

Usability Activity 1: MyZou Heuristic Evaluation Report

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Part 1

Who is/are the target audience(s)?

The target audience for myZou includes currently enrolled undergraduate and graduate students at the University of Missouri as well as students registered for graduate certificate programs.

What are their needs?

The target audience for myZou needs a one-stop-shop for all the main functions of their student account at the University of Missouri. Their first requirement is to register as a student online, and register for individual courses online afterward. They also require a way to view their course schedules, make schedule changes, view grades, and access their student academic profiles. It is also essential for students to upload documents about their financial account and immunization records at the University of Missouri. Secondary needs include the ability to pay bills, apply for and receive financial aid, and communicate with the Bursar's Office and University Registrar regarding these matters. All of these can be relatively complicated but important procedures. It is essential to make the system streamlined and display notifications and changes in the account clearly and understandably. Furthermore, the system is going to be used by both undergraduate and graduate school students. So, the format must be as clear and intuitive as possible concerning the click paths and commands needed to achieve even the most complicated administrative goals, with almost no operation instructions required.

What do they want to do with the system?

Students access myZou to perform various tasks. Every semester, students can register for their classes and see their class schedule to view information such as the class title, lecture time, location, professor name, and section number in myZou. Students also use MyZou to manage their information about financial aid and account balances, upload official documents, and view grade information. When students want to check their balance on the student account on myZou, they are redirected to the third party site called TouchNet where the payments for the tuition and other auxiliary costs are processed. In the financial aid section of Myzou, students can accept and decline scholarships, federal grants, federal and private loans. In the document upload section, students can upload their immunization documents, citizenship documents, W-9 documents and view their COVID-19 vaccination record by clicking on the link to the “show me the renewal” page on the Mizzou website. In the academic records section, students can view their grades for all the completed courses from their institution. Current and former students can download or request to send their official transcript to other institutions or organizations. MyZou has partnered with Myhub to enable this process.

Although the students can perform all of the above tasks within MyZou, for this evaluation, our team will be focusing on two tasks:

1-Enrollment process for classes

2-Uploading official documents

What is the context in which they will use the system?

Most commonly, students will use MyZou in one of the following contexts: as a newly accepted student using the site for the first time to set up their academic and financial

information, or as a current student returning on a semesterly basis to register for more classes, upload relevant documents, and settle subsequent financial requirements. It's important to remember that because this site is most commonly used only on a semesterly basis, even a current student who has used the site on multiple prior occasions might forget how to perform a given task, much less where on-site to look.

2-Describe the sources that helped with defining the target audience and tasks.

The University of Missouri website and the associated search engine MizzouOne were both key sources for defining the target audience and tasks because they are the main sources of relevant information provided by the university that created and supports the system. MizzouOne (2021) describes myZou as “Mizzou's online student information system that manages information and activities surrounding admissions, registration, grading, financial aid, tuition, and student charges.” Therefore, the tasks myZou is designed to complete primarily include updating student accounts regarding admissions status, course registration, financial account, and relevant documentation therein. The University of Missouri website page for the Office of the University Registrar, where first-time myZou users are directed to create their accounts, provides a similar definition of myZou's tasks. We were further informed by our own experiences as students using myZou for these purposes. Thus, we can confidently identify the “specifications of functionality” that are part of the blueprint for a well-designed product (Rubin & Chisnell, 2008, p. 118).

MizzouOne (2021) indicates that the myZou portal “is to be used by students, faculty, and staff.” Of these three, students are the primary intended users, and they are expected to manage their student account in the ways listed above. Faculty and staff members have access as well, although it is mostly limited to updating student accounts with pertinent information. Although

they are not the primary intended users of the system, parents or spouses of students can also access myZou via a special third party portal if they have “been given additional authorized access (AAA)” by the student who holds the myZou account. Thus, we can confidently identify the main user profile of the target audience for myZou as graduate and undergraduate University of Missouri students (Rubin & Chisnell, 2008)

Part 2 – Heuristic Evaluation

1. Identify the type of computer and browser you used for the evaluation

This evaluation was jointly conducted with a Dell Windows PC using Google Chrome, a Macbook using Safari, a Macbook using Google Chrome, and an Asus Zephyrus Windows PC using Chrome. The evaluation thus follows the spirit of Wong’s (2021) recommendation for diverse evaluators with diverse skill sets and points of view.

2. Indicate your rationale for the heuristics tool you chose for this assignment

For this evaluation, our team favored Nielsen’s Ten Usability Heuristics over Shneiderman’s Eight Golden Rules because while they have some similarities in concept, Nielsen’s heuristics are more comprehensive and appropriate for a system designed for students. They include, for example, heuristic criteria for Help and Documentation, which is especially crucial for a student website in case they require more instructions on how to use a new, unfamiliar university system. Furthermore, we believe it is necessary to consider the myZou website from the perspective of aesthetics and minimalist design since it will assist students in focusing on what they need to do without being distracted. Shneiderman’s approach does not consider either of these factors.

3. Evaluate MyZou

1-Visibility of system status

This heuristic indicates that the system should always keep users informed about what is going on through appropriate feedback within a reasonable amount of time.

Satisfaction: 4

Severity: 0

Rationale: The myZou secure document upload system clearly keeps the user informed about the upload status. When documents are uploaded successfully, the system provides a clearly visible notification (**Figure 1**). Similarly, the scheduling system immediately alerts any scheduling problems or successful course enrollments by displaying the visible notification. (**Figure 2**). For both features, commands are visible in an intuitive step-by-step format, and pop-ups with concise instructions and explanations appear when the user is ready to move on to the next step. Progress indicators like this make system status visible and understandable.

