Assessing My Time At Michigan State University
by Bill Arnot

I have been fortunate during my studies at Michigan State University that I have been able to gain many insights that have shaped my own instructional practices from my studies in the Masters of the Arts Educational Technology (MAET) program. The courses that I enrolled in developed my own understanding of how technology integrates with learning theory and content knowledge. This is most apparent in how I now create and utilize assessment to inform my own instruction and to help facilitate student understanding and in how I view leadership and my potential place as one. This was achieved over the past year and a half of study. It is only now reflecting back over my time in the MAET program that I see this theme carefully integrated in each course.

Each course of study has influenced how I think about my own instruction, but more than that, how I think about student learning in my school as a whole. The first course to get me thinking from a more macro point of view was *Technology and Leadership*. For several reasons this course was very uncomfortable to me. At the time the course felt very disconnected from what I thought I should be studying. I studied leadership styles that are more reminiscent of the business world than education. I learned how I identified as leader and how other people that I would be working with might connect well together to become a cohesive unit. Perhaps the most foundational idea was that no matter what style a leader possesses they can still fail without vision and reasonably obtainable goals. My own biases towards not wanting to have anything to do with administration made it difficult to focus.

One assignment in particular changed my perspective on the course and leadership in general. I was tasked with creating a policy brief to convince stakeholders to move a certain way on an issue. Before this I had not considered the greater implications and benefits to education by being the one who could influence district or state policies that must be implemented at the school level. This forced me to re-evaluate my own goals in my school system. For the first time I considered what opportunities might exist for me to influence decisions made higher up.

Another facet to this course was identifying my own leadership style as well as learning many other styles that are effective in certain situations. As this is my fourth year teaching, I by no means identify myself as a leader, but should I obtain my goal of becoming an Educational Technologist I will have lead staff development on technology. This position would require a certain amount of leadership in the implementation of 21st century teaching initiatives, especially those involving technology and student learning.

Technology and Leadership has affected my thinking in regards to policy and school leadership. I had not considered this avenue for improving student understanding through policy decisions. In fact I disdained it. My own biases and stereotypes of bureaucracy of making teaching harder for teachers was put to task. For the first time I thought that perhaps

this might be a path worth pursuing in the effort to help improve student understanding through the integration of technology.

The decisions made by leadership at the school, district, state, and federal levels can be quite powerful with the right vision and goals. Measuring whether or not those goals or vision have been fulfilled is a much more difficult process. As such, assessment becomes an integral part of leadership. Though my perceptions of leadership have changed, my ideas of assessment have evolved much more.

Assessment in general is ubiquitous with teaching. However, as a teacher I have found that assessment itself is often divorced from improving student understanding or informing instruction. Looking back at my own instruction before the MAET program and now, I can see these deficits in my own teaching. There have been several courses that have influenced my thoughts on assessment.

The first course that challenged me to re-evaluate my assessment practices was *Learning in School and Other Settings*. In this course I learned to pair learning theory and technology with content knowledge. I was tasked with the design of lesson plans that integrated these practices using the Understanding by Design (UbD) model. UbD required me to design my lesson backwards by considering first my objectives and outcomes and how I would assess if they had been achieved. I was familiar with backwards design before the MAET program, however the focus on assessment was new. At the time I would typically design the assessment after the lesson had already occurred. That is not to say that informal assessment did not take place or was not planned to some extent, but the presence of a well thought out formative assessment was missing.

Learning in School and Other Settings forced me to consider more deeply how I should assess students for knowledge and understanding. Having to work out how I will assess students ahead of time gave me more focus in the creation of my lesson plan for this course and for my own classroom lesson planning practices. Knowing exactly what I expected students to be able to accomplish made my lesson plans more coherent and efficient.

Assessment in this course went beyond my normal practice and experience. One of the most memorable experiences I had in *Learning in School and Other Settings* was a podcast I was assigned to created on student understanding (or lack thereof). The assignment tasked me with asking several of my students the question, "What causes the tides on the earth?" I recorded several student's responses, in which later I would analyze and identify common and uncommon misconceptions about the topic. This was an extremely useful method for identifying student misconceptions. I was able to listen through each student's responses several times to better understand their understanding of the topic. There were many inconsistencies in their responses that I had not caught while I was recording each student. This made me consider how much information I was missing in my own classes.

