

CANVAS RE-DESIGN

FINAL PROJECT

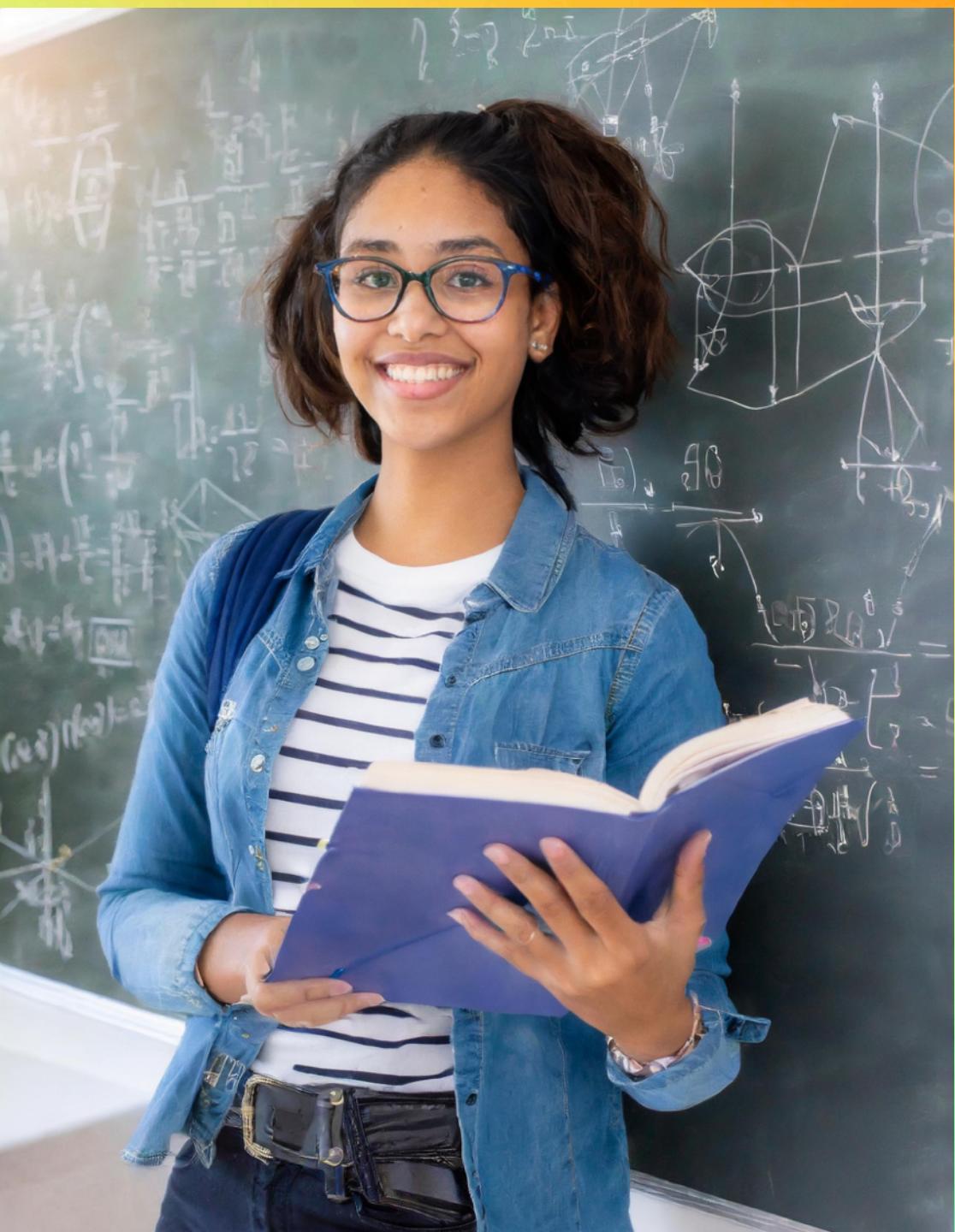
TOMMASO ROSATI - PRAVEEN SURATHU - ANDREW TANNER - SNEHA SHAJEE MOHAN



DISCOVERY

INTERVIEW / OBSERVATION

PLAN



STUDENT



FACULTY



STAFF

INTERVIEW PLAN

MAIN QUESTIONS

- How do you use Canvas, on your phone, computer, or tablet? Why do you prefer to use that particular device?
- Have you ever used any other LMS software?
- What activities do you perform on Canvas? Which one is the most frequent?
- Can you please explain the last activity you performed on Canvas?
- Have you ever faced any issues using the Canvas platform? If so, what were they?
- Can you share an example of a positive experience you've had while using Canvas for your academic tasks?
- What features of the Canvas website do you find most helpful in managing your coursework?
- How would you describe the process of interacting with instructors and classmates through Canvas?
- How would you rate the overall user experience of Canvas in terms of usability and accessibility?
- Do you have any personal or professional experience with accessibility? Do you know someone living with disabilities or have you had to work with such features?
- Are there any specific features or functionalities you wish Canvas offered to enhance your learning experience?



STUDENT

INTERVIEW PLAN

MAIN QUESTIONS

- Do students frequently report any issues during assignment submission in Canvas? If so, what are they?
- Can you identify any areas of canvas where you encounter frequent technical issues or glitches? If so, what are they, and how do they impact your work?
- Do you believe that canvas adequately communicates important announcements or updates relevant to faculty members?
- Are there any specific training or support resources you feel would be beneficial to help faculty members navigate and utilize canvas more effectively?
- Have you encountered any compatibility issues while accessing canvas from different devices or browsers?
- What specific features or functionalities of canvas do you find most challenging to navigate or utilize effectively?
- In your opinion, what improvements could be made to canvas to better support faculty members in their daily activities and responsibilities?
- Can you provide insights into the process of updating and maintaining content on canvas? How often is the content reviewed and refreshed?
- How important are accessibility features for the Canvas platform?
- What metrics are you using to measure accessibility?



