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KeanWise v2

Usability Problem Statement

It is clear that the KeanWise platform has a usability issue because users are often confused where to look for resources on the site, and they are unable to efficiently navigate it.

- ▶ Clunky display
- ▶ Many pages showing repetitive text
- ▶ Each page having different format
- ▶ No mobile scaled version of KeanWise

THE NEED:

Users of KeanWise need a way to:

- ▶ Efficiently navigate the site on desktop (SCANNING)
- ▶ Location of resources should be SELF EVIDENT
- ▶ Minimize unnecessary effort or confusion
- ▶ Use KeanWise while on mobile

Current Design

The screenshot displays the Kean University website's 'Web Information System Express'. The header includes the university's logo and name, along with navigation links for 'LOG IN', 'MAIN MENU', and 'CONTACT Us'. A sidebar on the right contains a vertical menu with links for 'Prospective Students', 'Students', 'Faculty', 'Employees', and 'Other Services'. The main content area features a 'Welcome Guest!' message and a large 'Welcome to KeanWISE!' heading. Below this, a message states: 'To access full menu options, please login using the button on the top right of the page.' The page is organized into four columns of links: 'ACCEPTED STUDENTS:', 'PROSPECTIVE STUDENTS:', 'LINKS & RESOURCES:', 'REGISTRATION RESOURCES:', 'CURRENT STUDENTS:', and a final column of links. A red arrow points to the 'REGISTRATION RESOURCES:' section, specifically to the 'Registration Information' link, with the text 'Small font, clunky design, in the corner of the website' written in red.

KEAN UNIVERSITY
Web Information System Express

LOG IN | MAIN MENU | CONTACT Us

Welcome Guest!

Welcome to KeanWISE!

To access full menu options, please login using the button on the top right of the page.

ACCEPTED STUDENTS:

- [Accepted Student Checklist](#)
- [Tuition Deposit](#)
- [Apply for Housing](#)
- [Apply for Financial Aid](#)
- [Final Checklist](#)

PROSPECTIVE STUDENTS:

- [Apply to Kean](#)
- [Re-Admission Information](#)
- [Admissions](#)

LINKS & RESOURCES:

- [Campus Alert](#)
- [ID Cards](#)
- [Meal Plans](#)
- [Parking ePermits](#)
- [Simple Syllabus](#)
 - Click [here](#) for Current and recent Course Syllabi
 - Click [here](#) for Archived syllabi from Fall 2021 thru Fall 2012
- [Family Educational Rights and Privacy Act \(FERPA\)](#)
 - Student Educational Records Release

REGISTRATION RESOURCES:

- [Registration Information](#)
 - [Self-Service](#)
- [Academic Calendar](#)
- [View Course Sections](#)
- [Financial Obligation Agreement](#)
 - [Complete Required Financial Obligation Agreement](#)
- [Payment Due Date & Payment Options](#)
- [Financial Aid Self-Service](#)
- [View/Pay my Bill](#)
- [Tuition & Fees](#)

CURRENT STUDENTS:

- [Update Student Records](#)
- [Apply for Graduation](#)
- [Enrollment Verification](#)
- [Transcript Information](#)
- [Health Insurance](#)
(Proof of Insurance required for Residential and International Students)
- [Scholarship Services](#)

Small font, clunky design, in the corner of the website

Prospective Students
Students
Faculty
Employees
Other Services

Current Design cont'd

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Web Information System Express

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Website menu is hard to find

no clear home redirect

no prompt on where to go or what to do

Current Design cont'd

The screenshot displays the Kean University WebAdvisor interface. At the top left is the Kean University logo. The header bar includes the text 'Web Information System Express' and navigation links: 'Log In', 'Main Menu', 'Students Menu', and 'Contact Us'. Below the header, a dark blue banner reads 'CURRENT STUDENTS - WEBADVISOR FOR STUDENTS MENU' with 'Welcome Guest!' on the right. The main content area contains a warning: 'The following links may display confidential information. Please resolve all student restrictions before registration.' Below this, there are four categories of links, each in a light blue box: 'User Account' (with links for 'What's my User ID?', 'What's my password', and 'Change Password'), 'Financial Information', 'Registration' (with a link for 'Search for Course Sections - Self Service'), and 'Other'. A second navigation bar at the bottom repeats the 'Log In', 'Main Menu', 'Students Menu', and 'Contact Us' links, with the 'WebAdvisor 3.1' logo and 'POWERED BY DATATEL' on the right.

When not logged in, Student Menu tab has limited options & no prompt telling user to log in

Current Design cont'd



KEAN
UNIVERSITY

Web Information System Express

LOG IN

MAIN MENU

STUDENTS MENU

CONTACT Us

CURRENT STUDENTS - WEBADVISOR FOR STUDENTS MENU

Welcome Guest!

The following links may display confidential information.
Please resolve all student restrictions before registration.

