UDL, Constructionist learning, the flipped classroom and their connection to the five disciplines

As educators in the field of education, we ought to continually respond to the process of learning and the impact that it has on the learner and his or her mindset. There is a cycle to learning that many educators are familiar with and there are a variety of tools and techniques that can be used to enable learning amongst students in a deeper way (Senge, 2006). For example, when we examine Universal Design for Learning (UDL), we are made to believe that we have to teach the same course as it has been done for the last four decades—when we can be creative and innovative using technology. A simple lesson on "poems and ballads" can be "UDLify" to give it a modern context. Just as a three-legged stool fits all the parts together to show a unified object, so can the five disciplines be combined to show us that there can be synergy in learning. According to Senge (2006), people often think of education as an individual endeavor. Teachers go into their classrooms, behind closed doors, and they teach alone. Students are supposed to demonstrate their expertise alone, or they are considered to be "cheaters" (p. 164). But in an Internet- and social-media-enabled world, where students regularly connect on Facebook and Twitter from their laptops during class, and where educational practices have moved increasingly toward teacher collaboration during the past forty years—then it is crystal clear that the mental model of the education profession is long overdue for change (Senge, 2006).

The learning disciplines involve teachers seeking to improve their classroom, schools and communities through collective action, constructionist teaching and the flipped model, to make learning more relevant, so that students become more invested in their learning experiences and the lifelong learning journey. Just as Bers (2008) relates the story of the Argentinean student who created a robotic manipulative and kept at the tasks until she was able to get the objects to shake hands, simply, demonstrating that friendship was an important learning focus for her. This example of personal mastery is what makes the constructionist learning environment a meaningful learning experience for students and promotes a growth mindset. Learning does not occur in any situation unless it is sparked by the learner's own intrinsic interest and curiosity states Senge (2006, p. 77) and it is a lifelong process. Therefore, it

is critically important for a parent and school to cultivate and encourage a child toward personal mastery of their learning and their creative ability.

For the flipped model project, there was a struggle to take a lesson that was more teacher-centered and make it more learner-centered. Even though it makes sense to view learning as student-centered; as the instructor it is important to feel needed and depended upon for the lessons. Although, the notion of students questioning and figuring out ideas and problems on their own seems reasonable—I didn't realize that the learning experience was more about what I wanted to control than what students needed to encounter and figure out on their own. From this activity, I got the opportunity to reflect that my mental model and leap of abstraction needs to change—that this perspective is based on how I was taught but it has to be changed to reflect how my students want to be taught. We can't continue to utilize a flawed system of learning and hope to get an improved result. On the other hand, when students are working in the flipped model situation they are not able to ask questions, if there is a concept that is confusing (Bergmann & Sams, 2012). There are positives and negatives to both sides of the education coin and as educators we have to reflect on our beliefs and our performance in the classroom—are they in contrast to one another? The flipped classroom is focused on developing the individual rather than the team. This is the ability to focus on what the student cares and to change oneself because you want to states Senge (2006, p. 75). All of the learning disciplines, but particularly the practice of personal mastery and building shared vision, through flipped classroom assignments, can help students develop those capabilities.

Team learning is not just useful in the classroom, but out of the classroom. It is important that students learn especially in constructionist environments that everyone has something to offer. One of the leading schools in reading, math and language in Shanghai recognized that team learning among their teachers is what has given them the academic and strong scholastic edge. Visiting a maker school in New York, it was amazing to discover that in that environment students are not losers on projects and grades are not the object of obsession. One of the great things about learning in that environment is that students are allowed to fail. There is no pressure to finish competitively or be perfect—the importance of the learning experience is to be creative and when the parameters to learning changes—then we can see shifts in students mindsets. They experiment, they learn lots of things, and failure is celebrated (Thomas, 2014, p. 74).

According to Senge (2006) there is no greater force that is as powerful to change a learning environment as a shared vision (p.191). Shared visions in the classroom and in schools should not be about one person executing the focus and energy for learning. The flipped assignment helped me to realize that as an educator, there has to be the burning desire to expand my ability to create and to have a similar expectation of my students. We have to strive towards generative learning—so that learners become excited about a vision that is meaningful for all of us (Senge, 2006, p. 192). As a colleague remarked in a discussion, we must move away from the belief that teaching is for the classroom and homework is for home. This leap of abstraction; however, contradicts the flipped model classroom.

Systems' thinking is not just relevant to education, but it is a new way of looking at learning and thinking. When a group of us worked on a project about technology and early childhood education, it was interesting to note that children are naturally systems thinkers in that they are attune to people around them, their own thoughts, their emotions, and their inner selves—it was interesting to discover that Senge also advanced this perspective when he discussed seeing the forest and the trees (Senge, 2006, p. 124). Children find a way to connect technology with their lives.

To conclude, there were connections found in all the projects and to some degree there may have been contradictions, as well, to the five disciplines.

References

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