

# Development of a Mobile Outreach Tool for the Recruitment of Students for an Undergraduate Construction Management Program

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The growth in number and level of complexity of construction projects is driving the need for more experienced construction managers. The U.S. Bureau of Labor Statistics shows that employment in this field is projected to increase by eleven percent from 2016 to 2026, much faster than the seven percent average for all occupations. Still, colleges and universities are facing significant challenges in attracting individuals to Construction Management (CM) programs. One of the main problems is the general lack of knowledge and information about the construction industry at the high school level. There is a widespread misconception that the construction industry consists only of low paid, labor intensive, blue-color jobs which are less prestigious than other industries. Many high school students, their parents, teachers, and even school counselors, are unfamiliar with the career opportunities available in construction management and are equally unaware of the required qualifications for construction managers which typically include a college degree.

The objective of this research was to develop a modern outreach tool for high school students that would augment and complement the recruitment system already used by the university's admissions department. The tool aims to change the negative perceptions regarding construction careers and increase awareness of the opportunities in construction management.

After reviewing successful recruiting procedures used by various universities, a first conclusion was that the most effective way to reach prospective students would be through the use of a mobile recruitment tool. This tool would allow them to receive information anytime, anywhere, on a device that is always in their possession. The Pew Research Center indicates that smartphone ownership is nearly universal among teens of different genders, races, ethnicities and socioeconomic backgrounds with 95 percent of teens reporting they have a smartphone or access to one and 45 percent stating they are online on a near-constant basis. Accordingly, a second conclusion was the necessity to develop an app optimized to be used on a tablet or smartphone. A wide examination of the literature pertaining to K-12 learning habits has revealed that choice is critical in learning, so another conclusion was to develop a downloadable mobile game to allow prospective students to select from several options to advance through the game and learn about construction management. The "gaming to learn" educational approach has been around for close to a decade, but it is still controversial.

In fall 2017 the CM department, in collaboration with a software developer, started the process to create an app entitled "Future Construction Managers". By fall 2018, the app was completed, tested, debugged, and deployed. Through the free downloadable game, players can explore a virtual construction site where they interact with construction managers with various roles including estimators, schedulers, project managers, and superintendents. Players are challenged to explore the entire site, talk to all managers, and consider whether they would be suited for a career in construction management. Additionally, "Future Construction Managers" offers players in-game links to the university's construction management program website.

An important future step is to analyze the demographic information that users provide when they access the app. The data collected will be used to establish a more accurate user profile. Incoming CM students will also complete a survey on their overall impression of the app. The goal is to determine if the app influenced their decision to apply and enroll at the university. If proven successful, the downloadable mobile game tool could significantly change the university's recruiting approach, particularly for the CM program.

**Keywords:** CM Recruitment, Mobile Outreach Tool, App, Gaming-to-Learn, Virtual Construction Site