

## Professional Statement

My name is Joselyn Hathaway, and my current academic status is a junior mathematics major with a minor in secondary education at Elizabeth City State University (ECSU) in Elizabeth City, North Carolina. I am also a participant in the Center of Excellence in Remote Sensing Education Research (CERSER) program with Dr. Linda Hayden. The CERSER program helps me learn extensive mathematics and science related to my major. My 9<sup>th</sup> grade teacher had the most impact on me choosing teacher as a career. One of her qualities that stood out the most was how her top priority was that each student understood what she teaching. The moment that reassured me that about my decision to teach 9<sup>th</sup> grade math was during my last week and one of the students told me that they wished I could become their permanent math teacher. Hearing this made me feel a sense of accomplishment and recognize how my efforts had impacted the students in a positive way, similarly to how my 9<sup>th</sup> grade math teacher impacted me.

My interest in mathematics and science began the summer before sixth grade in the Center for Remote Sensing of Ice Sheets (CReSIS) Middle School Program. The program presented standard mathematics for middle school grades and carried into the academic school year. Science was also connected to the mathematics by finding measurements and locations on maps. My participation in the North Carolina-Mathematics and Science Education Network (NC-MSEN) Pre-college program on Saturdays lead by Mr. Milton Bond has also been a contributing factor in my education. During the program, there were four classes: English, mathematics, science, and an elective. The materials that we studied were very similar to what was currently being taught in school. This enabled me to get ahead in my mathematics classes and receive help with homework before going back to school. Near the end of MSEN, there was an awards ceremony and competition titled MSEN Day. The competition included students from Fayetteville State University, North Carolina State University, and University of North Carolina Chapel Hill. Being in MSEN from middle school through high school has been an important influence in my motivation to continue to sharpen my mathematics skills.

During the spring semester of 2016, my contribution to a team research project was with CERSER at ECSU. Our team did research on standardized tests and test taking strategies. We also compared the HBCU's to see the differences in test scores and the kinds of programs that were offered to help students approach standardized tests. In April 2016, I attended the ADMI conference in Winston-Salem. There were representatives and guest speakers from different companies such as Intel and Yahoo. During these sessions, the presenters shared information about their company and explained internships that were offered. I also attended the IEEE joint meeting with the Geoscience and Remote Sensing Society (GRSS) and Women in Engineering (WIE) at NC State University. At this meeting, Melba Crawford spoke on the ongoing remote sensing project and its results. The event also included a tour of the campus and the Center of Geospatial Analytics.

In the summer of 2016, I participated in a summer internship at the University of Kansas in Lawrence, Kansas. During this internship, my research was based on how science, technology, engineering, and mathematics (STEM) outreach programs impacted

students. The data collected and evaluated was from the Center for Remote Sensing of Ice Sheets (CReSIS) program from the past five years to observe student's performance and how their performance increased during the program. My research also consisted of collecting statistics on the positive effects of STEM programs on students learning. Along with the research portion of the internship, I also engaged in outreach in the surrounding schools and communities. The outreach events included interacting and educating a variety of students about polar science and leading activities.

During the spring semester of 2017, I participated in the mathematics education team research project at ECSU. Our research was titled GLOBE Training for Preservice and Inservice Teacher Education at Elizabeth City State University. This research was based on learning the importance of GLOBE and what this program does for preservice students and inservice teachers. GLOBE is based on earth science and consists of protocols in which our team utilized for the research project. The three protocols that we focused on were clouds, air temperature, and surface temperature. The team attended a webinar and workshop with Dr. Jessica Taylor from NASA in January. The team followed up with leading a training session in March to share the protocols that we utilized and used the data sheets, completed by the participants, to represent our research data. Also, I attended an IMPACTS program training at UNC Chapel Hill in Chapel Hill, North Carolina. This program is a science-based outreach program that allows students to lead activities in the community and schools. After going through the training, my prototype for a lesson was created and presented to three groups of middle school students during the Education Research Week.

In the summer of 2017, my research at Texas Tech University with my mentor Dr. Michael Serra was based on numeracy and decision-making. The goal of the research was to determine if how people answer certain mathematics questions affects their decisions in various situations. In order to collect the data, the research project survey was created on Qualtrics with mathematics problems based on probability, chance, quantity, and percentage. The questions were designed to present the information in different ways in order to see how the participants think and how they answer the questions. Also, the participants were given questions that correlated to real world situations and scenarios. These questions were intended to discover if a person's mathematical thinking skills affected how they make decisions in real situations.

During the spring of 2018, my research experience with CERSER at ECSU on the mathematics education was on mathematics competitions. The title of our project was The Effects Mathematics Competitions have on Stimulating Optimal Performance in the Classroom. Our overall goal of the project included observing students performance as a group and as individuals. In order to do so, my team reached out to local and neighboring high schools for the participation of ninth grade students. We included a maximum of eight average students, four boys and four girls, to participate. During the competition, we allotted them one hour to complete the questions. Also, these questions were based on the SAT prep since ninth grade is when students are preparing to take the exam.

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Staying involved in various STEM programs has put me a step ahead, especially in my mathematics and science classes. This originates from continuing to learn outside of my regular classes by being in CERSER, attending internships, and becoming more exposed to other educational opportunities. My plan is to receive my bachelor's degree, obtain my teaching license, and become a mathematics teacher while pursuing my graduate degree. Participating in mathematics and education summer internships will help prepare me for the following school year and present more experience in mathematics, which will prepare me for a career in mathematics education.