

Domain I Reflection

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Both in teacher preparation programs and within schools, there is a consistent and steadfast push for educators to make data-informed instructional decisions. My personal belief is that this usage of the word, “data,” is vague and can mean various pieces of information from various sources. Nonetheless, I also believe that this phrase is reflective of the choices I’ve made teaching pre-calculus over the last year and a half.

Since I do not teach a course that culminates in a standardized exam, monitoring student progress depends on local definitions of success rather than global ones. Because of this, I, with the help of the leaders in my department as well as my students, developed our own benchmarks to reflect the unique learning needs of my individual students and the Frederick Douglass High School community. Out of these conversations, I developed a simple math efficacy survey, which I distribute to my students quarterly. This survey monitors students’ confidence in their ability to learn new things as well as their confidence to improve their math skills. According to Samuel and Warner, measured increases in academic efficacy in the math classroom can reduce math anxiety in the long term (2021). Coupled with formative data collected during class and students’ grades on various assignments, the results of this survey helped me assess my own effectiveness as a teacher.

Overwhelmingly, students’ confidence rose over the course of the academic year (Figure 1). During this time, and into the subsequent school year, I employed strategies that intentionally lower students’ barriers to entry for challenging mathematical concepts. I

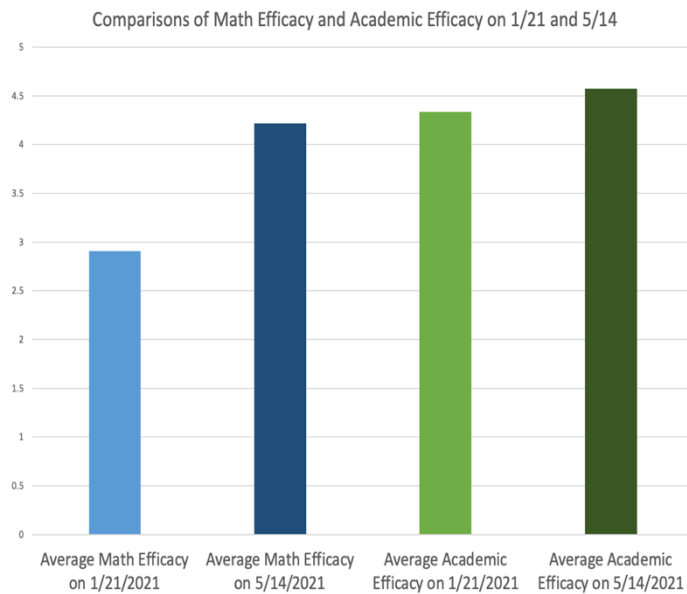


Figure 1

interests like architecture, computer science, and design, in line with the principles of Culturally Responsive Pedagogy, explored by Voigt et. al. (2020). These practices were similarly guided by Muhammad’s Historically Responsive Literacy framework (2020). We explored the context of math using examples that are proximal to our class’s experiences, like partnering with local businesses and nonprofits and framing math on Frederick Douglass High School’s campus.

I know that adjusting my instructional practices will be an ongoing process throughout my teaching career. I see this process as adding tools to my teaching toolbox, and as new challenges or needs arise, I can draw the tool that fits best. Currently, I would assess that I need many more tools to help me differentiate. At the beginning of my teaching journey, integrating differentiation strategies feels less organic than other components of my planning. Over the next few years, this is an area of my arsenal I wish to bolster to better serve the different needs of my students in both pre-planned and spontaneous ways.

scaffolded assignment and allowed students to self-diagnose their level of need for instructor guidance to give all students the opportunity to understand a concept more deeply. Teaching abstract concepts within trigonometry was conducted through tangible tasks and projects that connected the standard to student

References

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