



GROUP 3

Leveraging Mobile Technology to Support Public Speaking Skills

Project Management Plan

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Overview

The purpose of this project management plan is to help guide the project execution, facilitate communication among group members, provide project scope and provide a schedule for all the milestones and deliverables. This document sets guidelines and dates for all group members to adhere to and will be updated throughout the semester as the project progresses through different stages.

Background/Context

After brainstorming different ideas, the design team decided to explore designing an application that would help users with public speaking. By leveraging the internet and social media the group decided to create an online Community of Practice (CoP) to offer more opportunities for speakers to stream live webcasts (with shared video so the speaker can gauge the audience engagement) and/or record themselves asynchronously and solicit feedback. The group also decided to integrate mobile technology to extend access to individuals who are comfortable using the technology and increased opportunities to practice and learn.

After reviewing a number of mobile applications geared towards supporting public speakers, the finding was that most of them were very limited. Some key features included timers to help speakers ensure they kept to a pre-designated time, and Teleprompters considered by our stakeholders as inappropriate because they limit audience connection by reducing eye contact and limiting gesturing and movement. Other features offered were, PowerPoint/presentation slide design tips, and strategies for preparing a speech (framework). In a nutshell, none of the products employed the use of social media for the purpose of obtaining constructive feedback. The end goal of this process is to develop a solution that will help learners develop new behaviors that will result in a stronger ability to present or speak in public.

Definition

The User Research – Project Management Plan is a living document and will change based on user inputs and feedback. It outlines the steps for further

development of the prototype, selection and implementation of user research methods, planning, management, analysis, design, development, communication, and procedures used for the prototype design of the presentation app. The User research will guide the improvement and finalization of the mobile application called SpeakEasy.

Scope

The following parameters describe the scope of the work to be performed by the design team. Deviation from these specifications may result in delayed deliverables, impact to product performance or quality, and may result in necessary modifications to the Project Management Plan (PMP). Changes to the PMP may result in fluctuations in price and deliverable/milestone schedules. The design team shall take reasonable measures to accommodate and maximize time spent with stakeholders, subject matter experts (SMEs), and other contributors.

- **Period of Performance (POP):** August 29, 2012 – May 8, 2013
- **Design Team:** Samar Aleem, Paula Croisetiere, Allisyn Jones, Sheila Campbell-Jucha, Christine Wessels
- **Project Manager:** The design team shall assign an individual team member to coordinate and execute the delivery of two major milestones within the POP

Goals

The overarching goal of this project is to design and develop a refined, semi-functional, prototype of the SpeakEasy mobile application and Community of Practice (CoP). The design team will leverage mobile technology, web 1.0, adult learning principles and design, and user-centered design methods to create a custom application for use on any tablet computer. The CoP and the mobile user interface shall be designed to build learner confidence and enable increased opportunities to practice their skills by conducting synchronous webinars or uploading a presentation and soliciting formalized feedback from viewers (participants).

Objectives

In order to realize the goals of the project, the design team has identified specific objectives that must be successfully executed based on the ADDIE model approach.

Phase	Objectives	Output(s)
Analysis	Analyses/Data Collection: User needs assessment, task analysis, competitive market analysis, gap identification, recommended solutions	<ul style="list-style-type: none"> • User Research and Design Plan • Primary Personas
Design	Identify prototyping platform, create non-functional mock-up screens, storyboard two scenarios emulating the main functions of the application/CoP, collect user feedback from individuals that align with the specified personas	<ul style="list-style-type: none"> • Initial prototype • Oral presentation to stakeholders
Develop & Implement	<ul style="list-style-type: none"> • Apply previous user feedback regarding the prototype and redesign in preparation for (R1) testing • Recruit a diverse pool of user participants for R1 and R2 testing • Develop testing scripts (for facilitators/observers and testers as indicated) • Execute two rounds of usability testing • Incorporate user feedback into prototype after each round of testing • Showcase final prototype to shareholders 	<ul style="list-style-type: none"> • Alpha prototype • Alpha: Usability Testing Report • Beta prototype • Beta: Usability Testing Report • Build fully functional CoP and mobile application¹
Evaluate¹	Employ evaluation techniques (Kirkpatrick) to measure change in user performance based on specified indicators over an extended period of time	TBD

¹ This output falls beyond the scope of this project however, the stakeholders or design team may choose to exercise the follow-on task order to fully execute building of both the CoP and a functional mobile application.

Project Schedule

The table below lists the milestones for this project, along with their estimated date of completion.