FACULTY

INTERVIEW PLAN

MAIN QUESTIONS

- Who are your primary users?
- What tasks have your primary users identified as key?
- How important are accessibility features for the Canvas platform?
- Can you provide insights into the process of updating and maintaining content on canvas? How often is the content reviewed and refreshed?
- In your opinion, what improvements could be made to canvas to better support faculty members in their daily activities and responsibilities?
- Before we wrap up, is there anything else related to the Canvas platform that we havenâ€™t asked that you think we should know?





STUDENT

OBSERVATION

PLAN

KPI

- Time on task
- Steps in navigation
- Success of the task

TASKS

- Read the latest announcement from one of your classes.
- Check for new mail in your Canvas inbox.
- Navigate to the files section of your class and download a file.
- Start a conversation with a classmate using the chat feature.
- Upload a PDF file as an assignment.
- Find the contact information and office hours of one of your professors.
- Edit your contact informations
- Show your course history
- Can you show me an accessibility feature? And use it?
- Can you turn up the high contrast on the Canvas screen?
- Find the contact information of one of your classmates.
- Put a text message in any of the course groups

METRICS

- Time to complete the task
- Amount of screen in navigation
- Error rate
- Success rate

OBSERVATION

PLAN

KPI

- Time on task
- Steps in navigation
- Success of the task



FACULTY

TASKS

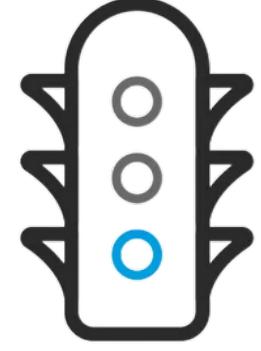
- Create a new module and add a link to an external site
- Check for feedback from students on a given assignment
- Grade an assignment (pretend to)
- Create an announcement for 3 different classes (the same).
- Share one specific folder in files section to a class

METRICS

- Time to complete the task
- Amount of screen in navigation
- Error rate
- Success rate

