**World Cheese Awards 2021 - Final Project Usability Study**

Kasha Muzila, Karl Eirich

Below, you will find a list of tasks we asked each user. Those being if they were able to accomplish that task as intended or if they may have struggled, a description of the bugs we ran into while they were performing the task, observations we have noticed while the user was doing the task, and suggestions that came up while doing each user study. However, the summary section of this document will summarize our findings to give a better understanding of what steps we need to take to improve our app.

**Summary:**

Overall, none of our users had an issue navigating through the app. Our users understood that the interactions were from the dropdown menus provided and did not make errors or go off track. All our users used a laptop, desktop, iPad, or iPhone to navigate the app. Our app is more legible on a laptop or desktop but not so much on an iPad or iPhone due to overlapping text or graphs being too small.

Consistent suggestions between each user were to use a better color scheme on the geographical map, have a purpose section that explains the app, have hover touch information over the cheese icon to indicate that it takes the user to the original World Cheese Awards website, the delta numbers displayed when picking a filter is unclear, have dropdown options in pink towards the top of the dropdown menu or have it in chronological order, have a graph (i.e., pie graph) to show the total number of awards, and fix the map filter functionality.

Consistent bugs we ran into was that each filter option works if you select multiple of the same filter option (e.g., two countries, four categories, etc.), but it does not work if you choose more than one type of filter option (e.g., one country and one rating, two categories and one rating, etc.), that the pink and blue text is not displaying correctly where the user can understand that the pink options were available options to choose from based on previous filter options, and that the geological map does not filter down based on the options the user chose.

Our goal is to fix the bugs we have observed while also incorporating as many suggestions as possible.

**Usability Study**

User 1:

Recording: <https://berkeley.zoom.us/rec/share/3NfVklV4zKf50aDMcqb2WuC8Y2Hd36QzBVqaefE5_nBy9mC7q8zJa1X_EMh3qBPG.45EXWR_j6qTd6QD9>

Tasks:

* Select a country you’re interested in
  + User was able to accomplish task as intended
* Select a rating you’re interested in
  + User was able to accomplish task as intended
* Select a category you’re interested in
  + User was able to accomplish task as intended
* Select a product you’re interested in
  + User was able to accomplish task as intended
* Click the icon that will take you to the world cheese awards website
  + User had a hard time finding the icon as well as not being able to understand what the icon is for without being told.
* Select a country and a rating
  + User accomplished task as intended but the analytics were not correct. It seems that when the user would select a rating after they have selected a country, the code ignores the country filter and only applies the rating filter.
* Select a rating and then a country
  + User accomplished task as intended and the data visualizations showed the correct numbers. We need to fix our code so that the user can select a country and rating, no matter the order they have selected it in.
* Can you hover over some of the graphs
  + User was able to use their mouse to hover over graphs as intended and the correct information was being displayed.

Observations:

* User was able to understand most of the graphs.
* User was not able to understand what they geographical map was displaying and how it worked with the interactive filtration. This is because we did not use an effective color scheme and was not able to get the interactive filtration working on the geographical map by the time the usability study was conducted.
* User had an easy time navigating most of the app on their own without any instructions.

Suggestions:

* Need better color scheme for geographical map
* Write how the world cheese awards is judged
* Need to write that the icon takes you to the world cheese awards website
* A purpose section

User 2:

Recording: <https://berkeley.zoom.us/rec/share/D_xXedw57t5LQpqTYZ0oTJm3JqM1UFMKHAqCE785JQuOx47HElZ5i1gtxunX6x-2.iCfYsBxS1j3FpYXk>

Tasks:

* Select a category
  + User was able to accomplish task as intended. But code is broken and all data visualizations display zero
* Select a product
  + User was able to accomplish task as intended. But code is broken and all data visualizations display zero
* Select a rating
  + User was able to accomplish task as intended
* Hover over top ten cheeses by medal
  + User was able to accomplish task as intended
* Hover over medals graph
  + User was able to accomplish task as intended. However, the information displayed is done in percentages and should be in whole integer numbers.
* Select a rating and a country
  + User was able to accomplish task as intended. The information displayed was incorrect
* Exit out of the country that’s selected and choose a second rating
  + User was able to accomplish task as intended. The information displayed was correct.
* Exit out of the ratings that were selected and select two different countries
  + User was able to accomplish task as intended. The information displayed was correct.

Observations:

* User was able to understand most of the graphs except the Top Countries by Medal graph since they were in percentages. After this user study, we changed this graph to whole integer numbers.
* User was able to navigate the app with ease and didn’t have a problem understanding how to use the app.

