ACTing On My Learning: My Growth in Assessment, Content Instruction, & Technology

A Synthesis of My Graduate Studies

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As someone who has always wanted to be a teacher, I believe that I inherently strive to be a lifelong learner. Growing up, I always enjoyed school, and my love for learning continued into adulthood. I seek out opportunities to extend my knowledge both personally and professionally. For instance, I feel fulfilled when I travel and take in the history of the places I visit, especially when I can relate it back to what I teach in the classroom. In addition, I intentionally work on furthering myself as an educator. Pursuing a master's degree was an educational feat that would significantly support my growth as a lifelong learner and an educator.

In 2017, I began my graduate courses in conjunction with Michigan State University's (MSU) year-long student teaching internship program. During my second year of classroom teaching during the 2019-2020 school year, I officially entered into MSU's Master of Arts in Education (MAED) program with a concentration in Technology and Learning. My time in this program has positively impacted how I approach my teaching, specifically as it relates to assessment, content instruction, and technology.

Assessment

Designing and evaluating assessments are major responsibilities of being a teacher. I need to be intentional with what goes into my assessments and with how I

use them to inform my instruction. The course CEP 813: Electronic Assessment for Teaching and Learning strengthened my knowledge of best practices for assessments. Throughout this course, I blogged about my beliefs about assessment. I continuously reflected on course material and my professional experiences to verbalize my three beliefs about assessment that I use to guide my teaching:

1. Assessment should be purposeful by connecting to learning goals and by my meaningful feedback.
2. Assessment should be in various formats.
3. Assessment should be on-going throughout a unit.

My first belief was particularly shaped by my work in CEP 813 because I studied in depth about how to provide meaningful feedback. Research by Hattie and Timperley (2007) analyzed that effective feedback answers the questions of "Where am I going? How am I going? Where to next?" It works at four levels (task, process, self-regulation, and self), and I "need to make appropriate judgments about when, how, and at what level to provide appropriate feedback and to which of the three questions it should be addressed" (Hattie & Timperley, 2007, p. 100). This breakdown on how to provide effective feedback has impacted my teaching practice. When I provide feedback for students, both verbally and in writing, I am conscious of their current performance and how it relates to our learning goals. This knowledge informs the type of feedback I must provide to my students in order to best progress their learning.

My work on articulating my three beliefs led to creating an Assessment Design Checklist. Through my professional experiences and research, I developed six questions that are important to me when I develop assessments:

1. Is my assessment formative in some way?
2. Do my questions require students to use a range of types and depths of thinking?
3. Does the assessment relate to learning goals?
4. Does my feedback further student learning?
5. Will the assessment guide my teaching?
6. Is my assessment equitable and free of bias?

By going through these six questions during my assessment design process, it supports my ability to craft quality assessments for my students. As a result, I am able to administer assessments that gauge student comprehension and provide them with feedback that supports their learning.

In my classroom, I have regularly implemented what I learned about assessments in CEP 813. By reflecting on my beliefs about assessments and creating an Assessment Design Checklist, I am better equipped to develop purposeful assessments and to enact purposeful feedback and post-assessment instruction.

Content Instruction

Knowing the content of what I teach is a major part of teaching and knowing how to teach the content is equally important. Going into my MAED program, one of my goals involved building on my teaching endorsements to advance my knowledge and instruction of subject matter. To support my endorsements in elementary and

middle school math and English Language Arts, I completed courses relating to these subjects. In these courses, I learned and researched in depth about instructional best practices. As a lifelong learner, I was also motivated to take courses to strengthen my teaching in other areas. Two courses in particular influenced my thinking and practice of content instruction: TE 804: Reflection and Inquiry in Teaching Practice II and TE 861A: Teaching Science for Understanding. These courses focused on science, yet elements of what I learned in them strengthened my overall abilities in instruction.

TE 804 came at a pivotal time in my teaching career because I took it during my year-long student teaching. I was in a teaching context where this course directly related to what I instructed daily and where I had regular guidance from my mentor teacher and colleagues. During this course, I took on an Action Research Inquiry Project. After identifying two concerns in my classroom, unequal participation and more emphasis on teacher-directed discourse, I successfully carried out intervention strategies. I implemented argumentation language frames and restructured my class discussions in order to give my students the language they could use for productive talk and the spaces to do so. Throughout the whole process of my action research, I collaborated with my mentor teacher and colleagues to gain feedback and recommendations on how I can best improve student learning and participation.