Figure 1

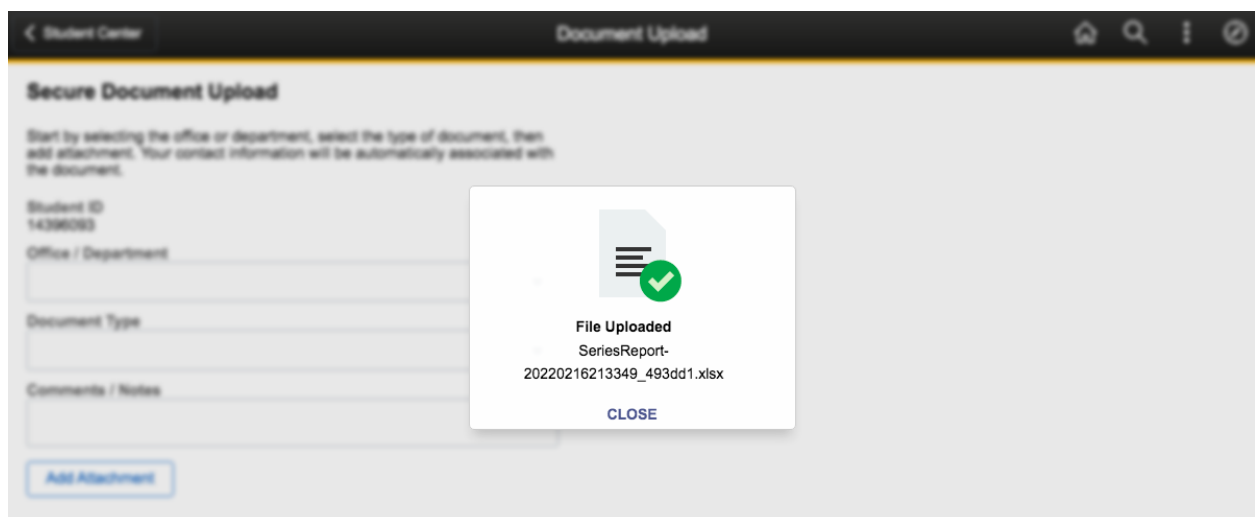


Figure 2

▼ My 2022 Spring Semester Class Schedule

☒ Enrolled
 ☐ Dropped

Class	Description	Days/Times	Room	Instructor	Units	Status
IS_LT 7355-01 (57408)	WEB DESIGN & DEV (Lect/Stand)	TBA	INTERNET	J. Kueter	3.00	✓
IS_LT 9421-01 (57218)	USABILITY INFO SYST & SERVICE (Lect/Stand)	TBA	INTERNET	D. Kueker	3.00	✓

2-Match between the system and the real world

This heuristic suggests that the system/design should speak the user's language rather than rely on system-oriented terms.

Satisfaction: 3

Severity: 1

Rationale: When users attempt to upload a secure document, they are presented with generally understandable language. However, in the document list that pops up some document types are presented in the form of abbreviation. **(Figure 3)**. This might cause confusion for some students that are not familiar with the system. Our recommendation is that an explanation in the form of annotation should be provided when the users hover over the abbreviation. When trying enrolling in courses, generally the system utilizes terminology that users can mostly understand. However, while looking for classes as a preliminary step toward enrolling in classes, users must fill out a field labeled “Course Career” **(Figure 4)**. This term appears vague, and some new users or international students may be confused about what it means. Instead of just “Course Career,” we recommend that the system clarifies in plain language what this search bar exactly means, possibly in the form of an annotation.

Figure 3

Document Upload

- Budget Increase
- Change of address (plus)
- Citizenship
- Clarify Letter
- Consortium Agreement
- Default Clearance Letter
- Dependency Documents
- Independent Override
- MOFELP Application
- Other
- Parent Driver's License
- Parent Income
- Parent Social Security Card
- Parent's Birth Certificate
- Permanent Resident Card
- Private Loan paper certificati
- Reaffirmation Letter
- SAP
- SC FORMS
- Scholarship Appeal

Comments / Notes

Add Attachment

Figure 4

Student Center Student Manage Classes

Class Search

Browse Course Catalog

Enrollment

Schedule Planner

My Planner

My Class Schedule

My Weekly Schedule

View Final Exam Schedule

Enter Search Criteria

Search for Classes

Institution Univ of Missouri - Columbia

Term 5027 - 2022 Spring Semester

Select at least 2 search criteria. Select Search to view your search results.

Class Search

Subject

Course Number is exactly

Course Career

Show Open Classes Only

Self-paced (6 month) courses only

Additional Search Criteria

3-User Control and Freedom

This heuristic indicates that when users make mistakes or change their minds, the system should allow them to undo their last action and go back to the previous page.

Satisfaction: 4

Severity: 0

Rationale: When aiming to upload a secure document (immunization) and realizing they have selected the wrong document (team contract), users are provided with a 'clear' button to quit their action. In addition, on the top right corner of the open window (**Figure 5**), users are provided with a close button that serves as an exit to close that view completely. The same thing happens when users want to enroll in a course. After adding the course to the shopping cart, users can quit this multi-step task by using the 'cancel' button or selecting 'next' to proceed to the next step of the enrollment process (**Figure 6**). Providing users with cancel/undo and close options gives them a sense of control over the system and encourages them to explore the features and quickly learn its functions.

