



Designing For Clarity

A Methodological Redesign of Blackboard

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The Goal

The goal of Designing For Clarity is to increase the readability of structured systems through designed outcomes that improve an application's usability, user experience, and organization of features and information.

Method

Designing For Clarity means...

This method optimizes outcomes where the final product's design is influenced by a community's interpretation of a "clear" design, rather than designing with clarity which would focus on the designer's approach to designing. Before the design process, review your definitions and ways that you evaluated clarity (practice vs visual representation) to constitute what clarity is, what clarity does, how clarity can be utilized as a tool and an action.

Steps for method:

Step 1 - Defining Clarity

Define what clarity means to you.

Identify what conditions must be met to constitute something as having clarity.

Step 2 - Design Problem

Identify your design problem, goals, and target audience.

Understand your project's purpose, project scope, and community you will be serving.

Step 3 - Research

Research user centered design, navigation systems, and conduct user flow analysis for your application. Get UI and UX inspiration from similar existing applications to your own.

Review existing research and methodologies on user centered design and related fields.

Step 4 - Interview Audience

Interview members from your target audience and continue problem discovery.

Gain direct insight on strong and weak points from the old design, updating any goals and project constraints to guide your design process.

Step 5 - Design

Design: create sketches, wire frames, and prototypes.

Create iterative solutions to your design problem with Figma or other prototyping tools, taking into consideration the necessities of your user base and acquired research.

Step 6 - Revision

Self reflect on your designed outcome and seek community feedback through usability testing; revise your design.

Note successes and pitfalls of your current prototype. Turn to your audience and test the effectiveness of your new design, comparing its results to the old design. If it may apply, repeat steps 5 and 6 until design purpose is achieved.

Redesigning Blackboard

In this section, I will be applying the previously defined method to improve the visual clarity of an application.



Step 1 - Defining Clarity

Personal Definition of Clarity: To be presented or executed in an understandable, comprehensible, and navigable fashion. To be perceived in a predictable and not confusing manner that also improves accessibility of the application's tools.

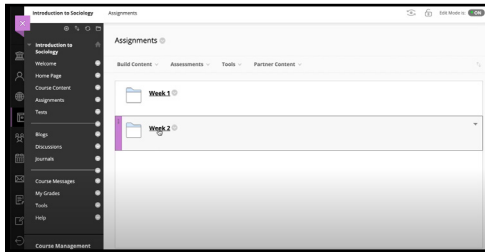


Step 2 - Design Problem

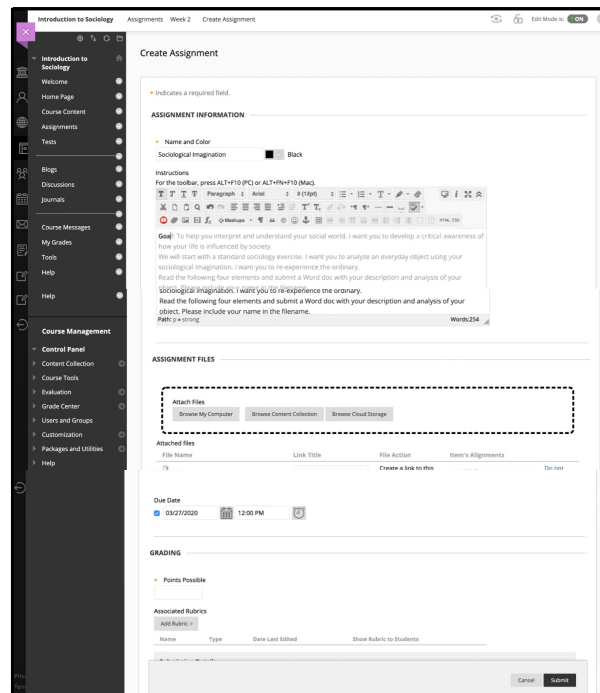
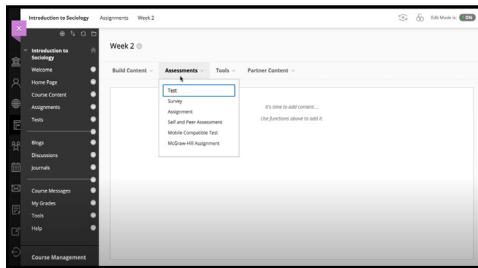
Blackboard is a course management system that is commonly used by educational institutions to manage course resources through an online format. Instructors can share content with their students in a centralized location, hosting discussions, quizzes, and grading coursework all through Blackboard.

Design Problem: Many Instructors have come forward to share their critiques on the visual and interactive flaws of the website. User navigation and features, such as uploading new class assignments, can be restructured for a more comprehensible design and the general UI can be updated to be more cohesive and modern.

