be necessary).

Ease of Learning

While the four boxes at the top of the page link to helpful and potentially most frequently used pages, the text on the box images are sometimes misleading (particularly the "Textbooks" box) which can confuse users.

Efficiency of Use

The large number of links at the bottom of the page form an imposing navigation block that can be difficult for users to parse.

Memorability

Navigation bar changes drastically on page change (see other existing page screenshots) which makes it hard to remember where links are.

Error Frequency and Satisfaction

"Campus Shop" is a little vague, which can lead to user errors.

Subjective Satisfaction

The blurry images used in the banners on the homepage are not visually pleasing the look at. Additionally, the page (and the following four pages) are not responsively designed, so viewing on mobile is less-than-ideal.



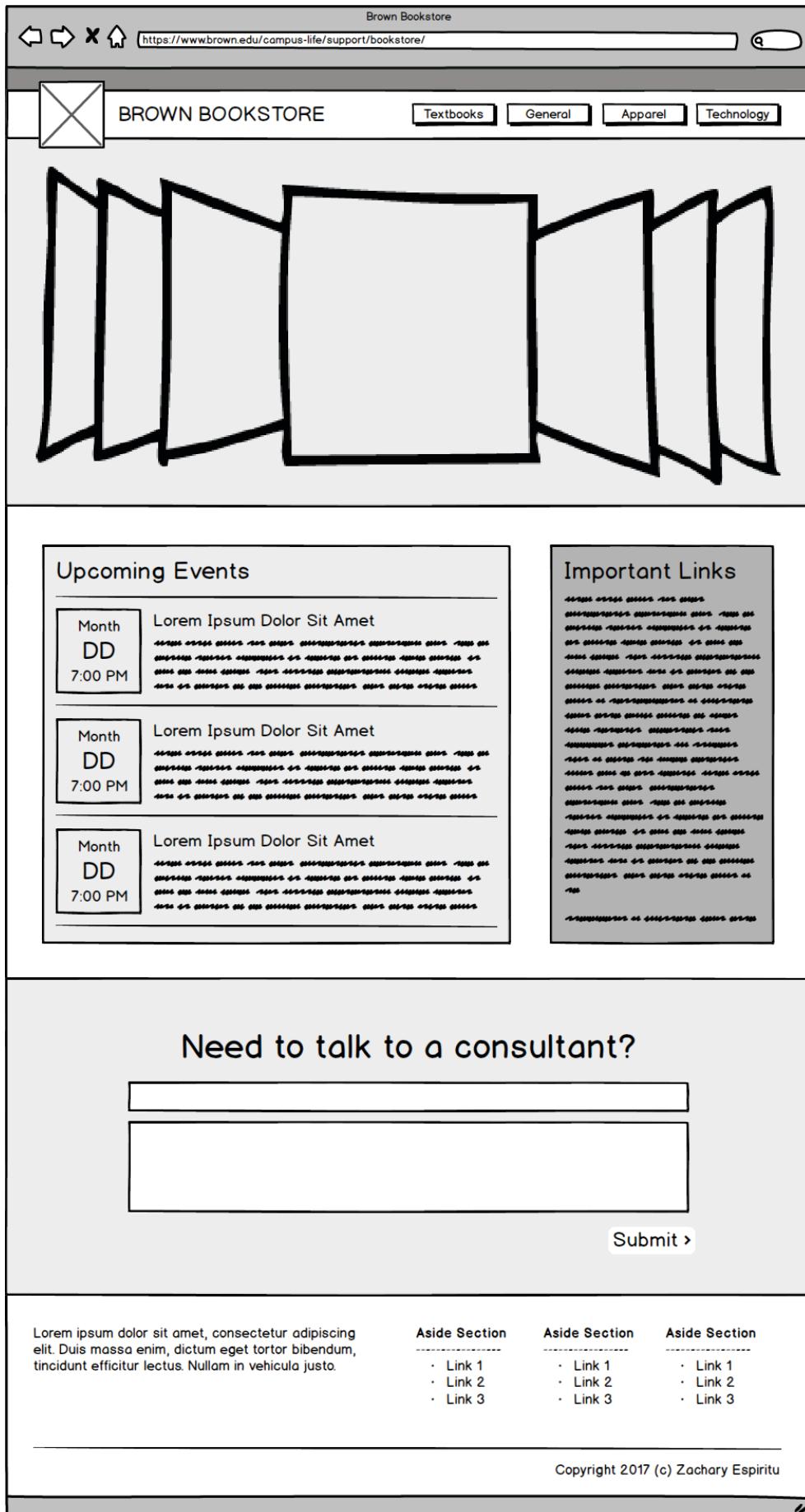


Figure 2: Homepage Wireframe

Intuitive Design

Standard carousel design UI element for important events (example, a banner about buying textbooks during beginning of semester) and less cluttered navigation bar make it easier for users.

