Hispanics students are a minority in Computer Science college classrooms in the U.S. This may be due, in part, to a lack of exposure to computing before college. Often, Hispanic high school students are not able to take computer science courses due to limited offerings in the school system or other priorities. This postpones exposure to computer science for many students until they take a first course in programming at the college level. Frequently, the pace of college instruction and lack of prior preparation combine to make students struggle through the programming course, often dropping the class and changing their major from computer science.

This research will introduce both the Alice and Android App Inventor programming environments. Alice, from Carnegie Mellon University, is a 3D programming interface developed to attract more students to the computing field, especially women. It is a drag and drop environment which does not require developers to write code from scratch. Alice code can also be written in Java. Previous studies have shown that Alice is a good interface to be taught in introductory courses. The second interface which will be used is the Android App Inventor, also regarded as important for introducing computational thinking in K-12. This interface is also drag and drop which does not require writing code from scratch. Rather, App Inventor uses Scratch, developed by Massachusetts Institute of Technology (MIT). The App Inventor interface was developed by Google for the development of mobile applications. The Android App Inventor is Java-based.

Alice and App Inventor will be used and compared by the Project Adelante middle and high school students during the academic year, with a pre-assessment survey administered by the Kean research students. At the end of the research project, the Project Adelante students will be given a post-assessment and a small project to see how much they have learned and if they have become interested in pursuing a degree in Computer Science. Intermediate assessments will also be taken, as the students are exposed to the two environments, to determine if there are any differences in computing fundamentals as learned by the students using Alice or App Inventor.