Target Audience: Instructors that actively use Blackboard to manage their course content.

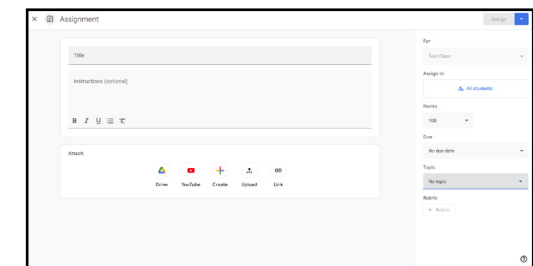
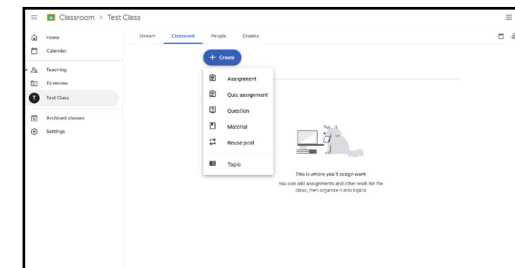
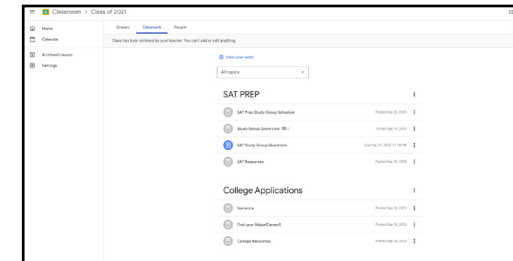
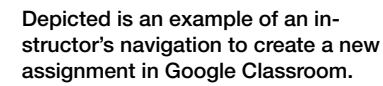


Depicted is an example of an instructor's navigation to create a new assignment in Blackboard Original.



Step 3 - Research

Similar course management systems to Blackboard were compared to observe their differences in user flow, aesthetics, and structure. I chose to display the navigation of creating an assignment per each management system here to give a basis of comparison. Google Classroom and Canvas LMS have more abstraction than Blackboard, providing less customizable upload options, but an overall simpler and beginner friendly UI that allows tasks to be completed in less clicks. I also observed the updates made from Blackboard Original to Blackboard Ultra and how they redesigned their web pages for educators.



User-centered design involves empathizing with the user end of your application and then actively applying that information in your design process, creating a final product that reflects, acknowledges, and respects the needs of your target audience.

My target audience uses Blackboard everyday to aid in their teaching, so creating a design that optimizes their workflow and organizes their content while being user friendly to not so tech savvy instructors would be ideal. Designs that show clarity address accessibility needs, incorporate bread crumbing for navigation, hierarchy, simplicity, fluidity, and consistent interaction patterns in their designs.

Step 4 - Interview Audience

Since I am designing a product for instructors, I reached out to a few within my own institution who actively used the platform to manage their course content. I chose professors from a variety of subjects (Computer Science, Math, History, Design) to observe common critiques or specific issues pertaining to an instructor's class subject. Including instructors who have different class structures such as asynchronous or lecture discussion based classes were also taken into account.

Through email correspondences, I started by asking the following questions to my audience:

1. What areas of Blackboard's design do you like or think needs improvement?
2. Do you feel Blackboard supports your class resources and class structure?

Here are my design goals influenced from the interviews:

- Redesign the class landing and grade book page.
- Update UI to be on par with competitors.
- Reduce the complexity of common features to reduce learning curve and improve user friendliness.
 - Change default settings to most commonly used
 - Simplify pathing of features
 - Organize and abstract advanced customizable options
- Add additional features that will improve the workflow or reduce confusion of target audience.

After interviewing my target audience, I decided to research the UI of discussional spaces, to do lists, and grade books to see how information is organized.

Remarks on General Layout of Blackboard:

Pros:

- “very customizable. That has to be balanced by it have good defaults for those who use it a very minimal level.”
- “The discussion board is ok, but I prefer PIAZZA and probably will set that up for future courses.”
- “We have put class resources such as videos and learning goals into the folders for each week. There is a checklist of items for each week. Instructors are posting their in-class notes. And all sections are being recorded.”
- “It’s supportive for structuring content by modules or week-by-week. It’s also helpful for tracking attendance, submitting/reviewing assignments, and putting in grades”

Cons:

- “I think the aesthetics are not great. The colors, the design, the fonts, etc. None of it is particularly appealing visually.”
- “I wish there were ways to make it more visual and a little less clunky”
- “[When] you link something, the default for the link is ‘in page’ rather than ‘open a new tab’... I think switching that default would save so many clicks.”
- “hard for faculty who have very little experience with back end systems.”
- “While Ally in Blackboard is a useful tool, it does not effectively test our PDFs for accessibility. It incorrectly labels some of our documents as accessible”
- “It would also be great to be able to work a bit more collaboratively in Blackboard or for students to be able to see what each other is working on”

Remarks on Grade Book Page:

- “some grade book calculations need to be done outside of Blackboard and imported in. It would be nice if it was more like Excel.”
- “I don’t particularly like the ‘student view’ option and think other software I have used has better versions of that.”
- “It would be nice to get the stats for each child site (class section). The original view had this functionality, Ultra view does not.”
- “Entering due dates for apps such as Gradescope and MyLab creates major confusion because while things are being graded they show as overdue in Bb.”

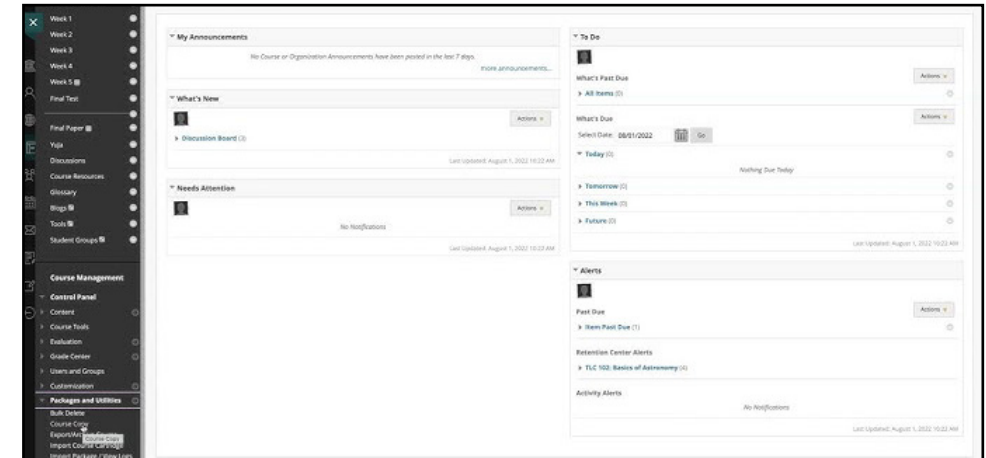
Step 5 - Design

After conducting initial interviews, I've decided to focus on redesigning two pages: the class landing and grade book page.

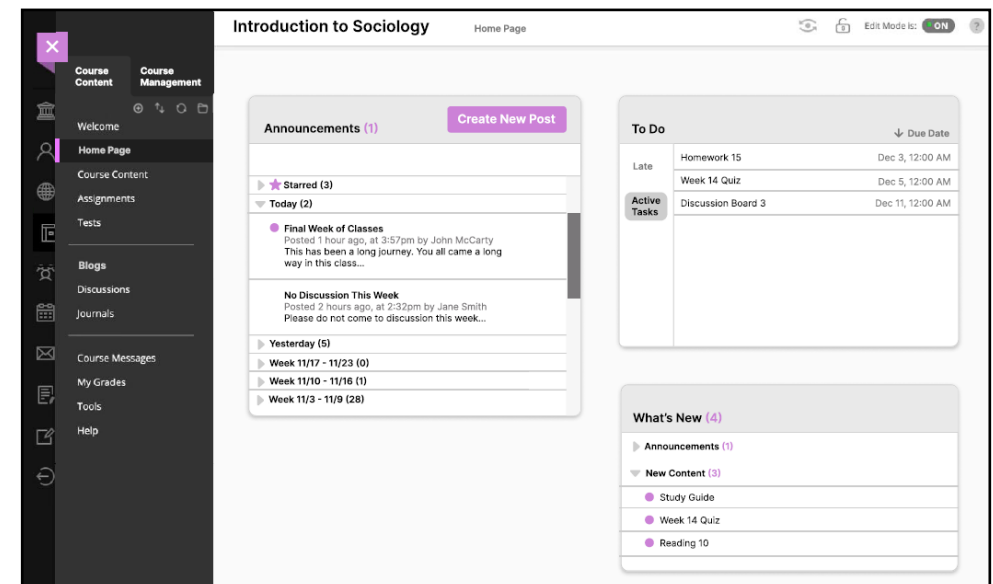
Landing Page Redesign:

- Navigation bar now splits up the course content options and the course management options into separate tabs; this organizes and reduces the length of the bar.
- A highlight is added to show which navigation option the user is currently stepping in.
- Drop down icons on the navigation bar are removed; the functionality can still be done with the drop down options appearing under the main option when clicked.
- Added varied font sizes to build hierarchy of information.
- Announcements and other compartments are given modern UI to lean into familiarity of similar tools (Gmail, Piazza, etc.) The old Announcements compartment design lacked appeal/functionality, so I added a timeline, a way to easily make a new post, and an easy way to identify new and old posts (purple circle indicates new).
- Removed visual clutter (profile pictures, useless buttons) and simplified drop down options such as in the To Do compartment to reduce complexity.
- The compartments are more isolated from each other in comparison to the old design which makes them look blended together by having long boxes with thin borders/outlines; they are more compact boxes with drop shadows to make them stand out more.