Figure 5

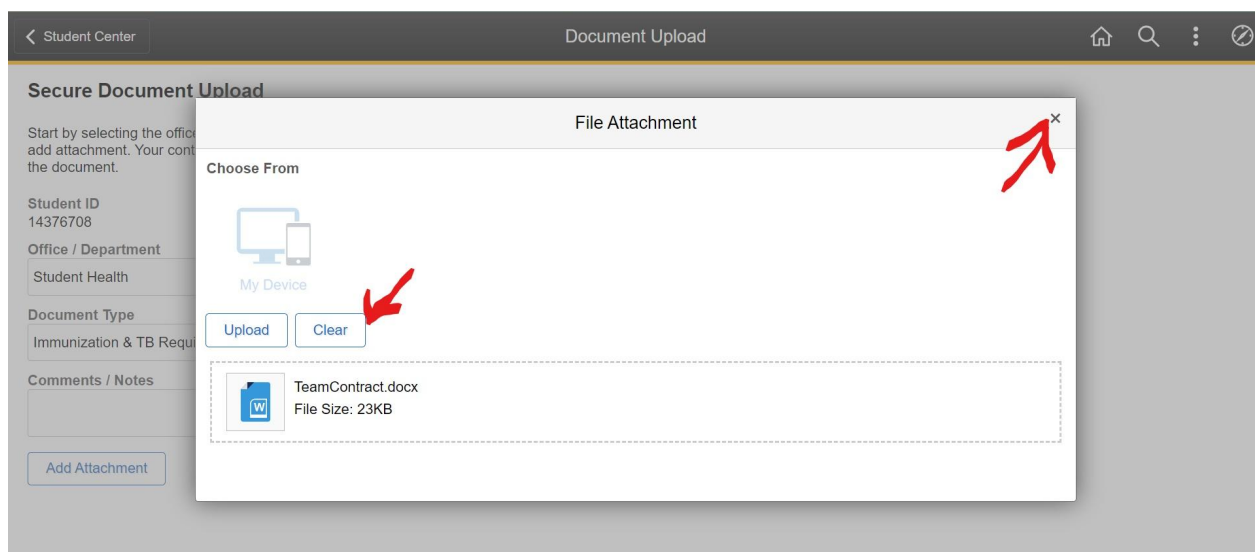


Figure 6

IS_LT 9474-01 Lect/Stand ● Open

Session Regular Academic Session

Career Graduate

Enrollment Information

- Graduate standing is required
- ASYN-Class participants are online anytime
- College of Education & Human Development Fee
- Missouri Online Semester Based

Permission Nbr

Grading Graded, A-F

Units 3.00

↘

Section	Component	Days & Times	Room	Instructor	Start/End Date
01	Lect/Stand	TBA	INTERNET	Rose Marra	08/22/2022 - 12/08/2022

4-Consistency and Standards

This heuristic explains that the words, situations, and actions should maintain consistency in the system to reduce the cognitive load for users to learn how to utilize the same function.

Satisfaction: 3

Severity: 1

Rationale: The myZou system is mostly consistent. However, there is a minor inconsistency when enrolling in the class in myZou because the drop-down selections for the block session types are displayed in the course scheduler compared to the search criteria for the enrollment cart. In the course scheduler on the left side of **Figure 7**, the available block session types for selection are fewer than in the drop-down search menu for the enrollment cart on the right. This inconsistency in the session type choices for one search tool over the other in the same platform can confuse the users. As for uploading the document, the button icons for ‘Add Attachment’ and ‘My Device’ in **Figure 8** are consistent with what users would expect to see in the document upload feature in the other platforms. Clicking on the button for ‘Add Attachment’, opening the

file attachment tab, clicking on the icon for 'My Device', and opening the file explorer is a common practice of uploading documents.

Figure 7

The image shows two parts of a web application. On the left is the 'Select Session' form for the University of Missouri. It has a list of session options with checkboxes. A red arrow points to the 'Block 13F & 19F' option, which is checked. Other checked options include 'Block 14F & 20F', 'Block 14G & 20G', and 'Remediation 1'. At the bottom are 'Cancel' and 'Save' buttons. On the right is a dropdown menu showing a list of session blocks from 'Block 1' to 'Block 11N'. A red arrow points to the 'Session' dropdown menu.

Figure 8

The image shows a 'Document Upload' interface. On the left, there's a sidebar with 'Secure Document Upload' and a list of document types, including 'COVID-19 Vaccination Record'. At the bottom of the sidebar, the 'Add Attachment' button is circled in red with an arrow pointing to it. In the center, a 'File Attachment' modal is open. Inside the modal, under 'Choose From', there's a 'My Device' option with a computer and phone icon, which is circled in red with an arrow pointing to it. Below this is a dashed box for file selection.

5-Error Prevention

This heuristic explains that having an error-preventing system to eliminate error-prone conditions is essential for a better user experience.

Satisfaction: 4

Severity: 0

Rationale: The website directs users to re-confirm the course information before processing the course enrollment by giving the option to click on “Finish Enrolling” or “Cancel” (**Figure 9**).

The error-preventing system in the course enrollment cart eliminates the user from enrolling into the course selected by mistake. Similar cancellation options are available in the document upload system to prevent users from accidentally uploading the wrong document (**Figure 10**). The user can select the “X” button or the button that says “Clear” to eliminate the error-prone condition of uploading the document by mistake or uploading the wrong one.

Figure 9

2. Confirm classes

Select Finish Enrolling to process your request for the classes listed. To exit without adding these classes, select Cancel.

