> *We are storytelling creatures, and as children we acquire language to tell those stories that we have inside us.* – *Jerome Bruner*

Like Bruner, I believe that narratives are an effective framework for explaining difficult subjects so that, together with my enthusiasm for teaching, I may empower students to learn and enjoy mathematics. To achieve these learning goals, I foster accountability in learning, as well as integrate various interactive technologies, emphasize quantitative literacy and writing, and engage curiosity in the unknown by incorporating my research in the classroom.

I like to begin class with a simple guiding question to build a narrative, whether it be in an introductory course like algebra or a more advanced one like complex analysis. For example, in my Concepts in Math course, I began a lecture with "what is average?" Among the many proposed definitions, my favorite response was "to be middle of the road." We agreed that the definition of average was subtle and proceeded to discuss mean, median, and mode, among other notions. Throughout the discussion, I kept pointing to the original question that remained on the board while weaving in each new concept to compare and contrast them. I find that class participation keeps the narrative in constant flux and helps individuals contextualize the nuances in the material to later recall and apply the concepts.

It is important for my students to take ownership of their learning experience, but in a friendly setting. I thus emphasize that we all use each other's first names to create a respectful learning environment, which I adhere to when acknowledging their contributions and calling on them to answer questions. I find this helps to keep students engaged, encourages them to freely ask questions, and helps to reduce their mathematical anxiety. Oftentimes, different answers and comments can move the discussion in interesting directions by building on initial ideas. As an example, in a calculus course I wrote the words "explicit" and "implicit" on the board and asked students to come up to it to provide examples of usage in daily and mathematical contexts. I was advised that this activity helped with internalizing, for instance, the difference between the explicit, $y = \pm\sqrt{1-x^2}$, and the implicit, $x^2 + y^2 = 1$, formulas for the unit circle. I find that the study of word morphology bridges the gap between the practical and technical usage of the words. Ultimately, I view my role as that of a coach and strive to provide ample opportunities for my students to grow by helping them value their active role in learning.

Because it is important for me to know that my students are learning, I administer daily quizzes during the first ten minutes of all of my classes to ensure that they arrive prepared. These quizzes provide individuals with immediate feedback on their performance so that if anyone is struggling, I can target teaching with extra exercises or activities. To accommodate different learning styles and levels, I regularly assign silent work of ranging difficulty. This leaves me free to walk around the classroom and give personal attention to help weaker students while also challenging the more advanced ones.

Students have grown up with computers and appreciate their usefulness to accomplish tasks, so not surprisingly many expect to learn and use the newest technologies in their math courses. I have seamlessly integrated GeoGebra, Wolfram Alpha, and Sage into my classes to incorporate accurate and striking imagery, but also to test the boundaries of a theory, check work after difficult calculations, and visualize tricky formulas. As an example, the graphing form of a parabola often puzzles algebra students, but by plotting $f(x) = a(x-h)^2 + k$ on GeoGebra students can "see" the effects that result from changing the values for each coefficient of a, h, and k in a range from -5 to 5. This illustrates an important point that a deeper understanding of a subject can be achieved through visual or computational methods, and oftentimes before a formal derivation is given.

Building real-world skills among my students entails encouraging them to become quantitatively literate citizens so that they may construct critical contexts in their jobs while they communicate and express themselves with precision. That is, thinking mathematically entails critical analysis and goes hand-in-hand with strong writing and communication skills, which is a view I came to fully appreciate during my time as a Quantitative Research Fellow at LaGuardia Community College and Medgar Evers College. To cultivate these skills in my classroom, I employ various pedagogical techniques, such as low-stakes writing exercises ranging from lesson or chapter summaries to reflective essays to help students digest the material and begin understanding it intuitively. Through these methods, I strive to teach my class to interpret and convey, both written and orally, mathematical principles.

For instance, I developed the "EME System" to coach individuals through the process of solving word problems and emphasize the importance of contextualizing their final answers in writing:

1. "English" (E)
2. "English to Math" $(E \to M)$
3. "Math" (M)
4. "Math to English" $(M \to E)$

In the first step, "English," I teach how to critically read for key terms and units before proceeding. Next, in "English to Math," students define any important quantities as variables and write equations or functions in mathematical notation. Then, using the course lessons, they arrive at an answer in the "Math" stage. The final crucial step, however, is "Math to English" where sentences are written contextualizing answers including units and other relevant information. I strongly believe writing about mathematics is a starting point for students to become independent thinkers capable of approaching, framing, and solving interesting questions on their own.

Further, I draw on black holes to fuel interest in related rates for my calculus students by creating a problem about the expanding region of a black hole called the event horizon that grows as matter falls into it. I introduced terms via drawings starting with how Einstein's Theory of Relativity allows us to explain gravity via geometry, as in "bent space," and that a black hole is the ultimate conclusion of extremely heavy objects. I used this opportunity to mention my research where I build multiple quantum wormholes inside a universe to create more exotic universes. Though this heuristic explanation of my research is a fun break from the course material, it serves to introduce the constantly evolving narrative of mathematics and allows others to participate in its histories.

I hope to continue growing as an educator by building on my strong pedagogical foundation through additional experimentation with alternative teaching methods so that I may guide and inspire mathematics students to learn, write, and think critically with confidence on wide-ranging problems.