



Implementation of In-Person PhysioCamp at Farmville Middle School and High School Improves College Readiness and Provides Exposure to STEM Careers

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Goals

- Increase student self-efficacy and foster self-growth
- Provide an environment for career exploration
- Prepare students for college and future careers

Background

PhysioCamp is a “day-camp” that historically travels to local schools and other locations to help kindergarten-12th grade students understand the human body and navigate the healthcare profession. Sessions last between 1-4 hours and students from a plethora of healthcare backgrounds (medicine, dental, nursing, PA, PT/OT) are involved. In-person activities historically included discussion of organs and how organ systems work together. The goal of Physiocamp is at the end of each calendar year, underrepresented and underprivileged k-12 students are shown that STEM fields are accessible to them.

Current Issues

Farmville Middle School and High Schools have historically been underperforming schools with a lower than county, state, and national average of students pursuing STEM fields. Farmville High School consistently ranks below other schools in Pitt County in regard to performance grade score. This score is determined by the accumulation of standardized test scores and compared to national averages. With regards to Farmville Middle School, they too have an extremely poor performance grade score when compared to other schools in Pitt County. Both schools are known to have a greater percentage of students who are economically disadvantaged than their peers, and as such, are less likely to pursue postsecondary education.¹ When examining the students who pursued postsecondary education from Farmville High School, only 12.9% of polled students wished to pursue a career in STEM upon graduation.² With the increasing national demand for healthcare providers and the need for doctors to serve rural areas, students from rural areas are the most likely to serve the areas in which they are from. As such, a better job must be done at increasing accessibility to those career paths.