Milestones	Est. Completion	Due Date
Project Management Plan	02/20/13	03/06/13
R1 Usability Test results posted to Blackboard wiki	TBD	04/03/13
R2 test results posted to Blackboard wiki	TBD	05/01/13
Prototype Revisions	Ongoing	Ongoing
Data Collection and Analyses	Ongoing	Ongoing
User Research Presentation	TBD	05/08/13

Milestones/Deliverables

Phase 1 (POP: August 29, 2012 – December 14, 2012)

1. User Research Design Plan (URDP)
2. Initial prototype
3. Revised prototype based on initial user feedback
4. Present findings to stakeholders

Phase 2 (POP: January 23, 2013 – May 8, 2013)

1. Project Management Plan
2. User Research Testing – R1 Results Report
3. Alpha Prototype
4. User Research Testing – R2 Results Report
5. Beta Prototype
6. Final Product

Technical Approach

As described in the objectives section of this document, the design team shall employ the standard ADDIE (Analysis Design Development Implementation Evaluation) model to collect data from stakeholders, potential users, and

subject-matter experts (SMEs) to produce a semi-functional prototype that employs web 1.0 technologies (non-dialogic).²

In order to identify the characteristics of the learner population, knowledge, skill, and ability (KSAs) gaps, stakeholder goals, and SME guidance, the design team shall engage in the following activities:

1. Conduct interviews with a minimum of one (1) SME. The SME must be available for follow up questions throughout the life cycle of the project.
2. Conduct an online survey to guide the design team to identify learner attitudes, understanding, preferences, and skill levels which, will be used to determine primary features and pedagogical approach to design.
3. Identify stakeholders to ascertain their needs and goals of the end product.
4. Conduct a competitive analysis of existing products to help differentiate this product and maximize marketability.

Upon stakeholder approval of the URDP³ the design team shall prepare a mock-up depicting the major functions of the learning environment for the purposes of soliciting initial feedback from learners who meet the specific characteristics of the two main personas and stakeholders. Initial feedback will be used to revise the prototype in preparation for two rounds of user testing/viability thus rendering a final prototype ready for development by a qualified engineer.

Design and Prototype Development

To address the need for providing a convenient means to access the CoP on-demand, a mobile platform was selected as the primary delivery system. It responds to the varying user needs and provides increased opportunities to interact with the CoP. Following extensive research and analysis, the design team identified three primary focal points including:

- Planning: preparing a presentation for online delivery (synchronously or asynchronously)

² A fully functional product falls beyond the scope of this project however, should the design team or stakeholders decide to exercise this option, the follow-on task order and related PMP will address the requirements including identification of developer(s) and/or engineer(s) to build the product, intellectual property rights, and associated costs.

³ For the purposes of this project, stakeholder approval is the equivalent of a passing grade from the course instructor, Dr. Brenda Bannan.

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- Practicing: speaking to a virtual audience via the mobile application interface and receiving structured, constructive feedback from participants
- Participating: viewing or reviewing presentations from other CoP members and providing constructive feedback⁴

Five personas emerged as a result of the user needs analysis informing the design team of the background, experience, and demographic information needed to tailor the product to their needs.

User Characteristics (Background)

1. *Comfort level using technology* – approximately half were very comfortable using technology and were unafraid to try new software/hardware whereas others were less inclined and had limited technical skills
2. *Level of education and background* – working professionals aged 18 and up
3. *Public speaking experience* – level of comfort and amount of experience

User Needs

1. Increased opportunities to practice.
2. Constructive performance feedback.
3. Accessible on an as-needed basis (on-demand).

After further consideration, the design team narrowed down the persona profiles to two types of individuals who represented the characteristics and needs of the target user audience:

Persona # 1- Teshia:

- Novice User, Tech Savvy
- 37, Technical Writer

Persona # 2- Faisal:

- Intermediate User, Tech Savvy
- 30, Business Analyst Manager

⁴ The design team recognizes the need for developing a motivational scheme that encourages users to want to both engage in the practice and participation activities.

User Research Testing: Round 1

During the initial design process, preliminary user input about the original prototype was gathered. The results were limited and not substantial enough to warrant a prototype upgrade. Therefore, an additional round of testing is warranted to further analyze specific user opinions, perceptions, expectations, assumptions, and overall usability of SpeakEasy. It will consist of user research testing, a survey, and obtaining feedback from (a) focus group(s).

Purpose

The primary purpose of (R1) testing is to determine if the design of the user interface is intuitive. Specifically, the first round of testing will measure usability of both the Practice and Participate functions. Secondly, this phase will be used to identify opportunities for creating incentives to motivate users to engage in the Participate aspect of CoP, a key element necessary for soliciting constructive feedback. This testing phase will also help to determine the level of user confidence in the product itself (e.g. does the user believe that using the SpeakEasy product will help them overcome anxiety and other obstacles faced when tasked to speak publicly) to overcome known issues that cause them difficulty and deliver presentations that effectively communicate their message and meet their objectives.

