

Doors to Explore & Crossroads Preparatory Academy



Doors to Explore provides a mobile platform that enables students to discover STEM subject areas, schools, and employers to complete potential career pathways.

CPA partnered with Doors to Explore given a unique opportunity for students to gain experience co-creating the app through design-based research. Students were able to use and test a preliminary version of the app, which also enabled a study to observe preliminary evidence of the theory of action. The LEU was a high school STEM teacher who helped to design and manage the study, and also participated in multiple educator feedback sessions along with the Director of Innovation.

Theory of Action

Inputs - Key Levers - Innovation/ Intervention
If we do the following...

- a. Provide students with a mobile app quiz that recommends various STEM careers based on their interests
- b. Provide subject areas/ majors of study for recommended STEM careers
- c. Provide colleges that offer majors of study for recommended STEM careers
- d. Provide employers that offer recommended STEM careers
- d. Allow students to create a pathway to obtain a recommended STEM career

Desired Practice - Implementation - Outputs
Then we will impact practice/ behavior in the following ways...

- a. Students will use the mobile app to take the quiz, and receive STEM career recommendations.
- b. Students will explore STEM career recommendations.
- c. Students will explore subjects areas/majors for recommended STEM careers
- d. Students will explore colleges that offer majors of study for recommended STEM careers.
- e. Students will explore employers that offer recommended STEM careers.
- d. Students will use the mobile app to create a pathway for desired STEM careers.

Measurable Student Outcomes by Nov 8 - Impact Goals
And we will reach our student outcome goals...

- a. Increase career awareness.
- b. Increase career literacy.



Crossroads Preparatory Academy



SCHOOL BACKGROUND & PROBLEM OF PRACTICE

Crossroads Preparatory Academy (CPA) is a public charter school founded in 2017 to provide "high-quality seats" to high school students after establishing two lower schools and identifying a need for expansion. In previous years the district was the highest performing charter school district in the state of Missouri. The Academy was voted Charter School of the Year in its founding year, in which it served students in grades 7-9. The school is highly focused on personalized, project-based learning experiences, 21st century learning skills, community engagement, and college and career readiness - making it ideal for testing an early stage innovation. It uses downtown Kansas City, where it is located, as its extended classroom. In 2017, about 60% of students received free-and-reduced-price lunch. While Crossroads schools have performed well on the ELA state exam, CPA embraces opportunities to provide their students with new and engaging approaches to learning.

METHODOLOGY

A combination of observation and focus group was used to measure the key levers, desired practices, and student outcome goals. Specifically, a researcher observed three 10th grade students using the app during a 20 minute advisory period for ease of use while they navigated the app. Then, a small focus group was conducted by asking targeted questions guided by the Theory of Action. In addition to this, a STEM career interest survey was conducted with 10 students prior to app exposure to understand general baseline knowledge and interest in STEM careers.

In addition, feedback was collected from the LEU and Director of Innovation about the app's utility for schools and additional key levers that would elevate the app's promise for use by educators.

FINDINGS

Observations yielded evidence that most of the key levers, desired practices, and outcomes in the Doors to Explore Theory of Action were present. For example, the students agreed that the platform's quiz was easy to use and recommended careers that made sense based on their interests.

Due to the short duration of the advisory period, students didn't have enough time to get much further in the app than receiving their career recommendations. However, once they received the recommendation, students could explore colleges that offered subjects of interest and learned the geographical location of those schools relative to their hometown. Students also discovered and learned more about employers of interest and shared existing knowledge with one another.

Since these students were eager to learn more about their career recommendations before exploring the career pathway, educators gave feedback that the app could be used as a supplemental tool in the classroom. They expressed a strong preference for an in-classroom resource with supporting curriculum and envisioned packaging the app with a curriculum, including activities for students to engage in outside of the app before creating a milestone in the app (such as choosing a career, subject area, college, or employer).

The focus group uncovered an increase in STEM career awareness for students who used the app. For example, one student who wanted to be an OBGYN was recommended a career in Health Technology based on her responses to the quiz. The app sparked curiosity about the career as she mentioned that she had never heard of it and was previously confident in her career choice.

MODIFICATIONS

Doors to Explore observed student use of the app to measure UX effectiveness and directly solicited design feedback. Students were delighted to offer suggestions and experience the improvements in subsequent software versions. Some of the design feature recommendations included were to include known abbreviations for schools in addition to their full names in drop-down lists, and provide more information for selections such as careers and subjects. Recommendations highlighted by educators were to create a version that could be used in-classroom such as via the web (it is currently available via mobile device), and aligning the tool with a curriculum, for example. Doors to Explore has recently received funding to work on these modifications.

CONCLUSIONS

Doors to Explore was at an integral stage of product development where user feedback made a pivotal difference in the outcome of the product. Whereas the product was originally being marketed to students and their parents through the Apple/Android app store, it is now undergoing changes to be marketed to schools based on feedback. This could be a timely change to the process of learning about and choosing a career, learning about the pathway for career achievement, and exposure to STEM careers. Doors to Explore is embracing these changes and collaborating with the CPA LEU and Director of Innovations, as well as other schools and businesses in Kansas City, to ensure a useful and impactful product in the Kansas City ecosystem that can be replicated in other markets.