Ease of Learning

The reduced number of links in the navigation bar make it easy to find relevant sections of the site. The addition of a help form directly at the bottom of the page is helpful for users who scroll to the bottom without figuring out what they need.

Efficiency of Use

Reduced number of links out of the page make it faster for users to find the page that they want to go to next.

Memorability

Addition of a "Upcoming Events" panel means that users will remember to come to this page to find events at the bookstore (which aren't advertised anywhere else).

Error Frequency and Satisfaction

It's less difficult to go to the wrong page with a reduced number of links.

Subjective Satisfaction

The less cluttered interface is more visually appealing to users and results in a more readable webpage.

Figure 3: Current Textbook Landing Page

Intuitive Design

It isn't immediately clear that the "Textbooks–Compare and Shop" button brings you to the search interface (informal surveys showed that some users thought it was a header for the text below it).

Ease of Learning

The large amount of text makes it difficult for users to find the information that users need. Not all of the information on this page is relevant to all users! (Also see "Efficiency of Use".)

Efficiency of Use

Since the font of the paragraph headers is very similar to the rest of the text on the page, it's hard to immediately figure out where information is.

Memorability

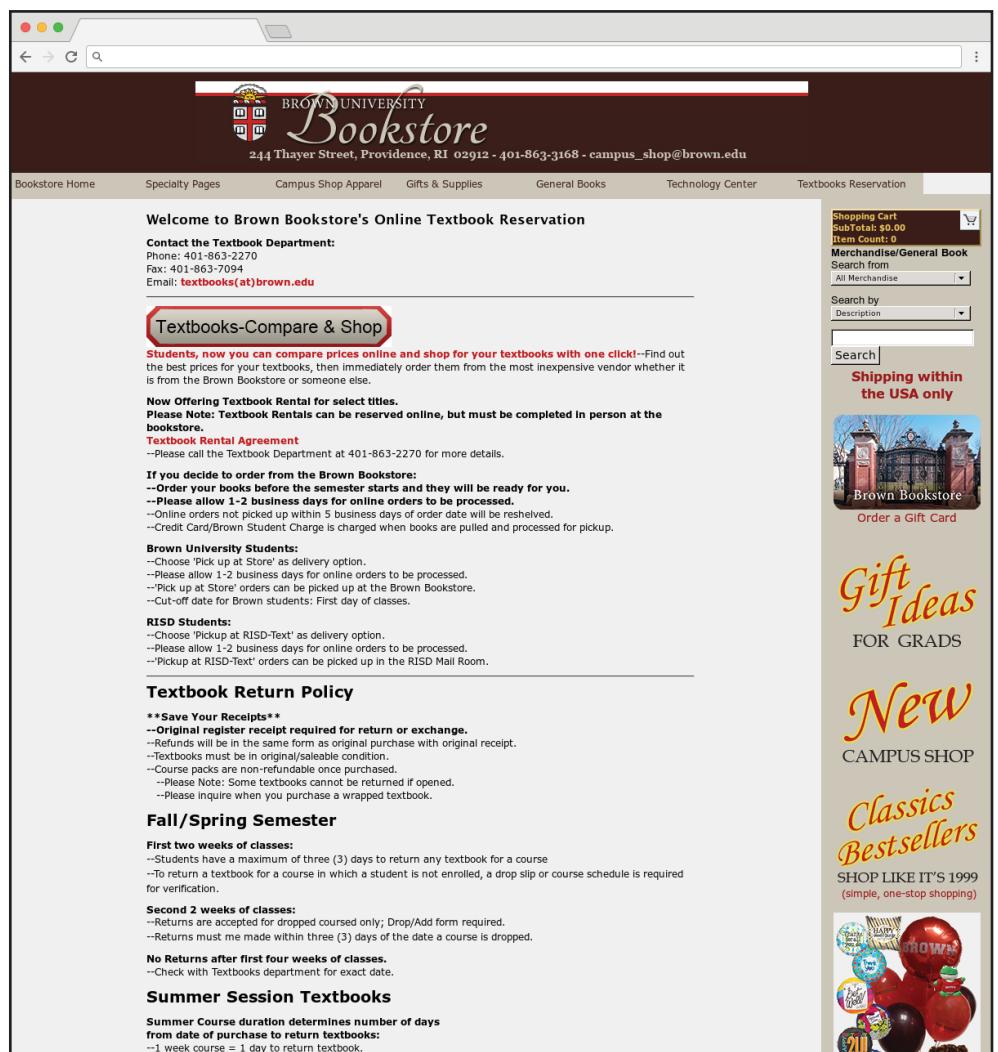
Due to the large amount of text, it's hard to remember where to look on the page to find the information that you need.