Audience

Ten testers shall be identified by the design team to execute the first round of testing. Based on prior user demographics results, testers will be selected based on the following criteria: working professionals between the ages of 18 and 55; two thirds of the tester pool shall be female and one third male; have at least a single undergraduate degree, and are likely have a graduate degree as well. All are very busy and have a difficult time balancing their work and home life and will need to have access to the application at their convenience without time or location access restrictions; and have expressed a desire to improve some aspect of their public speaking skills.

Goals and Questions

Goal	Potential Questions	Method
Determine feature/function priorities of app	Rate each feature 1-5 on how valuable they find it What would be helpful to have on this application that you did not see when preparing for a presentation?	Usability test Focus group
Determine what features are useful	If you were preparing for an important presentation what feature would you use? How quickly were you able to use the features/functions? What would make you a repeat user? What types of public speaking sessions would you use it for?	Usability test Focus group
Determine if features are confusing	Was anything confusing on the application? What was your first impression of the application?	Usability test Focus group
SpeakEasy Expectations	How would the app make your life easier? What do you want to gain from using this application? How do you think a mobile application can help you to build or enhance your public speaking skills?	Focus group Survey
Demographic data	Age, gender, education Technology level, mobile device experience	Survey

Resources

- Semi-functional prototype demonstrating the Practice and Participation features and navigation
- Test script
- Testing prototype functional tasks
- Test interview questions
- Focus group demonstration
- Testing consent form
- Recording consent form
- Tablet computer with a case (case must enable the user to prop the tablet up vertically)
- Post-test survey

Planning

The users have been identified and will be contacted to confirm their participation in the R1 testing. The current prototype will be adjusted to accommodate the goals of the R1 testing, specifically to present the layout and navigation of the Practice and Participate features and functions of the public speaking mobile application for tablet computers. The testing and recording consent forms will be developed. The testing function tasks will be identified and the testing script will be developed and tested by the design team. The focus group demonstration will be scripted, created, and tested by the design team. The interview questions will be developed to coordinate with the demo. A follow-up survey will be developed to gather demographic data and overall user impressions.

Testing Method

R1 tests will demonstrate the functions and navigation of the prototype to highlight the Practice and Participate functions. Some users will be observed as they attempt to accomplish specific tasks requiring navigation of these functions and will also be recorded for a more detailed observation of their interaction with the prototype. Other users will be provided with an online demo of the navigation of certain functions within the prototype. All users will be interviewed for their perceptions and preferences of the functions.

Results

Based upon the analysis of the user input gathered during the R1 testing, the prototype will be upgraded to ensure ease of use and preferred functionality of the public speaking mobile application. This analysis will also drive the planning

for a second round of user research to further enrich and refine the presentation prototype.

User Research Testing: Round 2

Purpose

The purpose of this testing phase is to predict the expected performance of the actual learner using SpeakEasy. The evaluation will focus on determining if the needs of the user are met in an easy to understand, useful, and productive manner. The testing will evaluate the potential for errors and difficulties involved in using the application for presentation activities.

R2 will consist of micro-usability testing followed by a scripted interview and open discussion. The goals of R2 testing are to determine the following:

1. Intuitive navigation
2. Changes incorporated from round one testing yielded increased usability
3. Verify stakeholders continued support

Preparation

Planning for the second round of testing is to some extent, contingent upon the results of the first round. As such, the approach, goals, and strategies described within this document are subject to change and will be discussed and agreed upon by all members of the design team.

Resources

Micro-usability Test:

- 6 to 8 participants who are available for half an hour
- Introductory script: Facilitators/Observers will initiate the testing session by providing users with a brief introduction to the product, explain the scope of the testing, and address any questions or concerns the users may have prior to beginning the test
- Post-test questionnaire
- Semi-functional online prototype

Audience

The audience for testing purposes will be the core of our target audience and 6 to 8 participants. The demographics include users that are familiar with mobile technology and between the ages of 25 and 45. They will be progressing in their careers and motivated to improve.

Approach

The micro-usability test will be conducted in two distinct phases. The first phase will involve use of screen recording software to capture user interactions with the prototype. Screen capture applications for consideration include: Camtasia, Blackboard Collaborate, SnagIt, or other video screen capture program as determined and agreed upon by the design team. The second phase will involve a face-to-face interview between the observer and the tester/user.

Phase 1 – Micro-usability Testing

Facilitators will observe two users as they attempt to accomplish a minimum of two specific tasks without any assistance to identify design features that impede users from easily and successfully executing a task. The objective of this phase is to determine if users successfully navigate through the application.

Phase 2 – Scripted Questionnaire and Open Discussion

The purpose of a scripted interview is to ensure that all users are subjected to the same conditions and questions. This will ensure validity of the data/feedback collected.

