CORE COMPETENCY 3: Incorporating Technology in the Classroom

Interpretation/Reflection

Educators can use technology in a classroom setting to present and disseminate information to their students. Students can use technology to share information with each other and provide feedback to educators. As a result of the obvious benefits technology brings into the classroom, technology is becoming an ever-increasing and rapidly changing component of all classroom settings, especially at the undergraduate and graduate levels.

Social media platforms such as Facebook, Twitter, and Instagram can help educators and students communicate and inform each other. Educators can use these platforms to interact with their students or administer assignments, while students can use these platforms to collaborate, ask questions, or collect data. These platforms can better engage students, especially those students who may be timid and quiet in a regular classroom setting, by offering new ways for students to express and involve themselves.

For educators and students alike, PowerPoint and other similar software programs are widely-used in classroom settings. These programs provide an effective way for both educators and students to present or share information using text, animations, videos, and pictures. Though these software programs do have some benefits for both educators and students alike, in that they are convenient and easy to use, they are often associated with some significant disadvantages as well. For example, preparing and designing effective PowerPoint presentations requires time, energy, and careful planning and thought. Finding time to spend on creating PowerPoint presentations on top of on preparing and designing other technological strategies (e.g., discussion boards and posts, iClicker questions, and group activities) can become stressful and overwhelming for the educator. Though PowerPoint is a valuable teaching and learning tool, it may not be worthwhile to rely solely on this tool in the classroom.

At Michigan State University, I have learned about different methodologies for introducing technology into the classroom. For example, as an educator and a student, I have enjoyed using "Desire 2 Learn" (D2L), an online space for educators to post course materials and for students to actively engage in the course. More specifically, D2L allows educators to set up their course electronically; they can post their PowerPoint lectures, readings, and other course materials (e.g., assignments and worksheets) on the website. Students can access materials directly from D2L and ask the educator or other students questions via e-mail. The discussion board is one of the more attractive features of D2L because it allows educators or students to discuss and, in some cases, debate questions and comments that relate to the course. In the "Global Issues in Fisheries and Wildlife" course I co-taught at MSU, I used D2L discussion boards to post questions that related to assigned reading. In the discussion board, I asked each student to respond to these questions and to those answers left by other students. I believe D2L, used in this way, was effective in stimulating communication—communication that would not have necessarily occurred in the classroom—among my students. I also believe the discussion

boards and posts served as a way for me to formatively assess my students' learning during the semester. Based on the questions and answers I received from my students, it was easy for me to identify what the students did and did not understand well. Thus, I was better able to brainstorm ways for me to employ new, more effective, discipline-related teaching strategies. In a future teaching position, I hope to maintain a similar course website that can serve as a place where students find all the information they need about the course and where students and educators are able to interact and communicate together.

As a student, I have observed a trend shifting away from more in-person, traditional lectures to full online courses, where most of the instruction takes place via the Internet. I often wonder about the effectiveness of these online courses, which usually include some type of pre-recorded lectures, in ensuring that students properly learn the material. In the "Global Issues in Fisheries and Wildlife" course I co-taught at MSU, for instance, I was directed to use a series of 80-minute pre-recorded lectures to fill most of the class time during the course. This particular teaching methodology was often met with frustration and confusion on behalf of the students, for there was often not enough time to properly dissect and discuss each of the pre-recorded lectures. Additionally, the educators and the students missed out asking and answering questions, which, in my opinion, is an important part of learning. At the end of the course, I was disappointed in the outcome of my students' final papers, which lacked the insight and perspective I felt they each should have had by the end of the semester. I am afraid that the particular structure of the course, being mostly online, did not adequately improve student learning in this area of study.

To summarize, though I believe technology is an important component of any classroom, I am conflicted about whether or not technology alone can adequately support a student's ability to learn. I think a mix of educator involvement, perhaps in the form of in-person, traditional lectures, and technology, perhaps in the form of D2L or other online teaching aids or tools, is the best solution for enhancing student learning in a classroom setting. Along with mini-lectures (i.e., 10-15 minute in-class lectures), I could see myself incorporating different forms of technology into my own classroom someday; in fact, in one of the "Teaching Essentials for MSU STEM Faculty" workshops, I learned about a variety of other technological strategies and tools (e.g., concept maps, TextExpander2, NetLogo, "Be Socratic," and R) that I hope to use to enhance student learning. One challenge for not only me, but also for other developing educators, will be to find a functional balance between maintaining a flexible, technologically-rich learning environment, while still ensuring in-person connection. Meaningful and positive interactions and communication lay the foundation for forming relationships and, thus, can promote students' desire to learn. In an environment dominated by technology, how can the connections occur and these relationships form?