

Evaluation Assignment – 5
Heuristic Evaluation

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Team-2: Water's Matter App

Undergraduate Design

The objective of the undergraduate application is to design and develop a bilingual web app for Colonia residents to learn about water conservation measures and rainwater harvesting which helps them to improve their water management. This App will have three sections., conservation, harvesting and rainfall calculator. This app has two languages: English and Spanish as it is mainly used by the residents of US and Mexican borders. This app will provide information through a library of images, text and links in both the languages.

Language selection appears on screen when the application is opened. The user can choose either English or Spanish. On the home page there will be button to various sections – conservation, harvesting, rainfall calculator and a drop-down menu across each section. The conservation and harvesting sections provide information through text, downloadable pdf, photos and YouTube videos. The rainfall calculator section has sections where user need to provide the inputs to get the required information.

User Interface Domain

This application belongs to the domain of web application which provides resource specific information about water conservation. This application is intended to run on a mobile phone but it can be accessed with a computer. The application provides information about water conservation and harvesting through text, pdf documents which are downloadable, photos and YouTube videos. The application has a rainfall calculator to estimate rainfall in a specific area. All the information in the application will be bilingual both in English and Spanish.

Usability Principles

Visibility of system status

The design should always keep users informed about what is going on, and the state of the system. The name of section that the user access should display the section name such as Harvesting or conservation and related information below.

Match between system and real world

The design should speak the users' language. The technical language should be minimal in the app as most of the users will have no technical knowledge and they might get intimidated in using the app.

User Control Freedom

User often perform actions by mistake should be able to back out of a process or undo an action with ease. Since most of our application users will be old we have to make sure there are proper navigation buttons or drop down for easy access.

Recognition rather than recall

Minimize the user's memory load by making elements, actions, and options visible. All the sections in the applications should be visible and the provided information should be visible.

Flexibility and ease of use

Shortcuts — hidden from novice users — may speed up the interaction for the expert user such that the design can cater to both inexperienced and experienced users. Such as the homepage should include all the necessary section links or buttons.

Help and documentation

It's best if the system doesn't need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks. The rainfall calculator might require guide for using it as it would be the first time for many users.

Potential Usability Problems

1. If the user by chooses wrong language by mistake, there will be a problem as he can't access the information required for nor he can revert back to other language unless he reopens this application. This may break the user control freedom. There is a chance the language will be based on the browser settings but it better to have options for it.
2. There is no documentation or guide for the rainfall calculator which could limit it usage by inexperienced users. It will break the help and documentation principle.
3. If the documents, text or the videos have more technical words or sentences it might be difficult for some users. This would break the match between the system and real world principle.

Critical Usability Concerns

1. In the rainfall calculator, the user needs to select specific region in order to estimate the rainfall and computes calculation based on user inputs. If the user selects the wrong region the app, if there is visible indication about the selection of this region, there might be a chance where the user will get wrong result which might not know and he might even move forward in utilizing this result. This can be critical for the user for water conservation.
2. In the prototype presented, it appears the text in the application is quite smaller compare to the top menu. If this moves on to the complete application, there is possibility that this might be critical for users as most the users will be old. So the text size should be bigger so that any user can easily recognize and understand it.