Old Landing Page



Redesigned Landing Page



Grade Book Redesign:

- Grade book now encompasses all features of the full grade center to reduce number of pages.
- Buttons/drop downs pertaining to the grading columns are moved closer to the columns and are changed to look more like buttons.
- Simplified the mailing feature as well as added a student search bar and a section organizer when viewing current students in the instructor's class.
- Students' overall grades and names are shown more directly, separating it from the individual assignment grades, providing the students' letter grades as well.
- Rows are alternating in color to help instructors read.
- Missing or excused assignments are now grayed out and completions/needs grading icons are labeled to provide more context to new viewers along with their icons.
- Filters and sorting options are reduced to a filter icon.
- Horizontal and vertical scroll bars are added to easily view all students and graded items.

Step 6 - Revision

In this step I would have returned to my target audience and done usability tests and asked for feedback, revising my prototype continuously until the design purpose is met.

Old Grade Book

LAST NAME	FIRST NAME	TOTAL	WHAT DO YOU	DISC: PLUTO OI	UNIT 1 QUIZ
Brown	Tony	70.00	✓	!	30.00
Casper	Chris	10.00	✓	!	--
Cooper	Ashby	80.00	✓	7.00	30.00
Lopez	Bruce	70.00	--	--	20.00

Redesigned Grade Book

Find Student	Overall Grade	Participation	Discussion	Unit 1 Quiz	Test 1	Homework 1
✉ Tony Brown 70.00 C	70.00	70.00	✓ Completed	70.00	! Needs Grading	70.00
✉ Chris Casper 10.00 F	10.00	10.00	—	—	10.00	10.00
✉ Ashby Cooper 70.00 C	70.00	70.00	✓ Completed	70.00	! Needs Grading	70.00
✉ Bruce Lopez 80.00 B	80.00	80.00	✓ Completed	80.00	80.00	—

Reflection

When redesigning the landing page, there was a moment I questioned if adding more features would really provide more clarity to the design since I would technically be adding more complexity to its UI/UX. After thinking about it, I decided that adding features is great in terms of providing more accessibility and organization, simplifying the journey to using some features like creating a new announcement, and encouraging the user to interact with it more. I say this since one of the main criticisms about Blackboard from my interviews was that the discussional spaces, like the Announcements feature, weren't that interactive with students and so not as effective at sharing content as other modes of communication like Gmail or Piazza. With the addition of the create new post button and the new post indicators (purple circles), I hope to bring greater value to this and other features. For the Grade Book, I added a class section filter as requested by an instructor, but I believe that there are probably more features I could add that would meet the demands of some of the other professors. If given more time, I would probably work on adding a feature to view each assignment's due date as well as adding something to view the overall stats of the class section. Maybe through an extended amount of interviews I would be able to figure out more features to add to the Grade Book, but for now I believe the design I currently have is a bare bones redesign of the original.

Something else that I had to take some time to think about was deciding what features would be okay to remove entirely or combine with another feature. This required circling back to critiques made about Blackboard's layout and understanding what parts of the features are used most often/valued and then what parts weren't useful. In the case of redesigning the Grade Book, the old design had three different buttons dedicated to filtering the columns and rows, so I decided to just merge all of those options into a single filter icon; cleaning up the space.

When I was redesigning both pages, I generally wanted to keep a similar format to how the features were previously laid out to make it have some level of familiarity between the two layouts. I figured this was a good choice after reading about how some professors were hesitant to convert their course page from Blackboard Original to Blackboard Ultra because of the massive change to the layout making it a cumbersome task to get used to the new way of navigation despite the layout being cleaner and more modern. All of my professors still use Blackboard Original for this reason, valuing familiarity.

Something that I think could be cool to add to the landing page and generally any course content page is more page customization options (changing the color of features, adding background images, etc.) to bring more life and identity to the otherwise boring page. Although suggested by a few instructors, this feature wasn't exactly a priority to make as it didn't pertain to the goal of this project, Designing For Clarity, so I scrapped it.