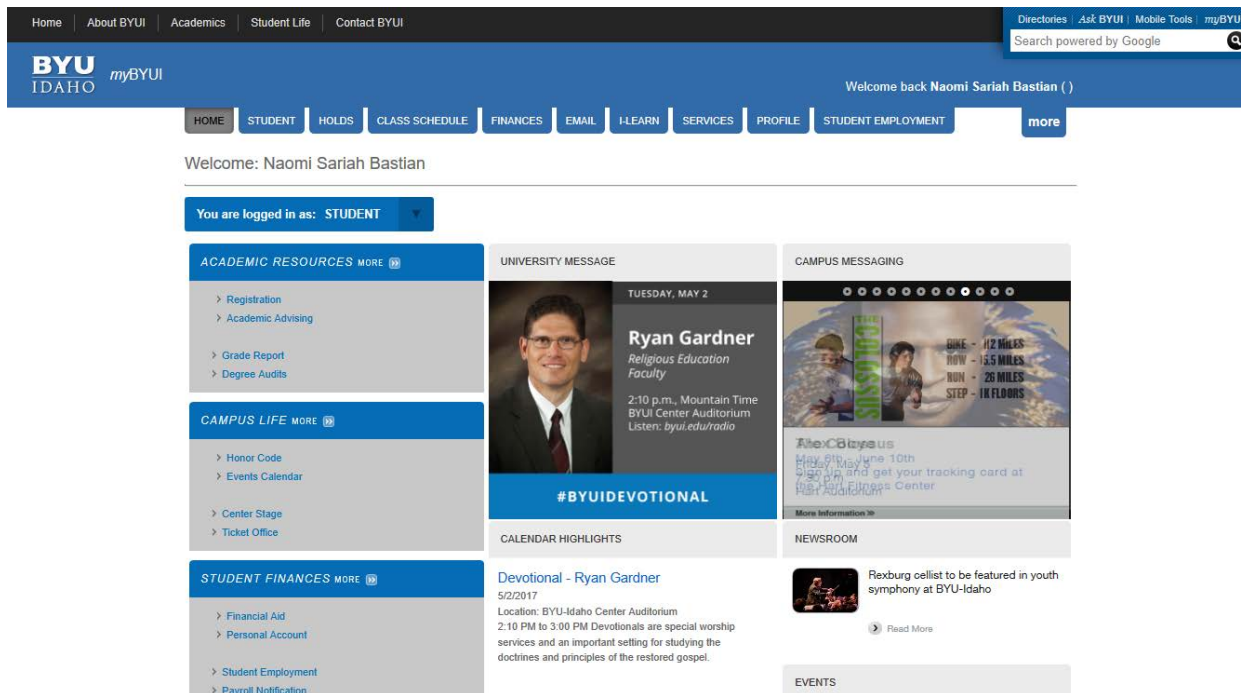


## Project 1: Preliminary Analysis

### Assignment

In summary, please include the following:

1. The target user I will be focusing on is a BYU-I Pathways Online Student. This particular student will be using their personal computer or a publicly accessible computer (such as a computer in a library or Internet café) to complete their coursework. Since Pathways is expanding at a rapid rate, the devices these users will be accessing their coursework through and their internet connection quality will vary.
2. I want to redesign the MyBYUI homepage (<https://my.byui.edu/ics>) for the diverse set of users that will be accessing it due to the growth of the Pathways Program. The current homepage is not responsive, does not display well on mobile devices, and is basically inaccessible unless you are using a computer with a large enough display and adequate internet connection. This specific interface is crucial to the success of BYU-I students, whether on-campus or online, given that this is where students find information relating to their major, find student employment, and use various applications to handle their online learning, finances, and class registration. As a Web Design and Development major, this interface uses the technology with which I am most familiar. I am hoping that redesigning the website into a more modular, responsive website that loads faster and contains necessary information rather than an overload of information will aid students across the world in accessing their MyBYUI homepage from a variety of devices, with less of a strain on their network or WiFi.



3. A breakdown of how the eight items in the interaction framework relate to the real-world example.

### Interaction Framework

1. Presentation: The interface must be able to accurately present the system state.

For the most part, the current interface does accurately present the information. However, some of that information is redundant and not easy to navigate towards.

2. Perception: The user must have the physical ability to accept the input that the interface is presenting.

Unless the user is visually impaired, the website should be accessible to anyone. However, if the user is using a screen reader, most of the information on the Campus Messaging board will not be communicated (because the Campus Messaging board contains scrolling images).

3. Interpretation: The user must have the ability to understand the components of the interface.

Most users can accurately understand the main components of the interface, which for this interface are the navigation buttons at the top of the page. From there, however, every different tab has a different layout and the information is presented differently or must be navigated to by accessing a different webpage.

4. Evaluation: The user must have the ability to relate the interpretations received from the interface to his understanding of the system and to his goals.

The current user interface does accurately advertise the available functionality. In fact, the problem is that the website does not correctly advertise what it can do. The mess of outgoing links, related and quick links, and tables only serves to make the user more lost.

5. Goal: Execution starts with the user's goal. Why is he working with the system and what does he want to accomplish? Goals are typically expressed in terms of what the user is doing, not in terms of the interface or the system.

The specific goals of the user will vary from page to page within the MyBYUI system. But in short, the goals of the user are to fulfill their coursework, check their finances, and prepare for graduation.