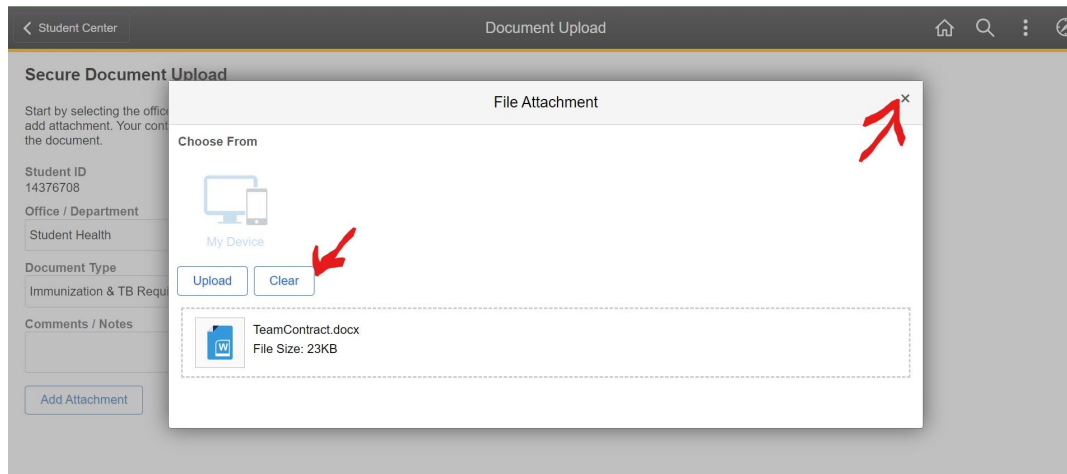
2022 Summer Semester | Graduate | Univ of Missouri - Columbia

● Open ■ Closed

2022 Summer Semester Enrollment Shopping Cart

Class	Description	Days/Times	Room	Instructor	Units	Status
IS_LT 7099-01 (63084)	MAKING & EDUCATION (Lect/Stand)	TBA	INTERNET	C. Dudenhoffer	3.00	●

Cancel Previous Finish Enrolling

Figure 10

6-Recognition rather than recall

This heuristic indicates that the information in the system should be easily retrievable to reduce the user's cognitive load.

Satisfaction: 4

Severity: 0

Rationale: The system provides a list of options that pop up when users need to fill out the fields for the institution, term, subject, course number when selecting criteria while searching for classes (**Figure 11**). Also, when users want to upload a secure document, a list of documents available to upload appears based on the office/department selected (**Figure 12**). This system benefits users because users may not be familiar with official document terminology. It lowers their cognitive load since they don't have to recall information, and it reduces the number of tasks they have to complete because they don't have to type as much.

Figure 11

Student Center

Class Search

Browse Course Catalog

Enrollment

Schedule Planner

My Planner

My Class Schedule

My Weekly Schedule

View Final Exam Schedule

Enter Search Criteria

Search for Classes

Select at least 2 search criteria. Select Search

Class Search

Institution

Term

Subject

Course Number

Course Career

is exactly

Show Open Classes Only

Self-paced (6 month) courses only

Additional Search Criteria

Aerospace Studies

Ag Science Communications

Ag, Food and Natural Resources

Agribusiness Management

Agric & Applied Economics

Agricultural Ed & Leadership

Agricultural Systems Tech

Ancient Mediterranean Studies

Anesthesiology

Animal Science

Anthropology

Arabic

Architectural Studies

Art Ceramics - Visual Studies

Art Drawing - Visual Studies

Art Fibers - Visual Studies

Art General - Visual Studies

Art Graphic Design - Visual St

Figure 12

Document Upload

Budget Increase

Change of address (plus)

Citizenship

Clarify Letter

Consortium Agreement

Default Clearance Letter

Dependency Documents

Independent Override

MOFELP Application

Other

Parent Driver's License

Parent Income

Parent Social Security Card

Parent's Birth Certificate

Permanent Resident Card

Private Loan paper certificati

Reaffirmation Letter

SAP

SC FORMS

Comments / Notes

Add Attachment

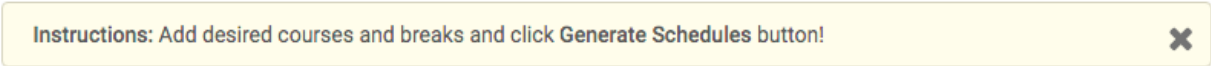
7- Flexibility and efficiency of use

This heuristic indicates that system processes should be flexible. Users should have the option to carry out different tasks in different ways, and choose whatever method is best for them.

Satisfaction: 2

Severity: 1

Rationale: While one of the great strengths of myZou's interface is that its intuitive and learnable system makes for a low cognitive load, as described in Heuristics 2 and 6, it sacrifices a customizable model for the sake of this learnability. For instance, the process of uploading documents requires the same number of clicks no matter if it is the user's first or fifth time around, which can feel extraneous and repetitive if the user is already familiar with the system. There is also no way for experienced users to avoid unnecessary instructive prompts from popping up while making schedule changes (**Figure 13**). If a user needs to upload the same type of document to the system frequently, perhaps if their medical record or citizenship status was receiving regular updates, an accelerator program could be taught to do it automatically whenever new documents become available (Laubheimer, 2020). Unfortunately, myZou does not allow students to make changes to the system at all. However, the options provided by the system are comprehensive for both scheduling and document uploading, as indicated in **Figures 14 and 15**, and meet all the potential needs students can have in those areas. The lack of flexibility does not significantly affect the user's ability to complete tasks, so the severity of this flaw is low.

Figure 13

Instructions: Add desired courses and breaks and click **Generate Schedules** button!