Results

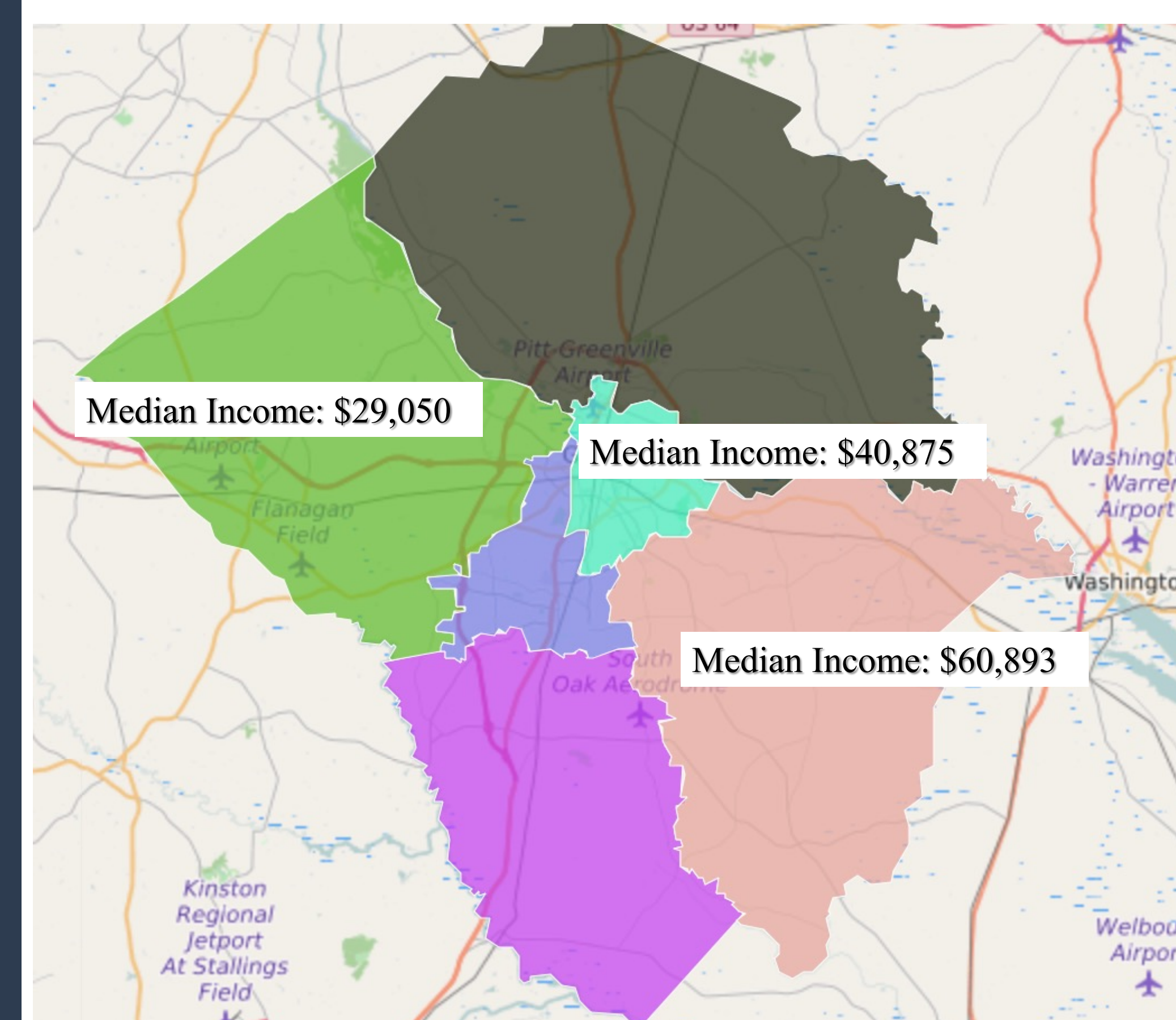


Figure 1. School Zoning of Pitt County. To the left, we have Farmville Central (green), in the middle we have JH Rose (blue), and to the left we have DH Conley (pink).

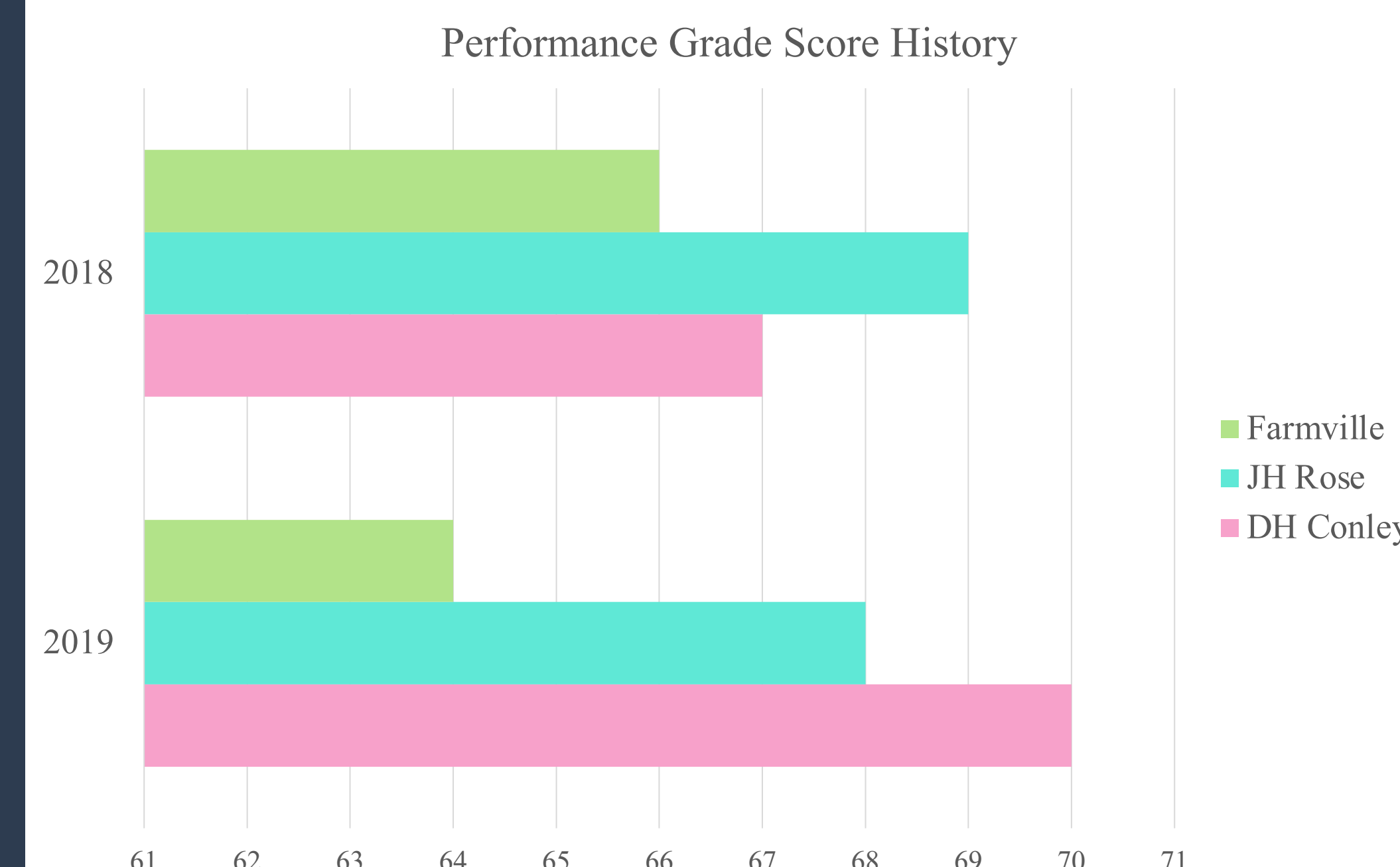


Figure 2. Performance Grade Score of students at Farmville High School, JH Rose High School, and DH Conley High School, respectively.