Sample Post-test Questions

1. Is the information logically organized and grouped?
2. Did you feel the need to solicit help as it pertains to using the application?
If so, please describe what caused you to seek help and why.
3. Are there tasks that you will want to perform that are not currently supported by the SpeakEasy application?
4. On a scale of 1-5 how would you rate the app?

Schedule/Time Management

In-Person Meetings

The design team shall meet following face-to-face classes on Wednesdays from 7:15pm to no later than 8:15pm at the Fairfax Campus of George Mason University (GMU), Thompson Hall, Room L003 unless otherwise directed by the instructor. Alternate locations may be appropriate and necessary, should the location change, the design team shall agree on the time (where applicable) and location with a minimum of 24 hours-notice to all members.

Online Meetings

Per the above schedule, the design team shall meet online using Backboard Collaborate as required by the instructor for archival purposes and tracking. Each design team member is responsible preparing for online meetings by ensuring the hardware used in conjunction with Collaborate is working properly. Members experiencing technical difficulties may contact the GMU IT department for additional assistance.

Meeting Schedule⁵

Week	Face-to-Face	Online
1	01/23/13	
2		01/30/13
3		02/06/13
4	02/13/13	
5		02/20/13
6	02/27/13	
7		03/06/13
8		03/20/13
9	03/27/13	
10		04/03/13
11	04/10/13	
12		04/17/13
13	04/24/13	
14		05/01/13
15	05/08/13	

Documentation

All meetings (both face-to-face and online) shall be documented by a designated note-taker prior to the beginning of the meeting. Meeting minutes shall be emailed to the rest of the design team to ensure clarity within two calendar days following the meeting. The note-taker is responsible for collecting the feedback, finalizing the minutes, and posting them to the group wiki on Blackboard. All design team members are required to review the final minutes and execute the action items contained therein.

The purpose of the design team meetings are to ensure that the group has a common understanding of the current state of the project and to make decisions in a collaborative fashion in order to advance development of the prototype or end product.

Action Items

⁵ Meeting schedule subject to change as determined by the instructor. Additional meetings may be scheduled by the design team on an as-needed basis and require a minimum of 72-hours notice.

At the end of each meeting, the note-taker is responsible for verbally listing each action item and the responsible party in order to confirm the design team as a whole is in agreement. If for any reason, a team member is unable to fulfill their specific task(s), they must alert the design team immediately so alternative arrangements can be made to ensure timely submission of all deliverables.

Meeting Architecture

In order to maximize meeting time, the task leader(s) are responsible for preparing an agenda and any related materials and distributing them to the team a minimum of 24 hours prior to the meeting.

Project Resources

1. Access to the primary stakeholder, Mr. Lance Schneibler
2. SME's shall be identified by the design team
3. The design team shall deliver all deliverables in a format compatible with the client's technology (includes software and hardware)
4. Access to mock-up software (Balsamiq)
5. Access to screen-recording program (e.g. Camtasia, Snagit, Captivate, etc.)
6. Video camera

Project Dependencies

- Access to volunteer stakeholders and learners/testers who currently own a tablet device
- List of software and hardware used by the client organization (to ensure compatibility of deliverables)
- Timely approval of deliverables

Assumptions

- Access to the primary client/stakeholder Mr. Lance E. Schmeidler, a basic course coordinator for the Communications Department at George Mason University (GMU). Mr. Schmeidler coordinates and manages the Comm 100 and 101 courses and is responsible for quality assurance as it pertains to course instruction, textbook selection, and ensuring the department acquires and maintains the technology needed to support the educational needs of their programs
- If for any reason Mr. Schmeidler is unable to provide the design team input or feedback, the team has identified other viable options to fulfill this role.
- The alpha and beta prototypes will be designed to accommodate standard tablet computers
- SpeakEasy shall be designed for use by tablet computer owners who have acquired a case that enables the tablet to be stood up on a vertical axis in order to facilitate easy recording of a presentation

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- The end product of this project shall result in a semi-functional prototype designed to be transferred to an engineer or developer for application prototype, to be designed for tablet computers. In the future along with future development, other mobile devices will possibly be included. Software development and configuration for this design will not be included in this project.
- Access to a diverse population of participants for both rounds of testing ensuring validity of data collection and analysis
- Access to a developer or other qualified individual to develop a functional prototype enabling the design team to measure performance/behavioral deltas as a result of using the SpeakEasy product
- Access to participants for the purposes of collecting information regarding their needs related to public speaking applications is necessary in order to ensure delivery of a quality, final prototype

Constraints

This project is limited to Balsamiq⁶ prototype software, as such the following items fall beyond the scope of this PMP:

- Create a fully functional and tested mobile application and web-based CoP
- Develop an environment where users can test out presentation function over a period of time

Success Criteria

Success of this project shall be based on timely delivery of all deliverables and milestones to stakeholders (and the course instructor).

⁶ Unless otherwise specified and agreed upon by the design team.