There is no clear Log In, it is a small button that is not easy to find

User Account

[What's my User ID?](#)
[What's my password](#)
[Change Password](#)

Financial Information

Registration

[Search for Course Sections - Self Service](#)

Other

LOG IN

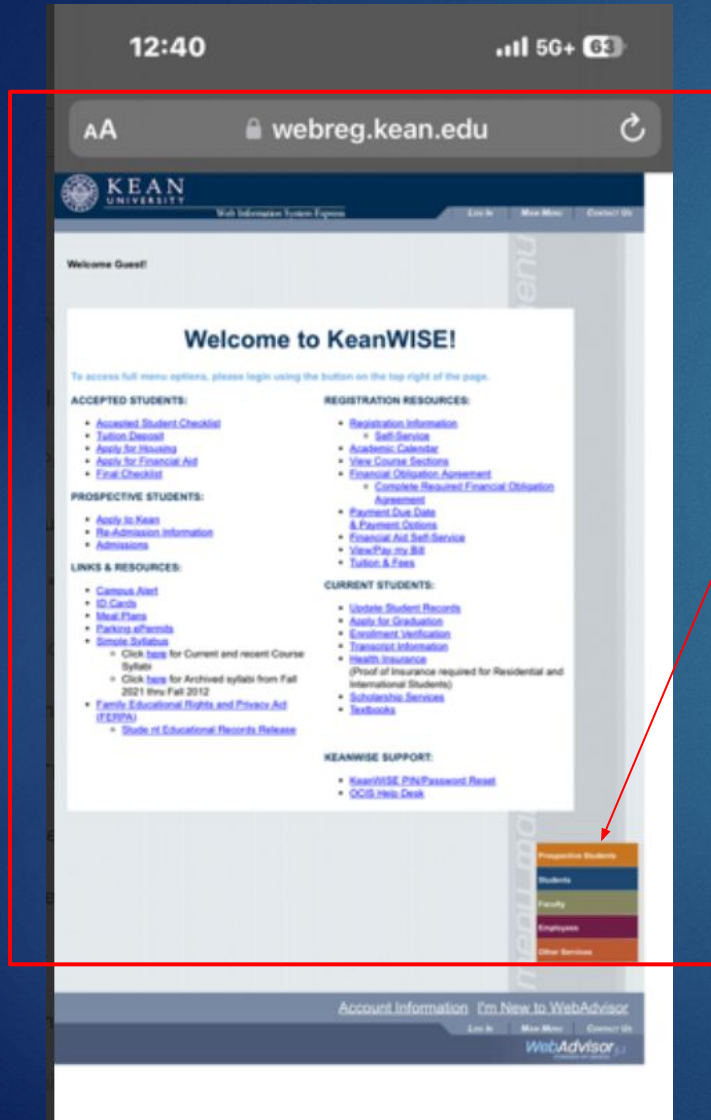
