

Developer Notebook 5 – UDL Practices

One particular topic that I think MSU has done an excellent job at making sure all us Master's students are aware of is the idea of a Universal Design for Learning, or UDL, for short. It was brought to our attentions that no two students read, understand, comprehend and process information the same way. In order to make the learning process in our classroom as productive and successful as possible, we need to vary our instruction to be able to reach all our differentiated learners. By providing and using multiple means of representation, concepts are more easily transferred and connection between ideas can be strengthened.

Teaching is an art that may take many years to come to fruition. It may take a while to determine what method is the most effective way to deliver material and reinforce ideas. UDL practices allow teachers to experiment and vary delivery so that all student learning in the classroom can be enriched. In this document, I will illustrate the techniques that I have employed to satisfy the UDL practices in my online module and I will also offer some insight into what other practices might be used in the future to assist in learning.

The first UDL guideline is to provide options to perception. This is usually done through alternate means of representation or modalities, such as vision, hearing and touch. I first offer the concepts through some sort of visionary medium. I might introduce topics in a PowerPoint, or a Word document, and then I would find a representation of the same information but through a different source, such as spoken word only, like a podcast. To help in the final comprehension, I have students feel the problems and solutions themselves. They might come up on the whiteboard and feel their way through their own calculations, using their own hands to write out the solution. Perhaps the most powerful perception guideline I have at my disposal is the actual laboratory itself. The sight, sound, and feel of an experiment is quite unlike anything ever experienced. I would like to be able to utilize that aspect of my class more to promote higher learning. I know that this is a *physical* activity that I would like to use to promote my *online* class, but the value of the experience greatly outweighs the online necessity. Perhaps I could allow student to use different means of delivery to convey the concepts they have learned in the laboratory, this would take us to UDL guideline #2.

The next guideline is to provide options for language, mathematical expression and symbols. In all my material, I strive to use at least two different means of representing data. While the first attempt may be the written word, I might then use a graph to display the same information, or even use a video or animation to deliver the same content. With all the clever and innovative Web 2.0 applications at our disposal today, one idea that I might try to bring to my course is to utilize different student delivery methods. If they are offered choices of display and delivery of their own work, students might have a greater sense of connection to their projects, and inevitably, to the learning.

The last UDL guideline is to provide options for comprehension. These include different scaffolds that students can use to access the knowledge obtained in the classroom. I have used various KWL activities, concept maps to highlight key ideas and relationships, and pre-reading inquiries to access prior knowledge. Perhaps one of the greatest tools I use in my classroom is the concept of a story. I use analogies, metaphors, or just events from my own life that I can tie into the learning of certain topics. I have even been known to, and I apologize for this, invent my own experiences to make a point. One technique that I have applied in my freshman Earth Science classes is to "chunk" the

information so learning has something to build on and connect to. It has worked quite well and I think even the blended AP Chemistry classes can benefit from this technique.

While my course could always use more UDL Practices to assure student success, I feel that I have done an adequate job in utilizing many of UDL guidelines already. The magnitude of practices available to enrich classes and engage learners is quite large. Wading through the techniques that work for each instructor is the difficult part. I continually strive to offer my students as many of these UDL Practices as possible, but there are many more waiting out there. I know that, in the end, the more I can offer my students, the greater success they will have in their learning and their own lives.