**OLTD 502 Lesson Critique and Revision**

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**Background**

Teaching has evolved since the early days of “spray and pray” instruction (Boushey & Moser, 2015) where teachers were the “sage on the stage” imparting their wisdom in lecture format and students were expected to dutifully listen and absorb it all, demonstrating their understanding by parroting correct responses at the end of a lesson or unit.

Today’s educators depend on research to design effective lessons. They understand that there are different learning styles and more than one way to demonstrate understanding. It is my opinion that teachers want their students to succeed and try their best to design engaging, effective lessons. And for the most part we are succeeding. Ford’s Model T worked, but we can all agree that it is not as efficient as today’s models of automobiles. There is always room for improvement.

The required readings on Understanding by Design (UbD) and Universal Design for Learning (UDL) intrigued me. Could they make my instruction more effective as promised? The UbD model by Grant Wiggins asks educators to begin with the end in mind. This is referred to as “backwards design.” The focus is on transferable skills. (McTighe & Wiggins, Understanding by Design Framework, 2011) The UDL model is an inclusive model that employs the use of multiple means of representing information, multiple means of action or expression and multiple means of engagement. (CAST, 2015) “Universal Design for Learning (UDL) is a research-based set of principles to guide the design of learning environments that are accessible and effective for all. First articulated by CAST in the 1990s and now the leading framework in an international reform movement, UDL informs all of our work in educational research and development, capacity building and professional learning.” (CAST, 2015) It was originally designed to create a more inclusive model for disabled persons but the model is applicable to all learners. (CAST, 2015)

**Process**

The process began by determining a subject area and topic I wished to address. I contemplated focusing on a literacy lesson, or a lesson on family from a Social Studies unit. Eventually I narrowed it down to a Science lesson from a unit on the brain as I frequently choose to begin the school year with a unit on the human brain. It is the most important tool students use at school. The best part is each student has one and it is absolutely free. I feel that students should have a basic understanding of this tool so as to use it most effectively. Could I use this narrow topic to address a broader skill set?

I examined lessons and activities from a variety of sources and finally settled on the unit developed by Christina Chan (Chan, 2015) It is current, includes clear learning objectives and links to curriculum mandates (though they are from the prescribed British Columbia learning outcomes). A teacher could deliver these lessons and students would likely learn. For the purpose of this assignment I chose to critique and revise the first two lessons in the unit.

Next I downloaded the UbD planning template. (McTighe, Downloads, 2015). I Proceeded by identifying the essential questions (McTighe & Wiggins, Essential Questions: Opening Doors to Student Understanding, 2013) and transferable knowledge and skills I wished the students to demonstrate. In this instance I wanted the students to understand the structure and functions of the brain as well as the importance of its role in establishing humans as the dominant species on Earth. The desired transferable skills were identified as comparing and contrasting, gathering information from a variety of sources and selecting an appropriate platform for demonstrating understanding of an assigned topic.

Next I examined the learning activities suggested in the original lesson. The unit was introduced with a Know Wonder Learn (KWL) activity. This is a common practice. My experience is that canvassing students’ prior knowledge can be valuable in determining a starting point from which to extend learning but students are seldom given the opportunity to pursue the line of inquiry begun with establishing what students wonder about. Nor are students routinely asked to reflect on what they learned as they proceed through the unit. I opted to introduce the concept of the “flipped” classroom and introduce the unit by assigning a short animated, age appropriate video by for the students to view with their families at home. This would provide more time for discussion around learning and hands-on activities during class.

**Lesson One**

The first face-to-face lesson would begin with a modified version of the Know part of the KWL as outlined in the original lesson plan. Students would share what they learned about the brain from the video with an “elbow buddy” or the person sitting next to them. Students would then be invited to share out, with prior knowledge of the brain being recorded on chart paper. This activity should effectively reach auditory and visual learners and determine a baseline for students’ knowledge of the brain.

The teacher would then direct the discussion towards the different parts of the brain addressed in the video and the functions they perform. At this point I would insert an activity from lesson two of the original unit by Chan. (Chan, 2015) The teacher would name a part of the brain and direct the students to perform a task governed by that region of the brain. The students would then be directed to touch the corresponding part of their head and turn to their neighbour, name the part of the brain they just used and describe what it does.

