



“Bridging you to your educational future”

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Problem

Each year thousands of refugees are forced to leave their homeland to escape political turmoil, natural disasters, war, and more often than not death. Since 2001, the United States alone has accepted 895,000 refugees¹. Leaving everything behind, these refugees are often forced into new communities with little understanding of the resources made available to them. Our goal is to provide refugees and international immigrants with the necessary educational opportunities to support their transition and future in the United States.

Currently, many organizations offer refugees some form of educational opportunities, however, these existing resources either do not support large groups or provide a suitable education. One example is UNICEF, a global organization focused on emergency children fund², who run several schools for refugees that requires triple shifts from staff to accommodate all the kids³. Due to the high capacity, these refugee schools lack the necessary resources and are forced to develop a standard curriculum that doesn't meet the wide range of backgrounds and suit each individual refugee's current academic standing.

Aside from inconsistencies in curriculum, another problem stems from the lack of connection between refugees and local culture. In the United States, refugee kids get help in enrolling for schools, but find it difficult to seek specific courses like language transition and/or local cultural learning⁴. With the wide diversity in the population, it becomes difficult to provide education opportunities for all the different backgrounds of people⁴. Another issue focuses around language barriers, preventing accurate evaluation of current refugees' educational standards⁵. This barrier makes it difficult to understand a refugee's academic status and runs the risk of repeating material they previously learned.

Another problem is with the resource gap, as many refugees don't have the financial means to access the necessary educational opportunities⁵. Refugee parents are sometimes forced to remove their children from school so they can support their families, both mentally and financially. One final problem is the social dynamic, where many refugees are left in social isolation with a failure to connect and grow resulting in a general discouragement of their

¹ Krogstad, Jens "Key facts about refugees to the US" (Pew Research Center) <http://www.pewresearch.org/fact-tank/2017/01/30/key-facts-about-refugees-to-the-u-s/>, Accessed November 11th, 2018

² UNICEF <https://www.unicef.org>, Accessed November 11th, 2018

³ Touma, Juliette "Gaza's Children Deserve Much Better" (UNICEF) <https://www.unicef.org/press-releases/gazas-children-deserve-much-better>, Accessed November 11th 2018

⁴ Endicott, Marisa "Resettled Refugees Face Challenges In U.S. Education System" (Medill Reports Chicago) <http://news.medill.northwestern.edu/chicago/resettled-refugees-face-challenges-in-u-s-education-system/>, Accessed November 11th, 2018

⁵ "5 challenges to accessing education for Syrian refugee children" (UNHCR) <http://www.unhcr.org/innovation/5-challenges-to-accessing-education-for-syrian-refugee-children/>, Accessed November 11th, 2018

academic pursuits. When refugee students are thrown into unfamiliar schools, lacking any connection with current classmates, these students lack the necessary social support to aid their academic development.

Our design plan revolves around this educational resource gap among refugees and international students. With the language barrier as one of the leading issues, our goal is to implement an adaptable design providing universal access. Our overall goal is to create an efficient and affordable solution so that people lacking basic education can easily use our design. Our solution will help refugees and international students by utilizing existing learning resources and promote academic connections, sparking their intellectual growth in a foreign country.

Solution

To help bridge the educational gap and provide refugees/international students the support they need to shape their futures, we built a website as an information hub focusing on developing academic connections. Globridge is an online community supported by teachers and volunteers to help publish professional and user-generated resources for the use of students. The goal of the site is to limit the amount of interactions as possible, to prevent users from being overloaded with information and overwhelmed by their technological ability. This website is designed to have low barriers of entry, so that even those without extended online experience should be able to navigate through the website.

Although the website focuses primarily on providing educational resources, Globridge builds a community among the students, teachers, and volunteers. By allowing user-generated content, students can interact with one another and promote content that helps foster their educational experience. Another function of the website allows for profile pages to help give recommendations, track progress, and have a reward system to encourage students to continue seeking classes and content. Both teachers and volunteers have the ability to create an account as well, to help strengthen the overall community.

The design and interactions of each Globridge screen is explained in detail below. The following pages offer explanations to help aid the development teams to create a working version of our prototype.