Error Frequency and Satisfaction

Users might not realize that the "Compare & Shop" button is the next step in shopping for textbooks, and navigate away from the page.

Subjective Satisfaction

The large amount of text on the page, small font size, and an overuse of different font weights make for a visually unappealing page.



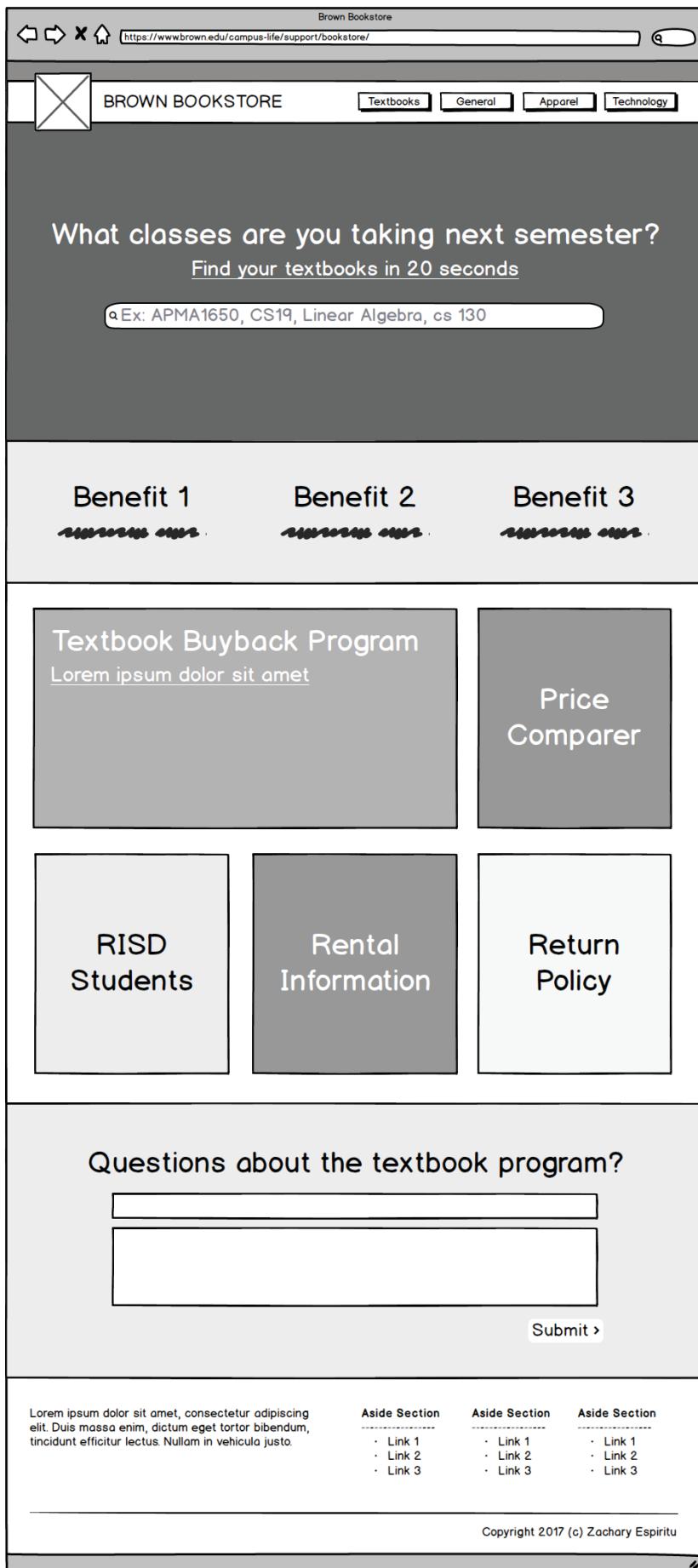


Figure 4: Textbook Landing Page Wireframe

Intuitive Design

It's less convenient for students to have to search for their textbooks by name (they have to refer back to course syllabi, etc.). Since teachers register their books directly with the bookstore, the bookstore should be able to tell students what books they need per class since students are more likely to remember the names of the class they're taking.

Ease of Learning

The very visible search bar makes it very easy to figure out what needs to be done to find the textbooks you need.

Efficiency of Use

Since the search bar's call-to-action is the first thing on the page, users immediately know that they need to input the courses they are taking into the search field.

Memorability

Students are more likely to know the names of their classes than the names of the books they need, so it's easier to remember how to use this interface in the future.

Error Frequency and Satisfaction

It's harder to make errors in finding correct textbooks when you're searching by class (searching by name instead can lead to buying the wrong textbook with a similar name).

