Queso Redesign
Final Paper

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The Challenge

Queso is a gameful learning management system for classrooms. It organizes the professor's and student's workflows, enabling more transparent and efficient relationships. It incorporates gamification in a quests and points system that enhances student engagement and platform usage. It is currently used by many U.M. students as well as some other middle schools and universities.

As students we used Queso for one semester, so we know the platform well. By doing so, we identified some usability problems as well as some broken features. In a nutshell, there are information organization issues as well as missing context for the point system. Also, we think that the aesthetics could gain from an update.

We are thrilled with the opportunity to improve upon a good design. The idea is to address the issues raised on our intensive research and make Queso a better experience for future students.

Re-design ideas followed multiple rounds of prototype, feedback loops before reaching a final wireframe. Based on the multiple iterations, continuous feedback, and group member's insights the final product is a culmination of the design process.

The Process

When starting to redesign Queso our team wanted to interview current users.

The audience for Queso is first for the professors looking to engage students in a gameful manner that know current platforms are not the most efficient. Once implemented, any class where students have access to computers can benefit from the use of Queso. Currently, the audience includes Middle-school through graduate students across the country with tech-savvy teachers. The hopes of redesigning this platform is to fix usability issues so more classes adopt this cleaner and more fun system.

The Research

We conducted all of the research ourselves. Our primary research drove every design decision. Using observational methods, we started quick and dirty sketching right after we took our synopsis notes based on ideas current students suggested. The insight from users This lead to our first three prototype options that we tested.

We conducted:
Comparative Analysis
In-person interviews
Blind card sorting
Contextual interviews
A survey
Task Analysis
Widget testing
Prototype testing

Starting by looking at our competition, we wanted to know Queso's strengths, weaknesses, opportunities, and threats.

Blackboard is used by many large universities but is cluttered. The lack of hierarchy doesn't answer student's needs due to its lack of task flow. After a user interview, we found out the student never clicked on the top navigation because it didn't lead her to the information needed and over 50 percent of the page was irrelevant to her.

Schoology is the newest system that immediately shows a news feed. Giving access to content is beneficial to users, but there is no clear task flow. Side and top navigation bars spread content and repeat features. After user interviews one user stated this problem well:

"The one thing I hate about Schoology is that I have to bounce around to different places to accomplish things."- Marta

Our strength against these platforms is simplicity and that it is new. Not weighed down by unnecessary attributes, Queso lets student accomplish their goals. Even if it's not an intuitive system, once users see the navigation it's not hard to find it again. For example, looking at professor feedback on an assignment requires clicking the "Revise" button. The content and features are there but not usable.

Weaknesses include structural setup of the site and lack of adoption. The gamification features aren't as pronounced as other platforms in development at a

Michigan university. While being a new disrupting platform can be an opportunity for growth, other learning management systems are heavily adopted and to convert schools might require lobbying of administrations. Converting professors would be beneficial in the long-run, but both teachers and students would need to learn a new system.

The in-person interviews gave insight to how students in the IMFA program use Queso and their opinions on other platforms. With Questions concerning demographics, behavior, needs, wants and frustrations we began to see the biggest issues were the structural organization of the site and naming. The idea behind Queso is solid, simpler to use than the competition and gamification is liked, but the organization of the website poses problems for efficient use.

Blind card sorting allowed our group to evaluate the information architecture, dictate the navigation and influence naming of categories. After three card sorts with graduate students, we saw that the progress tab was well liked and should be surfaced. Current classes should be on the top navigation. Updates and due dates need to be on the home page, preferably in a calendar format.

Videotaping users interacting with Queso naturally showed our team that while users have intent when signing in they browse the site after addressing their task.

While card sorting, Lauren created a survey to get feedback and insight from students not at the University of Miami. Used across the nation, Queso students from other universities gave their valuable feedback.

From the survey, we learned that Queso is accessed from a desktop for 76 percent of users. 92 percent logged in within the last week and 40 percent log in over seven times each week. Students are looking to submit assignments or check grades and over half spend two to five minutes on queso the last time they were logged in. The survey showed that due dates and weekly readings are necessary while office hours and open lab hours are not important to the majority of students.

From what we learned in previous research, we started our task analysis. The most valuable products of Queso to focus on are submitting assignments, creating a history of notifications and feed on general updates for the courses like weekly readings.

As we were designing prototypes and testing them, we continued research. Widget testing helped organize the placement of the features. By allowing them not to place features on their homepage, we learned that most of the features we had designed work well. Each widget tester put the placement of announcements at the top left-hand corner of the page, so we kept our design the same.

Prototype Testing and Feedback

Prototype testing happened throughout our design process. Every form of testing impacts the prototypes and integrates into the design. Our approach to the design process involved multiple levels of user testing through each of the prototype iterations. Gaining feedback we would change features and placement of the sites various items. The widget user test provided the team with valuable insight as to where features should be located and informed the final design. The design process took us on an interesting path from where we began. The design went through a variety of iterations but ultimately had us arrive at a solution that tested well.

Final Design

Users found the revised design prototype as a much more approachable design that was simple and easy to navigate. Having a welcoming opening image that personally acknowledged them was a delightful and personal feature. Finding particular sections such as Quests Due, and the calendar view, helped users manage their time and planning. The current Queso site was leaving users wanting more and difficult to navigate. We knew we could improve the design and user experience. We were looking for a more positive user experience and feel our final prototype achieved this goal.

Working Prototype

As a final result of the project, we produced a navigable prototype in HTML and published it on http://fabio.ribei.ro/queso.

A mobile version was alse designed, considering the shortcomings of smallers screens, larger touch buttons, etc. Its available at http://fabio.ribei.ro/queso/m

Next Steps

Further testing needs to be performed now that we have a final working prototype, in order to achieve a final production design.

We need to research and design the teacher's interface upgrade and adaptation to accommodate new features shown on the student's UI.

We need to make the working prototype responsive, to switch to the mobile version automatically.

Build the Backend. Queso’s original code needs to be upgraded to a newer version of the framework (Laravel) and the code needs to be updated to accommodate the new features shown in the design.