Application Screens

Home Page (Figure 1)

This is the primary home page when visiting Globridge. The goal of this page is to provide simple and quick access to educational content. The top right corner has the logo, options to create an account or login, and a slogan to give unique users a sense of the goal for the website. This home page provides different cards that offer basic starter and trending pages that highlights popular content (through recommended, hot, and liked videos). Under the lectures/online buttons, there is a drop down menu that lets the user filter information to suit what they are looking for. The user can change the view from online to lectures, however a user needs an account to register for the lectures.

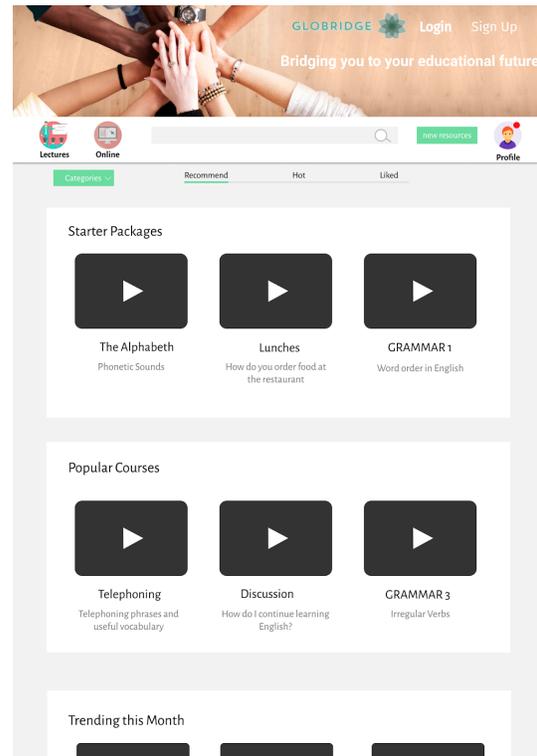


Figure 1

Login Page (Figure 2)

This is the login page for a user to sign into their profile. The goal of this page is to maintain a simple purpose of entering an email and password. This page has two primary actions: go back and submit. The submit button allows the user to sign in after they entered their email and password. The go back button allows the user to return to the home screen (Figure 1).

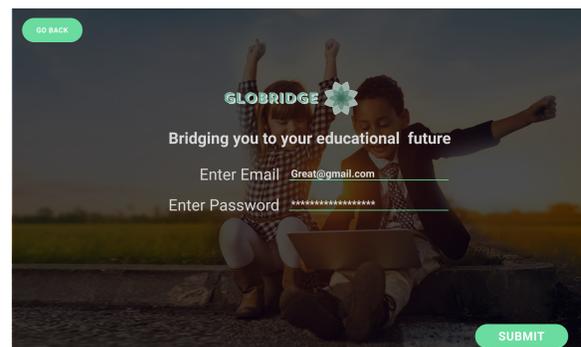


Figure 2

Create Account Screen (Figure 3)

This page is the sign up/create account page. The goal of this page is to gather information from the user to customize the website content to be more relevant to them. The most important input is the choose the language screen, which when changed, will transcribe the entire website into the chosen language. Next, the user can select if they want to be a student, teacher, volunteer, or all three. The next three rows asks for demographic information and account login info. The final selection is for the grade levels (more than one can be selected), which will be stored into the account information and filter the websites lectures and online resources to meet this grade level.

The screenshot shows the 'Tell Us About Yourself' registration form. At the top, there's a header with 'GLOBRIDGE' and 'Login Sign Up' links. Below the header is a banner with the text 'Bridging you to your educational future'. The main heading is 'Tell Us About Yourself'. Below this, there's a sub-heading: 'In order to help customize the content to your liking, please enter some information down below. This information can be changed anytime in your profile page.' The form includes a 'Choose a Language' dropdown menu, a 'You want to be a ...' section with radio buttons for 'Student', 'Teacher', and 'Volunteer', and input fields for 'Enter Your First Name', 'Enter Your Last Name', 'Enter Your Age', 'Enter Your Zip Code', 'yourmail @gmail.com', and 'Enter Your Password'. There's also a section titled 'Please select all grade levels you are interested in' with checkboxes for 'K-8th Grade' (Kindergarten through 8th Grade), 'High School' (9th Grade through 12th Grade), and 'College' (First-Year Student through Graduate Student). A green 'CREATE ACCOUNT' button is at the bottom right.