Suggestions:

* Doesn’t quite understand the delta numbers
* Doesn’t understand the relative percentages for the Top Countries. Should be changed to whole numbers to be more intuitive.
* Would like to see cheese themes (or pictures) on the app
* A purpose section
* Have links to the cheese company websites on some of the graphs
* Medals graph should be before top 10 graphs to show granularity
* See geographical location of where the companies are located per country
* Need someplace to show the total amount of awards

User 3:

Recording: <https://berkeley.zoom.us/rec/share/0YHvegkTY8sBXeitJdCFSIftsX7GcXX0noL302V2iikIfqMSQrotMOEknR-ingdq.-EDVZkvOaRkihgJ9>

Tasks:

* Select one category
  + User was able to accomplish task as intended.
* Select a product
  + User was able to accomplish task as intended.
* Select a second product
  + User was able to accomplish task as intended.
* Select the bronze rating while have the same products selected
  + User was able to accomplish task as intended but functionality is broken. Only looks at product category
* Select two categories
  + User was able to accomplish task as intended.
* Select bronze with two categories
  + User was able to accomplish task as intended but functionality is broken. Ignores the categories and only displays the rating

Observations:

* User was able to navigate the app, apply interactive filters with ease, and was able to understand most of the graphs that the app was displaying
* Saw the same bugs that we have to fix
* User was able to understand the dark and light mode themes and found it on their own.
* Selecting a category and/or product was fixed during this usability study
* Was able to scroll and zoom on graphs
* The pink and blue text to indicate filtration options does not work.

Suggestions:

* Have the dropdowns in chronological order
* Didn’t quite understand the red delta numbers and how it relates to the default. Suggestion was to maybe explain what this is or make it more clear that that’s what it’s displaying.
* Label x and y axis
* Rating and awards and medals should all be the same word
* Have somewhere that states the total amount of awards, like a pie graph.
* Create a hover over the cheese icon that says it takes you to the original world cheese awards website

User 4:

Recording: 

Tasks:

* Please tell us if you can tell the difference between how many awards the purple colored countries have on the geographical map.
  + Had a hard time telling the difference between countries that had 10 awards versus 2 awards. Need to change the color scheme so it’s easier for users to tell the difference
* Select a product
  + Had a hard time finding some of the pink available options and wanted
* Select a country and a category
  + User was able to accomplish this but the code was not reflecting the correct numbers. Was only showing the category and not the country and the category data.

Observations:

* User has more knowledge about cheese
* Fonts and colors are harder to see for older users

Suggestions:

* Top ten cheeses by medal needs to be more clear to the user by color coding them
* Put all of the pink dropdown options towards the top
* Choose a more readable color scheme for the website

User 5:

Recording: 

Tasks:

* Click on a country on the geological map
  + User was able to accomplish task as intended.
* Zoom in on the geological map
  + User was able to accomplish task as intended.
* Select a country and a rating
  + User was able to accomplish task as intended but it ignores the country and only displays the rating
* Select a category
  + User was able to accomplish task as intended but is broken when used with other filtration options and it’s hard to find a pink category available to select
* Select a product
  + User was able to accomplish task as intended but is broken when used with other filtration options and it’s hard to find a pink category available to select

Observations:

* Was done on an iPad and the app worked well overall but some graphs had some cut offs and had a hard time being legible
* Didn’t have trouble reading the text based on the color scheme the website is using

Suggestions:

* Put the available filtration options on top of the dropdown menu so the user doesn’t have to scroll for a while to find an option
* Some of the text is overlapping each other so it’s hard to read
* Fix the map to filter down to the options that the user picked

User 6:

Recording: <https://berkeley.zoom.us/rec/share/OTzoWcrb0CRDOzZawIug7RSWAO-JL-q91AKRfBBaeEP5HwRmeNVXI_w3I8OzTtH8.HkU2h1UCWsqtUrSL>

Tasks:

* Hold phone sideways
  + User was able to accomplish task as intended and graphs were easier to read
* Select country and category
  + User was able to accomplish task as intended but doesn’t apply both filters. Only applies one filter
* Exit out of the country and category filters
  + User was able to accomplish task as intended.
* Select a rating
  + User was able to accomplish task as intended.
* Click on one of the bars in one of the graphs
  + User was able to accomplish task as intended and touch hover information displayed correctly
* Select two ratings
  + User was able to accomplish task as intended.
* Click on one of the yellow bars
  + User was able to accomplish task as intended and touch hover information displayed correctly
* Double click on the graph
  + User was able to accomplish task as intended.
* Click on the brightest pink country on the geological map
  + User was able to accomplish task as intended and touch hover information displayed correctly. However, filtration does not currently work on this map because we have not implemented that functionality in time for this user study.
* Double click on the geological map
  + User was able to accomplish task as intended but only zooms in using two fingers doesn’t work but refreshing the app resets the map
* Select two products
  + User was able to accomplish task as intended.
* Select two categories
  + User was able to accomplish task as intended.
* Select two categories and rating
  + User was able to accomplish task as intended but doesn’t work properly. It ignores the category filtrations

Observations:

* Was done on an iPhone. The app worked well overall but it was hard to read the graphs unless the user put their phone sideways.
* User knew how to use dropdown menus
* Text overlaps each other and is hard to read
* Pink and blue text that is supposed to indicate what choices that are available to select based on other filtrations does not work.

Suggestions:

* Need a purpose section that explains the what the app does
* Need to apply filtration on the geographical map
* Be able to zoom in and out properly on the geographical map while using an iPhone