Subjective Satisfaction

The grid-based design and division of textbook information onto external pages makes for a cleaner and more visually appealing interface.

Figure 5: Current Textbook Search Page

Intuitive Design

Searching by book name is difficult because students don't immediately know what textbooks they need—that's why they come to the bookstore website! Additionally, the "Select Your Courses" feature is difficult to use due to its liberal use of abbreviations over course names.

Ease of Learning

Due to the problems described in "Intuitive Design", it's difficult to easily learn how to use the search feature.

Efficiency of Use

Searching is not very efficient since you have to scroll through many departments and course codes to select a course to search by.

Memorability

Once you figure out how to use the search feature the first time, it's relatively easy to remember how to use it in subsequent attempts (but it's still hard to find the course you are searching for),

Error Frequency and Satisfaction

It's very easy to select the wrong course due to the small text and small selection area per row for a course.

Subjective Satisfaction

The small text and lack of consistent button widths under "Add Term/..." make for a visually unappealing website.

Select Your Courses

| Term | Select Department | Select Course and Section | Add Term/Dept/Section? |
|---|---|---|----------------------------------|
| FALL 17 (Closed to Orders) SPRING 18 (Closed to Orders) WINTER INTERM 18 (Closed to | ARAB ARCH ASYR BEO BHBR BIOL CHEM CHIN CLAS CLPS COLT COST CSCI | 0020 - S01 - Stanford, Donald 0081 - S01 - Doeppner, Thom 0082 - S01 - Doeppner, Thom 0100 - S01 - Greenwald, Amy 0130 - S01 - Huang, Jeff 0150 - S01 - van Dam, Andries 0170 - S01 - Hughes, John F. 0190 - S01 - Krishnamurthi, Sh 0330 - S01 - Doeppner, Thom 0530 - S01 - Klein, Philip 1010 - S01 - Savage, John E. 1230 - S01 - van Dam, Andries 1234 - S01 - van Dam, Andries 1250 - S01 - Meier, Barbara L | Add Selection Clear Selection |

Your Current Course List

| Term | Dept | Course | Section | Instructor | Remove? |
|------|------|--------|---------|------------|---------|
| | | | | | |

Get Course Materials

BROWN BOOKSTORE

Showing results for
CSCI0190, CSCI1300, TAPS0260, APMA1650:

Search courses

| CSCI0190: Accelerated Introduction to Computer Science (Fisler) | |
|---|--|
| | Nullam Aliquam Tempus Odio Et Premium <i>by Cicero, Euripides, Authors, et. al.</i> <small>REQUISITE</small> Buy New: \$169.33 Buy Used: \$124.99 Rent New: \$100.99 Rent Used: \$84.99 |
| | Aenean Placerat Gravida Metus <i>by Cicero, Euripides, Authors, et. al.</i> <small>OPTIONAL</small> Buy New: \$169.33 Buy Used: \$124.99 Rent New: \$100.99 Rent Used: \$84.99 |
| CSCI1300: User Interfaces and User Experience (Huang) | |
| | Nullam Aliquam Tempus Odio Et Premium <i>by Cicero, Euripides, Authors, et. al.</i> <small>REQUISITE</small> Buy New: \$169.33 Buy Used: \$124.99 Rent New: \$100.99 Rent Used: \$84.99 |
| TAPS0260: Stage Lighting (Hett) | |
| No books for this class are available through the Brown Bookstore | |
| APMA1650: Statistical Inference I (Xi) | |
| | Nullam Aliquam Tempus Odio Et Premium <i>by Cicero, Euripides, Authors, et. al.</i> <small>REQUISITE</small> Buy New: \$169.33 Buy Used: \$124.99 Rent New: \$100.99 Rent Used: \$84.99 |

Didn't find what you were looking for?
Search third-party vendors

Ex: APMA1650, CS19, Linear Algebra, cs 130

Aside Section Aside Section Aside Section

- Link 1
- Link 2
- Link 3
- Link 1
- Link 2
- Link 3
- Link 1
- Link 2
- Link 3

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Figure 6: Textbook Search Wireframe
Intuitive Design

Since the search bar is on the textbook landing page and users search by course name or number, it's easy for users to search for the textbooks they need.

Ease of Learning

This result page organizes textbooks by course for readability and clearly denotes which textbooks are marked as required by instructors.

Efficiency of Use

Users can quickly see which textbooks apply to each class and can click the cart icon to the right of each course name header to add all of the books for that course to their cart.

Memorability

A consistent book information display format for each table row makes it easy to remember how to read the information on the page.

Error Frequency and Satisfaction

The addition of full course names makes it easy for users to check if they accidentally searched for the textbooks for a different course.