Figure 3

Register for Lectures (Figure 4)

Once logged into Globridge, the user will automatically be brought to the lecture page. The user can type keywords, choose a filter, and navigate through recommended/hot/liked to find the courses they're interested in. At anytime the user can select either the lecture button or online button to choose between physical classes or online study resources. Once the user finds a lecture they're interested in, they can view more information by clicking the card. If they want to register, they can click the register button and choose to register either as a student or volunteer. Once registered, a prompt appears letting them know if the registration was successful and gives them a choice to go to their profile or return to lectures.

The screenshot shows the 'English for Arabian' lecture card. At the top, there's a header with 'GLOBRIDGE' and 'Sign Out' links. Below the header is a banner with the text 'Bridging you to your educational future'. The main heading is 'Hello, Sophia!'. Below this, there's a navigation bar with 'Lectures' and 'Online' buttons. The main content area shows a list of lecture cards. The first card is 'English for Arabian' with a 'Language' filter. It includes a description: 'This course will teach you the fundamental elements of English to get prepared for the next level course.' and a 'You have successfully registered!' notification. The card also shows 'Course Name: EDA 101', 'Location: UW', 'Time: 130pm-3pm, wed', and 'fee: free'. There are buttons for 'Go to Profile', 'Return to Lectures', and 'Register as volunteer student'. The card also shows 'Vacancy: 10 | 30', 'Distance: 1.2 miles', and 'Provided By: ArabianiUS ORG'. Below this are other lecture cards: 'Get to Know English', 'Aranian and English', and 'Learn English in 3 Days'.

Figure 4

Online Resources (Figure 5)

Along with lecture courses, users can view an abundance of online resources through documents and/or videos. In this page, the user can filter subjects and select the course type that they are interested in (videos or documents). Just under the title of each article is a green “tag”, which can be used in the search bar to find courses that match that tag. The bar next to content type filters the information into two different categories: professional and community. Professional content is from accredited teachers, while community content is meant for anyone wanting to provide a resource for the site. This sample screen shows several possible articles, and if the user wanted more detail, they can select the see more text that would drop down everything in that article (like the 3rd card here). To encourage communication between users, a comment section also appears. Here the users can leave, respond, and upvote/downvote a comment.

The screenshot displays the GLOBRIDGE website interface. At the top, there is a navigation bar with the GLOBRIDGE logo, a "Sign Out" button, and the tagline "Bridging you to your educational future". Below this, a user greeting "Hello, Sophia!" is visible. The main content area features several articles, each with a green "tag" and a "See more" link. The articles include:

- to Tips for New English Learner**: A list of tips for learning English, such as reading classic literature and using social media.
- My Story of learning English**: A personal narrative about learning English from a student's perspective.
- What is your biggest cultural shock from visiting America?**: A collection of cultural shock stories, including "Bikinis at the Beach", "Mastering Utensils", and "Manners and Blowing Your Nose".