Figure 14

The screenshot shows the 'Student Manage Classes' interface. On the left is a sidebar with navigation links: 'Class Search' (highlighted in blue), 'Browse Course Catalog', 'Enrollment', 'Schedule Planner', 'My Planner', 'My Class Schedule', 'My Weekly Schedule', and 'View Final Exam Schedule'. The main content area is titled 'Search for Classes'. It includes a header 'Enter Search Criteria' with a red arrow pointing to the 'Class Search' link. Below this, there are dropdown menus for 'Institution' (set to 'Unlv of Missouri - Columbia') and 'Term' (set to '5027 - 2022 Spring Semester'). A message states: 'Select at least 2 search criteria. Select Search to view your search results.' The 'Class Search' section contains dropdowns for 'Subject', 'Course Number' (set to 'is exactly'), and 'Course Career'. There are also checkboxes for 'Show Open Classes Only' and 'Self-paced (6 month) courses only'. At the bottom right are 'Clear' and 'Search' buttons. A red arrow points to the 'Search for Classes' header, and another points to the 'Class Search' section header. A third red arrow points to the 'My Planner' link in the sidebar.

Figure 15

The screenshot shows the 'Document Upload' interface. A dropdown menu is open on the left, listing various document types: 'Budget Increase', 'Change of address (plus)', 'Citizenship', 'Clarify Letter', 'Consortium Agreement', 'Default Clearance Letter', 'Dependency Documents', 'Independent Override', 'MOFELP Application', 'Other', 'Parent Driver's License', 'Parent Income', 'Parent Social Security Card', 'Parent's Birth Certificate', 'Permanent Resident Card', 'Private Loan paper certificati', 'Reaffirmation Letter', 'SAP', and 'SC FORMS'. A red arrow points to this dropdown menu. Below the list is a 'Comments / Notes' text area and an 'Add Attachment' button. The background shows the 'Document Upload' header and a browser window with multiple tabs open.

8 - Aesthetic & Minimalist Design

The goal of this heuristic is to make sure the site layout doesn't overwhelm the user by feeling too cluttered and busy.

Satisfaction: 3

Severity: 1

Rationale: The minimalist nature of the site can vary a bit from page to page and task to task. For example, the page for securely uploading documents (**Figure 16**) appears minimalist in design, with much of the page being blank space. However, other tasks on other pages, such as the class search page (**Figure 17**) present the user with significantly more information at once. That said, in most cases, this is simply because the nature of the task itself requires that more information be present on-screen; any less would be impractical. According to Nielsen (1994), “Interfaces should not contain information which is irrelevant or rarely needed.” Therefore, the site’s aesthetic design might benefit from the relocation of some of the links in the menu on the left side of **Figure 17**. For example, a student who is still searching for classes to enroll in might not find as much use in a page allowing them to see their final exam schedule.

Figure 16

< Student Center Document Upload

Secure Document Upload

Start by selecting the office or department, select the type of document, then add attachment. Your contact information will be automatically associated with the document.

Student ID
18193782

Office / Department

Document Type

Comments / Notes

Add Attachment

Figure 17

The screenshot shows the 'Student Manage Classes' interface. On the left is a sidebar with the following links: 'Class Search' (highlighted), 'Browse Course Catalog', 'Enrollment', 'Schedule Planner', 'My Planner', 'My Class Schedule', 'My Weekly Schedule', and 'View Final Exam Schedule'. The main content area is titled 'Enter Search Criteria' and 'Search for Classes'. It contains the following fields and options:

- Institution:** A dropdown menu with 'Univ of Missouri - Columbia' selected.
- Term:** A dropdown menu with '5027 - 2022 Spring Semester' selected.
- Instruction:** A text input field.
- Subject:** A dropdown menu.
- Course Number:** A dropdown menu with 'is exactly' selected, followed by a text input field.
- Course Career:** A dropdown menu.
- Filters:** Two checkboxes: 'Show Open Classes Only' and 'Self-paced (6 month) courses only'.
- Additional Search Criteria:** A section with a right-pointing arrow.

Below the search fields, there is a blue bar with a white search icon and a blue bar with a white 'Search' button.

9 - Help Users Recognize, Diagnose, & Recover From Errors

In the event of something going awry during the user's experience, this heuristic's goal is to make sure the user knows when this happens and to aid the user know what has gone wrong and how to fix it.

Satisfaction: 2

Severity: 4

Rationale: While using the site's course search feature, different error messages could be displayed depending on whether the information entered is incomplete. The error messages could mean that the search results are too broad (**Figure 18**). It could also mean that the information entered is incorrect if the search returned no results (**Figure 19**). At this point, the user can use the "Clear" button at the bottom of the page (**Figure 20**) to reset all of the search fields and clear any information that had been entered into them. The document upload task, however, is a

different story. Although users are given the option to clear out the selected document from the upload screen before the submission (**Figure 21**), there is no way to view and subsequently remove an uploaded document should the user upload the wrong file by mistake (**Figure 22**).

Figure 18

The screenshot displays the 'Student Manage Classes' interface. On the left is a sidebar with navigation links: 'Class Search' (highlighted), 'Browse Course Catalog', 'Enrollment', 'Schedule Planner', 'My Planner', 'My Class Schedule', 'My Weekly Schedule', and 'View Final Exam Schedule'. The main content area is titled 'Enter Search Criteria' and includes a warning icon and text: 'Specify additional selection criteria to narrow your search.' Below this is a section titled 'Search for Classes' containing two dropdown menus: 'Institution' (set to 'Univ of Missouri - Columbia') and 'Term' (set to '5027 - 2022 Spring Semester'). A message states: 'Select at least 2 search criteria. Select Search to view your search results.' Further down, under 'Class Search', there are three more dropdown menus: 'Subject' (set to 'Info Science & Learning Tech'), 'Course Number' (set to 'is exactly'), and 'Course Career'. At the bottom, there are two checkboxes: 'Show Open Classes Only' and 'Self-paced (6 month) courses only'. A red arrow points from the warning text to the 'Institution' dropdown menu.