Subjective Satisfaction

A cleaner and more organized interface and large, very visible textbook thumbnails makes for a more visually appealing interface.

Figure 7: Current Single Textbook Information Page

Intuitive Design

The most significant problem on the page is that it's not clear how to add a specific version of a book ("Used", "New", etc.) to your cart—there's only a single "Shopping Cart" button.

Ease of Learning

Due to the issues described above, it's hard to easily learn how to add a book to your cart.

Efficiency of Use

You can only determine if a book is marked as "Required" for a course when you go to this page, which makes it harder if you are attempting to save money by only buying the books that are required.

Memorability

The automatic price comparison feature is easy to remember how to use because it simply just works.

Error Frequency and Satisfaction

The price comparison tool is perhaps the most usable and helpful element on the whole website.

Subjective Satisfaction

The small book description paragraph text and different colors on the hard-to-read shopping disclaimer at the bottom makes for a visually unappealing page.

The screenshot shows a web browser displaying the Brown University Bookstore website. The header features the bookstore's logo and navigation links for Bookstore Home, Specialty Pages, Campus Shop Apparel, Gifts & Supplies, General Books, Technology Center, and Textbooks Reservation. A "Shopping Cart" button is visible in the top right corner. The main content area displays a "Textbook Detail" for "COMPUTER SYSTEMS: PROGRAMMER'S PERSP.". It shows four price options: Used (\$125.25), New (\$167.00), New Rental (\$83.50), and Used Rental (\$62.63). Below this is a "Compare prices..." table showing prices from various vendors like Alibris, Amazon, and Textbooks.com. At the bottom, there is a "Textbooks" section with a "Pricing Disclaimer" note about price changes and availability.

| Vendor | Condition | Price | S&H | Note | Buy |
|---------------|------------|----------|--------|------|-----|
| Alibris | Unknown | \$27.12 | \$3.99 | | |
| Alibris | Unknown | \$27.18 | \$3.99 | | |
| Amazon | Acceptable | \$100.00 | \$3.99 | | |
| Textbooks.com | Used | \$104.33 | \$3.99 | | |
| Amazon | Good | \$104.33 | \$3.99 | | |
| Amazon | Acceptable | \$113.25 | \$0.00 | | |
| Amazon | Verygood | \$113.99 | \$3.99 | | |
| Amazon | Verygood | \$140.36 | \$3.99 | | |
| Amazon | Good | \$144.37 | \$0.00 | | |
| Amazon | New | \$144.38 | \$0.00 | | |

Pricing Disclaimer: Pricing is subject to change without notice. All Totals are calculated using new prices, as we cannot guarantee the availability of used books.

The wireframe shows a web browser window for "Brown Bookstore" at <https://www.brown.edu/campus-life/support/bookstore/>. The header includes a logo, a back arrow, and a search bar. The main content area displays a textbook entry for "Nullam Aliquam Tempus Odio Et Premium" by Cicero, Eurpides, Authors, et. al. (3rd Edition, 2016, ISBN: 0123456789). It features a large image placeholder with a diagonal cross, a summary, and price comparison tables for new, used, rent, and buyback versions. Below this is a section for "Description" with a long list of bullet points and a "Price Comparisons" section. A dark grey footer bar contains a search bar with "Ex: APMA1650, CS19, Linear Algebra, cs 130" and three aside sections with links.

Figure 8: Single Textbook Information Wireframe

Intuitive Design

A cleaner format more akin to a traditional e-commerce website format makes it easy to quickly find the information users need about textbooks.

Ease of Learning

See "Intuitive Design".

Efficiency of Use

See "Intuitive Design". Also, moving the Price Comparison tool to a separate row below the textbook-specific information emphasizes that the Price Comparison tool shows prices third-party websites that are distinct from the Bookstore information. The addition of a back arrow on the top header also makes it easy to quickly navigate back to the search page.

Memorability

It's easier for users to remember where to look on the page to find the information they need due to the grid-based divisions.

Error Frequency and Satisfaction

The explicit addition of "Add to Cart" buttons for each version of a book ("New", "Used", etc.) reduces the chance that a user accidentally buys the wrong version of a book.

Subjective Satisfaction

The grid-based interface makes for a cleaner webpage that is more visually appealing.

Figure 9: Current Shopping Cart Page

Intuitive Design

It's not clear how to update the quantity of an item in the cart. It's also not clear where the "Continue Shopping" button leads or the difference between the "Continue Checkout" button and the shopping cart icon in the right-hand-side column. You also can't tell if you're buying a book "New", "Used", etc.

Ease of Learning

The issues described above make it hard to figure out how to use the website quickly.

Efficiency of Use

See "Ease of Learning".