HEURISTIC EVALUATION

SUMMARY



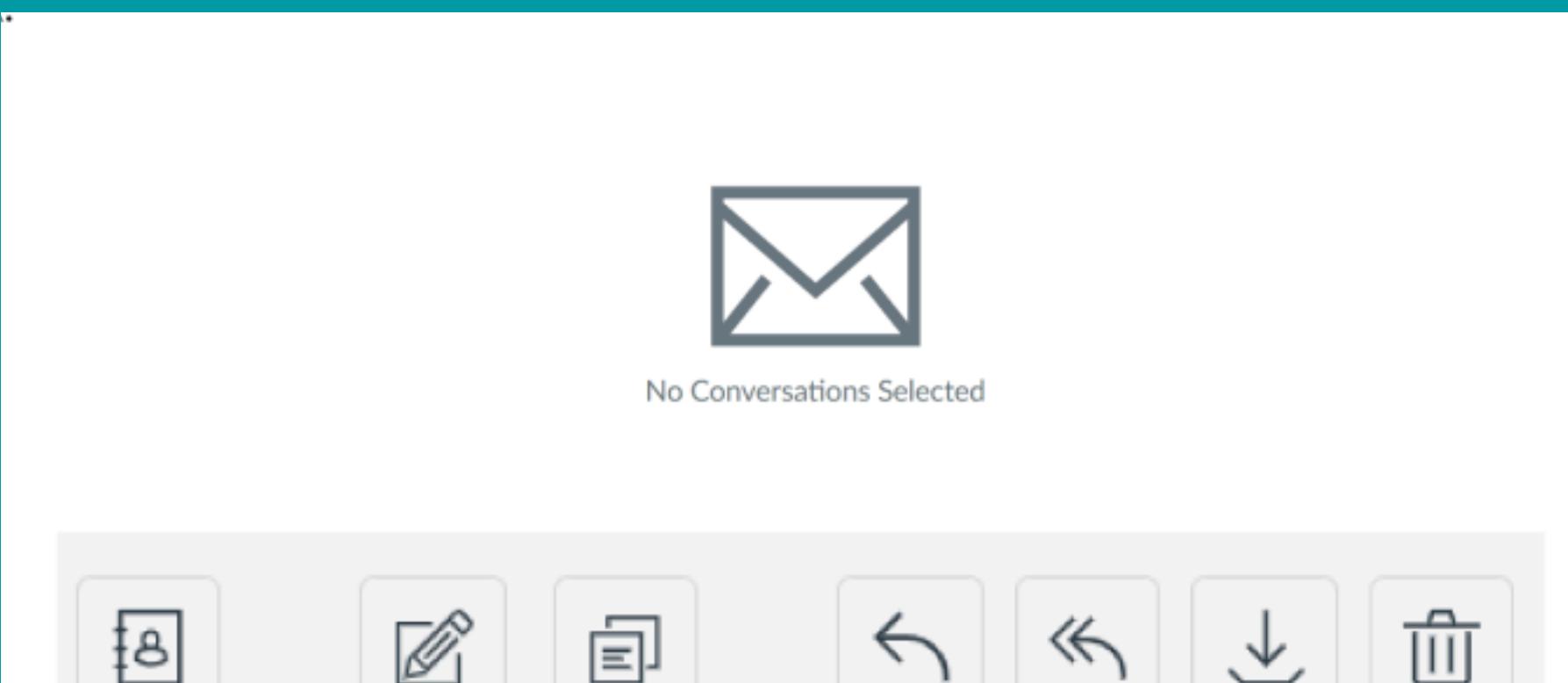
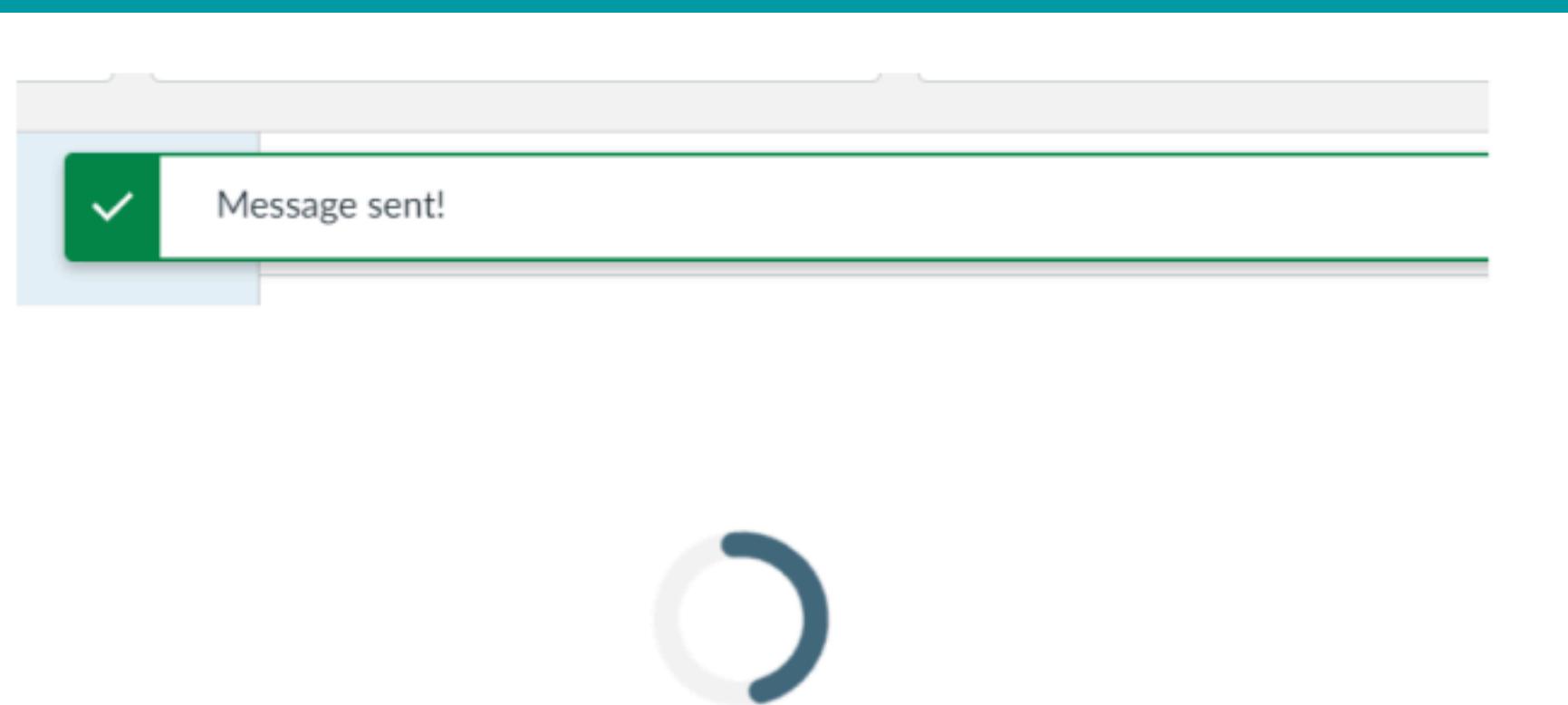
Visibility of System Status

In evaluating the "Visibility of System Status" heuristic, it was noted that : enhancing clarity in the left navigation menu and providing clear indications of the current module or week could improve user awareness. While Canvas generally offers appropriate feedback, issues such as unnecessary dashboard refreshes and lack of visibility of primary icons were identified, emphasizing the need for clearer system status cues.



Match Between System & the Real World

The evaluation highlights a mismatch between system representation and user expectations, particularly concerning the clarity of some icon names and feature functionalities. Users find certain icon names inconsistent and ambiguous, leading to confusion and hindering usability. Additionally, obscure features such as "Kaltura: My Media" are overlooked, emphasizing the importance of intuitive design and clearer communication of functionality within the application. While some icons match real-world systems (trash bin, email).



