SCOPE
Senior Consulting Program for Engineering

Pearson SCOPE Team

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Education

The Pearson SCOPE Team was charged with getting to know and understand three student groups: anatomy and physiology students, culinary arts students and public speaking students. Our final goal for the first semester was to use this knowledge to conceptualize mobile self-study applications for these groups.

Generally, public speaking students are more traditional, four-year college students. However, culinary arts and anatomy and physiology are more vocational; students studying these subjects are often older students going back to school for a career change. Moreover, habits of anatomy and physiology are traditional and focused, While culinary arts students tend to get most of their experience on the job. After several rounds of ideation and user interactions, one idea was put forward for each of the three user groups.

Anatomy & Physiology: Smartcards
Smartcards is an adaptive, rich-media study application based on the proven self-quiz and flashcard paradigms. Smartcards quizzes a student while adapting its degree of difficulty to match his or her ability and assessing areas of curricular strength and weakness. Instant feedback on individual questions directly facilitates learning while Smartcards' student strengths assessment helps students know what to study. Smartcards also features interactions with diagrams, very short videos, and other rich media to help students acquire a visual and kinesthetic understanding of their material.

Culinary Arts: Portfolio Creator
The Portfolio Creator is a mobile portfolio creating device with an additional web interface. The students will be able to take a picture of their food and title it immediately after accepting the picture. The picture with title immediately uploads to an internet interface for ultimate approval and ordering of their portfolio. Those with internet data service on their phones will be able to edit previous entries or view their internet portfolio page from their mobile device. Other students will be able to view and edit their portfolios through a computer online interface. This idea can also potentially be worked as a service in which the students send a tagged picture via a text messaging service, and the picture is added to their portfolio with the correct title.

Public Speaking: Speech Swapper
The user records a speech on their phone and then submits it to the speech swapper service for review. In return, they are asked to review a speech on their computer that was submitted by another user. The speeches are swapped randomly, so a student could be asked to review speeches on anything from sports to politics. When they have finished reviewing their assigned speech, and their corresponding reviewer had finished their speech, the student receives a recording of his speech indexed with tags and in-depth feedback about the speech.

After developing ideas from our first semester, we decided to make **Quiztones**, an alternative version of **Smartcards** that combines flashcard-like materials and music to create a complete studying experience. We found that students often studied using flashcards, and they listened to music while studying, so the marriage of the two was natural. We developed two versions of the application, and both focused on structuring the music and study materials to help create mental associations between the music and the words, augmenting the whole experience.

Quiztones Awesome

Quiztones Awesome is an application that takes two current common behaviors of students—studying with flashcards and listening to music—and combines them in a structured way to improve memorization and recall of the facts. Because students are already prone to listening to music while they study, this is a natural interaction that they can easily envision themselves using.
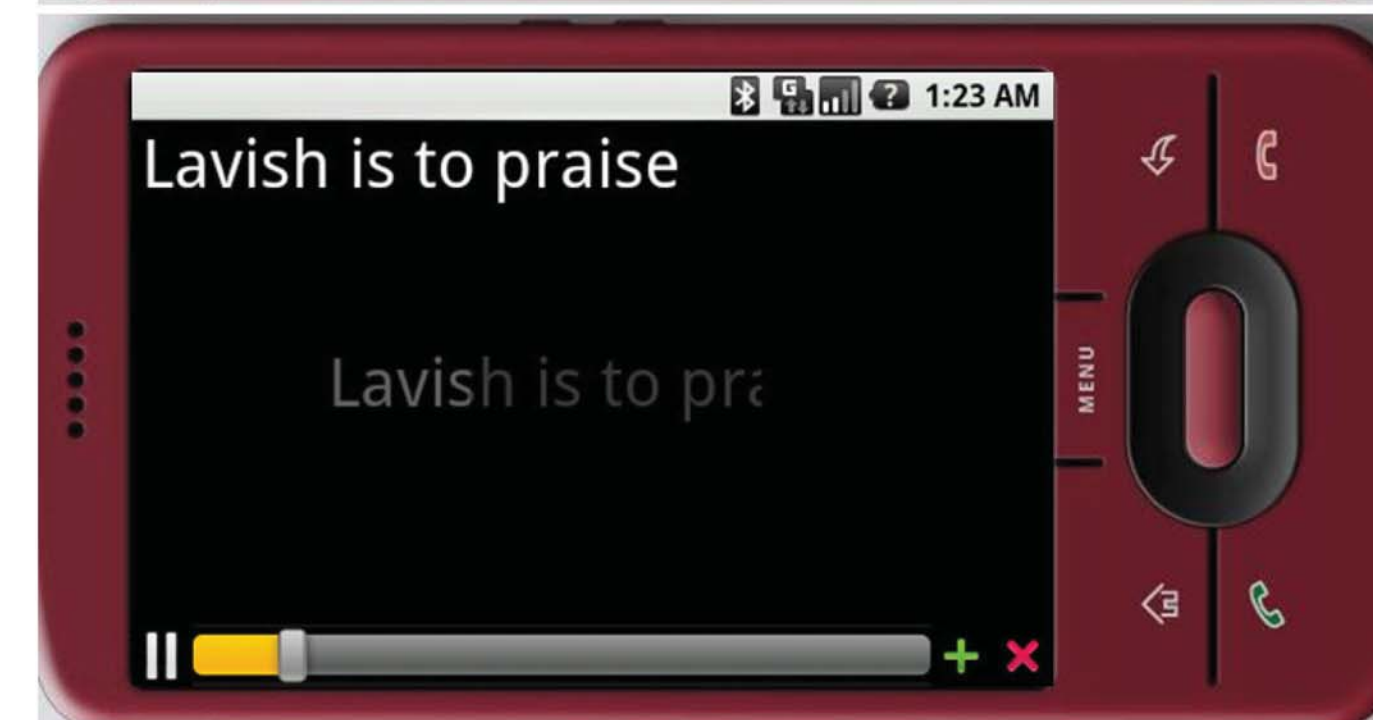
Quiztones Awesome was developed with the intention of bringing that familiar flashcard study paradigm into a more fun, casual and interstitial setting. Quiztones' usage of music brings that sense of fun, and it helps to leverage even a brief study session and make it meaningful.

