Wicked Problem of Practice: Innovation as Learning Ethic

Innovation as defined by Merriam-Webster is "the act or process of introducing new ideas, devices, or methods" (Innovation, 2014). With the push for standardized based teaching, innovation has been sacrificed for traditional practice. Skill and drill assignments are controlling school systems, taking away from the development of creativity and problem solving skills (Gee, 2013, p.30). Schools in the 21st century need to move away from traditional teaching methods influenced by industry, where students are taught to follow instructions and find the right answer (Sawyer, 2011). Creativity is being cut due to curriculum requirements. "In many public schools, students never get a chance to experiment with such styles of problem solving. There's no money, or no room in the standardized curriculum" (Milloy, 2013). Students have voiced that they want school to be "more interesting" and to have a "real learning experience" (Barseghian, 2011). Here are our recommendations to implement innovation as learning ethic: using internet for communication and collaboration amongst students, using higher order thinking to learn through discovery, giving students the time and experience of creative learning.

The introduction of the internet was one of the most creative innovations of our generation. As learners today, the internet can be so much more than Google or Youtube. It can be a tool for communication and collaboration. The TPACK (Technology, Pedagogy, and Content Knowledge) model supports both. "True technology integration is understanding and negotiating the relationships between these three components of knowledge" (Koehler, 2011). Students become more creative when they use what they know, apply it in a new way, and use the internet to share their findings. Student blogs "are highly motivating to students, provide excellent opportunities for students to read and write, are effective forums for collaboration and discussion, and are powerful tools to enable scaffolded learning to occur" (Glencoe, 2006). By using blogs, students are becoming more creative in the way they collaborate and communicate their thoughts and ideas.

At a young age, children learn about the world around them by making discoveries. This type of inquiry learning uses higher order thinking to promote critical thinking skills. However, once children begin school, this type of learning is quickly abolished due to several factors including standards based instruction, teaching to the test, and ensuring all students are learning the same material at the same time (Foote, Harrison, Ritchie, & Dyer, 2012). Instead, a redesign of curricula must occur to allow students to learn through discovery and inquiry in the classroom. Innovation will take place when there is a pedagogical shift to allow students to use creativity to figure out a solution to a problem rather than the instructor putting students on the right path to the correct answer (Adams, 2005). Students will be more innovative if they are able to choose *how* to answer a question, figure out what information is needed, and bring their own experiences to work through problems--at that point, authentic learning will occur.

Educators need to focus on encouraging the development of problem solving skills and creative thinking. In doing so, American education can redefine itself as an educational process that focuses on leading communities of innovative thinkers who are highly reflective members of society. Learners need to be given opportunities to experience real world problems that spark curiosity and engage them in critical thinking skills (Beers, 2011). It is only through these experiences that learners learn to be metacognitive, apply their learning, and truly learn how to learn, consequently, big things begin to happen: learners begin to naturally make connections

within their experiences and synthesize new ideas. Schools today spend much of their focus on standards and testing, which leads to teachers feeling there is no time to touch on the potential creativity of students. However, if standards and testing were abolished and creativity was developed in classrooms, the time for this type of learning would become available.

Businesses and stakeholders such as scientists, people in medicine, and the future generations are seeking employers who are innovative, who can solve problems as they arise, who use creativity to enhance an idea, and who can connect with other innovators around the globe, which is why innovation should be implemented as learning ethic in education today.

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