

Milestone 1 - Progress Report

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Background

For creators of technology, educating users is often a challenge. Some creators tend to introduce formal courses, while some others rely on users referencing documentation and trial-and-error. In some, third parties have created learning materials like weblog tutorials or even reference examples.

When considering the traits of technologies, a pattern appears to emerge: those that are rapidly-changing like augmented reality and artificial intelligence seem to depend on informal education. For these, often documentation and a sample are all the materials provided. Looking at more established topics like desktop computing and service management, the case is quite different. Corresponding certifications exist like CompTIA A+ and ITIL Foundation with accompanying curriculum and a network of professional teachers. The options vary greatly as the technology's maturity level changes.

How do developers learn rapidly-changing frameworks?

(Turner 2018)

Work Status

Consistent with the published project plan, this project is on schedule. Both the questionnaire survey and the interview survey are ready for peer and instructor review. The rest of this document describes these two surveys and the way in which they plan to be used.

Questionnaire Survey

The questionnaire survey was created to help identify patterns in the sample community and find candidates for the interview survey. The first few questions establish the respondent's background and experience in the area, and depending on the answers the survey either ends early or continues to detailed questions about learning. This screens respondents. The questions are tailored for users of React Native, which is generally considered a rapidly-changing framework. The intent of the survey is to assist in studying learning tool preference, motivation, and scope of use.

The survey is available at <https://u.nu/learn>.

Recruitment

A number of React Native community members have been identified to both participate in the survey and help recruit other participants. Some participants will be core contributors to the framework, whereas other participants will be just learning it. The researcher intends to directly pursue only English speakers. Recruitment will primarily take place over social media, forums, and chatrooms. Promotion of the survey will begin on July 5, 2018; it will remain open for two weeks.

Interview Survey

The interview survey asks questions about specific scenarios in which learning occurs. Less focus is given on what tools are used, but more focus is given on the antecedents and consequences of the learning. It will take place over Google Hangouts. Standard interview procedures will be followed (Trochim 2018). Care is taken to ensure respondents don't need to consult records. This research method will permit judging the quality of response, unlike the questionnaire survey. Additionally, open-ended questions are used to help introduce additional data. The script for this interview is located below in Survey Script.

Recruitment

The interview survey will be conducted on approximately eight participants. The respondent pool will come from questionnaire survey respondents who indicated a desire to contribute. Note that respondents who are screened from completing the questionnaire cannot elect for the interview; no additional screening is planned. Eight participants with up to four alternates will be selected randomly for the interview. The interviews will be conducted during the week of July 9, 2018.

Training

Prior to conducting the survey on real subjects, rehearsal interviews will take place. These will happen both in person and online. The purpose is to gain confidence in executing the protocol, learn how to avoid interviewer bias, and develop a system for recording responses. Family members and peers will be used as mock subjects.

Survey Script

The following interview survey questions are to be conducted in a video chat with the participant. Open by introducing yourself and reading the statement below.

This survey is being conducted as part of a class project on educational technology in graduate studies at the Georgia Institute of Technology. We expect that the interview will take approximately 15 minutes. Please note that your responses may be referenced in our work, however there will be no personally identifiable information shared. This work is considered an informal pilot study, and there is no compensation for participation. Your time is appreciated as we investigate how people learn rapidly changing frameworks.

How old are you?

What country do you live?

What kind of work do you do?

Do you have a formal education in software development?

Are you currently studying React Native as part of a course?

How long have you used React Native?

How satisfied are you as a user of the framework?

How did you hear about it?

How did you initially learn React Native?

How soon after learning it did you start using it?

What most often leads to you learning about React Native today?

Most recently, how have you kept up-to-date with it?

What about using a part of the framework that you're unfamiliar with – how would you learn about it?

How would you make time to learn?

How do you learn about new features?

Do you consider learning React Native to be routine or instead a special activity?

Thank you participating in our study. We will share the results of your interview within the next two weeks, and we expect to share the study conclusions within a few months.

Feedback is appreciated.

Data Access and Privacy

Data will be sanitized to remove personally identifiable information. Sanitized data will be published in the study's repository. Extra care will be taken to anonymize data in a way so as not to indicate the respondent's institutional and professional history. Subjects will be referenced using randomly assigned names. The sequence of respondents will be randomized, and the data will not be published until the surveys are concluded.

References

- Trochim, William M.K. 2018. "Social Research Methods - Knowledge Base - Interviews." 2018. <http://www.socialresearchmethods.net/kb/interview.php>.
- Turner, Ryan E. 2018. "Project Proposal – Educational Strategies for Highly Evolving Technology."