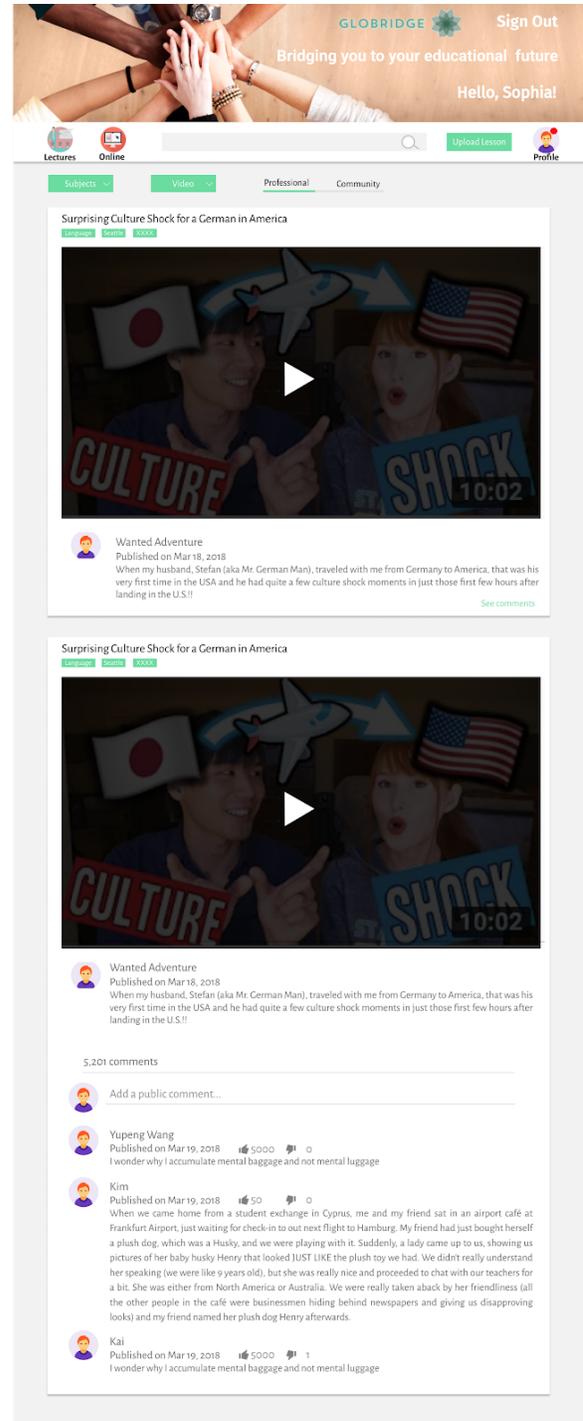
Below the articles, there is a comment section for the "Wanted Adventure" article. It shows 5,201 comments and includes a form to "Add a public comment...". Two example comments are visible:

- Yupeng Wang**: Published on Mar 19, 2018. "I wonder why I accumulate mental baggage and not mental luggage"
- Kim**: Published on Mar 19, 2018. "When we came home from a student exchange in Cyprus, me and my friend sat in an airport café at Frankfurt Airport, just waiting for check-in to our next flight to Hamburg. My friend had just bought herself a plush dog, which was a Husky, and we were playing with it. Suddenly, a lady came up to us, showing us pictures of her baby husky Henry that looked JUST LIKE the plush toy we had. We didn't really understand her speaking (we were like 9 years old), but she was really nice and proceeded to chat with our teachers for a bit. She was either from North America or Australia. We were really taken back by her friendliness (all the other people in the café were businessmen hiding behind newspapers and giving us disapproving looks) and my friend named her plush dog Henry afterwards."

Figure 5

Video Resources (Figure 6)

The other content type option that the user can select is in the form of videos. This page follows a similar format to the last page, however the key difference is that there aren't large walls of text that explains things in detail (as this would ideally be in the video). Instead of the see more text, the see comments text replaces it where users can view the comment section and leave responses to the video. The comment section of this page functions identically to the comment section from the previous page (Figure 5).

