Building an iOS App for Science Literature Searches

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Grateful acknowledgement is made to the University of Montana Office of Research and Sponsored Programs, and specifically to the University Small Grant Program for the research award of $2,260 for the "Building an iOS App for Science Literature Searches" project. Funding allowed me to hire a UM undergraduate student majoring in Computer Science to explore the feasibility, design, and implementation of an iOS App for science literature searches. All allocated funds were expended on student worker wages.

Academic libraries, over the last few years, have recognized the significance and ubiquitousness of mobile devices and the dominance of mobile phones and tablets in the life of university students. Mobile phones and tablets are the tools most likely at hand whenever a student needs to accomplish a task. Most academic library websites and many academic library databases are mobile device friendly. However, not many libraries have experimented with creating and building apps for their users. And there are not many literature search related apps currently in the Apple App Store and none of them are of the type proposed by this research project.

The objective of this research project was to build an application software program (app) for science literature searches on iOS mobile devices (specifically: iPhones and iPads). The target audience is university students looking for high quality literature that is most relevant and useful for a specific science topic or question. The goal is to create an easy to use app that transforms initial keywords, iteratively, into the best articles and books for the topic searched; with citations stored, managed and linked to content whenever possible. The benchmark was providing better results than simple Google Scholar (http://scholar.google.com) searches or simple academic library discovery system (http://www.lib.umt.edu/) searches.

Progress was made, and new insights gained, towards the project objective. Particularly with articulating the desired features of a search app and storyboarding some of the look and feel of the app. However, funding allocated for this grant proposal was less than half of what was requested. There was insufficient funding and therefore insufficient time for the student involved with the project to complete a workable prototype. An additional challenge was the lack of an API for Google Scholar. Experiments were made with parsing the html code data from Google Scholar searches. For future development exploration of a browser based application would also be undertaken.