Figure 19

The screenshot shows the 'Student Manage Classes' interface. On the left is a sidebar with navigation links: 'Class Search' (highlighted), 'Browse Course Catalog', 'Enrollment', 'Schedule Planner', 'My Planner', 'My Class Schedule', 'My Weekly Schedule', and 'View Final Exam Schedule'. The main content area is titled 'Enter Search Criteria'. It displays a message: 'The search returns no results that match the criteria specified.' with a yellow triangle icon. Below this is a section titled 'Search for Classes' containing search criteria: 'Institution' (Univ of Missouri - Columbia), 'Term' (5027 - 2022 Spring Semester), 'Subject' (Info Science & Learning Tech), 'Course Number' (is exactly 12), and 'Course Career' (empty). There are checkboxes for 'Show Open Classes Only' and 'Self-paced (6 month) courses only'. A red arrow points from the 'Search for Classes' section to the 'no results' message.

Figure 20

The screenshot shows the 'Student Manage Classes' interface with the same sidebar as Figure 19. The main content area is titled 'Search for Classes'. It displays the same search criteria as Figure 19: 'Institution' (Univ of Missouri - Columbia), 'Term' (5027 - 2022 Spring Semester), 'Subject' (Info Science & Learning Tech), 'Course Number' (is exactly 12), and 'Course Career' (empty). There are checkboxes for 'Show Open Classes Only' and 'Self-paced (6 month) courses only'. Below the search criteria is a section titled 'Additional Search Criteria'. At the bottom right are two buttons: 'Clear' and 'Search'. A red arrow points from the 'Search' button to the 'Additional Search Criteria' section.

Figure 21

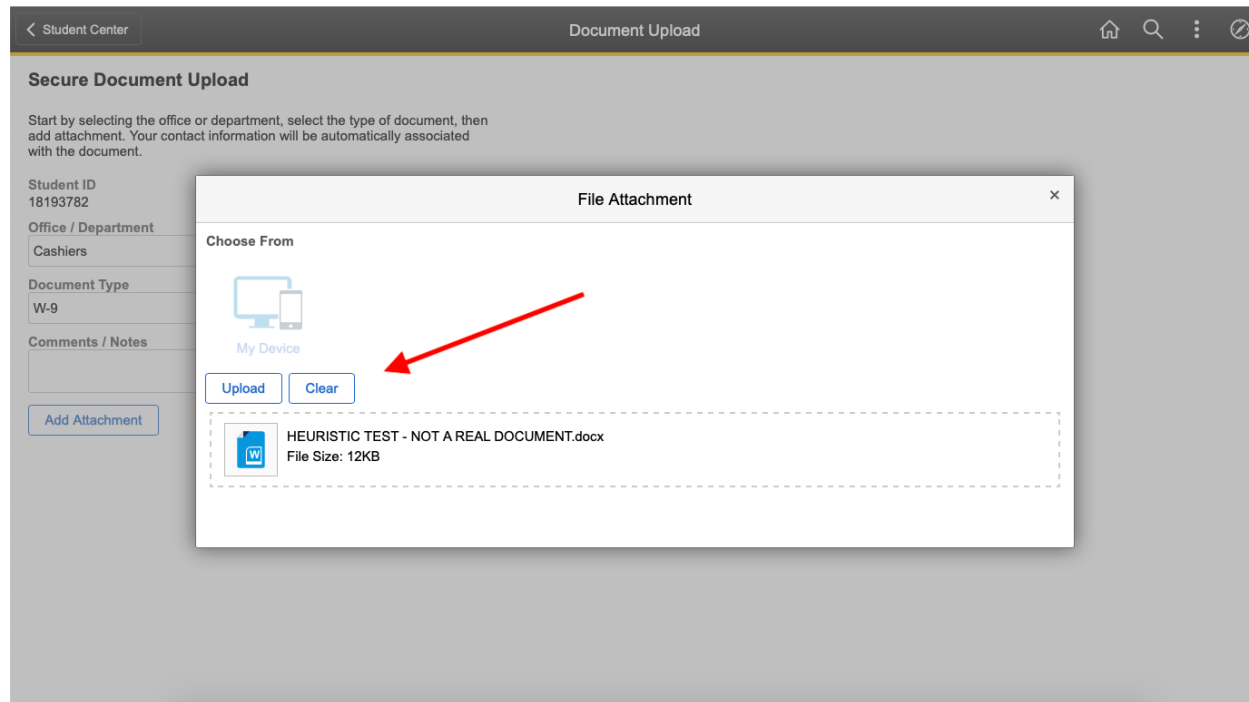
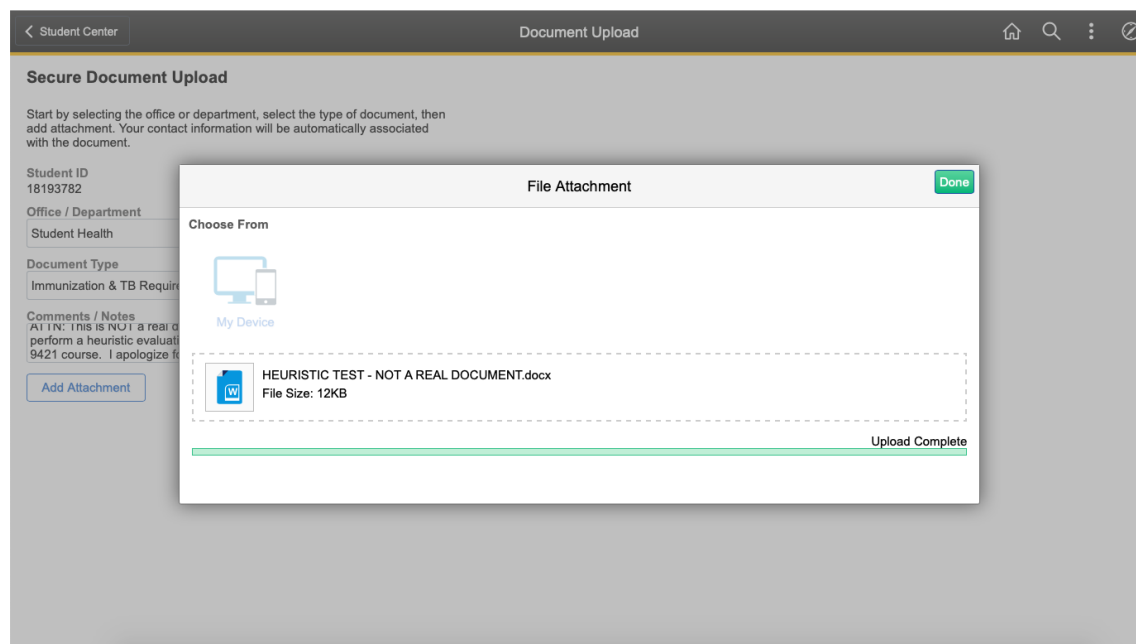