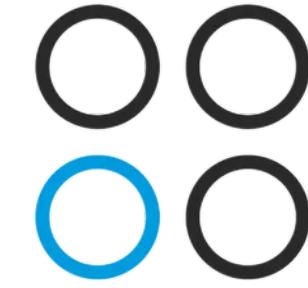
HEURISTIC EVALUATION

SUMMARY



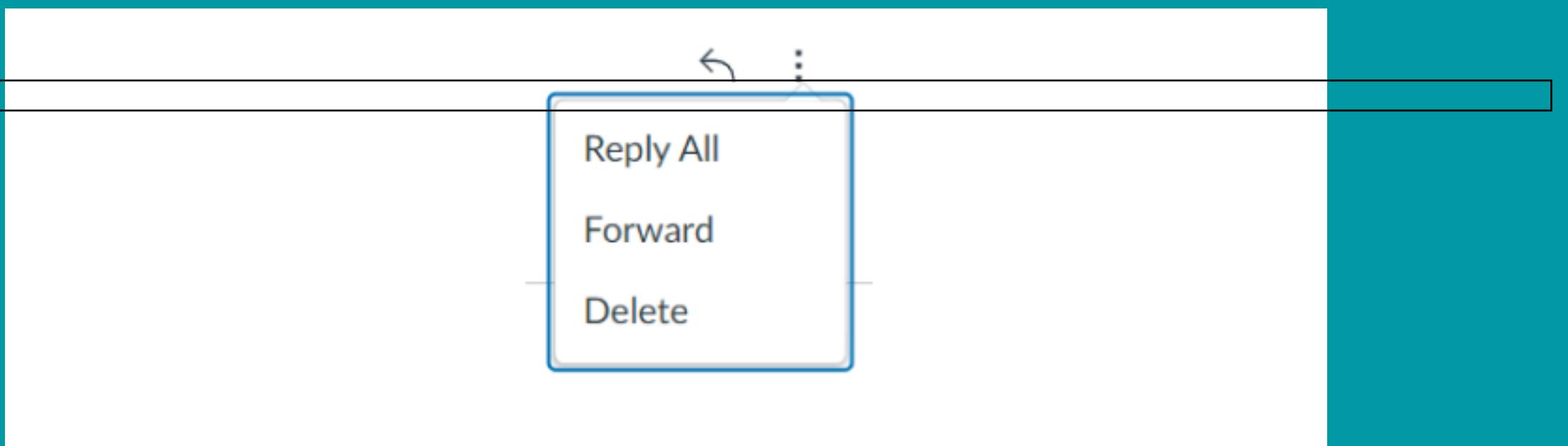
User Control & Freedom

In evaluating "User Control and Freedom," it was observed that Canvas provides extensive customization options for faculty, which can sometimes overwhelm students. The inconsistency in navigation controls, where some side navigations offer an 'x' option to close overlays while others automatically redirect, contributes to user frustration. Students have limited control over Canvas functionalities compared to faculty, and accessing essential features often involves a request process, limiting their sense of control.



Consistency & Standards

In evaluating "Consistency and Standards," it's noted that while Canvas maintains consistency in elements like side navigation menus and color branding, inconsistencies arise in the course layouts for student portals due to faculty customization. This variability within individual courses can lead to confusion for users, as they navigate differing functionalities and features within the same application.



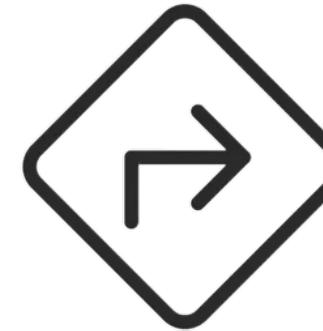
HEURISTIC EVALUATION

SUMMARY



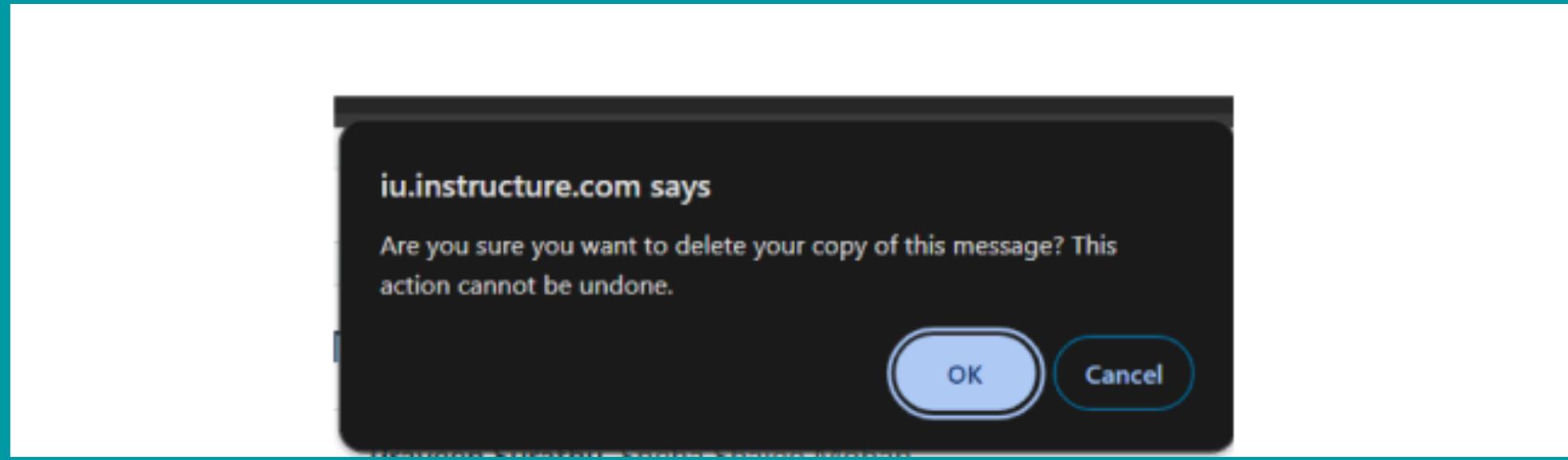
Error Prevention

In evaluating the "Error Prevention" heuristic, it was found that Canvas lacks effectiveness in preventing errors during submission or importing processes in faculty portal, leading to increased grading and course setup time. Despite this, Canvas implements some effective error prevention measures, such as displaying error messages appropriately and providing hover-over descriptions for icons to aid user navigation.



Recognition Rather than Recall

In evaluating the "Recognition Rather than Recall" heuristic, Canvas generally succeeds in prompting users to recognize information rather than recall it, as seen in the menu options and hover-over icon names. However, the absence of functionality for displaying previous course import details forces users to rely on recall, impacting usability.