Memorability

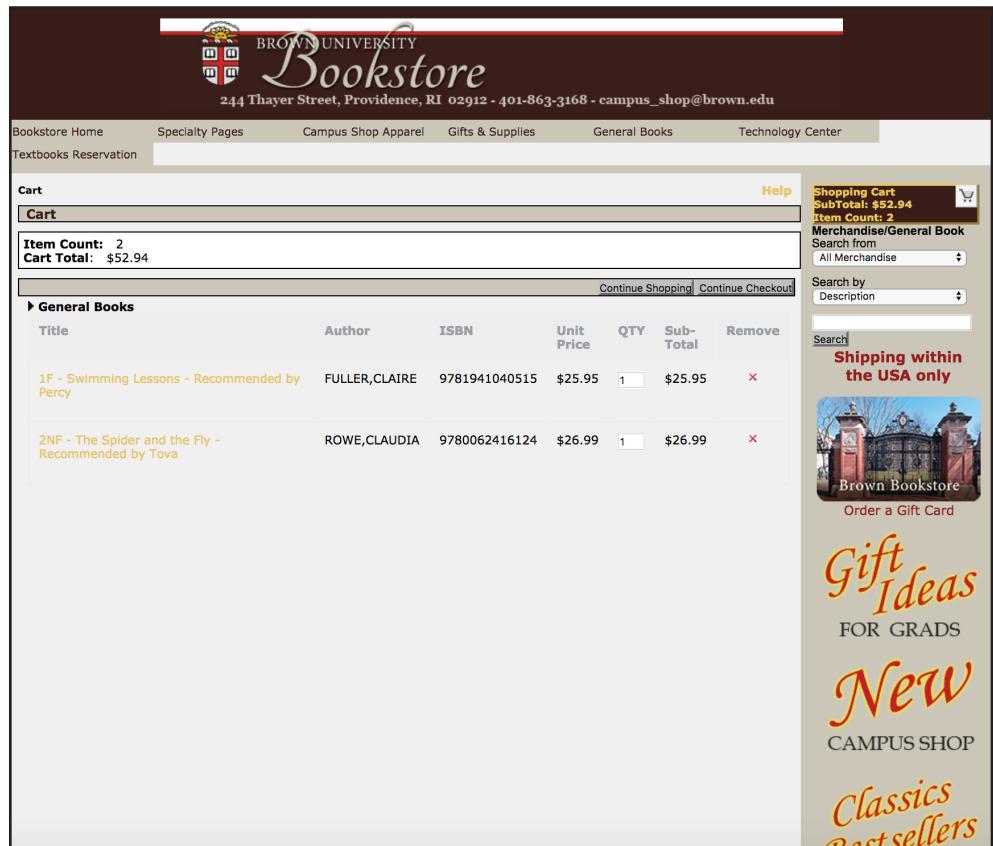
The unclear contexts of links on the page (as described above) make it hard to remember how to use the cart on subsequent attempts.

Error Frequency and Satisfaction

The unclear buttons (as described above) can increase error rates and user dissatisfaction with the interface.

Subjective Satisfaction

The small font (especially the yellow text of book titles that blends into the background) is unreadable and visually unappealing.



