

Rethinking Goals: Technology to Support Scientific Literacy and Information Literacy

By Chrissy Chavez

I began my career teaching at Bright Elementary School as a middle school science teacher and eight years later I continue to support Bright Elementary students as a middle school language arts teacher. Over the years, I've actively pursued professional development with a goal of providing my students with a quality education. Most recently, I've engaged in educational technology coursework as part of the **Wipro Urban Stem Fellowship Program** at Michigan State University (MSU) and the **Master of Arts in Education Technology** (MAET) program at MSU. My goals have evolved because of coursework in both programs. Rather than setting a broad goal of providing my students with a quality education, I've narrowed my focus to specific goals, which include developing scientific literacy, information literacy, and integrating technology into my practices in meaningful ways. Below I explore how my goals have evolved as part of my experiences in the MAET program.

When applying to the Wipro Urban Stem Fellowship, my initial professional goals were related to building science, technology, engineering, and math (STEM) capacity in my school, integrating technology in meaningful ways, and providing students with opportunities to engage with STEM professionals. Initially these goals seemed feasible until my fall 2015 teaching position changed from a middle school science position to a literacy position. Despite the new role, I worked diligently to integrate these goals with a literacy lens. To build STEM capacity in my school, I attended STEM professional development and shared my learning with teammates during grade level meetings. Tools were repurposed for creation of multimedia literacy projects, which supported my goal of integrating technology in meaningful ways. Students engaged with environmental scientists and activists in our community during an environmental justice action research project throughout the year, which connected to my goal of providing my students with experiences with STEM professionals.

As I continued to explore educational technology, my goals evolved to focus on how to truly integrate technology in meaningful ways. I created instrumental goals – tool centric goals- that were related to utilizing technology to collect, track, and analyze formative assessment data. Formative assessment data was collected from discussion posts, surveys, and short answer responses using **Google Forms, Google Classroom, Todays Meet, and Padlet**. The data collection led to flexible grouping for small group instruction, but my instrumental goals were problematic because they narrowly related to my ultimate vision of integrating technology in a meaningful way. Students were using technology, but the purpose was more tailored for the needs of the teacher rather than authentic experiences for the students.

When rethinking how to transform my instrumental goals into missional goals – goals created for a larger vision or strategy– I consider learning theories explored in coursework and my students' needs. Our current needs relate to developing scientific and information literacy, essential skills needed in both literacy and science to understand controversial real world issues we see in today's news headlines. I want my students to be able to obtain, evaluate, and effectively communicate new learning and positions on local and global issues. This is possible through the integration of technology in meaningful ways.