6. Intention: The intention is the user's goal expressed in the context of the system. Intentions are typically expressed in terms of what the system needs to do to achieve the user's goal. Note that a given goal can be expressed through many different intentions depending on the flexibility level of the interface.

The system has specific pages for the student, holds, class schedule, finances, email, I-Learn, services, the student's profile, and student employment. All of these pages are intended to help the student in their day-to-day campus life, as well as helping the student achieve their larger goals. This is a perfect kind of interface for the student's goals to be carried out as intended. In my opinion, there is no breakdown in intention.

7. Specify Sequence: The sequence is the plan of the particular interface actions that the user is to execute in order to carry out his intention. The sequence is specific to the finer points of the interface.

The sequence will vary depending on the student and their current needs. They will log onto the MyBYUI site in order to check their email, find job postings, or open I-Learn. The MyBYUI site is excellently suited to these more nebulous goals. However, when it comes to more specific goals, such as application for graduation or applying for a scholarship, these links are either harder to find within the ten different tabs or require navigating outside of the MyBYUI site to the BYUI website.

8. Execute Sequence: The final step is execution of the sequence plan. This involves physically manipulating the various interface elements.

As a webpage, the current user interface does not have any notable problems with executing on a larger screen and without a screen reader. But if a screen reader is used or the user accesses the site using a mobile device, there are significantly more problems. The large size of the webpage and the relative small size of the tabs at the top of the page make navigating while on a mobile device very difficult, and it often takes a succession of tries in order to reach the desired tab.

#### 4. A breakdown of how the eight variables of usability relate to the real-world example.

##### Variables of Usability

**Efficiency:** The amount of effort or time required to perform a task.

The amount of time required to perform a task greatly depends on the task, but the biggest hit to efficiency here is the nest of links you're required to navigate through. Just to check your email, plan your courses on the Grad Planner, or log in to I-Learn requires waiting for the page to redirect you, waiting for the new page to load, and then interpreting a new webpage and figuring out how to use it.

**Learnability:** The path to becoming proficient.

The learnability curve is not significant, mostly because the website does the brunt of the redirecting. You are forced to hunt for certain pieces of information, but they are still displayed on the page.

**Familiarity:** The degree in which the interface resembles something with which the user has previous experience.

The current user interface resembles I-Learn and other older websites enough that it is not wholly confusing, but the layout is very different and much more outdated than many of the contemporary learning sites available today.

**Simplicity:** The amount the user needs to know to master the system.

The user needs to know exactly what they must have done before registering for classes, applying for graduation, or accessing I-Learn. The MyBYUI site gives very little direction to help users achieve their goals.

**Mapping:** Clues within the design encouraging the user to form a consistent mental model of the system.

The current user interface is a terrible example of mapping. The layout changes with every tab chosen, which does not encourage the user to create this consistent mental map of the system.

**Motivation:** Does the user want to use the system?

At this point, the user has no choice but to use this system. I don't know of anyone that has complimented the site's ease of access and intuitive layout, or even said that they enjoy using the MyBYUI site to apply for graduation.

**Trust:** The amount of confidence the user has when using the system.

From what I have heard from other users, the MyBYUI site does not have a problem with trust. Generally, if you can find your way towards making a change, the change will be accurately reflected and further inspection is not necessary.

**Visibility:** The degree in which the functionality and the data of the system is available to the user when he needs it.

The current user interface is not particularly visible in this sense. Navigating through links to find the specific information you need is frustrating, and contributes to the lack of efficiency and terrible mapping.

- Attach the rubric (below) to the assignment and self-assess. This will be required for all CS 371 projects to help us with our self-evaluation skills.

Grading

	Exceptional 100%	Good 90%	Acceptable 70%	Developing 50%	Missing 0%
Selection Criteria 20%	It is clear the interface is important to the user and the user could benefit from a better design	All the components are present and the project is doable	All the components (user, interface description, and picture) are present but the project might be very difficult to complete	Example missing description of user, description of the interface, or a picture of the interface	No item selected
Interaction Framework: Correctness 10%	It is "absolutely clear" from the assignment that the interaction framework is completely understood	No mistakes were made in the description of the interaction framework	At least one component of the interaction framework not accurately described or the description is not absolutely clear	At least one component of the interaction framework is not listed or described	Interaction framework not mentioned
Interaction Framework: Application 20%	The interaction framework was used to correctly identify the core of the usability problem for the example	No mistakes were made in relating the interaction framework to the example	At least one component of the interaction framework is related to the example in a contrived or inaccurate way	At least one component of the interaction framework is not related to the example	Interaction framework not related to the example
Variables of Usability: Correctness 20%	It is "absolutely clear" from the assignment that the variables of usability are completely understood	No mistakes were made in the description of the variables of usability	At least one variable not accurately described or the description is not absolutely clear	At least one variable is not listed or described	Variables of usability not mentioned
Variables of Usability: Application 30%	The variables of usability were used to correctly identify the core of the usability problem for the example	No mistakes were made in relating the variables of usability to the example	At least one component of the variables of usability was related to the example in a contrived or inaccurate way	At least one component of the variables of usability was not related to the example	Variable of usability was not related to the example

In addition to the above criteria, a penalty will be added for write-ups that suffer from usability issues: grammar or spelling errors, overly verbose, poor formatting choice, etc.