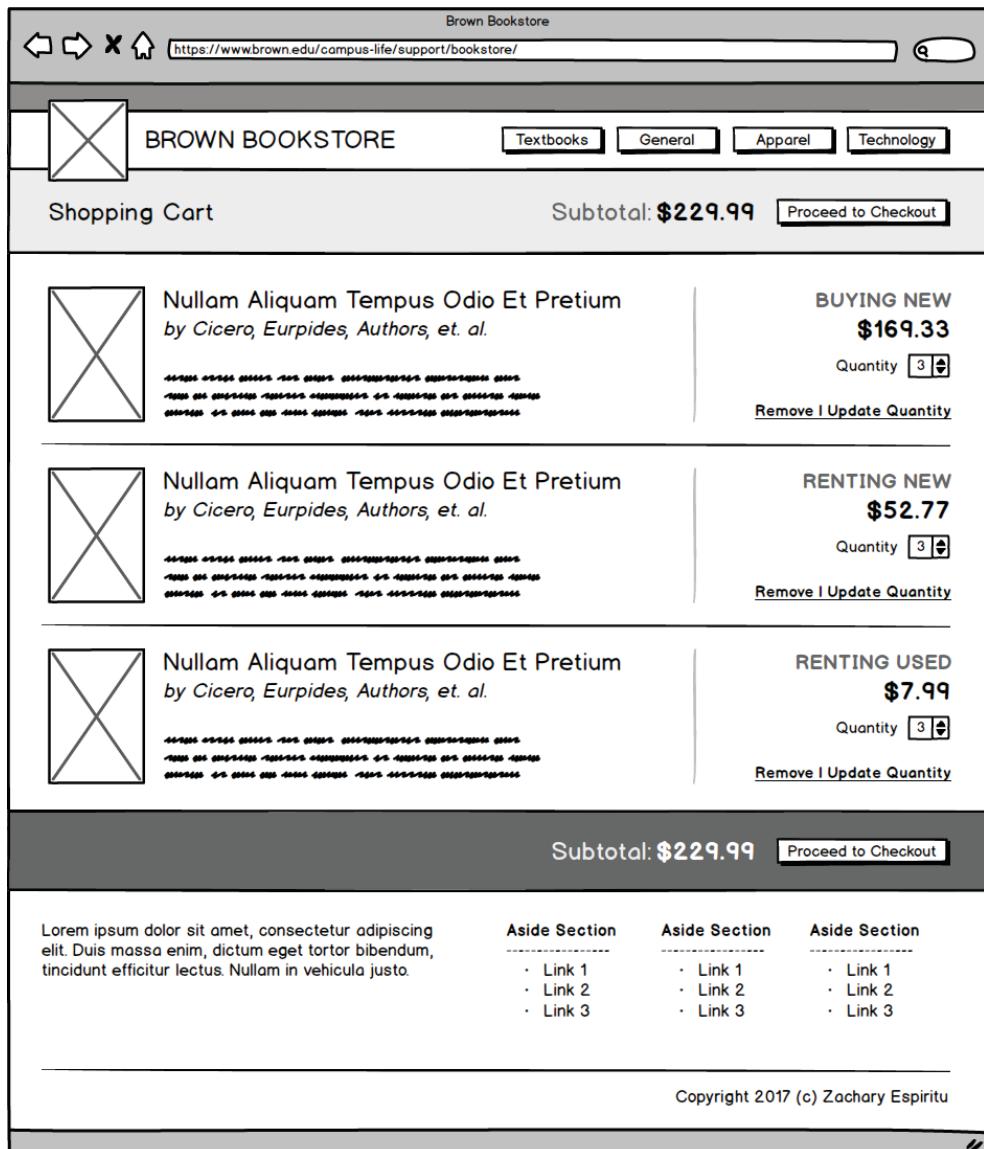


Figure 10: Shopping Cart Wireframe

Intuitive Design

More contextual links fix the problems described in the original shopping cart interface which result in a more intuitive interface.

Ease of Learning

The clearer column-based format of the shopping cart makes it easy to parse the information on the page for users who are unfamiliar with the cart interface. As a result, it's also quicker to use.

Efficiency of Use

See "Ease of Learning".

Memorability

Repeated contextual links reinforce the purpose of buttons on each table row for an textbook.

Error Frequency and Satisfaction

Since the text of the links are clearer in the wireframe than on the original page, users are less prone to make errors and therefore are more satisfied.

Subjective Satisfaction

The column-based format and larger text makes for a more visually appealing interface.

Figure 11: Textbook Search High-Fidelity Mockup

This high-fidelity mockup is based off the wireframe for the textbook search page (Figure 6). It improves on the original textbook home page as displayed in Figure 5 in the following ways:

- An immediate call to action ("What classes are you taking next semester?") informs users immediately they need to enter into the search box to find the results they need. It also simplifies the search process.
- The call to action is emphasized with the contrasting white text on the black background.
- Navigation bar takes advantage of more whitespace and strips away unnecessary navigation elements for more user-friendly usage.
- The three-column "benefits" bar below the header uses different sizes and weights of fonts to emphasize to shoppers the important information that they should take away from the page.
- Content that was originally displayed on the textbook homepage (Figure 5) is now designed to be displayed on external pages with the addition of a grid-based menu. This menu is cleaner and is more visually appealing due to the background images.
- The color palette has been reduced to three main colors (black, white, and red) which improves readability and simplifies the amount of mental parsing a user needs to do to read the page.

The high-fidelity mockup shows a modern website layout for "BROWN BOOKSTORE". At the top, there is a navigation bar with links for Textbooks, General, Apparel, and Technology. Below the navigation is a large banner featuring a photograph of a study room with tables and chairs. Overlaid on the banner is a dark overlay with white text: "What classes are you taking next semester?" and "Find your textbooks in 20 seconds". A search bar contains the placeholder text "Example: CSCI1300, MATH520, Linear algebra, cs 19".

Below the banner, there are three columns of "benefits" cards:

- RENT & BUY**: Multiple, affordable buying options
- COMPARE**: Free price comparison tool
- TWO WEEKS**: Return period, no questions asked

Below these cards are six smaller images with corresponding labels:

- Buyback Program**: An image of the bookstore storefront.
- Rental Info**: An image of people looking at books on library shelves.
- Compare Prices**: An image of a city street with a building sign for "AVON".
- RISD Students**: An image of a university building with students walking by.
- Return Policy**: An image of books on a shelf.
- Faculty & Staff**: An image of the bookstore storefront.