MAIN MENU

STUDENTS MENU

CONTACT Us

WebAdvisor^{3.1}
POWERED BY DATATEL

Current Design Mobile

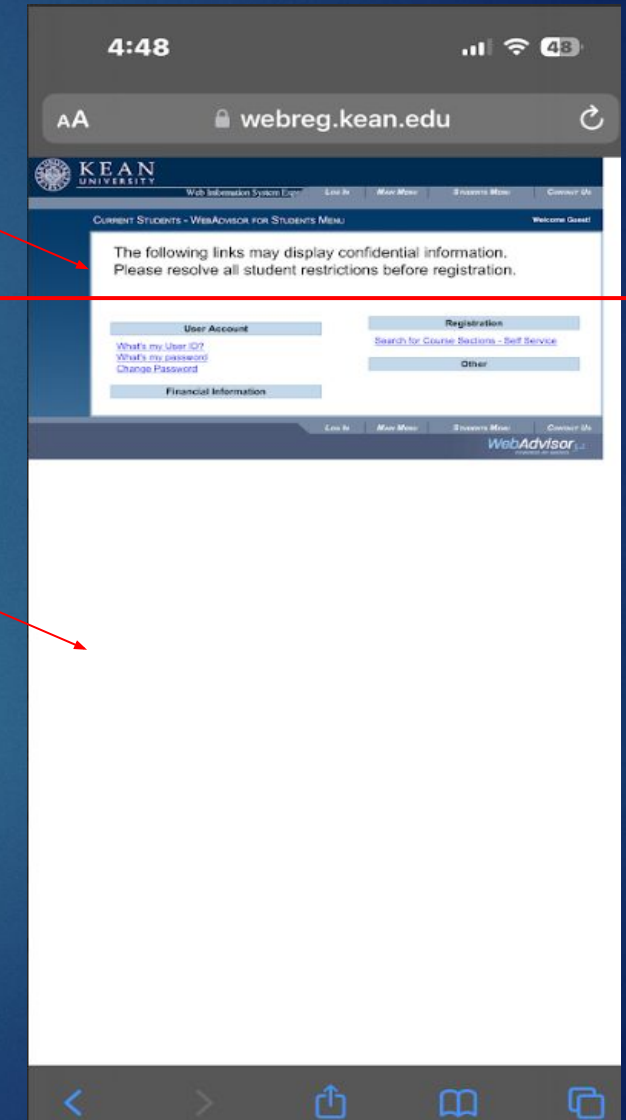


Extremely small font

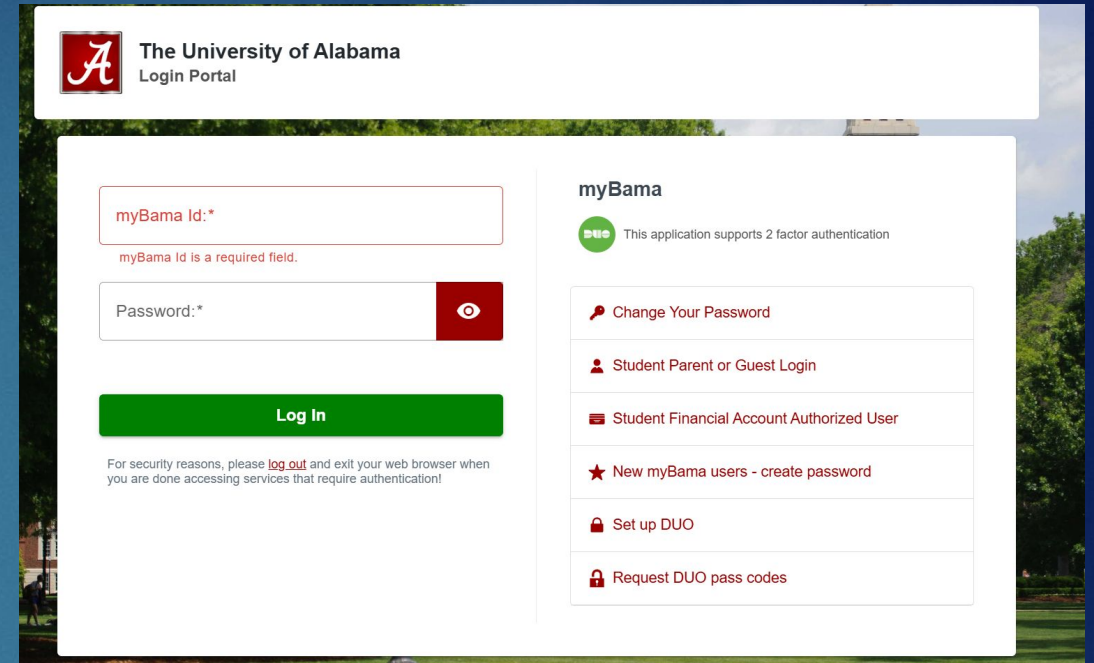
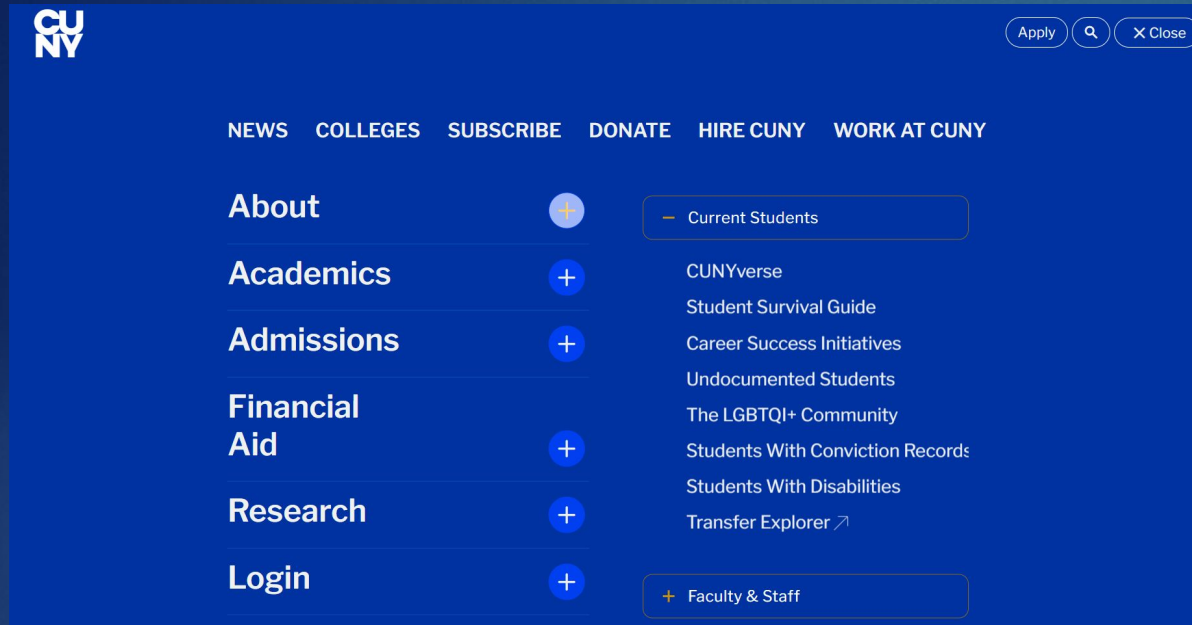
Resources in different places than Desktop version

