**Assessment 2 – Create Your Own Project**

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**EDTC 805 – Cross Discipline Studies in Technology**

Computer science is one of the driving forces of innovation in our society. Even though there is a growing demand for jobs in the field, it remains marginalized within elementary and high school settings across the United States. According to recent findings, 25 states do not allow computer science courses to count towards high school mathematics or science graduation credits. New Jersey is one of those states that falls into that category even though computing jobs are growing nearly five times the state average. By the year 2020, it is expected that there will be 400,000 students to fill the 1.4 million computing jobs within the United States (CODE, 2014). This deficit equates to over one million more jobs than students which is why it is a paramount goal to prepare our students now for the demands of the future.

Computer science education is an untapped resource within educational institutions throughout our nation. Exposing students to computer science education at a younger age is one of the viable solutions that can begin to level the playing field. Another possible solution is to introduce young girls to computer science and engineering at an early age. In doing so, it may peak their interests in becoming young developers which could eventually narrow the gap between genders. CoderDojos can also provide meaningful ways for students to use problem-solving skills in fun and collaborative learning environments.

Urban schools are underserved in coding education. Furthermore, female students and students of color are lagging behind their counterparts. The goal of this project is to develop a pilot program within an urban community which might be replicable in other educational institutions with the intention of promoting computer science education in K-12 educational settings.

In order to establish a model program, the researcher has developed a collaborative network with the organizers of the Ridgefield Park CoderDojo charter. Recommended practices have been reviewed in order to establish the guidelines for the afterschool program that will be implemented with the Y Academy at Alexander D. Sullivan Elementary School in Jersey City, New Jersey. The program will serve approximately twenty-five, 4th and 5th grade students. Each session will last approximately fifty minutes. Students will meet twice a week beginning on November 17th through the middle of June 2015.

The researcher will be co-teaching alongside one of the Y Academy advisors in order to fine-tune the model that is currently being developed. As part of the program, the students will create their own web pages and also complete a 20 hour coding course. An evaluative assessment piece will also be developed in order to determine the effectiveness of the program. If the current model is successful, the findings will be published in technology related publications and also shared in conferences that promote computer science education. One of the conferences will include the Girls in Technology Symposium which will be taking place in March, 2015.

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