Database Redesign for STEM Academy

Progress Report

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4 December 2017

CS 461 Fall 2017

Abstract

STEM Academy requires a system to generate and distribute surveys, collect the responses, and make standard reports of these responses. This design document provides a detailed solution to manage all the components of this project and meet the requirements listed in our 'Requirements' document.

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1 INTRODUCTION

1.1 Purpose

This document provides the plan and design concepts for this project, which will be used as a road map to manage the survey data for our clients.

1.2 Scope

This document provides a detailed solution for all the components of our project- Survey Generation, Survey Distribution, and Report Generation and Storage. This solution will be used to generate/edit survey questions, collect/edit survey data, store the responses from the surveys generated, analyse/view the data, and generate a standard report including some graphics that looks finished enough to share directly with outside entities by STEM Academy. We could change this document as we achieve our goals, but the big picture will still be relevant.

1.3 Summary

In this Design Document, we describe how Quatrics can be used to manage the different components of this project.

2 BODY

2.1 Identified Stakeholders

We have three kinds of identified stakeholders for our project. The first stakeholder is STEM Academy, our client. They can learn how and what needs to be done for this project by referring to this Design Document. The second kind of stakeholder is Group 47 of Capstone Team. We will be providing the deliverables for this project. The final stakeholder is our supervisors who are also our instructors, and TA- D. Kevin McGrath, Winters, Kirsten Michelle, and Lin, Daniel.

2.2 Design Concerns

The user of our product would be merely the STEM Academy and the participants who will be taking the surveys. We will be providing a fully functioning system that can be used by non-technical staff to store surveys and make reports.

2.3 Survey Generation

The administrator responsible for creating the surveys will login to Qualtrics with their Oregon State credentials. They can create or edit a survey project with Qualtrics. The interface of generating questions should lead our client to add, delete and edit any type of questions they want easily. Once logged in, they can use the Folders option on the top left to create a folder for surveys for a specific camp. After selecting that folder, the administrator will click on the Create Project option. The user is prompted for a survey name where they can name it accordingly for the pre-camp, and start creating the survey. The user can create the questions from scratch, or import questions from a previously created survey. The Create a New Question drop down box under the first default question block can be used to create multiple questions of various types (static, standard, specialty or advanced). This is the basic method for generating a survey. The website interface is very user friendly and it is easy to learn all the different functionalities and features. The top navigation bar lets the administrator manipulate the look and feel, survey flow and settings for the survey being edited. They can use the Preview Survey option to check how their distributed survey will look like to the participants. Similarly, they can create a new project in the same folder for the post-camp survey. For the next camp, they can create a different folder that contains survey for that camp and name that folder accordingly. This can help refer to specific surveys and their reports in the future.

2.4 Distribution of the Survey

After the administors of STEM Academy created the surveys, they need to distribute the surveys to get the responses from participants so that they can assess data to determine their impacts on the respective participants, make any necessary camp changes, and apply for potential funding. The interface of distribution can lead them to distribute surveys safely and easily in multiple ways. There are four options for the survey distribution in Qualtrics- Email, Web, Social and Mobile. The most appropriate option for this project would be Web. The administrator will navigate to the Distributions tab under the current project and click on ”Web”. This provides them with a link to the survey. This link can be simply embedded in the STEM Academy data solutions website, which will allow the camp participants to take the survey. The administrator will be able to view the responses to the survey in the Qualtrics website, under the ”Reports” tab of the respective survey project.

2.5 Report Generation and Storage

As soon as a distributed survey is completed by a participant, a report is automatically created and stored in Qualtrics, which will be available for the administrator to view and customize at any time. The reports are automatically updated as more people take the survey. Once the administrator logs into Qualtrics, they can select the project folder for which they want to view the report. A response visualization for each survey question is listed under the ”Reports” tab of the top navigation bar. This includes a metric and a plot to visualize the response data. These visualizations are set appropriately by default for the different types of questions. However, the administrator can click on any metric or plot to start editing the visualization options. The metric options are mean, min, max, net promoter score, response count, choice count, sum and percentage. The plot options are simple table, bar chart, line chart, pie chart, breakdown bar, statistics table and gauge chart. If the administrator wishes to change the responses for any question, they can do so under the ”Data and Analysis” tab. These response data can be arranged as the administrator chooses, by adding a filter. These data can be exported by selecting ”Export and Import” option on the top right. By clicking on ”Export Data”, a pop-up menu appears where the administrator can select the file format and click on ”Download” to export the pages. Similarly, the report can be downloaded by clicking ”Share Report” on the top right, selecting the desired file format and finally clicking on ”Export Pages” in the pop-up menu.

3 References

[1]”Site Directory — Oregon State University”, Site Directory, 2017. [Online].[Accessed: 02- Dec- 2017]

[2]”Editing Survey Questions Qualtrics”, Oregonstate.qualtrics.com, 2017. [Online].[Accessed: 02- Dec- 2017].

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