Lots of empty space due to no scaling features

Same usability issues as desktop variant, just amplified



Prior Work and Research

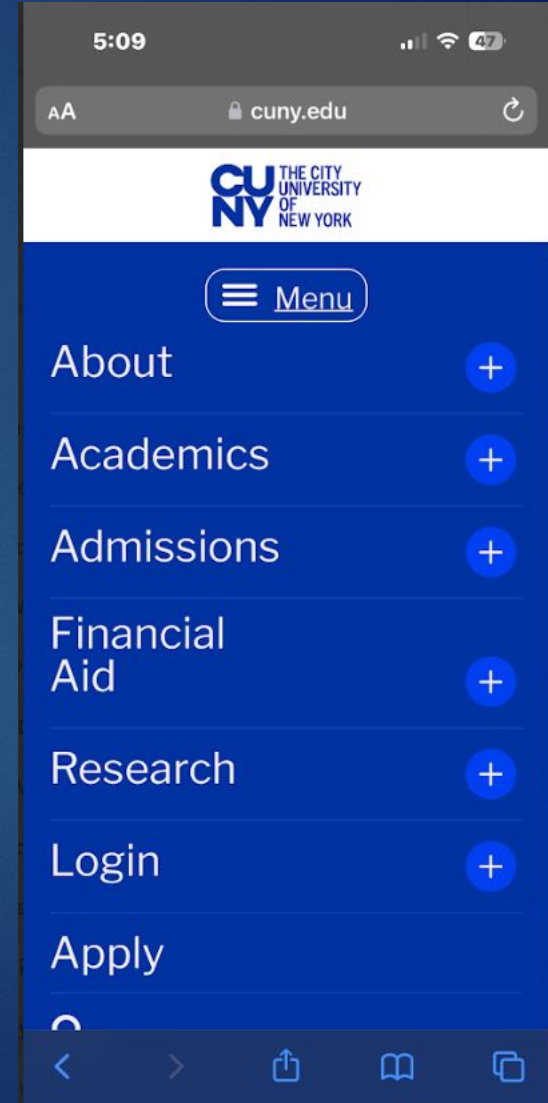


Researchers were able to view designs from other universities to compare to KeanWise

Prior Work and Research cont'd

Common Trends:

- ▶ Large Buttons for each directory
- ▶ Immediate Login Prompts
- ▶ Contrast in font size and colors
- ▶ Scaled for mobile use



Initial Prototyping

Task 1: Login. Find the login button and enter credentials

KeanWise		Q Search
Prospective	Welcome to KeanWise!	
Student MENU	Accepted Student	Registration Resources
Faculty MENU	Links & Resources	Prospective Student
Other Services	OATS HELP	FAQ's
		LOGIN

Task 2: Find Student Planning

KeanWise		Q Search
Prospective	Welcome to KeanWise!	
Student MENU	Accepted Student	Registration Resources
Faculty MENU	Links & Resources	Prospective Student
Other Services	OATS HELP	FAQ's
		LOGIN

Goals of Prototype:

- Address major flaws in KeanWise design
- Make locations self evident
- Keep in mind common tasks such as Student Planning
- Use KeanWise while on mobile

Data Gathering

- ▶ Users from different backgrounds were observed conducting usability testing of current KeanWise design
- ▶ Users were also interviewed during and after the testing to gather data on their pain points

Data Gathering cont'd

Common Trends:

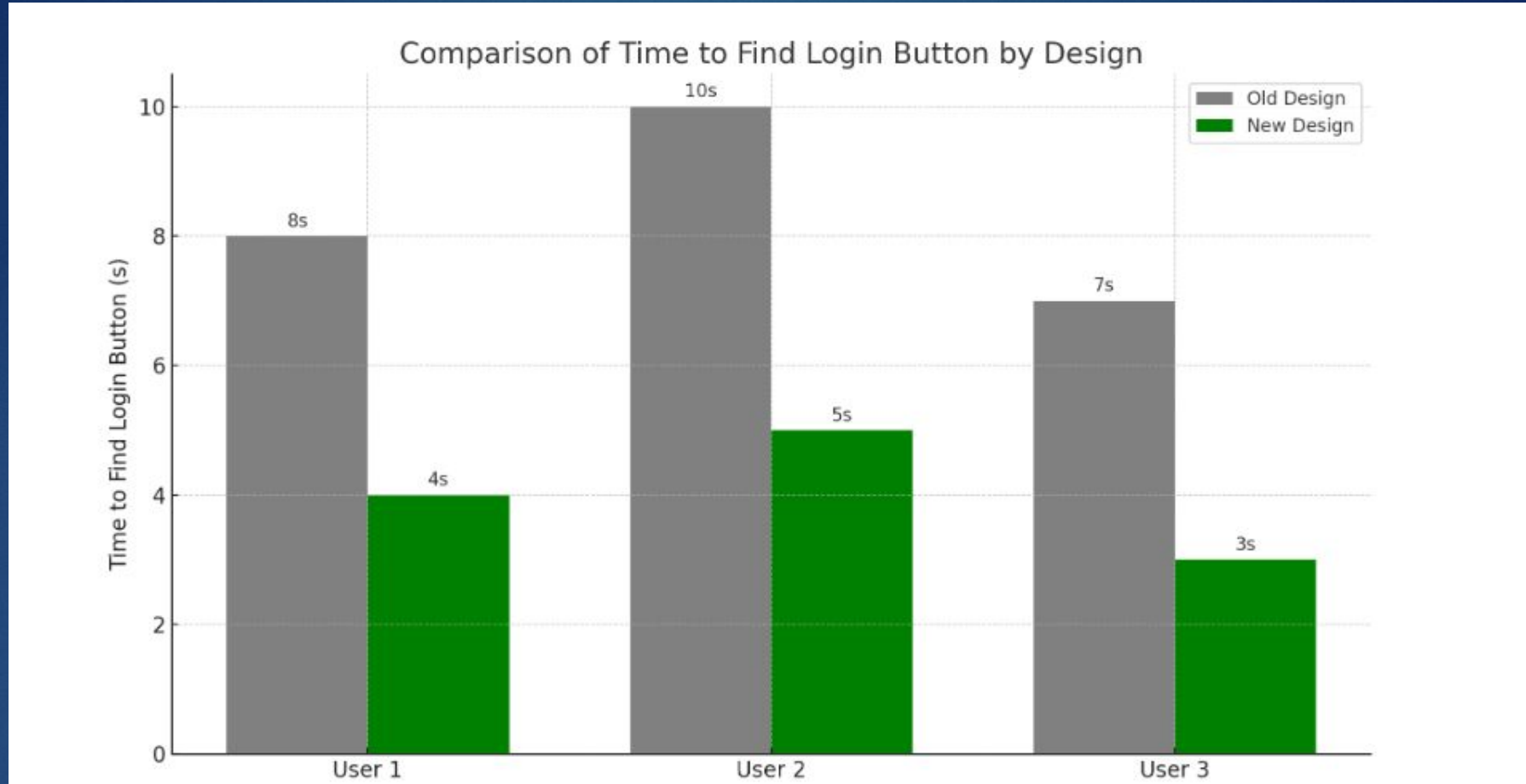
- ▶ Frustration with layout of website
- ▶ Menu items were hidden until logged in
- ▶ No prompt to log in
- ▶ No breadcrumbs
- ▶ Not scaled for mobile use

