Innovation Exchange: January 10, 2014

At the Innovation Exchange this month, we shared brief summaries of some of the innovative tools or approaches we have used in the classroom. Several faculty members also brought questions for the group to consider.

Many of the approaches shared a common focus on finding ways to engage students, and finding ways that encourage them to take ownership of their own learning. There is also strong support for the encouragement and recognition of student innovation.

The group also proposed having a broader discussion of how to encourage innovation at the next Innovation Exchange.

The next Innovation Exchange will be held on Friday, February 7 from 1-2:30 pm in A&S 402 (Science Innovation Center).

Summary of Tools, Approaches and Questions

Arthur Wohwill shared some of the learning activities that he has developed using Scratch, a software program developed by MIT to create stories, games and animations. The Scratch freeware program can be found at http://scratch.mit.edu. Some of the tools that Arthur has developed for his Biology students can be found at http://tinyurl.com/np9vwzu

Laura Shears has developed learning tools for her students using SCORM, a set of programming standards that allow for the development of sharable learning tools. Learning tools developed in conformance with SCORM can be easily shared and widely utilized. In particular, Laura develops learning objects that challenge students to solve mathematical problems or use mathematical principles in creative ways. A brief introduction to SCORM can be found at http://scorm.com/scorm-explained/.

Willie Davis has tried to develop classroom activities that reflect the principles of multiple intelligence theory. He creates each lesson plan in a way that reflects the various learning styles, and so will students engaging the same material in very different ways around the room. He has found the multimedia rooms to be beneficial for this, both due to the technology available, but also because of their flexible arrangement. This allows students to play to their strengths, and energizes both the students and the instructor.

Mindy Wilson uses projects to catalyze innovation in her students. This Fall, students in her molecular biology class designed and carried out a collaborative research projects. They were then able to create high quality scientific posters to present at a scientific conference. The students had to work together to develop the research projects, conduct the research, and determine how to most effectively present their work. This required them to do more than simply master the content: it added significance to the work of the class, and made learning the content more relevant. It also allowed for more creative ways to share their results, and served as a catalyst for student innovation as they mastered the content in ways that really challenged them.
Elaine Pogoncheff also offers students the opportunity to do presentations at the Eco-Scholars day hosted by LCC’s Technical Careers Division (http://www.lcc.edu/techcareers/ecoscholars/). This presents students with a different kind of challenge: it requires them to connect the concepts they are learning in class to real world applications. Thus, the management class might do presentations about developing business efficiencies that are environmentally sound. The conference presentations also develop broader skills for students in terms of the presentation of their ideas, and offer an opportunity for networking as well.

Jesse Draper discussed his use of Omeka software (http://omeka.org/). His students used the software to build a digital archive of materials related to a series of protests happening at MSU at the time. The students constructed a narrative of the event based on the documents that they collected, and developed online poster sessions to share their work with each other and the wider community. This gave the students a sense of ownership of the work of the class, but also the sense that they were creating something that went beyond the classroom.

**Elaine Pogoncheff** noted that several of the ideas that had been shared had a common commitment to encouraging and emphasizing self-directed learning. She noted that the Center for Self-Directed Teens (http://opendoorsforteens.org/), an initiative based on principles developed by Northstar (http://northstarteens.org/guiding-principles/), was a model that we might consider. The basic concept is that students want to learn, and should be responsible for their own education in way that encourage engagement, innovation and respect. We should explore what we can do that is similar to this, and this might be a conversation for a future Innovation Exchange.

**Ed Bryant** shared several ideas about how to find a way to use the tools that student already have. Many of our students have smart phones, and routinely use them during class. We as instructors can encourage them to use their phones/laptops in an engaging way. So, Ed routinely has students Google material in class (leading to what he jokingly called his “periodic table dance”, as he mimics what they are telling him about the elements they are looking up online).

**Tim Periard** shared that providing students a variety of way to share work with the class and with each other is another way to encourage innovation. Having students present their work in the form of PowerPoint, Prezi, or through online videos and animations is another way to get them to engage material in a creative way, and also encourage the idea of sharing that adds another dimension to their engagement with the material.

**Dave Schwinn** also considered this sharing to be a great way to encourage student learning through innovation. He suggested that we might find a way to share student work with each other, with the college community, and with the larger community. It was suggested that we develop some kind of student innovation showcase that highlights students work. The group agreed that this was an initiative that we should undertake.

**Roxanne Frith** raised an issue that she hoped the group might help her address. While she requires students to do presentations, she finds that often they suffer from being too heavily reliant on text (even in her Photography class!). In addition, students often wind up simply reading their PowerPoint to
the class. The group had several suggestions. **Anne Heutsche** requires students to do presentations that tell a story using ONLY images: no words allowed. In addition, she doesn’t let the students explain their presentation until the other students have had an opportunity to give their interpretation of the story being told. **Ed Bryant** gives students a word limit for the slides, and also prohibits them from using complete sentences in their slides.

**Chris Greene-Szmadzinski** also raised an issue that he hoped the group could assist him with. Chris teaches Sign Language, and wondered if anyone had any experience with adaptive software for both quizzing and practicing. Many of the available tools only work with single words: this is fine, but what is really needed is something that includes entire sentences. He was hoping to find a way to allow students to practice in a way that adapts to their performance, so that stronger students can move to progressively more difficult material. The group had a few suggestions for publisher-produced adaptive learning tools, but this was a problem that required more research.

**Laura Shears** mentioned that LCC had several Math Machines. These were interactive tools that used mathematical equations to control a laser projector. This was a great tool because assessment simply required the students to demonstrate that the laser projected in the correct manner. More sophisticated problems required moving the light in specific patterns or otherwise involved games that used the tool. One problem is that the machines require set-up and take-down time, which is sometimes difficult without dedicated classrooms.

**Sue Halick** shared a variety of tools available through eLearning and the CTE. The eLearning team has a list of programs and resources: [http://www.lcc.edu/elearning/faculty/documents/supplemental/d2l-tech-tools-for-faculty.pdf](http://www.lcc.edu/elearning/faculty/documents/supplemental/d2l-tech-tools-for-faculty.pdf). Sue also planned to share these on the Faculty Community Group on D2L. Sue also offered to share a list of recommended tools for creating engaging assignments on her SkyDrive: look for the public folder of halicks.

Sue also mentioned Animoto ([http://animoto.com/](http://animoto.com/)) as a way to easily create and share videos that might be used in class. The program has templates available that can be easily adapted to whatever the instructor wants to do. It is easy to upload images, text, and video and then control and edit the videos yourself. There is an educator version available for a lower price.

**James Bender** shared his use of the Adobe Connect to lead webinars and otherwise connect with students in a virtual classroom.

**Dan Holt** shared his use of virtual environments such as Second Life ([http://secondlife.com](http://secondlife.com)). This allows students to interact with each other and with the instructor in a virtual environment. In essence, it allows him to do a variety of activities he does in face-to-face classes in an online environment. This gives students a sense of community that is often lacking in online classes. Many students who take online classes never step on campus: this gives them a chance to develop a sense of place and connection to the LCC community.

**Aaron Mundale** and **Sean Nagler** discussed the Dicast Digital Innovation Center ([http://lccdicast.org/](http://lccdicast.org/)). This program works with faculty to enhance student learning through the use of virtual environments
that encourage interaction. This might allow students to virtually work with expensive equipment, or to practice in a virtual environment. As an example, they worked with Joe Long of the Surgical Tech program to develop a simulation to help students prepare for surgery.