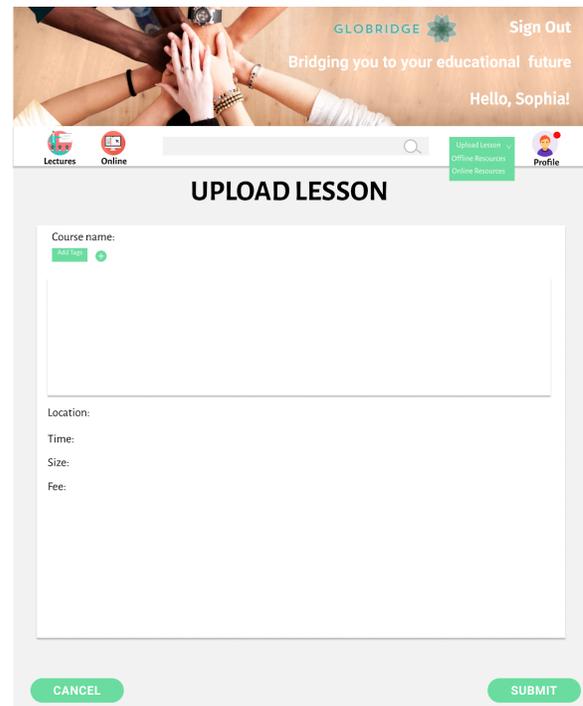


The screenshot displays a user interface for a video resource. At the top, there is a navigation bar with the GLOBRIDGE logo, a 'Sign Out' button, and the text 'Bridging you to your educational future' and 'Hello, Sophia!'. Below the navigation bar, there are tabs for 'Subjects', 'Video', 'Professional', and 'Community'. The main content area features a video player with a play button and a title 'Surprising Culture Shock for a German in America'. The video player shows a man and a woman holding signs that say 'CULTURE' and 'SHOCK'. Below the video player, there is a comment section with three comments. The first comment is from 'Wanted Adventure' and is published on Mar 18, 2018. The second comment is from 'Yupeng Wang' and is published on Mar 19, 2018. The third comment is from 'Kim' and is published on Mar 19, 2018. The comment section also includes a '5,201 comments' indicator and an 'Add a public comment...' input field.

Figure 6

Upload Lesson (Figure 7)

Since our platform relies on content, the users have the ability to upload a lesson. If a user has something to upload, the upload lesson button is to the right of the search bar/to the left of the profile page. After clicking upload lesson, the user can select the resource type: offline or online. The user would enter specific course information (seen here for offline resource) and would require the user to enter the name, description, location, time, etc. The online lesson, not pictured, functions in an identical way, except that files can be dragged and dropped into the site and the website will automatically render and upload them.

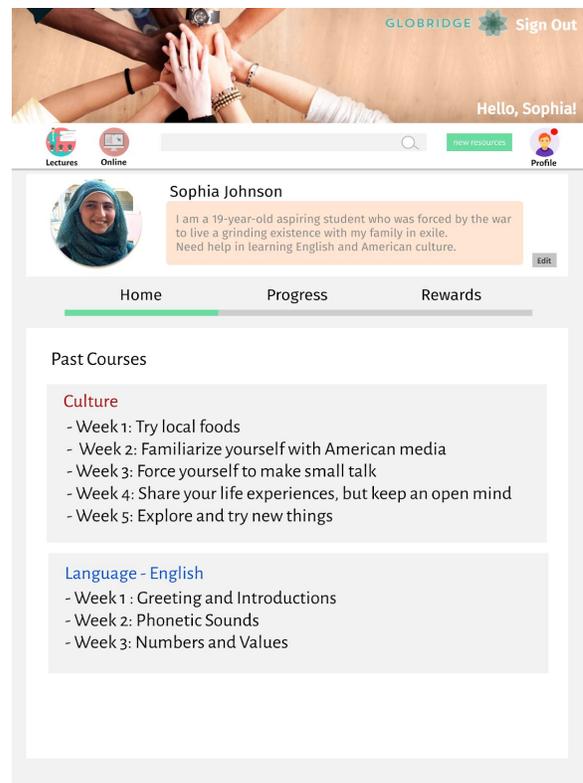


The screenshot shows the 'UPLOAD LESSON' form. At the top, there is a navigation bar with 'Lectures' and 'Online' buttons, a search bar, and 'Upload Lesson', 'Offline Resources', and 'Online Resources' links. The main form has a 'Course name:' field with a green 'Add New' button. Below it is a large text area for the description. Further down are fields for 'Location:', 'Time:', 'Size:', and 'Fee:'. At the bottom, there are 'CANCEL' and 'SUBMIT' buttons.

Figure 7

Profile Home Page (Figure 8)

This page is the home page of the profile section (specifically for a student). The goal of this page is to show past and current courses to the user so that they can easily keep track of what they learned. Past courses will appear by their categories. If the user is interested they can click on a specific course, and a new tab with that course page will open. This section can easily be customized with a short bio, image/avatar picture, and public name. The user can navigate to the progress and rewards pages to find additional profile information.



The screenshot shows the user profile home page for Sophia Johnson. The header includes the GLOBRIDGE logo, 'Sign Out' button, and 'Hello, Sophia!'. Below the header is a navigation bar with 'Lectures', 'Online', 'New Resources', and 'Profile' buttons. The main content area features a profile card for Sophia Johnson with a bio: 'I am a 19-year-old aspiring student who was forced by the war to live a grinding existence with my family in exile. Need help in learning English and American culture.' Below the bio are tabs for 'Home', 'Progress', and 'Rewards'. The 'Home' tab is active, showing 'Past Courses' categorized into 'Culture' and 'Language - English'. The 'Culture' category lists five weeks of activities, and the 'Language - English' category lists three weeks of activities.