Task 1 KLM: Find Login Button

Step	Action Description	KLM Operator	Time (sec)	Notes
1	Mentally prepare to find the login button	M	1.35	Mental preparation
2	Move eyes to scan the page for login button	M	1.35	Cognitive scan
3	Move mouse to login button	P	1.10	Pointing using mouse
4	Mentally verify that it is the correct button	M	1.35	Cognitive verification
5	Click the login button	BB (Mouse)	0.20	Button click

Keystroke Level Model to find Login button

Task 1: Find Login Button



Comparison in Usability Testing between Designs

Task 2 KLM: Find Student Planning

Step	Action Description	KLM Operator	Time (sec)	Notes
1	Mentally prepare for the task	M	1.35	Initial decision to begin
2	Move mouse to "Quick Links" or navigation menu	P	1.10	Top navigation
3	Click to open the navigation menu	BB	0.20	Mouse click
4	Mentally locate "Students" tab	M	1.35	Visual search
5	Point to the "Students" tab	P	1.10	Navigate cursor
6	Click on "Students"	BB	0.20	

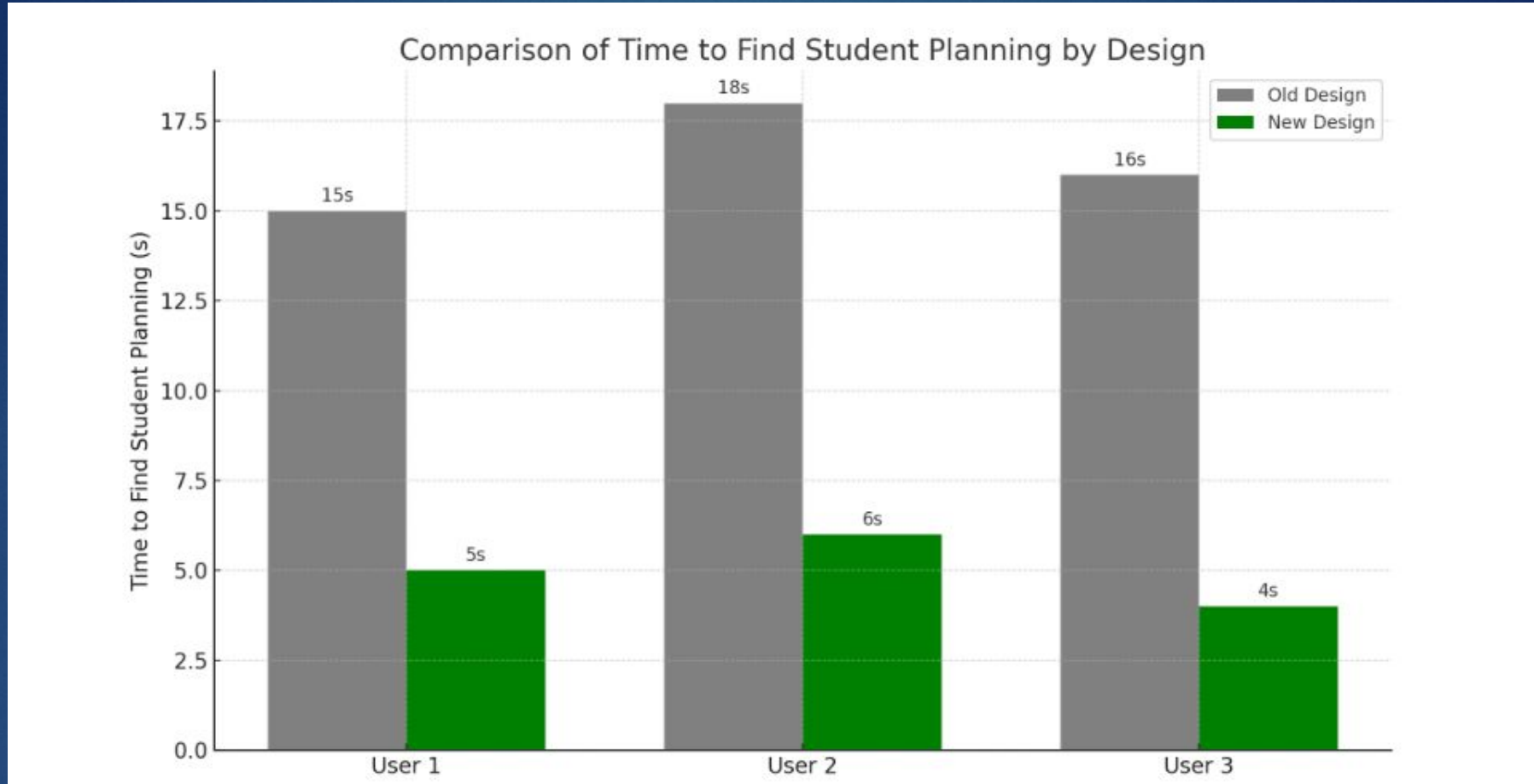
Keystroke Level Model to find Login button