I started to think about how varied the form of an assessment could be. There are many ways to assess students for understanding, but I think perhaps recording students is possibly the best. unfortunately it is also one of the most costly assessments in the form of time. As I can only interview one student at a time. These considerations contributed to a thoughtful re-evaluation of my own assessment practices, which started to feel inadequate. Learning in School and Other Settings marked the beginning of rethinking how I perceive and handle assessment in my instruction. I continued to develop these ideas in another course, *Teaching Students Online*.

The course, *Teaching Students Online,* picked up where *Learning in School and Other Settings,* left off. My curiosity had been kindled, but it would still take several courses to instill real change in my classroom practices. In *Teaching Students Online* I had to create an online course module using a content management system. As I had ready access to Weebly at my school, I opted to use it for this course module. In this course module on sampling distribution in statistics I experimented with the idea of a blended classroom using the flipped classroom model. I created video content for the site along with activities that would be completed in class. The challenge for me in this assignment was the assessment piece. Not yet fully embracing the Understanding by Design method of planning out the assessment before the design of the lesson, I put it off till the final draft.

The difficulty for me was deciding how to leverage digital tools to assess student learning and understanding. I was not yet convinced of validity or reliability of an online environment for quizzes and/or tests. A feature of the course that changed my mind was the peer review process. I was able to evaluate several other student's work and incorporate their best ideas into my own work. Seeing how everyone blended their assessments into their course modules gave me the final push to do so for my own. This resonated with what I had learned in *Learning in School and Other Settings.* Assessment can come in many forms not necessarily a paper and pencil assessment. I would push this further in the next course I would take.

Learning Technology by Design was very similar to *Learning in School and Other Settings.* In both courses I had to design a course module. However, as the title suggests Learning Technology by Design, was more focused on elements of design to create an environment that was accessible to all learners. It also introduced me to an idea that I have found quite valuable in my own teaching, user-testing. In this self-assessment I had several of my students test out my completed course module. Their feedback was extremely useful. They were able to find many design flaws that I had not considered. It also allowed me to identify what concepts students were having difficulty with so that I could adjust the module to better suit their needs.

This was the first real time that I actively used an assessment (the user-testing) to inform my instruction to such a large degree. I revised whole pages to better accommodate my student's difficulties and the end result benefited greatly from the whole process. As a bonus my students were extremely motivated and engaged. Getting a say in how the content they would

learn would be represented inspired their learning and increased their understanding. The feedback they provided gave me a great deal information regarding their own understanding that informed my own instruction. This has become the guiding principle behind each of my assessments.

Using assessment to inform my instruction is further developed in my final course of study in *Electronic Portfolios*. This course put into focus those key things that I had been developing in my studies over the past year and half. I studied various learning theories on the topic of formative assessment and Understanding by Design. I created a synthesis precis on formative assessment that helped identify how I value formative assessment. This culminated in an analysis of local assessment practices at my own school. These two assignments and reinforcement of learning theory helped me think about all that I had already accomplished and learned throughout the MAET program. Specifically that I value formative assessment above summative assessment as a means to assess student understanding and inform my own instructional practices and that assessment can be done a large variety of non-traditional ways.

Non-traditional assessments to me represent those assessments that are not bound by pen and paper. That integrate technology to help facilitate student understanding. In *Electronics Portfolios* this was done through the now common practice in the MAET program of using a content management system to create an assessment design. However, one unique assignment took a more radical approach to assessment, through the use of video games. Specifically Minecraft. As an assignment I had to create an assessment in Minecraft and record a screencast detailing the creation implementation of a geometry assessment on describing three-dimensional shapes with two-dimensional figures. A perfect platform for this concept. At the start of this assignment I was skeptical of the possible value Minecraft would have in my own classes, but after much thought ideas started to form and those biases that I started this program with did not seem to hinder my creativity.

I think that this creativity in using technology in assessment is one of the core themes of Masters of the Arts Educational Technology program. This has affected my thinking and practice the most since enrolling in the program. As I have advanced through the various courses I have moved towards relying on formative assessment much more than summative. Formally assessing student understanding on a daily basis and adjusting the next classes instruction is now a common practice in my classroom. I am still growing in this enterprise. My assessment practices are still incomplete. I want to create more creative and interesting assessments to help facilitate the transfer of content knowledge and understanding through the integration of technology.

My studies at Michigan State University have affected how I think about my teaching and how I practice it. My perceptions of leadership in technology have driven my interest to become more involved in the policy making process at my school. I actively challenge our school's goals and vision and make sure that are localized assessments are measuring them with

fidelity. I thoughtfully use technology to develop student understanding of content knowledge in my classrooms. I do so with special attention towards design, objectives, and assessment. More than ever I look to use technology creatively to realize my goals for my own classroom outcomes.