Figure 22



10 - Help & Documentation

The goal of this heuristic is to make sure that in the event the user is unable to move forward with their desired task(s), there are channels through which they are able to make a note of the problem at hand and allow them to seek assistance.

Satisfaction: 1

Severity: 4

Rationale: While on MyZou's homepage, users will have the ability to use the drop-down menu in the top right corner to open the Help page (**Figure 23**). Clicking on this link will open the Help page in a new tab, allowing the user to more easily access both it and MyZou simultaneously. However, the homepage is the only location from which the "Help" option is available in this menu. As demonstrated in **Figure 24** and **Figure 25**, the "Help" link is absent while searching for classes and uploading documents, respectively.

Figure 23

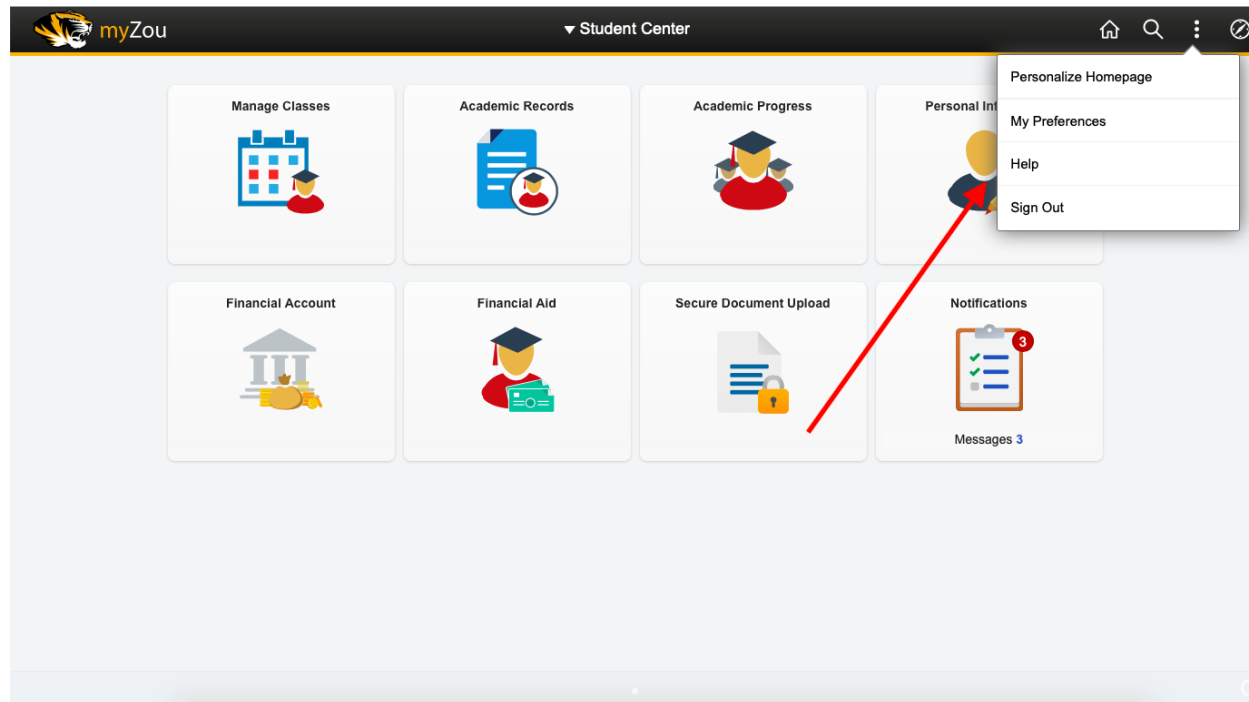


Figure 24

The screenshot shows the 'Student Manage Classes' interface. On the left is a sidebar with navigation links: 'Class Search' (highlighted), 'Browse Course Catalog', 'Enrollment', 'Schedule Planner', 'My Planner', 'My Class Schedule', 'My Weekly Schedule', and 'View Final Exam Schedule'. The main content area is titled 'Enter Search Criteria' and 'Search for Classes'. It contains dropdown menus for 'Institution' (Univ of Missouri - Columbia) and 'Term' (5027 - 2022 Spring Semester). Below these is a message: 'Select at least 2 search criteria. Select Search to view your search results.' The 'Class Search' section includes dropdowns for 'Subject', 'Course Number' (set to 'is exactly'), and 'Course Career'. There are also checkboxes for 'Show Open Classes Only' and 'Self-paced (6 month) courses only'. An 'Additional Search Criteria' section is partially visible. On the right, a user menu is open, showing options: 'Add to Homepage', 'Add to NavBar', 'Add to Favorites', 'My Preferences', and 'Sign Out'. A red arrow points from the 'Class Search' section to the 'Add to Favorites' option.