Task 2 KLM: Find Student Planning

10	Point to login button	P	1.10	
11	Click login button	BB	0.20	Opens login page
12	Mentally prep to enter credentials	M	1.35	Cognitive load
13	Click in username field	P + BB	1.30	Point and click
14	Type username (assume 8 characters)	8K	2.24	0.28 sec each
15	Press Tab to move to password field	K	0.28	
16	Type password (assume 8 characters)	8K	2.24	
17	Press Enter to log in	K	0.28	
18	Mentally prepare to find Student Planning	M	1.35	New task within system
19	Visual search for Student Planning link or tab	M	1.35	
20	Point to the Student Planning tab/link	P	1.10	
21	Click on Student Planning	BB	0.20	Done!

Keystroke Level Model to find Student Planning

Task 2: Find Student Planning



Comparison in Usability Testing between Designs

Feedback and Evaluations

1

Visibility of System Status

The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time.

- Does the design clearly communicate its state?
- Is feedback presented quickly after user actions?

Issues

Pointer: Top header area

There is no clear indication of whether or not the user is currently logged in or has an active session. Although a Login button is at the top, the user does not know if they are "in" the system once logged in.

Severity: 2 (Moderate; can confuse users about their current state)

Recommendations

Show a clear logged-in state (such as a "Welcome, [Name]") once the user has authenticated.

Provide feedback when any page load or task is in progress.

2

Match Between System and the Real World

The design should speak the users' language. Use words, phrases, and concepts familiar to the user, rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order.

- Will user be familiar with the terminology used in the design?
- Do the design's controls follow real-world conventions?

Issues

Severity: 0 (No issues in relation to word choices or jargon)