User
Mr. Adam
Hudson Aase
Mustafa Abdallah
Elham Abdelmaksoud
Ammar Abdelsamad
Laila Abdelwahab
Mohamed Abdelwahab
Leili Abdi

HEURISTIC EVALUATION

SUMMARY



The heuristic evaluation for "Flexibility and Efficiency of Use" identified limitations in Canvas's flexibility, such as the manual organization of modules and the use of unlabeled icons without alternative options for tasks. While the system lacks a noticeable group-chat feature or customization options, the presence of small icons on course cards and filtering options in inbox offers some flexibility for experienced users.



The heuristic evaluation for "Aesthetic and Minimalist Design" indicates that while Canvas features an efficient layout, there's a need to minimize non-essential elements for better focus and prioritize content with varying sizes and colors. However, Canvas lacks a minimalist design, with cluttered interfaces containing unused functionalities and course cards becoming overwhelming for users with more than a few courses, necessitating improvements in clarity and placement.

Inbox

Inbox

Unread

Starred

Sent

Archived

Submission Comments

All Courses

Inbox

Sri Jahnavi Adusumilli, Jamesetta Quiqui...
Regarding Project Proposal Submission
Hi Amulya, Hope you are fine. We import...

Mar 27, 2024

Mahamadoun Toure, Mariam Khan, Sahith Up...
Polis Projects
I discussed the possibility of volunteer...

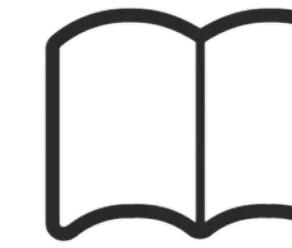
HEURISTIC EVALUATION

SUMMARY



Help Users Recognize, Diagnose
& Recover from Errors

The heuristic evaluation for "Flexibility and Efficiency of Use" identified limitations in Canvas's flexibility, such as the manual organization of modules and the use of unlabeled icons without alternative options for tasks. While the system lacks a noticeable group-chat feature or customization options, the presence of small icons on course cards and filtering options in inbox offers some flexibility for experienced users.



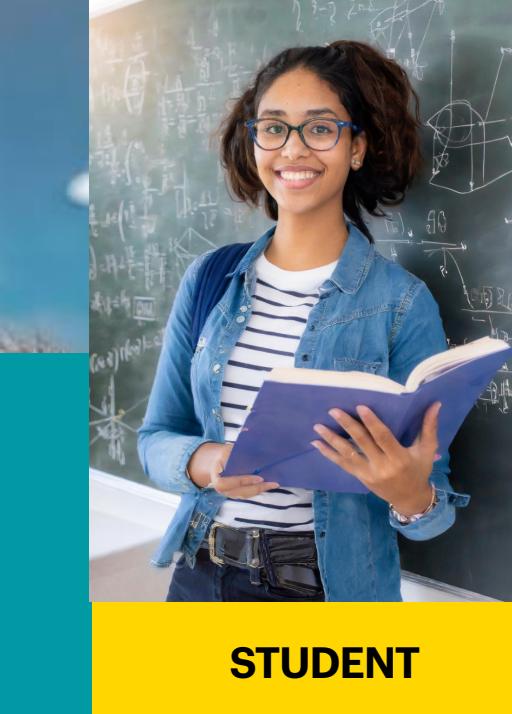
Help &
Documentation

The heuristic evaluation for "Aesthetic and Minimalist Design" indicates that while Canvas features an efficient layout, there's a need to minimize non-essential elements for better focus and prioritize content with varying sizes and colors. However, Canvas lacks a minimalist design, with cluttered interfaces containing unused functionalities and course cards becoming overwhelming for users with more than a few courses, necessitating improvements in clarity and placement.

A screenshot of the Canvas messaging interface titled "Compose message". The "Course" section has a dropdown menu labeled "Select Course" with the error message "Please select a course". The "To" section has a search bar labeled "Insert or Select Names" with the error message "Please select a recipient". The "Subject" section has a text input field labeled "Insert Subject".

RESULTS

KEY FINDINGS



INTERVIEWS

12 Students

OBSERVATION

10 Students

5 Faculty

2 Faculty

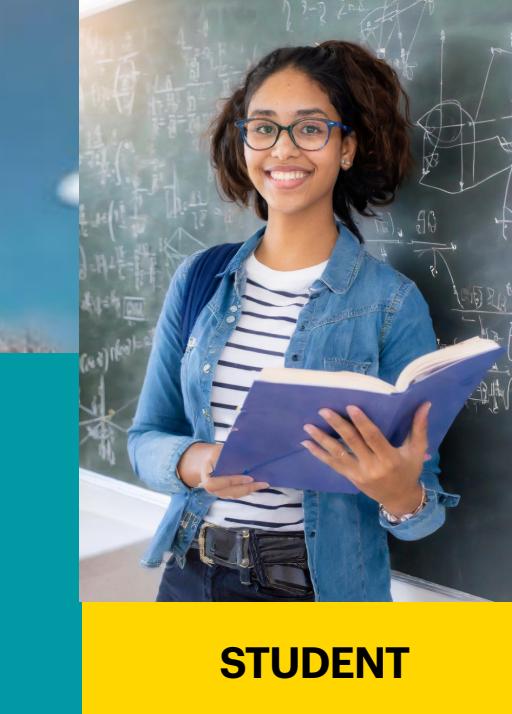
3 Staff

PRIORITIZED

- | Category | Findings |
|----------------|---|
| COMMUNICATION | ◆ Interacting with instructors and classmates on Canvas is challenging, leading to reliance on email communication or third-party applications like Slack for group discussions |
| GRADES | ◆ Difficulty in accessing grades on the dashboard in her laptop version |
| PEER REVIEW | ◆ Lack of an option to edit comments for peer reviews |
| COMMUNICATION | ◆ The inbox feature lacks categorization, causing inconvenience |
| GROUPS | ◆ In course groups, user has to open every group to find out which one is in |
| LOGIN | ◆ Difficulties in password retrieval and frequent login requests |
| ICONS | ◆ Most users did not use icons on the course cards |
| DOWNLOAD FILES | ◆ Most users are going the longer route for downloading files, do not use shortcuts |
| ASSIGNMENTS | ◆ Issues with group assignments not registering submissions for all members if one member from the group submits (sometimes) |