Students who are exposed to after school STEM programs were 1.6 times as likely to enter a STEM career

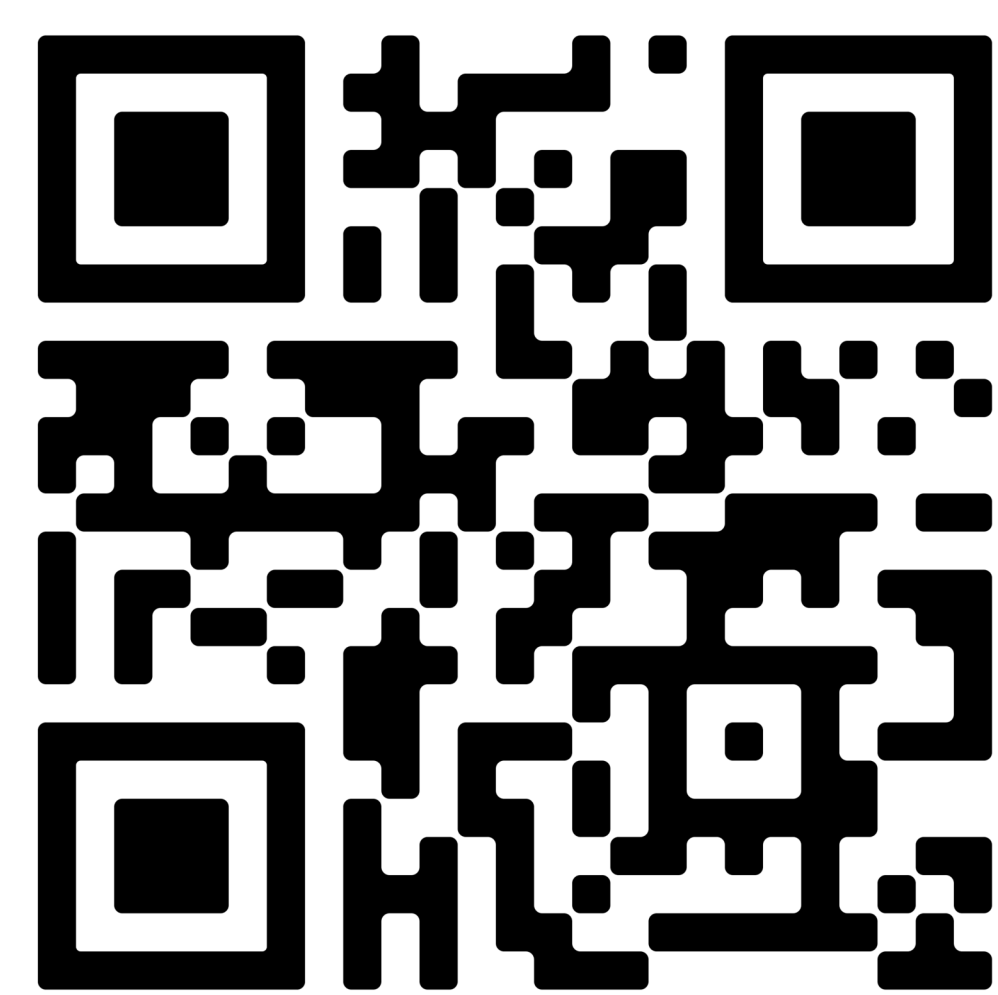
Future Direction

- The establishment of in-person activities will begin this upcoming fall secondary to inability for many students to have personal transportation.
- Connections will be made with the dental, nursing, and PA students to create a rotating schedule of mentorships and exposure to healthcare fields.
- A club will be created here at ECU to have an ongoing number of medical student volunteers who can visit Farmville Middle and High School biweekly.
- Before the first session, a pre-activity survey will be sent to all participating students to gauge student self-efficacy along with desire to enter a STEM-related field. A second survey will be sent each year to assess growth in self-efficacy in STEM followed by a final survey during students’ completion of their senior year. The final survey will measure changes in self-efficacy along with a desire to pursue postsecondary education in a STEM-related field.
- At the beginning of the first session, high school and middle school students will be given the option of having a graduate student mentor who guides them throughout their secondary education and prepares them for postsecondary education.

Acknowledgements

I would like to thank Farmville Middle and High School Principals Mr. Miller, Ms. Cook, and Mrs. Janice Moore for their contributions to this project.

1. Gardner, S. (2007, Oct 08). College Access for the Working Poor. *The Hispanic Outlook in Higher Education*, 18, 37-39.
2. North Carolina Standard Course of Study and Grade Level Competencies : Social Studies K-12. [Raleigh, N.C.] :N.C. Dept. of Public Instruction, 2019.
3. Kitchen, JA, Sonnert, G, Sadler, PM. The impact of college- and university-run high school summer programs on students’ end of high school STEM career aspirations. *Sci Ed.* 2018; 102: 529– 547.



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