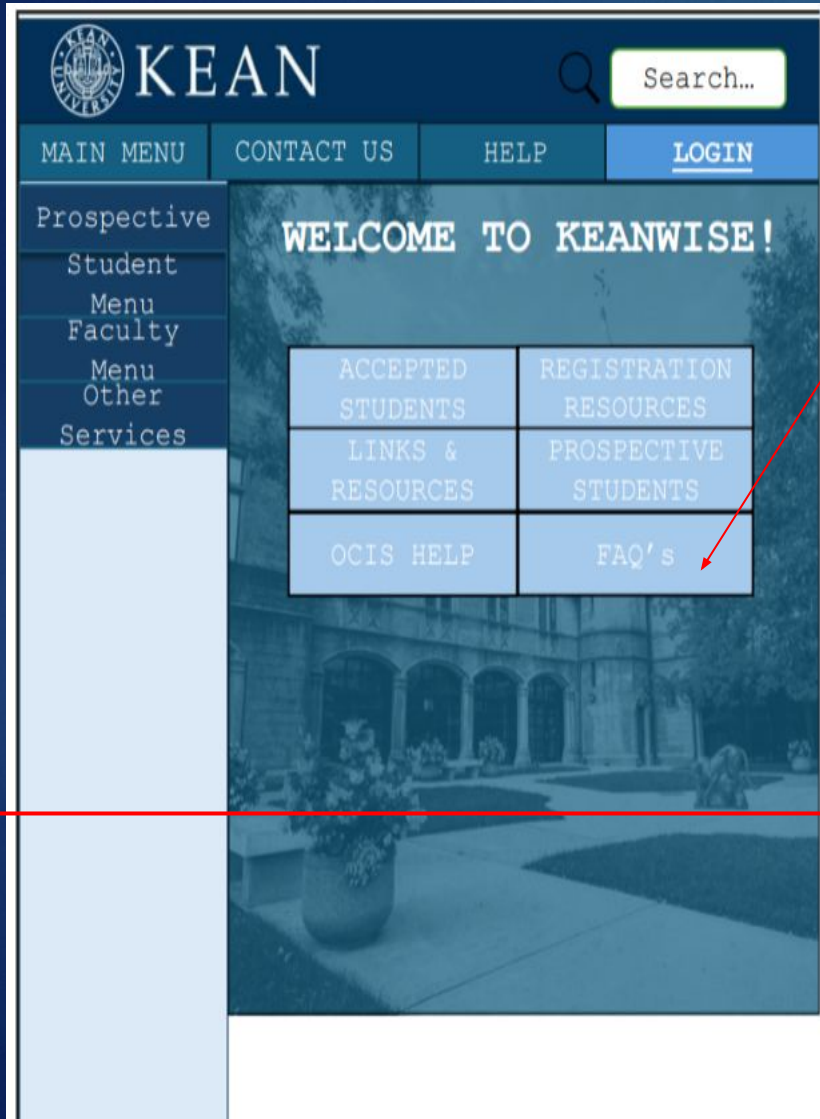
Recommendations

Provide short explanations under or next to each link to clarify its purpose.

Feedback & Prototyping:

- ▶ After initial prototyping, researchers conducted heuristic evaluations to receive feedback or follow on prototyping