Figure 8

Profile Progress Page (Figure 9)

This page is the progress page of the student's profile section. The goal of this page is give the user some statistics to feel that they are progressing towards a goal. The user can choose up to three goals per month to help give a sense of motivation towards their learning objectives. The Weekly Report gives a visual view of the amount of hours the that the user has spent per day towards their classes, either by attending lectures, watching videos, or reading documents. Eventually, we would hope to implement an input that would allow the user to view different weekly reports like interaction count or amount of classes taken.

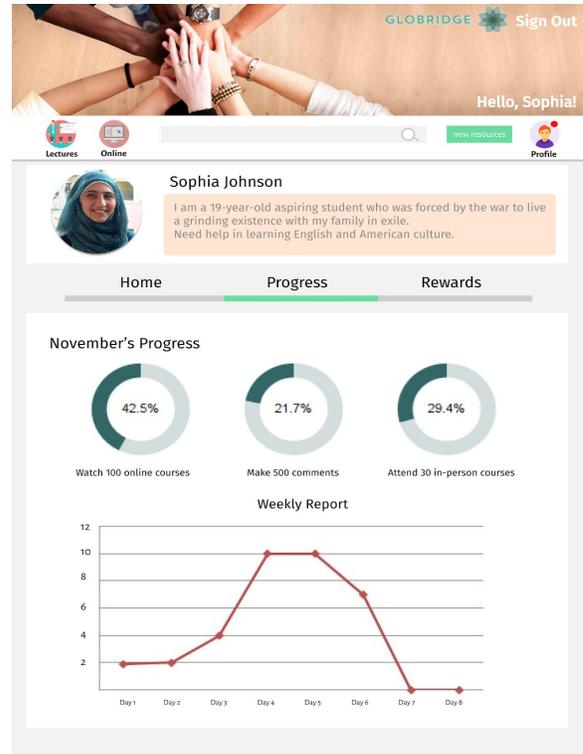


Figure 9

Profile Rewards Page (Figure 10)

This page is the rewards page of the student's profile section. The goal of this page is give the user a sense of accomplishment by encouraging and rewarding users with achievement badges. The badges are meant to be simple but pleasant looking to give users this desire to collect as many badges as possible. Sometimes educational learning can be cumbersome, long, and boring so unlocking these badges gives a "fun" aspect. The number of badges that the user can unlock is unlimited.

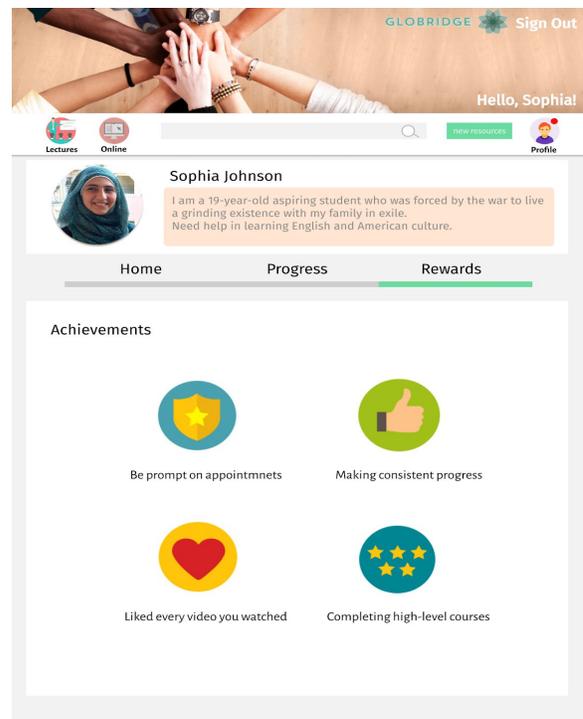


Figure 10

Evaluation

The primary goal for our design is to create simple interactions to avoid overwhelming our users with the amount of resources available to them. For getting the best sense of how we can meet the purpose of our design, we conducted a usability test and outlined goals for our testers that aligned with actual goals that users would have for our website. These goals included creating an account, navigating the account information, registering for a class, viewing messages on online resources, and uploading a lesson.