I developed in my teaching practice by addressing concerns in my classroom and then seeking to improve them through action research. I applied my intervention strategies to all the subjects I taught in order to promote critical thinking and equitable talk among my students overall. My work on improving productive talk in

my classroom enhanced my students' comprehension and discussion of instructional content. With students adjusted to discussion structures that supported student-led discourse, such as the cooperative learning strategy of inside-outside circle, I observed my students in more of a facilitator role. This position helped me to better understand where my students were at in their thinking and comprehension of the subject material. When preparing lessons now, I also carefully plan out the discussion formats in order to support productive talk, hold students accountable in being active learners, and engage students in their learning.

TE 861A supported my growth from TE 804. My completion of TE 861A also came at an ideal time when I was transitioning toward a departmentalized grade level where I would be teaching science and math. In TE 861A, there was an emphasis on teaching science units through anchoring phenomena. This way of structuring units of study supports students' conceptual understanding of science concepts, with a focus on selecting concepts that are meaningful to them. It also creates more avenues for student-driven learning, as students can, for example, generate driving questions about a phenomenon to guide the unit.

My studies in TE 861A helped me better understand the distinction between students learning about science and students figuring out science. The latter's focus on developing conceptual understanding seamlessly applies to math instruction as well. For example, when I teach subtraction to my students, I want them to master the procedure for regrouping, but to do this they also need to understand how regrouping works and why it is needed.

Overall, my graduate studies helped me strengthen my instruction of subject matter. I have learned and researched specific ways to increase student engagement and participation. As a result of this, I have purposefully restructured and implemented teaching practices that develop my students as active learners as they learn about concepts that are meaningful to them. In addition, my graduate courses emphasized collaborating with my colleagues on my instructional practices and plans. This sense of community empowered me to take risks and act on my learning. I have taken this collaborative approach into my teaching context, where my professional learning community supports one another in our instruction and teaching goals.

Technology

When I plan to use technology in my lessons, I ask myself the following question: What is the technology doing for my students and I that we could not do otherwise? As a part of the MAED program, I chose a concentration in Technology and Learning. I wanted to purposefully use technology to support my content instruction and for more effective, engaging, and student-centered teaching.

CEP 805: Learning Mathematics with Technology in particular strengthened my thinking and practice about how to best use technology. It focused on the math classroom and how tech tools can be used to support the Common Core State Standards (CCSS), Principles and Standards of School Mathematics, and strands of mathematical proficiency (conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and productive disposition). Learning in depth about those three standards and frameworks developed my content knowledge and

instruction of elementary math. Along with this, I learned how to analyze online tech tools to consider which ones would support my learning goals that involved these standards and frameworks. For each tech tool, I reflected on its affordances relating to computing and automating, representing ideas and thinking, accessing information, communicating, and capturing and creating. This resulted both in my understanding of the value that tech tools bring to my students and in gathering resources that I now use in my math classes. For example, I now assign XtraMath to my students to build their math fluency and track their progress. This tech tool has the affordance of computing and automating, as it gives my students instant feedback on their answers to help them master their math facts.

Evaluating these tech tools led to my creation of an online math resource library for teachers. I focused on tech tools that related to the CCSS domains of Number & Operations in Base Ten and Number & Operations - Fractions because of their significant presence in upper elementary school math. My creation of the resource library helped me realize how I could be a leader with supporting my colleagues in using educational technology. I have since discussed many of these tech tools with my colleagues, especially when the 2020-2021 school year consisted of several months of virtual learning.

By concentrating in Technology and Learning, I deepened my knowledge about how to use technology to meaningfully supplement my content instruction. For instance, I have used tech tools to introduce concepts, reinforce lessons, and provide additional support for students in both math and ELA. I have also used technology as a way to design assessments in digital contexts and to

streamline course content through Learning Management Systems. Due to my MAED program and concentration, I learned more ways that I can effectively use technology to my advantage in my classroom to help my students achieve their learning goals. Furthermore, I have used my graduate studies to work toward being a leader in technology integration. What I have learned in my courses has helped my growth in confidently supporting my colleagues during these early stages of my teaching career.

My work throughout my graduate studies has significantly contributed to my growth as an educator. Two of my major responsibilities as a teacher, content instruction and assessment design have strengthened because of my MAED program. I have learned best practices about how to ensure that all students are active participants in their learning and about how I can make learning more accessible and meaningful. To support these aspects of my teaching, I have grown in my knowledge of designing quality assessments in order to best gauge student understanding and next steps for my instruction. My concentration in Technology and Learning also has informed my teaching practices as it relates to content instruction and assessments. I am now better equipped with the knowledge of how to evaluate digital technology for its effectiveness in learning and how to then implement it for my students. I value the education I have received by earning my master's degree, and I look forward to acting on this learning to best serve my students in the years to come.

References

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*(1), 81–112.