RESULTS

KEY FINDINGS



INTERVIEWS

12 Students

OBSERVATION

10 Students

5 Faculty

2 Faculty

3 Staff

COMMUNICATION ◆ Interacting with instructors and classmates on Canvas is challenging, leading to reliance on email communication/third party applications like slack for group discussions

CHAT ◆ The chat option is very basic (don't have option to attach files) and doesn't work for some students
◆ Many users are unaware that the chat feature exists on Canvas.

CONTACT INFO ◆ Hard to find contact info and office hours, every course is different

INBOX ◆ Not used/aware of inbox functionality - inbox is very basic with limited features
◆ Lack of categorization in the inbox feature.

COURSE HISTORY ◆ Course history is hard to find and organize

ACCESSIBILITY ◆ Almost everyone was vaguely aware that accessibility features existed, but had no idea how to turn them on.

DOCUMENTATION ◆ No documentation for canvas (How to use/find features)

UPDATES ◆ UI related changes are placed in settings page which is very long and over-written

RESULTS

KEY FINDINGS



INTERVIEWS

12 Students

FACULTY

5 Faculty

3 Staff

OBSERVATION

10 Students

2 Faculty

PRIORITIZED

FILES ◆ Media files type sometimes missing preview

ASSIGNMENTS ◆ Quizzes generator has only basic functions

MODULES ◆ New modules always appear at the bottom. You need to drag them to the desired position.

COMMUNICATION ◆ Have a confirmation of receipt for important announcements.

FILES ◆ Big media files size management and loading

COMMUNICATION ◆ Making an announcement for multiple courses is not intuitive

FILES ◆ Share/unshare specific folder function is hard to find

COMMUNICATION ◆ Inbox and normal e-mail clients doesn't communicate properly

MODULES ◆ Import an old course into a new one is inefficient, especially when setting a different start date

RESULTS

PRIORITIES

PRIORITIZED

ACCESSIBILITY

- ◆ Accessibility is for everyone, but should center those who need it most.

QUIZ TOOL

- ◆ We could use an updated quiz tool that actually allows instructors to make quizzes with a bank of questions that are autogenerated instead of manual input

VERSION UPGRADES

- ◆ Upgrading Canvas versions is tedious because it is an older version and does not have a tool to smooth out the process of linking and others.

COMMUNITY FEATURES

- ◆ The help and community features allow users to make suggestions but they are not generally aware that they exist.