Following the review of the parts of the brain and their functions, the class will then be directed in the creation of representations of the human brain made out of playdough. Each lobe will be created and labelled. This activity is designed to engage the kinesthetic learners. I have chosen an adapted version of the activity posted by Emma Vanstoneon (Vanstoneon, 2014).

Lesson One will conclude with a gathering to review learning and identify learning goals for the unit. By breaking up the KWL in this manner the objective is to chunk direct instruction and discussion time into smaller more easily digested portions. Students will be directed to the Know chart created earlier and invited to add any new learnings. They will then be asked to share what they are still curious about with their elbow buddy. Sharing and recording this inquiry question with their family will be the day’s assigned homework and will provide the foundation for the concluding presentation at the end of the unit. The lesson will conclude with a song to engage those who learn best through music and an invitation to continue the learning at home by providing the recipe for a playdough brain they can make at home and a link to a video they can share with their families.

**Lesson Two**

In the original unit by Chan (Chan, 2015) the second lesson begins with a review of prior knowledge of the brain by referring to the KWL chart produced in the initial lesson. I have opted for a more interactive and cooperative approach that involves a group challenge to review the previous day’s learning. Models similar to those produced the previous day will be provided and students will be tasked to label them in groups.

The original follow-up lesson continued to address the names and functions of the parts of the brain. The teacher uses the model of placing two fists together to illustrate the size of a human brain and then uses a poster to reinforce the different parts of the brain. Students are involved by being asked to perform performing certain tasks that utilize each part of the brain. Use of the “flipped classroom” model for lesson one allowed us the time to conduct this activity in lesson one.

The revised lesson plan is less teacher-driven and more learner-driven. After completing the group challenge, students will gather and be engaged in a discussion about the many sources of information that exist (books, the web, experts) and be introduced to some digital sources where they can find information on the brain. Students will then be reminded to keep their “wonder” in mind and provided with an opportunity for independent exploration in the computer lab. The element of exploration and inquiry was a notable omission in the lesson plan.

The lesson will conclude with students sharing what they discovered and encouraging them to continue their exploration at home by sharing the websites with family members rather than having them complete the pencil and paper activity suggested in the original lesson plan. The graphic organizer suggested for this lesson can be presented later as an option for demonstrating understanding for those students who prefer such methods of presenting knowledge.

The revisions to the second lesson is intended to address the lack of opportunity for individual exploration in the original lesson plan and incorporate elements of the UDL model to make it more engaging and inclusive for all learners.

**Continuation**

Though not detailed in this critique the unit would proceed with students continuing to receive group instruction and allowing time for individual exploration to address “wonders” identified at the beginning of the unit. Students would be exposed to literature on the brain and receive further instruction on research strategies. They would be assigned tasks that provide them with the opportunity to compare and contrast the human brain with that of other animals and analyze the brain’s importance in establishing humans as the dominant species on the planet. The unit would conclude with students being provided with clear criteria in the form of a rubric for an assignment to demonstrate their learning. While suggested assessment tasks are suggested in the original unit, it contains no criteria or rubrics.

**Conclusion**

The redesign of the initial lessons in this unit and the concluding assignment are intended to honour the UDL model by acknowledging the **Affective Network** by offering choices of content and tools (e.g. choice of books to study literature, access to relevant websites, videos, and tactile activities) and providing flexible opportunities for demonstrating skill through multiple means of representing understanding. (e.g., written, oral, or visual presentation). Using the UbD template to establish clear goals and objectives and working with the end in mind incorporates the practice of Understanding by Design and ensures that each instructional move is intentional and purposeful. By drawing on both of these models the intention is to improve the engagement and effectiveness of the lessons. I have included a self-designed assessment rubric to provide students with clear criteria. This clarifies expectations for the teacher and students and allows them to prioritize and reflect on their work. It standardizes the assessment process making it objective while still allowing for students freedom in the method through which they demonstrate their understanding.

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