With our tasks planned out, we asked three international students around campus (and Sonam), meeting an aspect of our target audience, to test our website. In the test, we asked these participants to communicate through our tasks, detail how they were accomplishing each goal, and provide final feedback in the overall design of our website. After compiling together the responses from our participants, we received feedback on our design and discovered new ways to improve the workflow. Some of the feedback included: interaction to move back from pages, sign out, provide visual feedback after activity is completed, and a differentiation for each goal.

The comparison between our original design (Figure 11) and updated design (Figure 12) based on the usability test allowed us to address major problems that prevented users from interacting through the pages efficiently. Our first change was to create a slogan at the top of the page to give the users an understanding of the purpose for our website. Our second change provided additional information besides the simple visual icons, helping the users understand each icons purpose. The next change we made added additional feedback after the user registers a certain course, confirming to them that the registration was successful. Finally, the updated version features an ability to sign out of their account instead of simply clicking on their name.

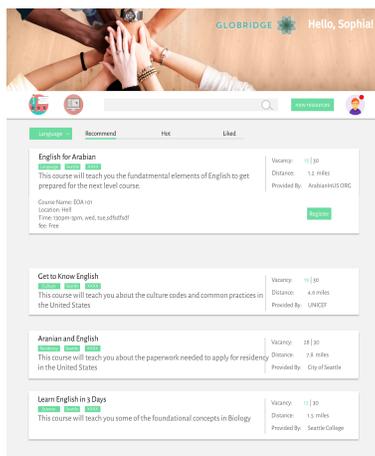


Figure 11: Old Screen for Registering Class

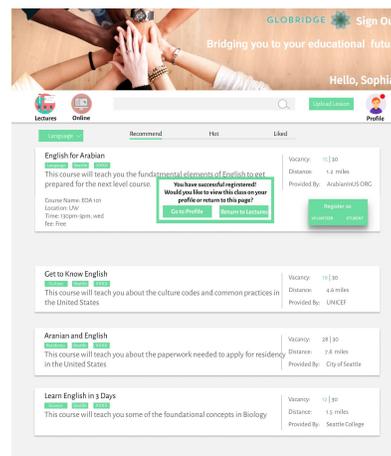


Figure 12: Updated Screen for Registering Classes

Our users enjoyed the simplicity of our design and the recommendations from the usability test gave us the opportunity to revisit/update our design, address common concerns, provide more feedback, and give more control to allow users to efficiently navigate through many different educational resources. The feedback and changes we made (from Figure 11 to Figure 12) provides strong evidence that our website design meets the needs of our target users and efficiently “bridges” the educational gap for international students and refugees.

Limitations

While we believe that Globridge meets many of the needs of our target users, there are two primary limitations that prevent effective use of the website. The first obstacle is that our website is very much community-driven, meaning that it relies on teachers/volunteers uploading materials to populate the resource bank. Our website needs interactions between active participants and a steady flow of new material to provide a meaningful impact on the educational gap . If teachers aren't adding lessons and lectures and users aren't communicating with one another, our platform simply falls short of its original purpose. Out of this stems another problem with measuring and ensuring quality educational content. Currently, we have no “moderation” of the content, meaning that anyone is free to post regardless of their qualifications. As the website becomes more popular, we would hope that content can go through a reviewal process, but in the early stages, unfortunately, quantity is needed over quality.

The second limitation focuses on exposure and access, as our design assumes that refugees will know about the website and have the technological resources to use it. Our eventual goal is to make a global impact and other countries (outside of the United States) might have technology deficits that prevents this universal use. Although some public libraries provide online resources and support, there is still an issue of easy accessibility that our design is trying to provide. This issue creates a new technology “gap”, limiting the potential impact of our platform.

Conclusion

Although the limitations explained above are a concern for our design, we believe that Globridge takes an important step in closing the educational gap between local residents and refugee/international students. Globridge is meant to be a universal site that accommodates all languages, race, cultures, and backgrounds and unites it's users into a common goal: to expand their learning. This platform allows for an online community that will hopefully stem to future academic connections as the students continue to grow. We hope that in conclusion of reading this specification, you recognize and understand our aspirations and are inspired to implement our design into a functional solution.

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