Figure 25

The screenshot shows the 'Document Upload' interface. The main heading is 'Secure Document Upload'. Below it is a paragraph: 'Start by selecting the office or department, select the type of document, then add attachment. Your contact information will be automatically associated with the document.' The form includes a 'Student ID' field with the value '18193782', a dropdown for 'Office / Department' (set to 'Cashiers'), a dropdown for 'Document Type' (set to 'W-9'), and a text area for 'Comments / Notes'. An 'Add Attachment' button is at the bottom. On the right, the same user menu is open, showing options: 'Add to Homepage', 'Add to NavBar', 'Add to Favorites', 'My Preferences', and 'Sign Out'. A red arrow points from the 'Secure Document Upload' section to the 'Add to Favorites' option.

Conclusion

Our heuristic evaluation focused on two of the myriad of tasks myZou is capable of: enrollment in classes and uploading secure documents. Our impression was generally positive. The system status is made clearly visible to the user with prompts, uses generally understandable language, and is easy to control. The system's design is mostly consistent, overall minimalist, and prevents errors by asking for confirmation before inputting commands.

The sum of our observations is that while myZou technically accomplishes everything it is meant to, there are still areas for usability improvements. The main issues that we observed while evaluating the course enrollment and uploading secure documents tasks were related to ambiguous terminology, uncustomizable formatting, a layout that is sometimes too busy, a dearth of help buttons, and the lack of options for recovering from errors. After our team discussed the individual findings and suggestions, we decided on the following recommendations:

1- When students are presented with the list of the documents they can upload, instead of just the terms that are listed in abbreviations (**Figure 2**), associate them with annotations that will appear when hovering the mouse over.

2-When enrolling for courses, we recommend that a clearer language is used by having the annotations to the “course career” term show up so the users don't get confused. (**Figure 3**)

3- We recommend matching the session types in the course scheduler with the search criteria drop-down options to enroll in the course for better consistency (**Figure 8**).

4-We recommend that there are options for experienced users to streamline document upload and scheduling.

5- We recommend that the site give the user more options to customize and organize the menus to make it more minimalist. Once again, as seen in **Figure 17**, some of the site's menu options would be better off in different locations.

6- Error prevention is not a substitute for error recovery. We recommend the system provide the option to remove uploaded documents, even if there are plenty of opportunities beforehand to stop the upload.

7- As the users may encounter problems at any step of a given process, it is imperative that the "Help" link be made accessible on all of the site's pages, not just the homepage.

All of the flaws found seem to stem from the designer's assumption that the user has full awareness of how the system works and what they are doing at all times. In accordance with Rubin and Chisnell's (2008) warnings of the many pitfalls of making a user profile, we recommend that the designers make a greater effort to put themselves in the real end user's shoes instead of those of their ideal user.

Reflections

Jonathan Tinker-Lamothe

The most significant lesson I learned through this project is that a heuristic evaluation needs to be multifaceted, which aligns with Wong's assertion that an evaluation must incorporate a lot of different perspectives in order to be successful (2021). The flaws seen here in myZou that so often come about when designing digital products and systems are the result of fundamental disconnects between the designer's frame of mind, and the user's. If a heuristic evaluation is left to only one person, or many people with similar ways of thinking, the evaluator runs the risk of thinking their way into the same rut as the designer, and perpetuating flaws in the system that leave different-thinking or technologically inexperienced users behind. I also learned that just because a system does what it sets out to do does not mean it cannot be improved.

Leslie Kim

My biggest takeaway from conducting a heuristic evaluation through this project was learning how to apply the heuristic principles to explain the usability problems of using MyZou as a student. I was surprised to find unexpected usability problems with the advanced search criteria to enroll in the class and the system for uploading the documents based on our evaluation of the site. Another lesson I learned is what to consider when we provide design improvements based on the usability problems that we identified from our evaluation. While some of the usability problems have easy fixes, there are also ones that would require sophisticated design changes. I find heuristic evaluations helpful when designing a better interface from the user experience standpoint.

Katie Bell

This project was a good learning experience for me in more ways than one. For one thing, I feel I now have a much better idea of how much time and effort would need to go into a professional heuristic evaluation. This amount of work would no doubt increase in tandem with the amount of tasks a given site is capable of. Plus, even though heuristic standards exist as a means of attempting to quantify how user-friendly a given site is, there's still a lot of room for subjectivity when it comes to how well those standards are being adhered to. Overall, this project has taught me that the concept of user-friendliness is an elusive one that should not be taken for granted.

Alma Erden

It was quite beneficial to learn about the Heuristic Principles and be able to use them when evaluating MyZou. I think the Heuristic evaluation method should be used whenever possible when it comes to evaluating various types of information systems and interfaces. When conducting this evaluation based on Nielsen Usability Heuristics, in addition to providing input on usability issues, I was also able to make well-informed recommendations much like professional evaluators would. Following individual evaluations, the team discussion session was also beneficial in terms of refining and making solid recommendations. Gaining new insights into Heuristics has already impacted how I look at any technological interface through the lens of usability principles. I believe that I added a valuable tool to my belt, and what I learned while working on this assignment will assist me when working on upcoming activities for this class and hopefully when designing meaningful learning experiences with usability principles in mind.

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