Design For Mobile

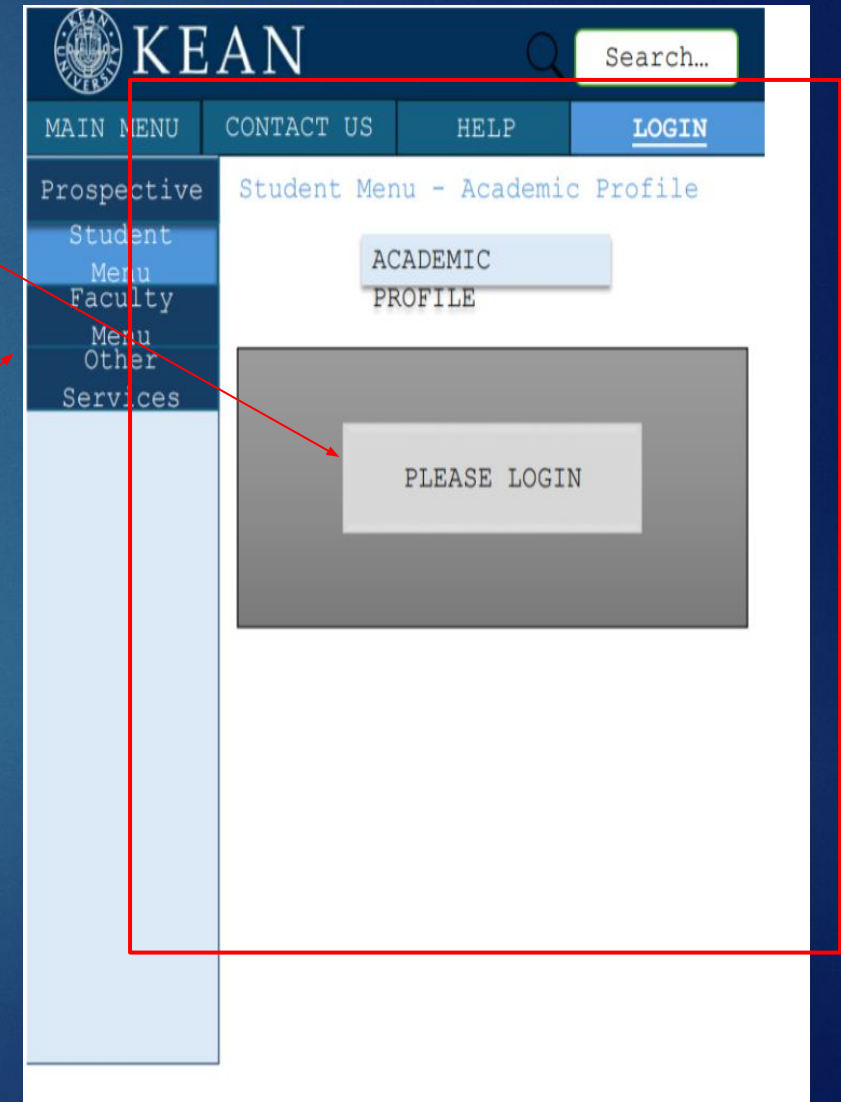


Immediate Login Prompts

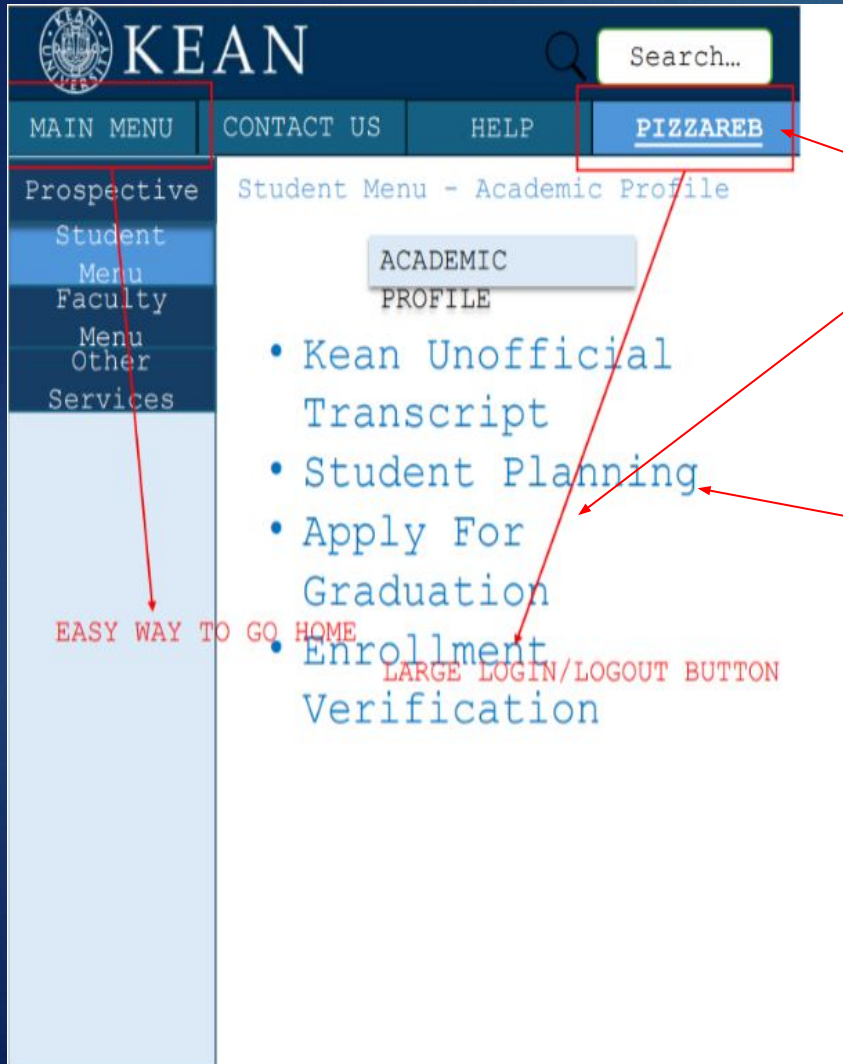
Resources easy to locate with names

Main Menu Button, Highlighted Menu Buttons

Breadcrumbs to let users know what menu they are in



Design Mobile cont'd

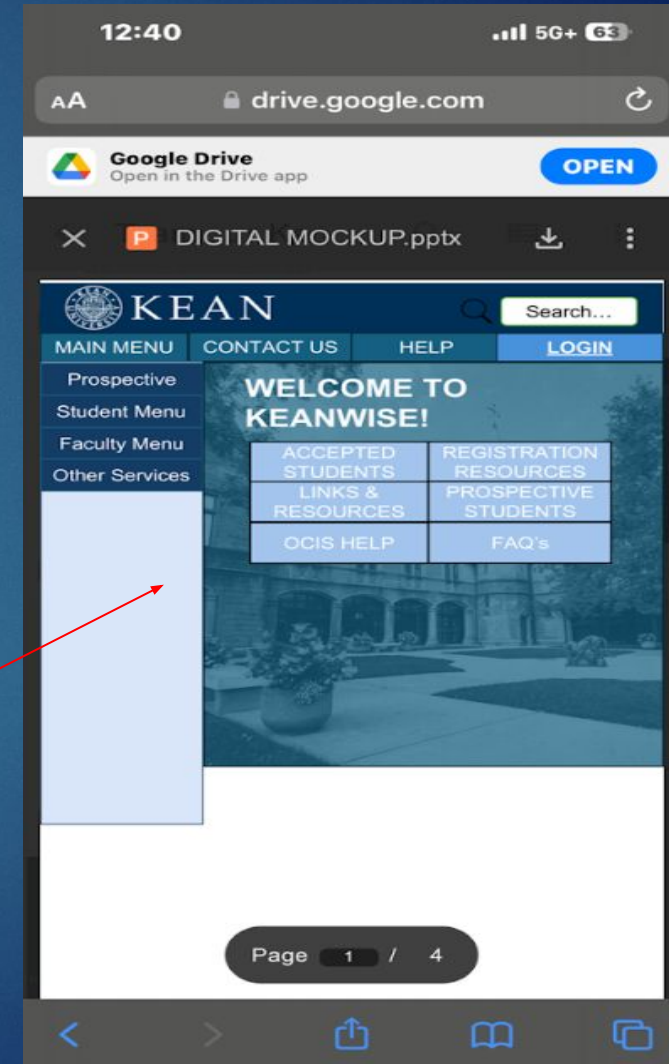


Positive Logged In Feedback

Resources easy to locate with names

Hyper Links relevant to that section

Mobile Design is scaled for users on the go



Pro's / Con's of Data Gathering

- ▶ Hard to find users for usability testing based on availability **(CON)**
- ▶ Users had different priorities so hard to get consisted feedback **(Also a Pro)**
- ▶ Our users had experience with similar interfaces **(PRO)**
- ▶ KeanWise design was poor so it was easy to find issues **(PRO)**
- ▶ We do not have formal interface design backgrounds **(CON)**

Conclusion

- ▶ The initial KeanWise interface contained severe usability issues related to: Navigation, Functionality, Consistency
- ▶ Through usability testing we were able to observe, gather data, prototype, design, and compare results
- ▶ The design is never complete, but we have a solid foundation to continue prototyping and building