INTERVIEWS

12 Students

5 Faculty

3 Staff

OBSERVATION

10 Students

2 Faculty

RESULTS

PERSONAS

USER PERSONA

Apoorva Singh

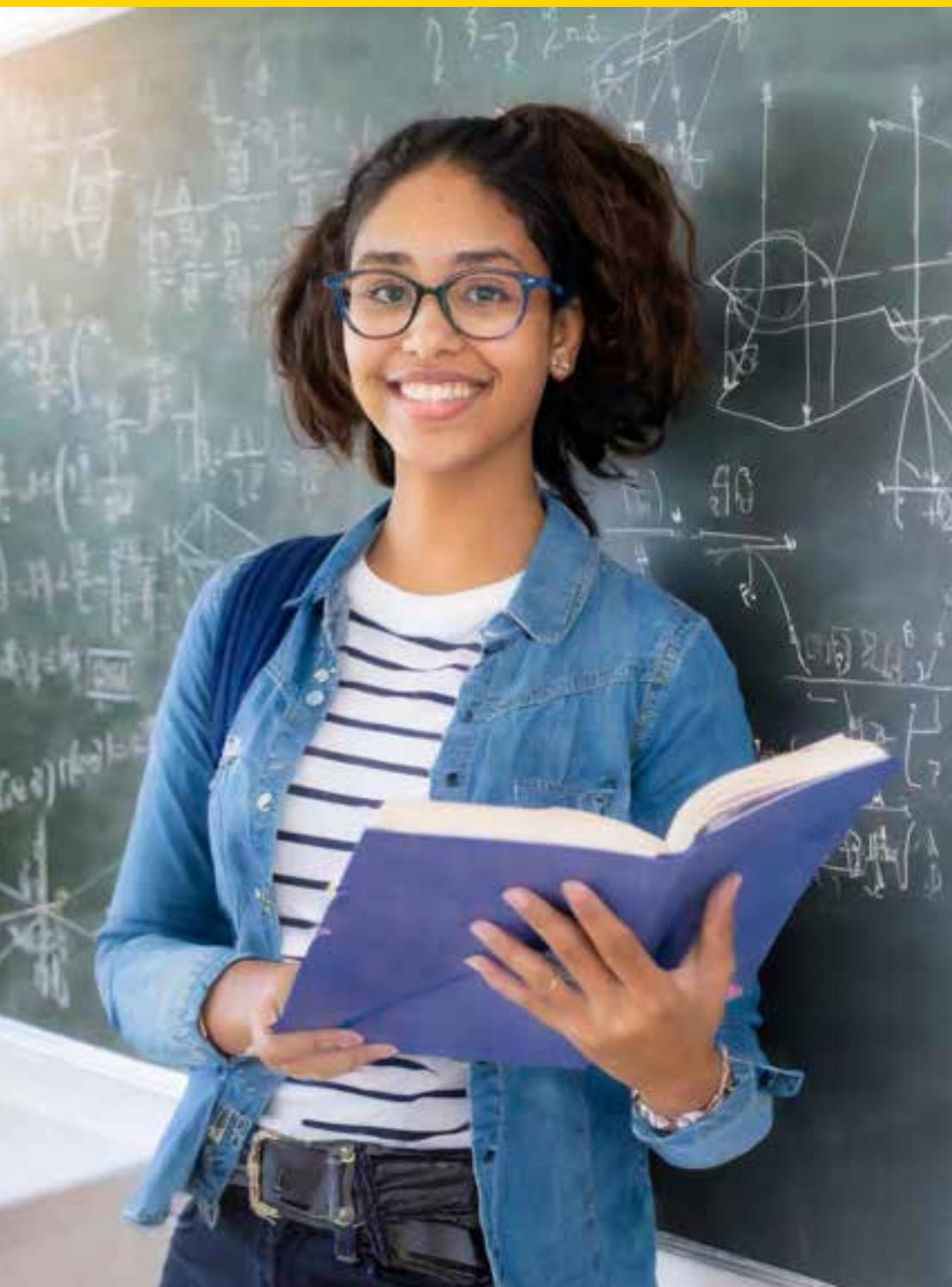
Age: 25

Occupation: Undergraduate HCI student

Family: Mother, father, sister

Location: Indianapolis, Indiana

Technology skills: 70/100



"Canvas helps me stay organized, but there are some challenges I wish could be addressed."

DESIRSES

Easy to Use

Communication

Portability

Accessibility

Customization

BIO

Apoorva Singh is a 25-year-old international student pursuing a Master's in Human-Computer Interaction (HCI). Originally from Mumbai, India, she moved to the United States to pursue her passion for designing user-friendly digital experiences. Apoorva is dedicated to her studies and actively seeks opportunities to enhance her skills in UI/UX design. She uses Canvas regularly to manage her coursework. Outside of academics, she enjoys exploring new cafes, attending design meetups, and practicing yoga.

FREQUENT TASKS

- Checking grades and course materials
- Submitting assignments and participating in discussions
- Checking the calendar and to-do list to become familiar with the deadlines
- Communicating with classmates and instructors via the inbox
- Accessing lecture recordings and supplementary resources

PAIN POINTS PRIORITIZED

1. **Interacting with instructors and classmates on Canvas is challenging, leading to reliance on email communication or third-party applications like Slack for group discussions**
2. **Difficulty in accessing grades on the dashboard in her laptop version**
3. **Lack of an option to edit comments for peer reviews**
4. **The inbox feature lacks categorization, causing inconvenience**
5. **In course groups, she has to open every group to find out which one she's in**

RESULTS

PERSONAS

USER PERSONA

dr Dan Wright

"Connecting with students tunes us into the future of music technology."

Age: 47

Occupation: Music Tech Professor

Family: Married, 3 kids

Location: Indianapolis, IN

Technology skills: 90/100



DESIRSES

Easy to Use

Communication

Portability

Accessibility

Customization

BIO

Professor of Music Technology with a passion for fusing music and tech, Dan Wright is a mentor to future industry leaders. His expertise spans audio engineering, digital instruments, and AI in music. An active musician and producer, Wright's work exemplifies his innovative approach to education and artistry.

FREQUENT TASKS

- Grade and post grades
- Make modules
- Share files and folders
- Make announcements
- Commuincate with the students

PAIN POINTS PRIORITIZED

1. Preview media files sometimes is missing
2. Missing advanced features in quizzes
3. New modules always appear at the bottom
4. Would like to have a confirmation of receipt for important announcements
5. Big media files size management and loading
6. Making announcements for multiple courses
7. Share/unshare specific folder
8. Using Inbox and normal e-mail clients to communicate
9. Import an old course is too difficult

RESULTS

PERSONAS

USER PERSONA

Taylor Ricci

Age: 40

Occupation: manager of learning technology and an instructional designer

Family: Married, 3 kids

Location: Indianapolis, IN

Technology skills: 80/100



"Accessibility is for everyone, but we must center those who need it most. Many things we take for granted now were actually originally designed for accessibility."

DESIRSES

Easy to Use

Communication

Portability

Accessibility

Customization

BIO

She is a manager of learning technology and an instructional designer. She is passionate about accessibility features and would like more designers and users alike to be aware of their inclusion. They overall have a positive feeling toward Canvas, though they believe that things could always be better. They believe in community power and frequently raise awareness about the community aspect of Canvas and its submit a feature option.

FREQUENT TASKS

- Process Product Assessments
- Conduct accessibility reviews of proposed features
- Conduct functionality reviews of proposed features
- Conduct use case testing for new features
- Review user complaints for functionality issues and other pain points

PAIN POINTS PRIORITIZED

1. **Lack of user and designer knowledge about accessibility features**
2. **Professors are uploading non-compliant materials in Canvas like poor quality captions, text images that are not readable, and other accessibility issues. These all must be reviewed and corrected.**
3. **Blockers (things that may knock a student off track) are only 30% of accessibility issues, and professors are even missing these large problems.**
4. **Students only come to Assistive services when they are in a critical stage.**
5. **Using older version of Canvas, to update, must manually relink plugins and other aspects with each version change.**

RESULTS

JOURNEY MAPS



Apoorva Singh 1

Age: 25

Occupation: Student, HCI

JOURNEY MAP

TASK

turn up the high contrast on the canvas screen

JUMP-IN

Access Canvas

Login
(2-factor authentication)

Go to account section

Go to settings

FRUSTRATION
5
4
3
2
1

this 2-factor authorization it's super fast!