At the bottom, there is a section titled "Questions about the textbook program?" with two input fields: "Email" and "Message", and a "Send" button.

Brown Bookstore

The University's official, one-stop shop for all the school supplies you need

TEXTBOOKS

Reservations
Buyback Program
Faculty Information
Medical References

TECHNOLOGY

Online Shop
Repairs
Technical Support
Loan Requests

BUSINESS

Returns & Exchanges
PCI Compliance
Fair Use & Copyright
Employment

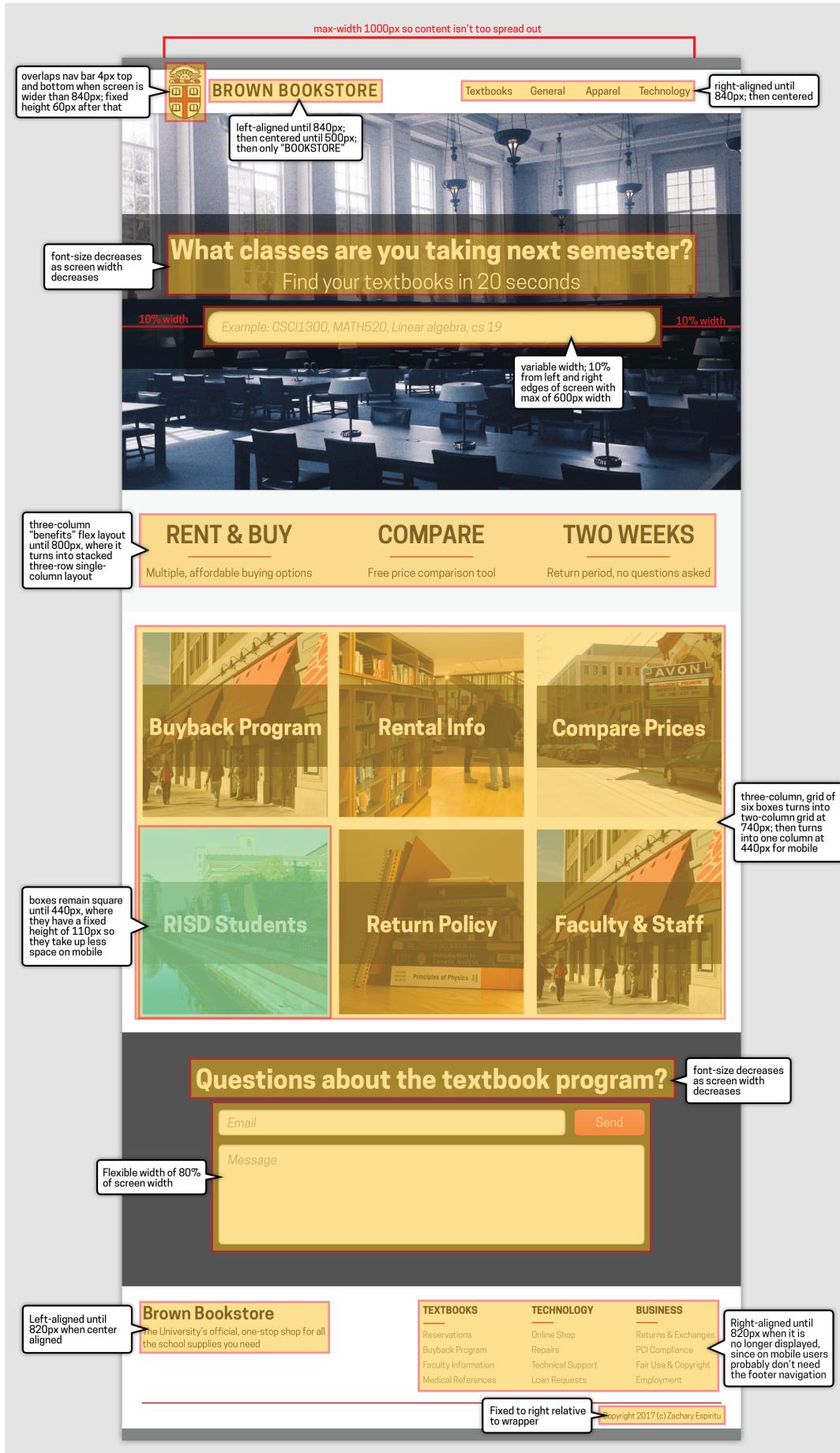


Figure 11: Textbook Search High-Fidelity Mockup w/Annotations

A full-size version of this image can be found in the .zip handin folder.