Information is presented to a user in fact chunks. Each fact chunk has three forms: a statement, a picture/equation/diagram, and a simple question. Each fact chunk is associated with a section of a specific part of a song designated by the user in a playlist.
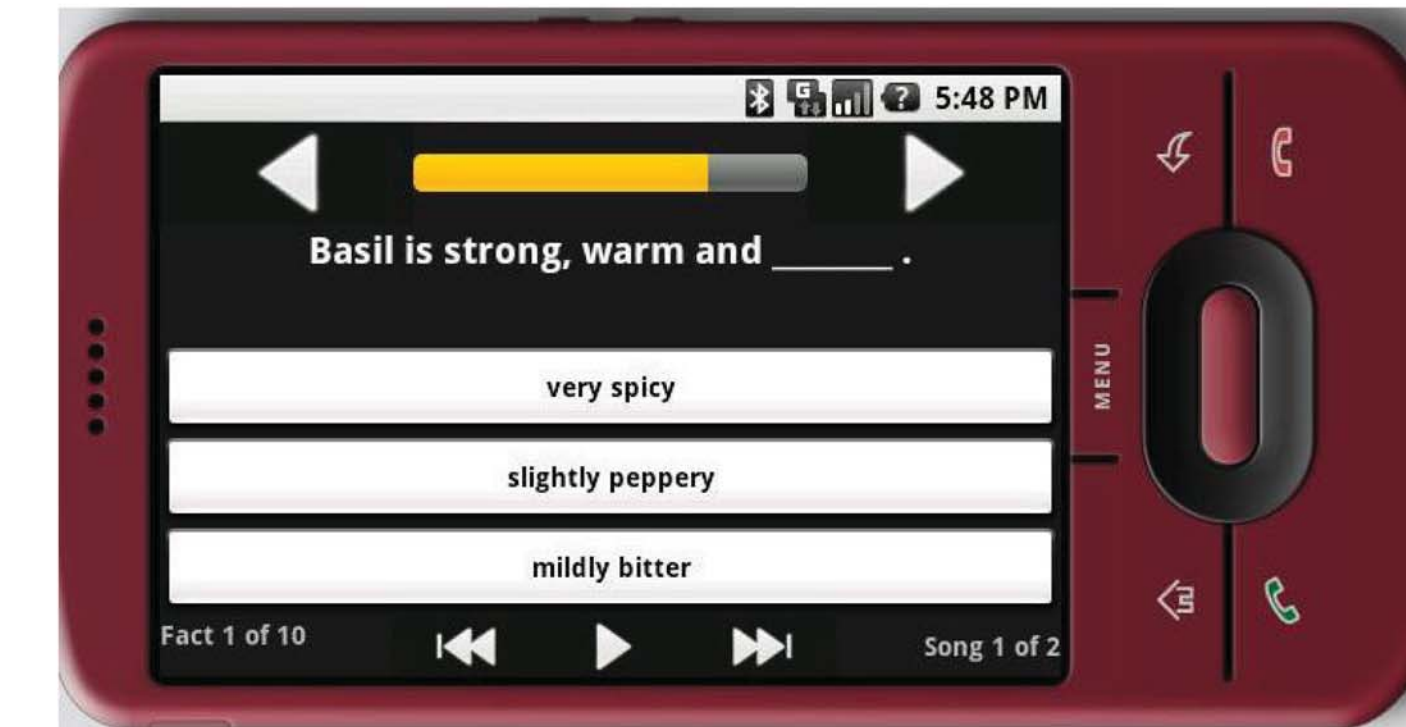
Quiztones Revenge

Quiztones Revenge allows users to listen to music, play a game, and study for class all at the same time. Higher learning students have been studying from flashcards for decades, listening to music for years, and playing video games since the 70's. Quiztones Revenge leverages today's college students' passion for music, video games and their use of mobile devices (specifically iPhones and iPod touches) to enhance the study experience.

Quiztones Revenge threads facts into the users favorite songs, by visually introducing course materials matching the facts to the original lyrics of the songs. To engage the user, the facts are tapped as they appear; an interaction similar to tapping the screen in Tap Tap Revenge on the iPhone and/or strumming the guitar in Guitar Hero on home videogame consoles. The goal of the application is for users to replace the original lyrics of their favorite songs with the facts that are visually presented to them on their mobile devices.