SETTINGS

Scroll down to the bottom

Find out the feature option

finding the correct feature took a lot of time!

CHANGING UI

Select drop-down
High contrast UI

Click on the cross-mark(x)

Select enable option

ISSUES

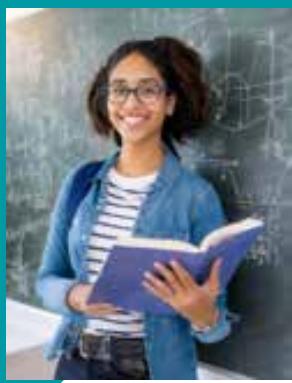
1. “Settings” which is a primary icon is placed in the secondary navigation menu
2. Improper (x) icon for enabling/disabling, which then shows a drop-down to select “enable”
3. Enabling/disabling feature doesn’t work in Canvas unless the page is refreshed
4. A warning message to refresh the page is missing

FIXES

1. Replace “Settings” to the dashboard primary navigation menu
2. Minimize features in the settings page, add important and mostly used features
3. add a toggle button to enable/disable on click

RESULTS

JOURNEY MAPS



Apoorva Singh **2**

Age: 25

Occupation: Student, HCI

JOURNEY MAP

TASK

Reply to a Week-Old Groupmate's Message in Canvas Inbox

JUMP-IN

Open Canvas

Login

Go to inbox section

It's easy to access the Inbox feature from the home screen!!

FRUSTRATION
5
4
3
2
1

INBOX

Scroll down through the messages until she finds the group conversation from last week

Open the conversation to view all the messages exchanged

These is no message categorization, making it difficult to search for past messages

REPLY

Read through the messages to understand the context

Select the specific message she wants to reply to

Tap on the "Reply" option associated with that message

Write the response in the reply field. Click on the "Send" button to submit the reply

Everything in this page is cool!!

ISSUES

1. There is no differentiation between student, faculty, and group messages.
2. There's no option to create a group.
3. There's no filter to search for messages from a week ago, which takes a lot of time to scroll down to a specific date.

FIXES

1. Implement a feature to differentiate between student, faculty, and group messages.
2. Provide users with the ability to create dedicated group channels similar to other applications like WhatsApp.
3. Add an option to search messages by date.

RESULTS

JOURNEY MAPS



dr Dan Wright

Age: 47

Occupation: Music theory professor

JOURNEY MAP

TASK

grade and post grades assignments

JUMP-IN

Access Canvas

Login
(2-factor authentication)

Go to the music
theory course

Go to the assignment

this 2-factor
authorization it's
super fast!

FRUSTRATION
5
4
3
2
1

GRADE

Select a student

Visualize the pdf

Correct, comment

Assign a grade

Click a button to go to
the next student

Restart the process
until the last student

how heavy
is this
pdf!

POST GRADES

Click the icon to post
grades

Choose if you want to
post all the grades or
just the one you are in

Click the button to
confirm the operation

everything in
one page,
cool!

ISSUES

1. There's no visualization of the class list and their grades during the grading
2. There's no label on the "post grades" icon
3. The "post grades" icon is in the top left corner, almost hidden
4. The submit button of the messages section looks like a CTA for posting the grade, but it doesn't

FIXES

1. Show class list and grades on the side
2. Label the "post grades" icon / create a redundant textual way to post grades
3. Move the "post grades" icon to a more visible position
4. Make the "submit" and "post" buttons closer together and ensure that they are easily distinguishable

RESULTS

JOURNEY MAPS



Taylor Ricci

Age: 40

Occupation: manager of learning technology and an instructional designer

JOURNEY MAP

TASK

Review a new feature suggested for addition

PROPOSAL

A new tech start-up presents a new feature for addition to Canvas at IU

The new proposal is missing a Product Assessment for the accessibility of the new feature.

The ATAC team requests that the Product Assessment be completed prior to consideration for inclusion on the IU Canvas

FRUSTRATION
5
4
3
2
1

The emphasis is on voluntary. The Product Assessment is technically voluntary so we have to constantly ask for people to fill it out

REVIEW

ATAC receives product assessment and member conducts an accessibility review of the feature and compares to the assessment

The assessment uncovers 5 discrepancies, causing the ATAC member to reject the product

The product is sent back to the tech start-up because there were 5 or more discrepancies between the Product Assessment and the Accessibility check. The tech company is advised to revise the product or seek out a 3rd party for re-evaluation

The product returns new and improved with a new Product Assessment

The product passes the new accessibility review

There are often discrepancies between the Product Assessment and the accessibility review because they often have sales people filling out the Assessment

ACTION

The product is approved for IU Buy / Purchasing. It will now move on the e-learning services team for functionality review and use case testing.

Every end is a beginning. Now that the feature passes accessibility, it's time to test its functionality

ISSUES

1. The new feature suggested is missing the Product Assessment.
2. There are 5 or more discrepancies between the Product Assessment.
3. The feature is approved for accessibility and needs to continue the process journey.

FIXES

1. ATAC and IU stand firm on the accessibility evaluation process, allowing no exceptions.
2. Reject the feature. The proposal needs to be evaluated by 3rd party or reconfigured.
3. E-learning team begins functionality review and use case testing.



AFFINITY DIAGRAMS

DATA